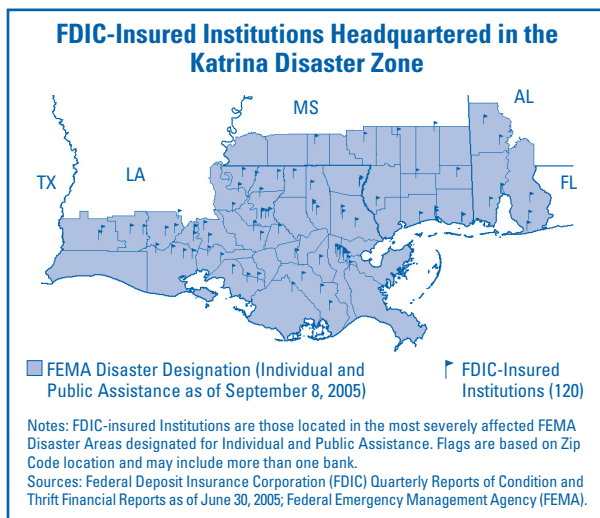


## In Focus This Quarter: A Preliminary Assessment of the Effects of Recent Hurricanes on FDIC-Insured Institutions

Hurricanes Katrina and Rita have taken a heavy toll on the lives and livelihoods of millions of Gulf Coast residents. Even as Americans responded to the immediate humanitarian crisis that followed the storms, they gained a new appreciation for the economic importance of this region to the rest of the nation. Like other sectors, the region's banking industry was hit hard by Katrina and will be dealing with its consequences for some time to come. This issue of *FDIC Outlook* provides a preliminary assessment of Katrina's effects on local financial institutions and the regional and national economies.



### Bank Performance after Natural Disasters: A Historical Perspective

How resilient have banks been in the face of past natural disasters? This article looks at four natural disasters that have struck the United States since 1989 and describes how local banks performed in their aftermath. While no banks are known to have failed as a result of these past natural disasters, credit quality deteriorated in some cases. Given the unprecedented scale of destruction and displacement resulting from Katrina, it remains to be seen how applicable these lessons may be to banks in the hardest-hit Gulf Coast areas. [See page 3.](#)

### Financial Characteristics of Banks Affected by Katrina

Focusing on the 49 counties and parishes in Louisiana, Mississippi, and Alabama designated as eligible for federal disaster assistance, this article summarizes the financial condition and performance of local financial institutions just prior to Katrina. [See page 10.](#)

### Unique Challenges Face FDIC-Insured Institutions after Katrina

In the immediate aftermath of Katrina, banks located in the hardest-hit areas of New Orleans and the Mississippi Gulf Coast worked first and foremost to overcome a range of operational difficulties. Depending on the pace and direction of the region's rebuilding effort, individual banks may contend with longer-term issues associated with credit quality and franchise value; however, a complete assessment of these longer-term issues may not be possible for some time. [See page 12.](#)

### Also in this issue:

- **Hurricane Damage to Oil and Gas Infrastructure Translates into Higher and More Volatile Energy Prices**  
[See page 19.](#)
- **The Effects of Katrina and Rita on the U.S. Economy and Consumers**  
[See page 22.](#)

## Letter from the Executive Editor

December 20, 2005

To the Reader:

When we released the Fall 2005 issue of **FDIC Outlook** in September, bankers and regulators were still responding to some of the immediate operational challenges posed by the Gulf Coast hurricanes. As of this writing, there remains considerable uncertainty about the ultimate economic losses and how the recovery process will unfold. Despite these uncertainties, we feel it is important to share with you what our analysts have been able to conclude about the situation thus far. Therefore, we have dedicated this issue of **FDIC Outlook** to evaluating the effects of Hurricane Katrina.

Our analysis of Katrina does not end with this issue of **FDIC Outlook**. As more becomes known about the course of the recovery and rebuilding efforts, our analysts will evaluate the effects on the local, regional, and national economy and the banking industry. We will bring those analyses to you in future editions of **FDIC Outlook** and in other publications such as **FDIC State Profiles**, **FDIC Quarterly Banking Profile**, and **FYI**.

As always, we value your feedback and welcome any comments you might have about this or other issues of **FDIC Outlook**. Please provide them to Barbara Ryan, Associate Director, FDIC Division of Insurance and Research, at 202-898-3841 or [baryan@fdic.gov](mailto:baryan@fdic.gov).

Sincerely,



Maureen E. Sweeney  
Executive Editor

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# Bank Performance after Natural Disasters: A Historical Perspective

In the weeks following the landfall of Hurricane Katrina, when the tremendous scale of the damage and dislocation was becoming apparent, analysts turned to the question of how financial institutions in the affected areas would weather the consequences of the storm. One difficulty in conducting this analysis was that there is no true historical precedent for regional economic losses on the scale of those caused by Katrina. Nonetheless, it may be useful to develop historical frames of reference for comparison to the current situation. A review of banks insured by the Federal Deposit Insurance Corporation (FDIC) that have failed since 1989 showed that no failures during that time could be directly attributed to natural disaster. This circumstance leads to another question: Historically, how resilient have banks been in the face of natural disasters? In other words, did banks struggle immediately following disasters and recover in later periods, or did they maintain steady performance through the adverse circumstances?

This article focuses on four natural disasters that struck the United States since 1989 and how banks headquartered in the regions most affected by those disasters coped with the ensuing circumstances. The disasters considered in this analysis are the Loma Prieta earthquake of 1989, Hurricane Andrew of 1992, the Northridge earthquake of 1994, and the Grand Forks flood of 1997. For each of these four events, the performance of affected local financial institutions is compared with the performance of institutions at both the state and national levels. Four performance ratios are used for each comparison: return on average assets, equity capital as a percentage of total assets, loan loss provisions as a percentage of total loans, and noncurrent loans as a percentage of total loans. To capture only those banks that were most affected by the disasters, banks with total assets in excess of \$5 billion (which are presumed to be more geographically diversified) were excluded from the analysis.

Our analysis suggests that, historically, natural disasters did not appear to have a significant negative impact on bank performance. In fact, performance of banks in disaster areas often remained consistent with local and national overall trends.

## Loma Prieta Earthquake

The Loma Prieta earthquake, measuring 6.9 on the Richter scale, struck the **San Francisco Bay** area at 5:04 p.m. on October 17, 1989. An aftershock with a magnitude of 5.2 struck 37 minutes after the initial shock. The earthquake epicenter was located in the Santa Cruz Mountains, near Loma Prieta peak, approximately 70 miles south of San Francisco. The worst damage occurred in the cities of **Watsonville** and **Santa Cruz**, but there was also considerable damage throughout the San Francisco Bay area, particularly in San Francisco and **Oakland**. The earthquake caused 63 deaths and 13,757 injuries. More than 1,000 homes were destroyed and more than 23,000 were damaged. In addition, 366 businesses were destroyed and approximately 3,500 were damaged. The total estimated economic loss was valued at more than \$16 billion, and \$7.6 billion in government aid was distributed in the affected areas.<sup>1</sup>

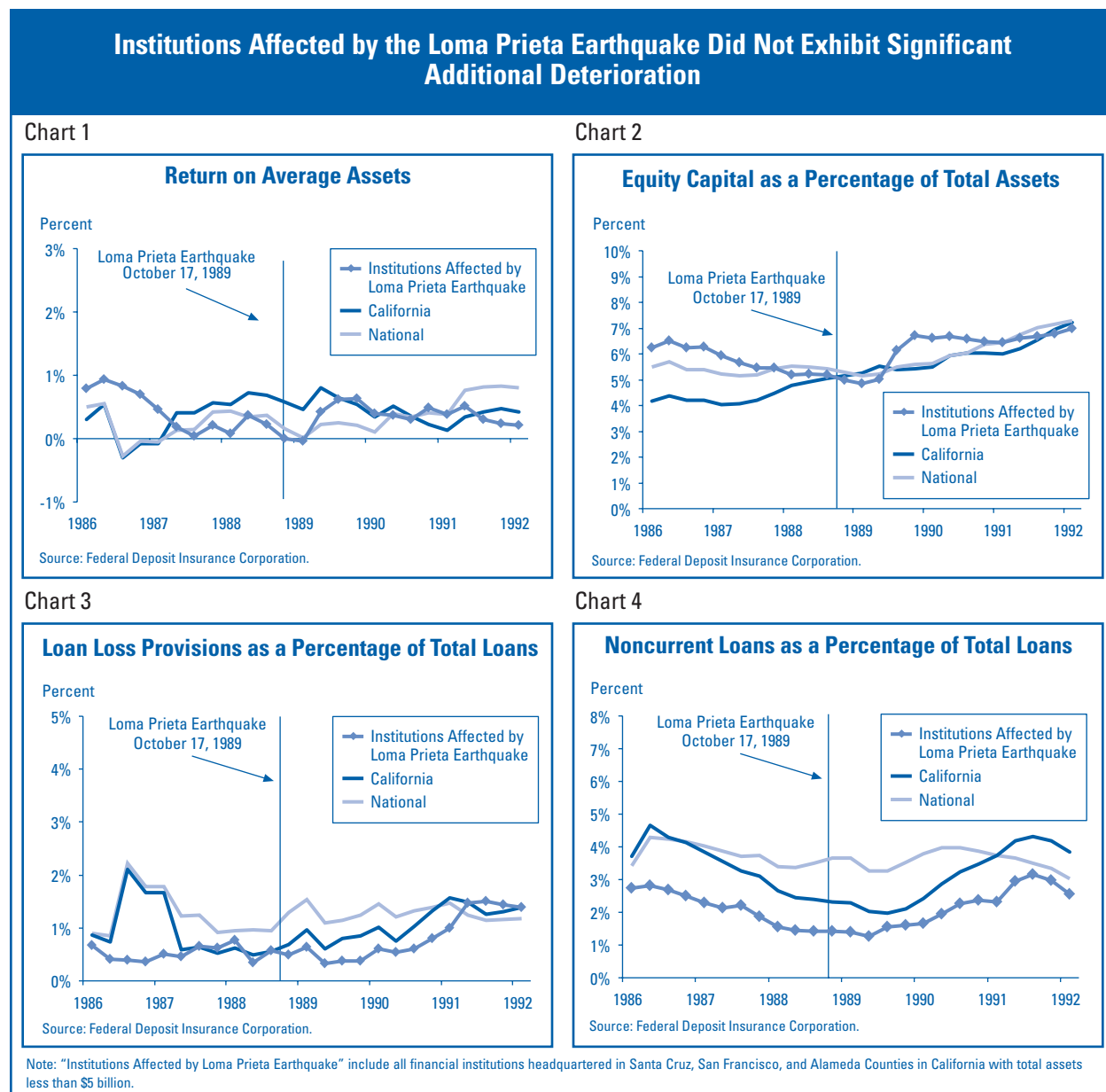
The performance of 63 financial institutions headquartered in **Santa Cruz**, **San Francisco**, and **Alameda Counties** was compared against the broader samples of financial institutions from California and across the nation. Charts 1 through 4 in Table 1 indicate that the performance of the banks in the affected area was not noticeably harmed by the earthquake. Loan loss provisions and noncurrent loans increased in the periods following the earthquake, but they generally increased more slowly than in the state as a whole. Equity capital growth exceeded the state and national averages following the earthquake. Except for a period immediately following the earthquake, the banks in the area generally reported at least as high a return on average assets after the earthquake as they had in the quarters preceding the disaster.

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<sup>1</sup> Mark Zandi, "Katrina: The Economic Fallout," Moody's Economy.com, August 30, 2005. All damage and aid amounts in this article are reflected in 2005 dollars.

# In Focus This Quarter: A Preliminary Assessment of Recent Hurricane Effects

Table 1



## Hurricane Andrew

Hurricane Andrew was only the third Category 5 hurricane to make landfall in the United States since 1851.<sup>2</sup> Andrew came ashore on August 24, 1992, near **Homestead, Florida**, carrying maximum sustained winds at its initial U.S. landfall around 145 miles per hour, with gusts up to 175 miles per hour. Andrew continued to

<sup>2</sup> Hurricane categories, rated on a scale of 1 (lowest wind speed) to 5 (highest wind speed), are used to estimate the potential property damage and flooding expected from a hurricane landfall. See [www.nhc.noaa.gov/aboutsshs.shtml](http://www.nhc.noaa.gov/aboutsshs.shtml) for more on the hurricane scale.

move across South Florida as a major hurricane and proceeded to the Gulf of Mexico. It eventually made landfall again in a sparsely populated section of south-central **Louisiana** as a Category 3 hurricane. The storm surge generated by Hurricane Andrew ranged from 4 to 6 feet in northern Biscayne Bay to a maximum of approximately 17 feet on the western shoreline of the bay. The storm surge in Louisiana was at least 8 feet. Rainfall totaled at least 7 inches in both states, and some areas recorded approximately 12 inches.<sup>3</sup>

<sup>3</sup> National Oceanic and Atmospheric Administration, National Hurricane Center, "Preliminary Report: Hurricane Andrew," August 1992.

# Bank Performance after Natural Disasters: A Historical Perspective

Table 2

## Institutions in the Area Most Affected by Hurricane Andrew Performed Quite Similarly to Institutions throughout Florida and across the Nation

Chart 5

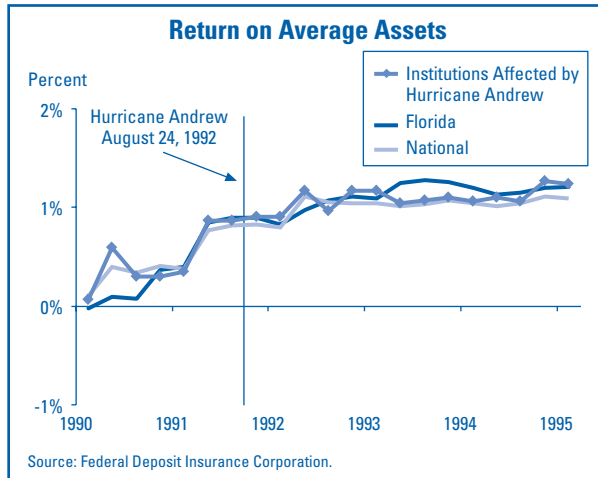


Chart 6

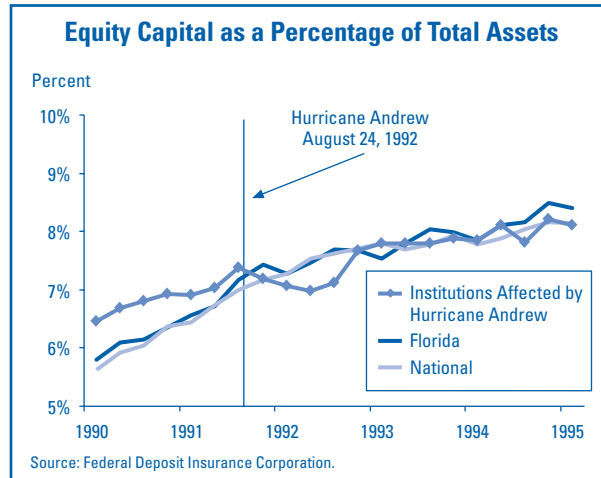


Chart 7

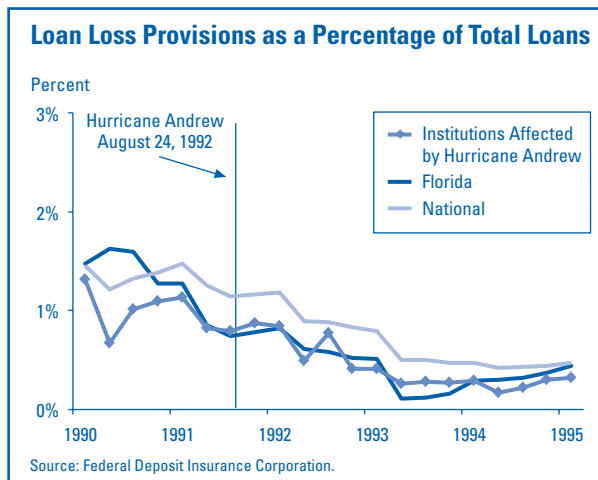
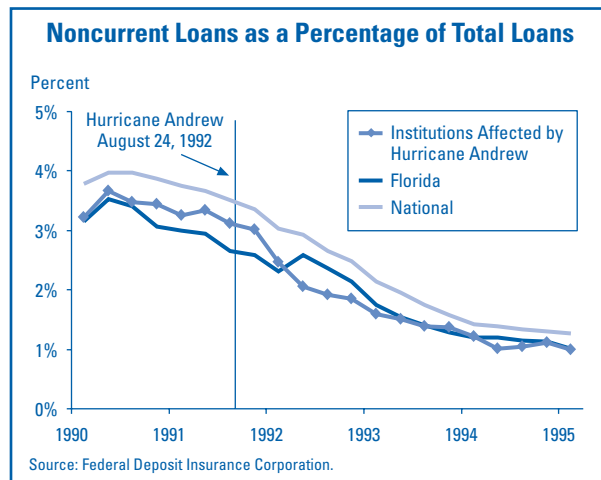


Chart 8



Note: "Institutions Affected by Hurricane Andrew" include all financial institutions headquartered in Dade County, Florida, with total assets less than \$5 billion.

Before Hurricane Katrina, Andrew was considered the costliest natural disaster in U.S. history. The economic loss was estimated at \$48 billion, with the greatest damage concentrated in **Dade County, Florida**. Approximately \$11 billion in government aid was distributed in all affected areas.<sup>4</sup> Fifteen lives were lost as a result of the storm in Florida, with an additional 29 lost during the days after the storm hit. A total of 17 people died in Louisiana.<sup>5</sup>

<sup>4</sup> See note 1.

<sup>5</sup> James West, "Hurricanes Are a Regular Part of Life in Louisiana," *USAToday.com*, May 17, 2005, [www.usatoday.com/weather/hurricane/history/louisiana-hurricanes.htm](http://www.usatoday.com/weather/hurricane/history/louisiana-hurricanes.htm).

Like Katrina, the disruption caused by Andrew was enormous. According to the *St. Petersburg Times*, 250,000 people in South Florida were left homeless, 100,000 residents of Dade County left the area permanently, and 82,000 businesses were destroyed.<sup>6</sup> The storm also damaged 33 percent of the coral reefs and 90 percent of south Dade's native pine-lands, mangroves, and tropical hardwood.

<sup>6</sup> Jeff Harrington, "After the Storm: Insurance Customers Still Paying the Price"; and "After the Storm: Storm's Howl Fills the Ears of Survivors," *St. Petersburg Times*, August 18, 2002. Both articles are from the series Hurricane Andrew 10 Years Later.

Because Dade County suffered the most severe damage from the storm, our analysis compared the performance of 71 banks headquartered in Dade County against totals for Florida and the United States as a whole. Charts 5 through 8 in Table 2 illustrate that the banks headquartered in Dade County performed in a manner quite similar to banks throughout Florida and across the nation. The ratio of loan loss provisions to total loans exhibited a declining trend after the hurricane, and the noncurrent loan ratio continued a generally declining trend as well. The Dade County banks did exhibit a slight decline in the ratio of equity capital to total assets for a few quarters after the hurricane struck, but this ratio recovered to the same level as the state and national averages by year-end 1993. By these measures, banks in Dade County proved to be remarkably resilient in the face of the enormous damage caused by Hurricane Andrew.<sup>7</sup>

### Northridge Earthquake

The Northridge earthquake occurred on January 17, 1994, at 4:30 a.m. in **Los Angeles, California**. Although the magnitude was a moderate 6.7 on the Richter scale, it was nonetheless one of the most costly earthquakes in U.S. history. The epicenter was located about 32 miles northwest of downtown Los Angeles. Damage extended up to 52 miles away from the epicenter, principally across **Los Angeles** and **Ventura Counties**. Most of the damage was concentrated in the western **San Fernando Valley** and in the city of **Santa Monica**. The earthquake caused considerable damage to freeways in the area, closing 11 major roads that lead into Los Angeles. In addition, a number of commercial buildings collapsed. Most of the damage was caused by the earthquake itself, with some damage resulting from fires and ground shift. Fifty-seven people died, more than 1,500 were injured, and 22,000 were left homeless.<sup>8</sup> Loss of life was likely reduced by the early morning hour at which the earthquake occurred and the fact that January 17 was a federal holiday. Economic losses from this disaster were estimated to be \$33 billion. Approximately \$16 billion in government aid was distributed to the affected areas.<sup>9</sup>

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<sup>7</sup> Bradley T. Ewing, Scott E. Hein, and Jamie Brown Kruse, under the auspices of the FDIC's Center for Financial Research, have conducted statistical analyses of the financial performance of banks after natural disasters, including Hurricane Andrew. Their preliminary report can be found on the FDIC Web site at [www.fdic.gov/bank/analytical/cfr/sept\\_2005/workshop\\_Be\\_Sh\\_Jk.pdf](http://www.fdic.gov/bank/analytical/cfr/sept_2005/workshop_Be_Sh_Jk.pdf).

<sup>8</sup> Wikipedia Encyclopedia, "Northridge Earthquake," [http://en.wikipedia.org/wiki/1994\\_Northridge\\_Earthquake](http://en.wikipedia.org/wiki/1994_Northridge_Earthquake).

<sup>9</sup> See note 1.

Our analysis compared the performance of 172 financial institutions headquartered in Los Angeles and Ventura Counties against the broader samples of financial institutions from California and across the nation. Charts 9 through 12 in Table 3 illustrate that before the earthquake, banks in the affected counties reflected higher ratios of loan loss provisions and noncurrent loans to total loans than the comparison groups. The ratio of equity capital to total assets was slightly below the comparison groups, and the return on average assets was actually negative and well below the state and national averages. It should be noted that the area most affected by the earthquake was already suffering from an economic downturn prior to the earthquake and that the California group also underperformed relative to the rest of the nation. After the earthquake, the condition of the banks in the affected area did not noticeably worsen relative to the larger groups. Both loan loss provisions and noncurrent loans as percentages of total loans generally declined following the earthquake. The ratio of equity capital to total assets for the banks in the affected area exhibited a strong, improving trend in the years following the earthquake. Beginning at year-end 1994, return on average assets also demonstrated significant improvement. Banks in the area affected by the Northridge earthquake continued to struggle in the years after the disaster, but the disaster did not appear to contribute significantly to those institutions' difficulties.

### Grand Forks Flood

On April 16, 1997, the flooding Red River passed the National Weather Service's forecasted crest of 49 feet, which equaled the height of the dikes in **Grand Forks, North Dakota**, and **East Grand Forks, Minnesota**. The river actually crested at just more than 54 feet on April 21 and did not begin receding until April 26.<sup>10</sup>

The resulting flood in Grand Forks caused an estimated \$2.4 billion in damages. Although this amount is considerably smaller than that of the other disasters reviewed in this article, the flood is included in the analysis because in some ways what happened in Grand

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<sup>10</sup> Wikipedia Encyclopedia, "Red River Flood, 1997," [http://en.wikipedia.org/wiki/The\\_1997\\_Red\\_River\\_Flood](http://en.wikipedia.org/wiki/The_1997_Red_River_Flood). The Red River is naturally prone to flooding because of its northward flow, the small slope of the river, and the flatness of the surrounding terrain. Eight major blizzards during the previous winter had dumped almost 99 inches of snow on the region, and subsequent spring rainstorms contributed to the disaster.

# Bank Performance after Natural Disasters: A Historical Perspective

Table 3

## Institutions Affected by the Northridge Earthquake Generally Demonstrated Improvement in the Periods following the Disaster

Chart 9

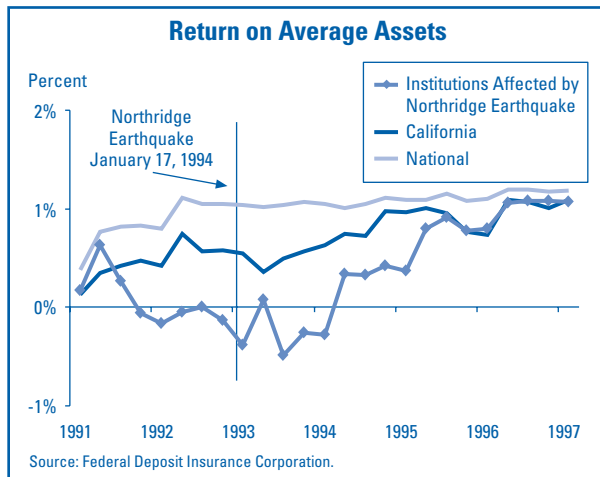


Chart 10

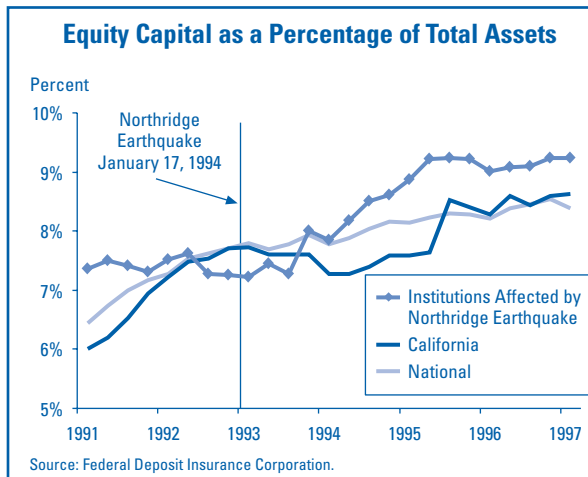


Chart 11

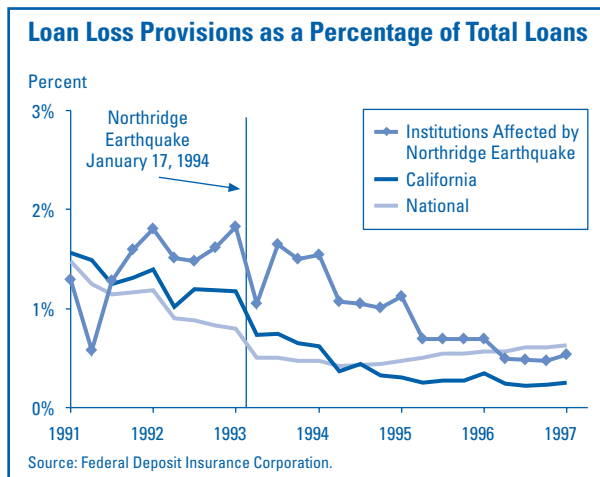
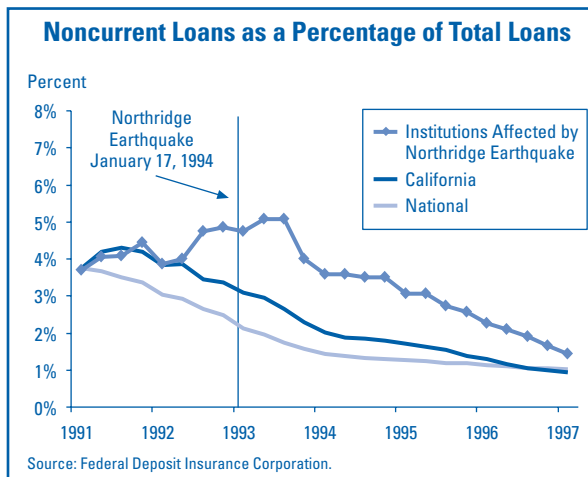


Chart 12



Note: "Institutions Affected by Northridge Earthquake" include all financial institutions headquartered in Los Angeles and Ventura Counties in California with total assets less than \$5 billion.

Forks was similar — but on a much smaller scale — to what has occurred after Katrina. The 1997 Red River floodwaters spread over two miles inland, inundating virtually everything in the Grand Forks twin communities.<sup>11</sup> When the flood receded, 11 buildings downtown had burned and about 90 percent of the city of Grand Forks was seriously damaged. Some people were unable to return to their homes for weeks after the flood crested. Although no lives were lost during the flood, thousands of people moved from the area. The Grand

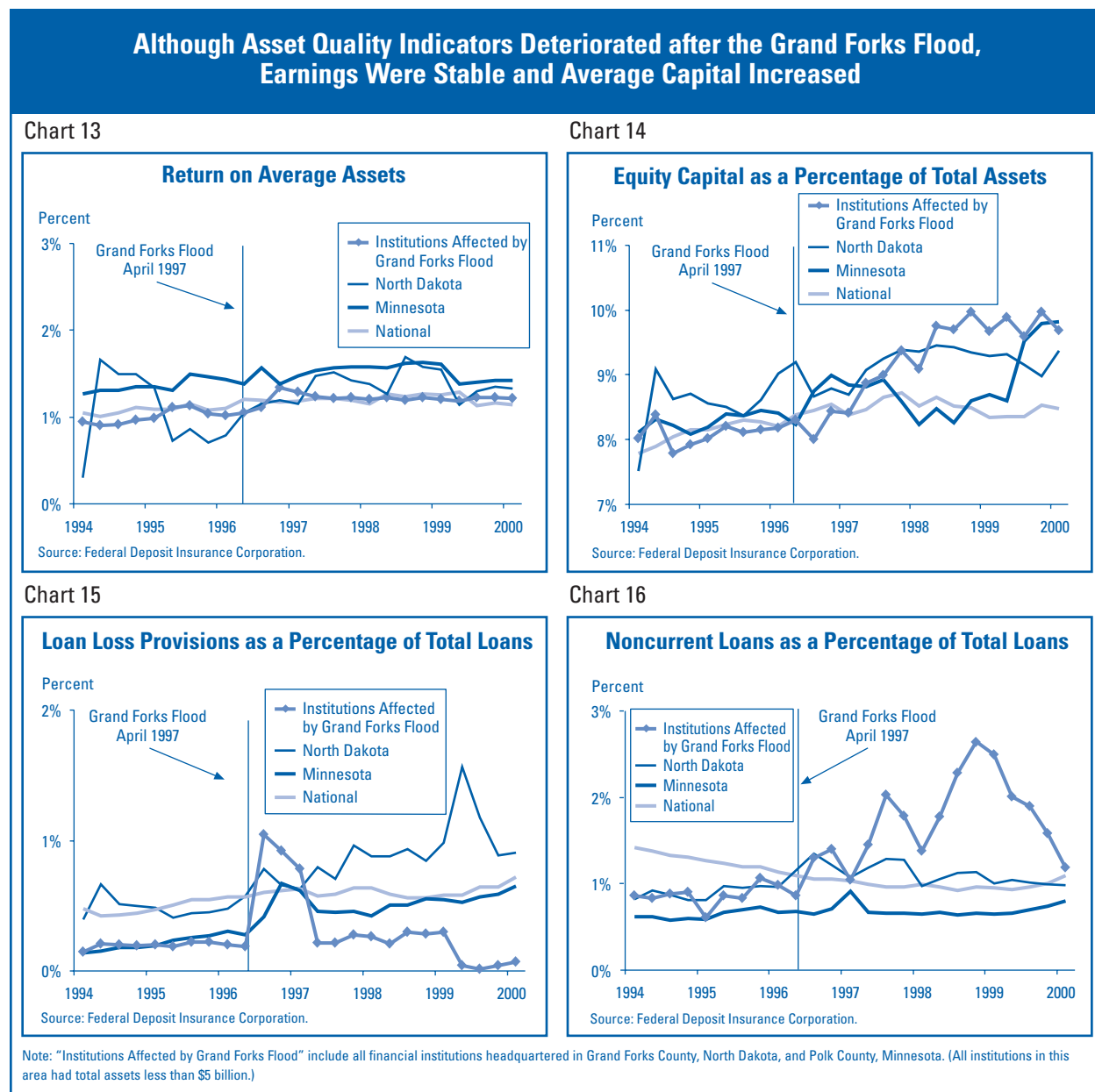
Forks metropolitan area lost 5.8 percent of its population between 1996 and 2000.<sup>12</sup>

Our analysis compared the performance of 12 financial institutions headquartered in **Grand Forks County, North Dakota, and Polk County, Minnesota**, against the broader samples of financial institutions from North Dakota, Minnesota, and

<sup>11</sup> Ibid.

<sup>12</sup> Rob Grunewald, "District Metro Areas — by the Numbers," *fedgazette*, Federal Reserve Bank of Minneapolis, September 2001, <http://minneapolisfed.org/pubs/fedgaz/01-09/metro.cfm>.

Table 4



across the nation. As illustrated in Charts 13 through 16 in Table 4, the banks in the affected area reported a significant spike in loan loss provisions for the first three quarters after the flood. However, the banks were reporting provisions consistent with pre-flood levels by the first quarter of 1998. The banks in the affected area also reported significantly higher levels of noncurrent loans relative to the comparison groups from the end of 1997 until year-end 2000. Nevertheless, beginning in the second quarter after the flood, the banks in the affected area reflected an increasing trend in the ratio of equity capital to total assets, and

the banks' return on average assets was virtually unchanged from prior periods.

### Conclusion

Historically, U.S. banks have proven to be resilient in the face of natural disasters. While the effects of four recent natural disasters on the performance of local banks were by no means uniform, in none of the cases did banks exhibit significant financial deterioration



## Bank Performance after Natural Disasters: A Historical Perspective

Table 5

<b>Compared to Recent Historical Precedents, Hurricane Katrina Will Bring Much Higher Economic Losses Along with Higher Levels of Disaster Assistance</b> (in billions of 2005 dollars)							
Natural Disaster	Date	Economic Loss			Economic Aid		
		Damage	Lost Output	Total Loss	Insurance Payments	Government Aid	Total Aid
Loma Prieta Earthquake	Oct. 1989	\$10.6	\$5.4	\$16.0	\$1.6	\$7.6	\$9.2
Hurricane Andrew	Aug. 1992	36.7	11.6	48.4	21.5	10.8	32.3
Northridge Earthquake	Jan. 1994	20.1	12.5	32.7	3.3	15.5	18.8
Grand Forks Flood	Apr./May 1997	N/A	N/A	2.0	N/A	1.0	>1.0 <sup>a</sup>
Hurricane Katrina	Aug. 2005	N/A	N/A	125–150	40–60	>100	>140–160 <sup>b</sup>

Note: N/A = not available.

<sup>a</sup> A breakdown of economic loss between damage and lost output is not available for the Grand Forks flood. Data on insurance payments also are not available; however, insurance costs were not extensive, because the majority of the flood damage was not covered in private homeowners' policies.

<sup>b</sup> The loss estimates for Hurricane Katrina are preliminary, and a breakdown between damage and lost output has not yet been quantified.

Sources: Moody's Economy.com, Risk Management Solutions, and Congressional Research Service.

in the years following the events. It is likely that an important factor in bank performance after disasters is that many losses are reimbursed either by insurance or government aid. Other factors may also be at work, including the ability of bank managers to adapt to challenging circumstances. In short, the banks in our review do not appear to be automatically consigned to adverse performance when natural disasters occurred.

This experience, however, may not be directly applicable to the case of Hurricane Katrina. First, the magnitude of the damage caused by Katrina is enormous compared to the losses associated with any of the previous recent disasters (see Table 5). In fact, the economic loss from Katrina may exceed one-and-one-half times the economic loss from the other four episodes combined. Offsetting these losses will be

massive inflows of insurance proceeds and government aid that will likely amount to two to three times the combined aid following the other four disasters. However, the long-term socioeconomic impact of Hurricane Katrina on the Gulf Coast economy remains difficult to predict. Even if environmental damage can be remediated and needed repairs can be promptly made to levees, roads, and public facilities, it remains to be seen how many people will return to New Orleans and how quickly business conditions will recover. For these reasons, the extent to which this historical experience will apply to Gulf Coast financial institutions may not be apparent for some time to come.

*Kristy Frame, Supervisory Examiner*  
*Lynne Montgomery, Senior Financial Analyst*  
*Christopher Newbury, Chief, Financial Analysis Section*

# Financial Characteristics of Banks Affected by Katrina

After Hurricane Katrina struck the **Gulf Coast** on August 29, 2005, the Federal Emergency Management Agency (FEMA) designated 49 counties and parishes in **Louisiana, Mississippi, and Alabama** as eligible for both individual and public assistance.<sup>1</sup> These jurisdictions, or initial “disaster counties,” include the most devastated coastal areas and contain the headquarters of 120 commercial banks and savings institutions insured by the Federal Deposit Insurance Corporation (FDIC). These are the institutions that are likely to experience the most significant impact from Katrina.

Most of these 120 institutions are relatively small community banks. About three-fourths of them have less than \$250 million in assets, and only five have more than \$1 billion in assets. They are overwhelmingly locally focused — almost three out of four (73 percent) obtain 100 percent of their deposits from within the disaster counties, and only five institutions obtain more than half their deposits from outside this area. Consequently, the outlook for this group of institutions is inextricably tied to the prospects of the economies within the initial disaster zone.

To get a sense of the relative strength and operating characteristics of financial institutions in the initial Katrina disaster counties, we can compare them with all small FDIC-insured institutions, defined here as those with less than \$1 billion in assets. Table 1 provides some comparative condition and performance ratios for the institutions in the Katrina disaster area and for small institutions nationwide. Financial institutions have three lines of defense against credit losses: earnings, reserves, and capital. The data in Table 1 show that, prior to the arrival of Hurricane Katrina, the banks and savings institutions in the Katrina counties had earnings and reserves that were above the national average, while their capital was lower.

The average return on assets, a basic yardstick of earnings performance, was five basis points higher for the Katrina institutions than for small institutions as a whole. Higher net interest margins, which represent the difference between the average yield that institutions earn on their interest-bearing assets and the average interest expense of funding those assets, were largely responsible for the better profitability. The ratio of

Table 1

FDIC-Insured Institutions Most Affected by Hurricane Katrina Compared to All Institutions with Less Than \$1 Billion in Assets (as of June 30, 2005)		
	Katrina Institutions	All Insured Institutions with Less Than \$1 Billion in Assets
Number of Institutions	120	8,262
Tier 1 Capital (% of total assets)	8.67%	9.91%
Return on Assets (year-to-date, annualized)	1.31%	1.21%
Net Interest Margin (year-to-date, annualized)	4.26%	4.09%
Noncurrent Loans (% of total loans)	0.61%	0.68%
Net Charge-Off Rate (year-to-date, annualized)	0.24%	0.17%
Reserves/Noncurrent Loans	215.9%	182.5%
Deposits/Assets	79.5%	80.1%
Loans/Assets	69.0%	66.4%

Note: Katrina institutions include all FDIC-insured commercial banks and savings institutions headquartered in 3 counties in Alabama, 30 parishes in Louisiana, and 15 counties in Mississippi.  
Sources: Federal Deposit Insurance Corporation (FDIC) Quarterly Reports of Condition and Thrift Financial Reports.

<sup>1</sup> Based on FEMA designations as of September 8, 2005.

## Financial Characteristics of Banks Affected by Katrina

reserves to noncurrent loans shows that the Katrina institutions held more in reserves for every \$1.00 of noncurrent loans than the national average (\$2.16 versus \$1.83).<sup>2</sup> The average capital level for the Katrina group was more than 1 percentage point lower than the average for all small institutions, but 119 of the 120 institutions in the Katrina group met or exceeded the highest federal regulatory capital standards as of June 30.

A comparison of loan portfolios reveals additional differences between institutions in the Katrina group and other small institutions (see Charts 1 and 2). For instance, the Katrina group is less exposed to real estate loans than other small institutions — residential and commercial real estate loans compose less than two-thirds of all loans in the Katrina group, as opposed to more than three-quarters of all loans at small institutions nationwide. This difference is attributable to the lower relative level of commercial real estate loans at Katrina institutions. Another difference is that commercial and industrial loans and nonmortgage loans to consumers are relatively more prominent in the loan portfolios of Katrina institutions than in the portfolios of small institutions in general. It is likely that weaknesses in commercial loans will take longer to fully emerge than weaknesses in residential mortgages and other loans to individuals.

The area devastated by Hurricane Katrina encompasses a wide variety of markets; because of that market diversity, many different outcomes among FDIC-insured institutions are to be expected. It will take many months, if not years, before the full impact on banks and thrifts becomes clear.

Ross Waldrop, Senior Banking Analyst

Chart 1

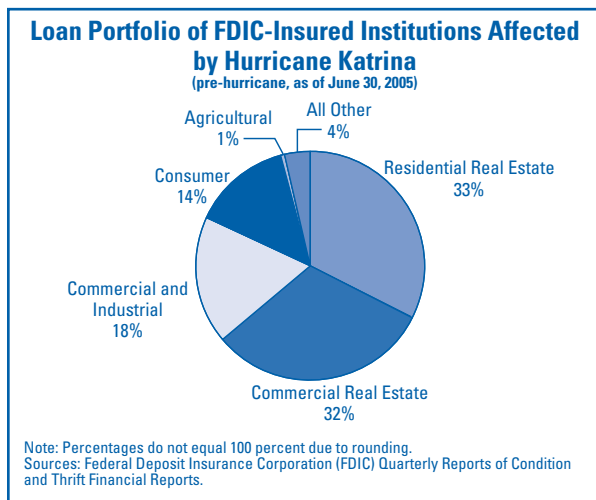
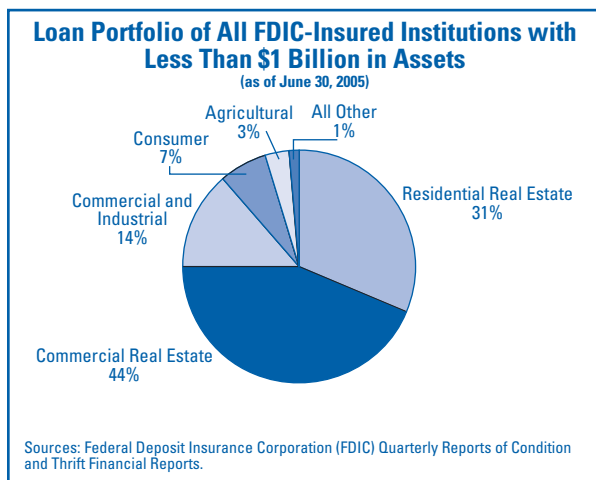


Chart 2



**Update:** As of November 25, 2005, third quarter 2005 financial reports were available for 118 of the 120 FDIC-insured institutions headquartered in the initial Katrina disaster area. These reports showed an increase in aggregate loan loss provisioning and higher net loan losses, as well as strong growth in assets and deposits during the third quarter. More than half of the group (69 institutions, or 58 percent) reported lower earnings than in the second quarter. Twelve institutions reported net losses for the quarter, compared to six in the second quarter. Only 48 institutions (41 percent) reported higher loan loss provisions, while 46 reported higher net loan losses. Total assets and total deposits of the group increased by \$3.1 billion (5.1 percent) and \$2.9 billion (6.2 percent), respectively.

<sup>2</sup> Noncurrent loans are those that are 90 days or more past due or in nonaccrual status.

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# Unique Challenges Face FDIC-Insured Institutions after Katrina

During the last days of August and the first days of September 2005, the nation and the world were shocked to realize the magnitude of the destruction wrought by Hurricane Katrina. In those early hours and days, the humanitarian crisis facing **Gulf Coast** residents took center stage while the realization grew that the region's recovery would be a long and complex process. From the earliest stages of the crisis, bankers and their regulators were in motion behind the scenes to meet another set of logistical and financial challenges facing the financial services providers of the region. Like other sectors, the region's banking industry was hit hard by the storm and will be dealing with the aftereffects for some time to come. This article discusses some of the short- and long-term challenges facing banks and thrift institutions affected by Katrina and describes some of the measures undertaken by bankers and regulators to maintain the availability of vital banking services in the Gulf Coast region.

The landfall of Katrina during the early hours of August 29 created a broad swath of destruction across southern **Louisiana, Mississippi, and Alabama**. The number of customers without electrical power immediately after the storm has been estimated at around 2.7 million. While service was restored to about 80 percent of these customers within three weeks, it may take up to six months to restore power to all of the eastern **New Orleans** area.<sup>1</sup> The loss of electrical power and the pre-storm evacuation of many coastal areas would have been enough to cause several days of disruption in the operations of local financial institutions even if the recovery from the storm had proceeded smoothly. However, it quickly became clear that this would not be the typical hurricane recovery scenario. Communities all along the Mississippi Gulf Coast had been essentially flattened by the storm. Moreover, the breaching of the levees in New Orleans and the storm surge along the Gulf Coast led to unprecedented flooding, which forced the prolonged displacement of as many as 1 million people.

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*Like other sectors, the region's banking industry was hit hard by the storm and will be dealing with the aftereffects for some time to come.*

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These conditions contributed not only to what will be a long and complex recovery process for the region but also to significant short- and long-term difficulties for local financial institutions. In the sections that follow, we discuss both the short-term operational challenges facing local financial institutions and the longer-term issues related to credit quality and franchise value.

## **Banks Faced Immediate Operational Challenges**

One of the Federal Deposit Insurance Corporation's (FDIC) first priorities at the outset of the crisis was to initiate contact with a list of 280 potentially affected institutions to ascertain their operational status.<sup>2</sup> Despite the ongoing evacuations and the near-total disruption to communications in the region, FDIC supervisors, working with other federal and state banking regulators, were able to contact personnel from 260 of the institutions by September 3, four days after Katrina made landfall. Of those 260 institutions, some 70 (27 percent) were reporting that their operations had been partially or totally disrupted by the storm or the subsequent flooding. The remaining 20 institutions on the initial list were successfully contacted by September 7. As of December 9, some 100 institutions continued to report offices affected by Katrina, with 98 branches still closed.<sup>3</sup>

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<sup>1</sup> Leslie Williams, "6 Months for Power, Nagin Says," *Times-Picayune*, November 8, 2005.

<sup>2</sup> See "Financial Characteristics of Banks Affected by Katrina" by Ross Waldrop in this issue for a detailed description of institutions located within the Katrina disaster zone.

<sup>3</sup> For the most recent information on the number of financial institutions affected by the hurricanes, visit the FDIC Web site at [www.fdic.gov/hurricane/index.html](http://www.fdic.gov/hurricane/index.html).

The immediate operational difficulties reported by these institutions tended to fall into two main categories: (1) the inability to operate branch offices and automated teller machines (ATMs) and (2) difficulty in processing electronic transactions. Of these two problems, restoring branch offices and ATMs proved to be the most vexing. By one estimate, more than 1,000 ATMs were damaged or destroyed during the storm and the subsequent flooding.<sup>4</sup> Many branch and ATM facilities located in New Orleans were underwater for up to a month, and some were inoperable for more than two months after the flooding. Where paper checks stored in bank offices or ATMs were destroyed, banks have had to use alternative means to process those items.<sup>5</sup> Contaminated cash and coins have had to be shipped to the Federal Reserve Banks of **Atlanta** and **Dallas** for replacement. In other cases, especially those along the Mississippi Gulf Coast, bank office facilities were nearly or completely destroyed. Even where the physical locations had been accessible, institutions faced staffing problems due to the displacement of key personnel from their homes.

Despite the scale of the destruction, there were few, if any, institutions that lost every single office because of Katrina. Many banks have resumed operations using facilities that were not severely damaged and have found creative ways to provide services to areas where facilities were heavily damaged. As of December 9, some 46 temporary banking locations were operating in Louisiana, Mississippi, **Texas**, and Alabama. In several other cases, a number of institutions have been sharing existing facilities to minimize disruption to customers in their local areas.<sup>6</sup> Although regulators typically require institutions to file applications before moving branch locations or establishing new branches, these requirements have been temporarily waived in order to assist the recovery effort. It will likely take months to recover and rebuild bank properties damaged by the hurricane and the subsequent flooding. In the meantime, every institution in the region has found some

way to reestablish a physical presence that allows it to interact with its customers.

By contrast, although the effects on electronic payment systems were initially severe, they also proved to be relatively short-lived. In the immediate aftermath of the storm, the closing of bank offices and the interruption of electrical and telecommunications services effectively prevented many institutions from accepting or sending electronic transactions. The disruptions affected the ability to conduct both customer transactions through electronic funds transfer systems and wholesale funds transfers through Automated Clearing House (ACH) systems.

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*Every institution in the region has found some way to reestablish a physical presence that allows it to interact with its customers.*

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Data backup and disaster recovery plans — strengthened because of the challenges of Y2K and September 11 — provided the means for most institutions to quickly resume accepting and sending electronic transactions within the first two weeks after Katrina. In the case of ACH transactions, bankers and Federal Reserve officials worked to establish alternative lines of communication that allowed institutions to conduct wholesale settlements. For the electronic networks that connect the region's ATM machines, transactions had to be conducted in some cases on a "stand-in" basis, whereby cardholders could access their accounts immediately and verifications were made after the fact.

The speed with which electronic transactions were restored in the region is testament to the effective disaster preparedness procedures that were put in place well before Katrina struck. Properly designed electronic recordkeeping and transactions processes have been invaluable in restoring financial services quickly to the devastated Gulf Coast communities. Many damaged or destroyed brick-and-mortar facilities, in contrast, are still unusable and may take many more months to repair.

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<sup>4</sup> "Katrina Hit Hard, but Payments Pros Hit Back," *Electronic Payments Week* 2, no. 35, September 13, 2005.

<sup>5</sup> Items that had been filmed prior to contamination are being processed under the Check 21 Act, and destroyed checks can be created and collected using the Automated Clearing House system under the Destroyed Check Entry format. However, checks rendered illegible by the flooding must be reissued by the payer. See: [www.frb-services.org/FedFlash/2005/100105/FedFlash100105\\_sup.pdf](http://www.frb-services.org/FedFlash/2005/100105/FedFlash100105_sup.pdf).

<sup>6</sup> For example, see: FDIC, "Banks Opening More Branches in Areas Affected by Hurricane Katrina, Helping Communities Rebuild," news release, September 14, 2005, [www.fdic.gov/news/news/press/2005/pr9005.html](http://www.fdic.gov/news/news/press/2005/pr9005.html).

### Atypical Patterns of Financial Transactions

In addition to the complications of simply reopening their doors to business, some banks located in the path of Katrina have experienced unusual transactional demands from their customers. In many cases, those who needed to buy emergency supplies or make temporary repairs to their homes spent significantly more in the weeks immediately following the storm than they otherwise would have. To the extent that electrical and communications outages limited their ability to use credit and debit cards at the point of sale, many of these customers also demanded higher-than-usual amounts of cash with which to conduct their business. These liquidity demands also extended to bank customers who were displaced to other parts of the country or experienced interruptions to their normal sources of income.

Since the earliest stages of the crisis, bankers and regulators have worked to ensure that institutions had sufficient access to cash and the utmost flexibility to manage their balance sheets and meet the transactional needs of their customers. During the first week of the crisis, the Federal Reserve Bank of Atlanta instituted extended hours for discount window lending and made special deliveries of cash to meet demand. Also from the start, the FDIC and other regulators encouraged bankers to undertake measures to minimize impediments for customers trying to access their funds. These measures included:

- Waiving ATM fees and surcharges,
- Increasing daily ATM cash withdrawal limits,
- Easing restrictions on check-cashing for customers and non-customers,
- Waiving overdraft fees as a result of paycheck interruption, and
- Waiving late fees due to late payments caused by interrupted mail service.

Bankers have been highly successful in facilitating transactions for the vast majority of their customers during the crucial early stages of the recovery process. Still, bank customers will no doubt continue to experience inconveniences due to branch closings and damaged ATMs.

Maintaining cash for customer needs remains a top priority for these institutions, but over time they may actually face challenges related to excess liquidity. As insurance proceeds and other forms of disaster assistance flow into the region, customers can be expected to accumulate large balances at their banks until those funds can be put to use in the rebuilding effort. During this stage of the recovery, banks could accumulate more deposits than they would under normal conditions. Such an inflow of funds could cause these institutions to grow their balance sheets faster than usual, forcing them to make some important strategic decisions with regard to how they manage their asset portfolios. All things being equal, this balance sheet growth could also have the effect of lowering capital and reserve ratios. Although these developments are expected to be manageable, they are indicative of the unusual fluctuations in transactional demand that Gulf Coast financial institutions will experience during the recovery period.

### Credit Quality Represents a Long-Term Concern

From a financial standpoint, the biggest source of uncertainty and concern for Gulf Coast financial institutions is the effect of the post-hurricane damage on credit quality. As described in an accompanying article in this issue, local institutions — like the industry as a whole — have recently had some of the lowest rates of problem loans on record.<sup>7</sup> However, the massive economic dislocations caused by Katrina will expose many local institutions to higher levels of credit losses going forward.

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*From a financial standpoint, the biggest source of uncertainty and concern for Gulf Coast financial institutions is the effect of the post-hurricane damage on credit quality.*

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<sup>7</sup> See “Financial Characteristics of Banks Affected by Katrina” in this issue.

## Unique Challenges Face FDIC-Insured Institutions after Katrina

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The economic toll of the storm is unprecedented in U.S. history. Revised estimates by the **Red Cross** show that around 210,000 homes have been destroyed or seriously damaged in Louisiana, compared to 28,000 homes destroyed by Hurricane Andrew in 1992.<sup>8</sup> In the immediate vicinity of New Orleans, it is estimated that 50,000 homes will need to be demolished, while 500,000 automobiles were flooded and 50,000 boats were displaced from their moorings.<sup>9</sup> The **Congressional Budget Office** estimated that between 280,000 and 400,000 jobs were lost initially as a result of the storm, although many displaced workers are finding employment in other areas of the country.<sup>10</sup> **Risk Management Solutions** (RMS) of Newark, California, estimated that the total economic losses related to the storm will exceed \$125 billion, at least 50 percent of which are attributable to the New Orleans flood.

As estimates of Katrina-related losses have risen over time, so have estimates of financial assistance that will be forthcoming to help offset those losses. The assistance will come from local, state, and federal governments, insurers, private charities, and other sources. RMS estimates that the cost to insurers is likely to range between \$40 billion and \$60 billion, of which some \$15 billion to \$25 billion will be incurred as a result of the flooding in New Orleans. Although standard policies purchased by homeowners and businesses exclude flood damage, policies purchased under the National Flood Insurance Program will cover these losses up to certain limits. Flood insurance policies are generally required on mortgaged properties located within flood plain areas designated by the Federal Emergency Management Agency (FEMA), although it is likely that the extent of the flooding in both Mississippi and Louisiana went well beyond those flood plain areas. Preliminary estimates of the percentage of residential and commercial properties covered by federal flood insurance range from 30 to 60 percent in affected regions of Louisiana to only about 10 percent in Mississippi.<sup>11</sup> However, based on the legal actions that have already been brought with regard to

insurance coverage, it may ultimately be up to the courts to resolve the issue of exactly how much damage will be covered by standard homeowners and business insurance policies.<sup>12</sup>

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### *The total amount of federal assistance could ultimately exceed \$100 billion.*

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Billions of dollars in federal disaster assistance have also begun flowing to the region. By September 12, two emergency supplemental bills had been enacted that will ultimately provide some \$62.3 billion in federal assistance. In a prime-time speech delivered on September 15, President Bush called for a range of federal assistance to households and businesses and the rebuilding of devastated areas. The proposal calls for “worker recovery accounts” of up to \$5,000 per person and the creation of a Gulf Opportunity Zone that would provide assistance to local businesses as they rebuild. On November 1, the president named FDIC Chairman Donald E. Powell as coordinator of the federal rebuilding effort in the Gulf Coast region.

While federal aid is already flowing through several channels, it will take time to fully disburse the funds. The **Congressional Budget Office** estimated that by the end of fiscal 2006, FEMA will spend approximately \$30 billion, or around half of the total funds that have been approved for its use. By December 7, more than 1.7 million persons had registered for FEMA assistance, some \$4.2 billion in direct assistance had been paid to Katrina victims, and another \$8.3 billion had been paid out to policyholders under the National Flood Insurance Program.<sup>13</sup> Meanwhile, the U.S. Department of Labor is operating three programs to offer immediate income assistance to workers displaced by Hurricane Katrina, including standard unemployment insurance, disaster unemployment insurance for those not eligible for the standard program, and the provision of temporary jobs funded through National Emergency Grants.

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<sup>8</sup> Red Cross Disaster Assessment in Louisiana, October 6, 2005.

<sup>9</sup> Ceci Connolly, “A Rude Return to ‘Big Easy’: City Warns Residents of Possible Hazards,” *Washington Post*, September 17, 2005.

<sup>10</sup> Douglas Holtz-Eakin, Congressional Budget Office Director, testimony before the Committee on the Budget, U.S. House of Representatives, October 6, 2005, [www.cbo.gov/showdoc.cfm?index=6684&sequence=0](http://www.cbo.gov/showdoc.cfm?index=6684&sequence=0).

<sup>11</sup> “Hurricane Katrina Could End Up as Biggest Insured Loss Ever,” *National Underwriter*, September 5, 2005.

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<sup>12</sup> Risk Management Solutions, “Hurricane Katrina: Profile of a Super Cat,” October 2005, [www.rms.com/Publications/KatrinaReport\\_LessonsandImplications.pdf](http://www.rms.com/Publications/KatrinaReport_LessonsandImplications.pdf).

<sup>13</sup> FEMA, “By the Numbers: First 100 Days — FEMA Recovery Update for Hurricane Katrina,” news release, December 6, 2005, [www.fema.gov/news/newsrelease.fema?id=21078](http://www.fema.gov/news/newsrelease.fema?id=21078).

Since September, Congress has passed seven additional measures that address issues ranging from student loan repayments to supplemental unemployment and health care benefits, bringing total approved federal assistance up to almost \$71 billion. With several other bills pending, the total amount of federal assistance could ultimately exceed \$100 billion.<sup>14</sup>

Given the offsetting forces of massive economic losses and the large-scale inflows of insurance proceeds and federal aid, a few preliminary conclusions can be reached about credit losses at FDIC-insured institutions. First, there will be upward pressure on credit losses from recent historically low levels of problem loans. This pressure will be the greatest on smaller institutions that conduct business mostly or exclusively located in the hardest-hit areas. Second, the vast amounts of financial assistance flowing to the region will eventually go a long way toward mitigating the anticipated credit losses in affected institutions' portfolios of mortgage loans, consumer loans, and commercial loans. Third, it will take some time, perhaps several months, to ascertain the full extent of the damage to individual borrowers as well as the assistance that will be available to them.

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### *An important long-run consideration for banks in the Gulf Coast region is the impact Katrina will have on their long-term earnings capacity, or their franchise value.*

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In light of the foregoing conditions, regulators and lenders have embraced a policy of flexibility toward borrowers in the early stages of the crisis. As has been the case in previous natural disasters, the FDIC and other banking regulators moved quickly at the outset to encourage institutions to work with borrowers to help them overcome hardships as the region gets back on its

feet. For example, an FDIC Financial Institution Letter (FIL) released on August 29, 2005, advised institutions to consider a range of policies to assist borrowers temporarily affected by the storm:

*The FDIC is encouraging banks to work constructively with borrowers who, because of the natural disaster, are experiencing difficulties beyond their control. Extending repayment terms, restructuring existing loans or easing terms for new loans, if done in a manner consistent with sound banking practices, can contribute to the health of the community and serve the long-term interests of the lending institution.*<sup>15</sup>

Because of the prolonged nature of the recovery process and the uncertain timing of insurance and disaster-relief payments, the federal banking agencies issued further regulatory guidance on November 30 encouraging lenders to continue to work with borrowers affected by Katrina.<sup>16</sup> While acknowledging that individual deferral programs and workout arrangements would vary across institutions, the November 30 guidance advocates providing flexible payment terms at the end of the deferral period so that all deferred interest and principal do not become due immediately when payments resume.

These flexibilities are intended to avoid creating unnecessary financial hardships on borrowers whose long-term prospects remain good, but who will experience significant difficulties in the near term. To put it another way, given the severity and suddenness of the economic hardships associated with Katrina, a policy of flexibility can ensure that lenders minimize the hardships on borrowers in the short run and maximize the ability of borrowers to repay over the long run. As disaster assistance continues to flow into the region, banks and their borrowers will be striving to return to a more normal footing where borrowers meet monthly debt obligations and banks effectively manage problem loans.

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<sup>14</sup> For example, Louisiana Representative Richard H. Baker has introduced legislation (called "The Baker Bill") to create a Louisiana Recovery Corporation that would channel federal assistance to property owners and promote residential redevelopment in the state.

<sup>15</sup> FDIC, "Regulatory Relief: Steps to Help Rebuild Areas Affected by Hurricane Katrina," FIL-85-2005, August 29, 2005, [www.fdic.gov/news/news/financial/2005/fil8505.html](http://www.fdic.gov/news/news/financial/2005/fil8505.html).

<sup>16</sup> The November 30 guidance issued by the Federal Financial Institutions Examination Council (FFIEC) can be found at: [www.ffiec.gov/press/pr113005.htm](http://www.ffiec.gov/press/pr113005.htm).



### Effects on Long-Term Franchise Value Remain Uncertain

Another important long-run consideration for banks in the Gulf Coast region is the impact Katrina will have on their long-term earnings capacity, or their franchise value. In general, the franchise value of local financial institutions is determined by a number of factors that are closely connected to the economic vitality of a region. These factors include the amount of savings generated in the region, loan demand generated by local households and businesses, and the propensity of the region to experience swings in economic activity that could adversely affect credit quality.

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*If there were any initial expectations that the recovery from Hurricane Katrina would be straightforward or proceed quickly, the developments of the first 100 days proved otherwise.*

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The long-run franchise value of financial institutions located in the path of previous natural disasters has generally been unaffected. In fact, the inflow of disaster assistance and the large-scale rebuilding effort that typically follow a destructive storm can usually be expected to generate demand for financial institutions to manage funds and finance rebuilding activities.<sup>17</sup> However, the massive dislocations associated with Hurricane Katrina introduce a measure of uncertainty into the long-run picture, at least for some local communities. It is evident that given the enormous economic importance of the Gulf Coast region to the U.S. economy and the commitment of federal, state, and local officials, the Gulf Coast economy will undergo a strong recovery. At the same time, at the local level it remains difficult to know which areas can be rebuilt and which areas may face overwhelming obstacles (such as environmental contamination) that may make it preferable to rebuild

elsewhere. In addition, the effect of insurance payments and federal disaster payments on the local economies of the Gulf Coast will be determined to some degree by whether evacuees decide to return to the region. To the extent that evacuees choose to permanently relocate outside the region, this financial assistance may not provide a significant stimulus to these local economies.<sup>18</sup>

### A Long Road Ahead

If there were any initial expectations that the recovery from Hurricane Katrina would be straightforward or proceed quickly, the developments of the first 100 days proved otherwise. Even as the floodwaters receded and the cleanup began, it became clear that there were serious environmental concerns — including the need to deal with mold and hazardous chemicals — that will need to be addressed before significant rebuilding can take place. Another pressing issue will be the need to ensure that necessary repairs and improvements are made to the protective levees that surround New Orleans. Even with the availability of billions of dollars in financial assistance, it could take years to fully repair the damage that has been done to businesses, residential neighborhoods, and public facilities in the most severely affected areas. In the meantime, a critical shortage of housing is making it difficult to bring back the workers needed to begin the rebuilding process. The realization of these difficulties could itself be a deterrent to the return of evacuees from New Orleans, many of whom may choose to permanently relocate outside the region.

Some progress is being made in resolving these uncertainties, which should prepare the way for future redevelopment. On December 15, the Administration pledged an additional \$1.5 billion to strengthen the levees surrounding New Orleans and to build “the best levee system known in the world,” according to the federal coordinator, Donald Powell.<sup>19</sup> Additional incentives for local business investment are expected to be contained in federal assistance programs

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<sup>17</sup> See “Bank Performance after Natural Disasters: A Historical Perspective” by Kristy Frame, Lynne Montgomery, and Christopher Newbury in this issue for a review of recent U.S. natural disasters and the effects on FDIC-insured institutions.

<sup>18</sup> New Orleans Mayor Ray Nagin recently estimated that the city could stand to regain only half of its pre-Katrina population. See: Manuel Roig-Franzia and Ceci Connolly, “Night and Day in New Orleans,” *Washington Post*, November 29, 2005.

<sup>19</sup> Joby Warrick and Peter Baker, “Bush Pledges \$1.5 Billion for New Orleans; Proposal Would Double Aid from U.S. for Flood Protection,” *Washington Post*, December 16, 2005.

## **In Focus This Quarter: A Preliminary Assessment of Recent Hurricane Effects**

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currently under development. For example, the proposed Gulf Opportunity Zone would provide for tax relief and loans amounting to some \$2.3 billion over the next five years for businesses and entrepreneurs that invest in hard-hit local economies in Louisiana, Mississippi, and Alabama. An essential element in this process will be the resilience and

perseverance of local financial institutions. As the Gulf Coast economy becomes revitalized, it will take a sustained effort of these local institutions and their regulators to help ensure that recovery funds are managed efficiently and invested wisely.

*Richard A. Brown, Chief Economist*

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# Hurricane Damage to Oil and Gas Infrastructure Translates into Higher and More Volatile Energy Prices

Within just 27 days in 2005, two major hurricanes, Katrina and Rita, struck the **Gulf Coast** of the United States, leaving significant destruction in their wake. As gasoline prices soared above \$3 per gallon, Americans were reminded of the importance of Gulf of Mexico ports to the U.S. energy sector and our economy. In fact, the Gulf Coast region provides more than 47 percent of the nation's oil refining capacity, about 29 percent of the country's oil production, and 20 percent of its natural gas output.

## Energy Prices Were Already Rising before the Hurricanes

Strong global demand had been pushing energy prices higher even before the supply shock caused by Hurricanes Katrina and Rita. For example, the price of west Texas intermediate oil, or WTI, had reached nearly \$60 per barrel in July 2005, up from \$50 in May and \$43 in December 2004. Natural gas prices also were on the rise when the hurricanes struck due to strong overall demand and the effects of industrial customers switching to natural gas power as oil prices surged. The prices of refined oil products were pressured by both the demand and supply sides, as refineries operated with little excess capacity. In January 2005, the price of regular gasoline averaged \$1.83 per gallon, but by July it had risen to \$2.29 per gallon. The nation's energy sector had little slack to cushion the supply impact of the storms in the Gulf this summer and fall.

## The Physical Gulf Coast Energy Infrastructure Was Badly Damaged by Katrina and Rita

The physical infrastructure exposed to major storms in the Gulf included offshore oil and gas production and drilling rigs and platforms, an extensive network of pipelines, oil refineries, and the Louisiana Offshore Oil Port, which handles almost 11 percent of the nation's oil imports. Much of the infrastructure sustained at least some damage from the hurricanes.

**Oil and Natural Gas Production.** Nearly all Gulf of Mexico (GOM) oil and natural gas production was

shut down as a safety precaution when Hurricane Katrina approached the Gulf Coast. Production can generally be brought back online after the equipment is inspected and deemed safe for normal operation. Because of damaged platforms, pipelines, and refineries, however, more than half of GOM oil production and 35 percent of GOM gas production remained "shut in" three weeks after Katrina's landfall.<sup>1</sup> On September 23, with Hurricane Rita threatening, the industry again shut in about 99 percent of GOM oil production and about 72 percent of its gas production. As of November 10, seven weeks after Rita, about half of GOM oil and more than 40 percent of GOM gas was still shut in (see Chart 1). As recently as December 5, about a third of the Gulf's oil production and 27 percent of the region's natural gas output remained shut in. The elevated shut-in figures are due to damage to both the region's offshore infrastructure and its onshore gas processing plants, refineries, and pipelines.

**Oil and Gas Platforms and Rigs.** There were 1,300 oil and gas platforms in the path of Hurricane Katrina and about 1,600 platforms in the path of Rita. Of those, Katrina destroyed 46 and seriously damaged 20, while Rita destroyed 66 and seriously damaged 32 (see Chart 2). According to *Department of the Interior* Secretary Gale Norton, "108 of the older 'end of life' facilities not built to Minerals Management Service's upgraded design standards were destroyed. They account for only 1.7 percent of the Gulf's oil production and 0.9 percent of the Gulf's gas production."<sup>2</sup> A much smaller number of drilling rigs were damaged or destroyed by these storms. The cumulative shut-in oil production for the period of August 26, 2005, to December 2, 2005, was equivalent to 17.7 percent of the yearly production of oil in the GOM. The comparable figure for natural gas production is 13.7 percent.

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<sup>1</sup> Oil and gas wells and mines that are "shut in" are capable of production but temporarily closed for repair, cleaning, or inaccessibility to a market.

<sup>2</sup> U.S. Department of the Interior, "Interior Secretary Gale Norton Reports on Gulf of Mexico Energy Status," news release, October 4, 2005, [www.mrm.mms.gov/Intro/PDFDocs/20051004.pdf](http://www.mrm.mms.gov/Intro/PDFDocs/20051004.pdf).

# In Focus This Quarter: A Preliminary Assessment of Recent Hurricane Effects

Chart 1

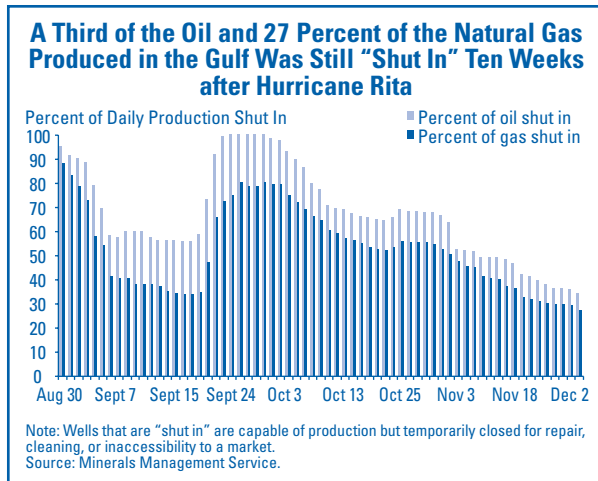


Chart 2

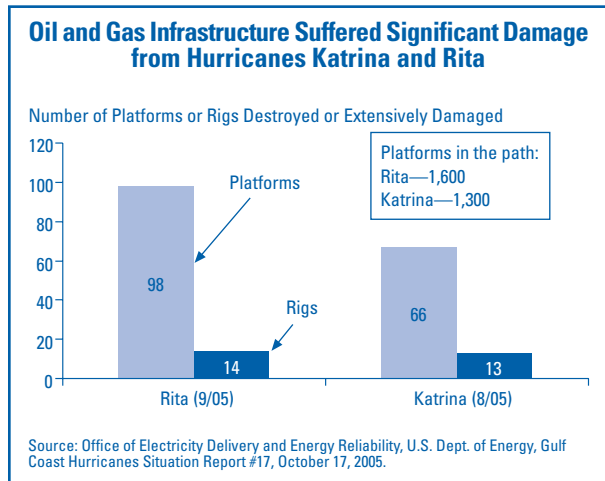


Chart 3

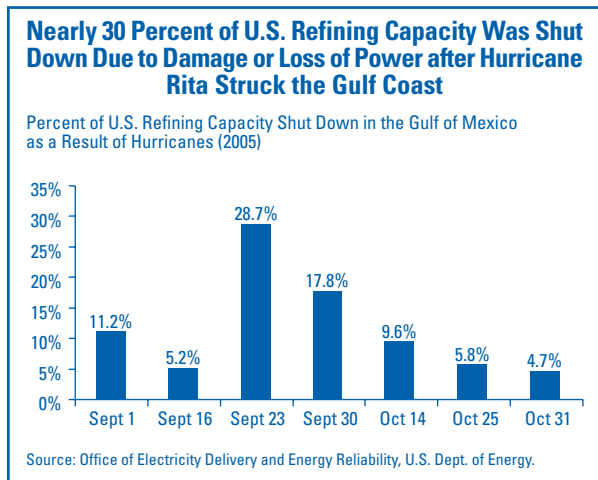


Chart 4

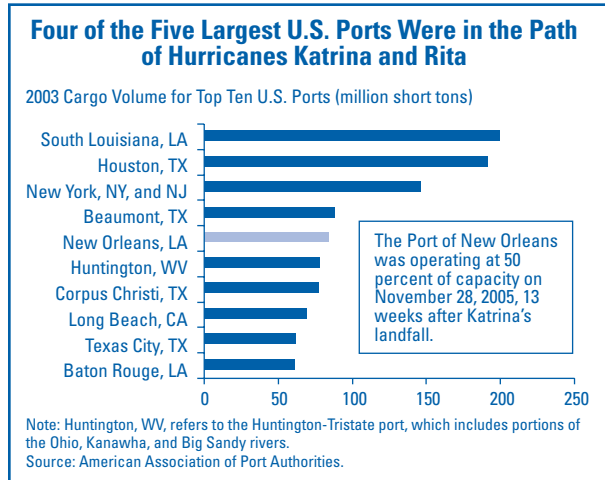


Chart 5

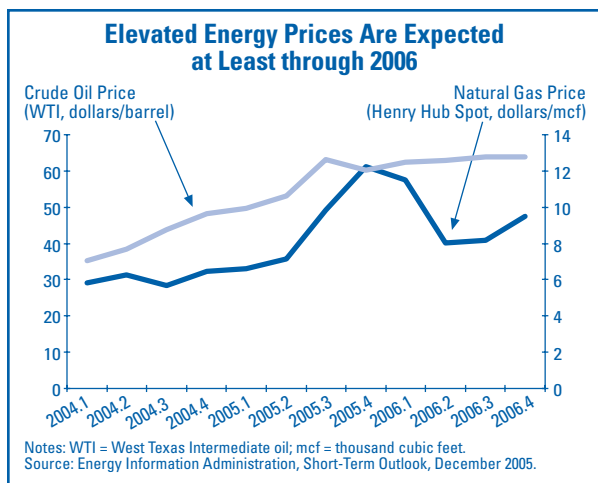
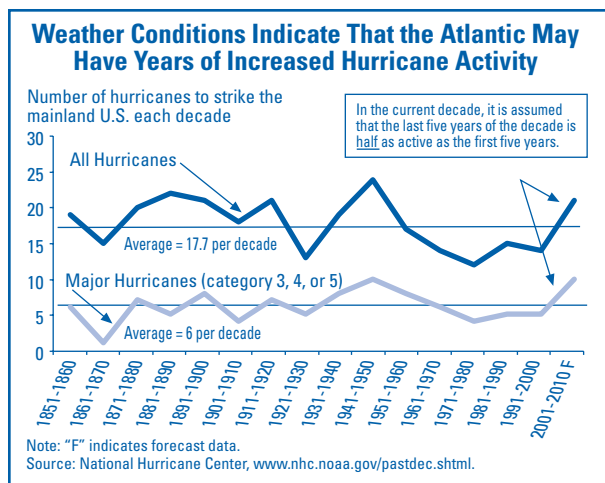


Chart 6



**Refineries.** A number of oil refineries were damaged by the hurricanes. Refineries sustained wind damage, flooding, and loss of power. After Katrina, more than 11 percent of U.S. refining capacity was shut down as a result of the hurricane, which sent the price of gasoline and other refined products soaring. By September 16, several refineries were brought back online, reducing the capacity shut down to about 5 percent. However, Hurricane Rita had the potential for striking the **Houston/Galveston** area, where a number of important oil refineries are located; as the region braced for a major storm, the threat of Rita shut down nearly 30 percent of the nation's refining capacity (see Chart 3). More than a month after Rita's landfall, nearly 5 percent of the country's oil refining capacity was still offline.

**Port of New Orleans.** Wharfs, cranes, and terminals of the Port of New Orleans, the fifth-largest port in the United States, sustained extensive damage, which was estimated at \$1.6 billion from Hurricane Katrina (see Chart 4). Although operating at just 50 percent capacity during the week of November 28, the **Port of New Orleans** estimates that it will be operating at 80 to 100 percent of capacity by March 2006.

**Energy Prices.** The prices of refined oil products responded so dramatically to the effects of the hurricanes because of the lack of excess capacity at the nation's refineries. Data provided by the **Energy Information Administration** indicate that on August 30, the day after Katrina's landfall, the price of reformulated regular gasoline on the New York Mercantile Exchange jumped more than 20 percent. The price of oil (WTI) rose 3.9 percent, and the price of natural gas for October delivery increased 4.7 percent. Although

most energy prices have retreated from the highs prompted by the hurricanes, they remain at historically high levels.

### Energy Prices Are Likely to Remain High

High energy prices are likely to be with us at least through 2006 (see Chart 5). The Energy Information Administration's December 6, 2005, **Short-Term Energy Outlook** forecasts oil prices (WTI) to be in the range of \$60 to \$64 per barrel through 2006. Natural gas prices are also expected to remain higher next year, though down from the peak experienced in fourth quarter 2005.

A greater concern is the possibility that hurricane activity in the Gulf of Mexico is on the upswing. Experts indicate that a "confluence of optimal ocean and atmosphere conditions has been known to produce increased tropical storm activity in multi-decadal (20- to 30-year) cycles. Because of this, NOAA [the **National Oceanic and Atmospheric Administration**] expects a continuation of above-normal seasons for another decade or perhaps longer."<sup>3</sup> (See Chart 6.)

If NOAA is correct, energy prices could remain high and volatile for years to come. If so, the economy will continue to find ways to adapt, but the adjustment process could be costly. Bankers and other business managers will need to incorporate the prospect of many more years of high and volatile energy prices into their plans.

*Stephen C. Gabriel, Senior Financial Economist*

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<sup>3</sup> National Oceanic and Atmospheric Administration, Department of Commerce, "NOAA Raises the 2005 Atlantic Hurricane Season Outlook," *NOAA Magazine*, August 2, 2005, [www.noaanews.noaa.gov/stories/2005/s2484.htm](http://www.noaanews.noaa.gov/stories/2005/s2484.htm).

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## The Effects of Katrina and Rita on the U.S. Economy and Consumers

The loss of economic activity and elevated energy prices associated with Hurricanes Katrina and Rita created significant headwinds for the U.S. economy during the third quarter. Despite these sources of drag, the **Bureau of Economic Analysis** estimated that the U.S. economy grew at a 4.3 percent annual rate during the quarter (see Chart 1). This performance exceeded the expectations of many observers, including contributors to a post-Hurricane Katrina **Blue Chip Economic Indicators** forecast that called for growth of 3.4 percent. The hurricanes had notable effects on aggregate economic activity during the third quarter, with the primary ripple effects being elevated energy prices coinciding with a decline in consumer confidence. However, the brunt of the impact was concentrated in the **Gulf Coast** region, which experienced declines in industrial output and considerable job losses.<sup>1</sup>

U.S. labor market growth weakened noticeably during September and October, dragged down by job losses in the Gulf Coast region. During both months, nonfarm payrolls were essentially unchanged, but the unemployment rate remained relatively steady around 5 percent, near its lowest level since 2001. As of early December, the **Bureau of Labor Statistics** estimated that 562,000 initial jobless claims had been filed as a result of Hurricanes Katrina and Rita (see Chart 2). These claims were concentrated primarily in **Louisiana** and **Mississippi**, and to a lesser extent in **Alabama**. However, nationwide initial claims have since fallen back to near pre-Katrina levels. Furthermore, the labor market rebounded in November with nonfarm payrolls expanding by 215,000, their largest gain in four months.

During September, consumer confidence fell to its lowest level in two years and remained subdued during October before recovering slightly in November (see Chart 3). High energy prices, coupled with ongoing geopolitical concerns and uncertainties about the economic impact of the hurricanes, weighed on the consumer's evaluation of both current and future conditions. For example, a **CNN/USA Today/Gallup** poll taken in mid-September (about two weeks after Hurri-

cane Katrina's landfall) indicated that four out of five Americans were concerned that Katrina would negatively impact their finances. A **CBS/New York Times** poll taken around the same time showed that 73 percent expected their taxes to increase as a result of the storm.

Real personal disposable incomes declined during August, driven mostly by a significant drop in business owners' income resulting from Katrina. Total private industry wages also came under pressure but still managed to grow during August and September. One factor that helped support private industry wages was the decision of some companies with operations in the Gulf Coast region to either keep employees on their payrolls (even if they were unable to work) or to relocate them to undamaged worksites.

Despite continued growth in incomes and the payments associated with federal disaster relief, inflation-adjusted U.S. consumer spending declined during both August and September (see Chart 4).<sup>2</sup> Much of this decline was attributable to a sharp drop in auto sales that began before Katrina, as well as a sluggish back-to-school shopping season (see Chart 5). While September's dip in spending can be explained by the adverse effects of the hurricanes on employment and consumer confidence, more recent indicators point to a rebound in spending. Retailers reported that, nationwide, same-store sales increased 4.4 percent in October and 3.5 percent in November, according to the **International Council of Shopping Centers**. Early holiday sales were modest, propped up by discounters like **Wal-Mart** that offered a series of price cuts for "Black Friday," the day after Thanksgiving. As a result, retail analysts who were initially concerned that the holiday season could be much weaker than initially forecast, now expect that the discounts and price wars may help perk up holiday spending.

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<sup>1</sup> Taken together, the states of Louisiana and Mississippi make up less than 2 percent of total U.S. economic activity.

<sup>2</sup> Estimates of total insured losses from Hurricanes Katrina and Rita exceeded \$60 billion. In addition, it was projected that the federal government would provide between \$150 billion and \$200 billion in assistance to hurricane victims.

# The Effects of Katrina and Rita on the U.S. Economy and Consumers

Chart 1

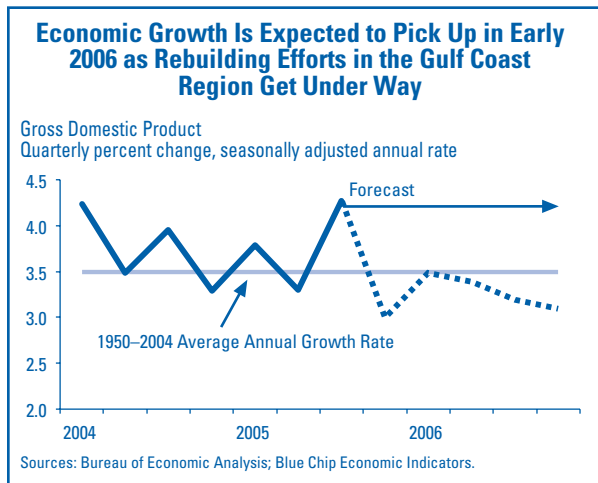


Chart 2

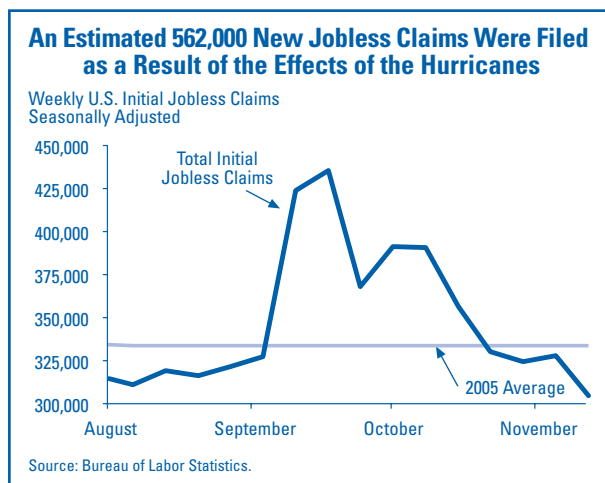


Chart 3

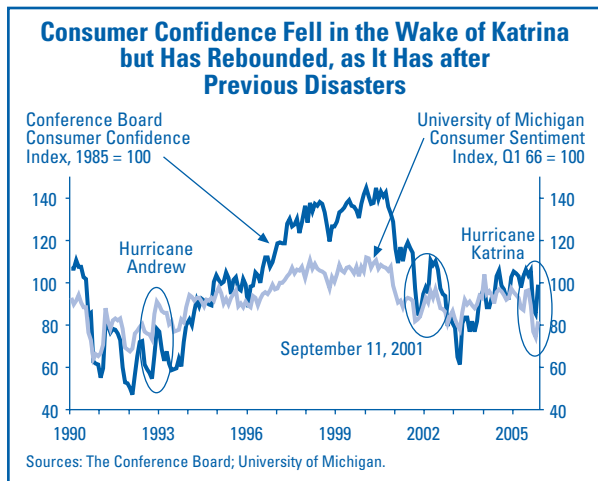


Chart 4

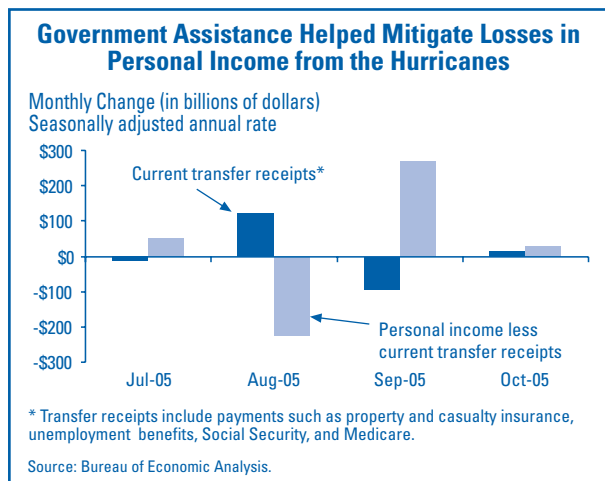


Chart 5

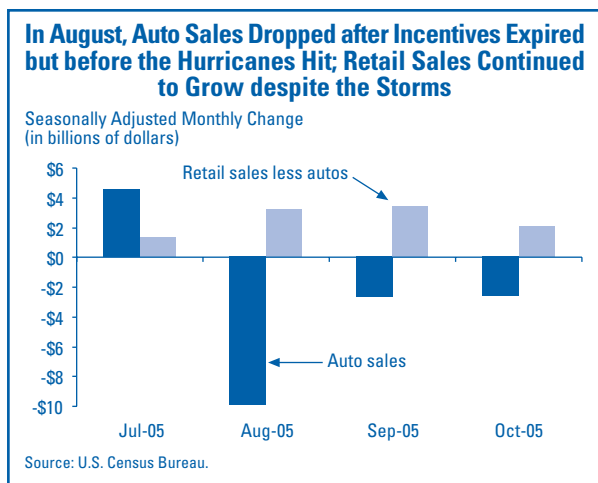
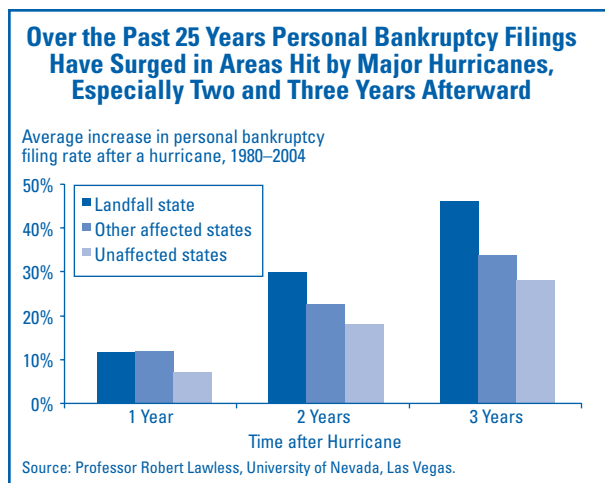


Chart 6



## In Focus This Quarter: A Preliminary Assessment of Recent Hurricane Effects

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As of early fall, nationwide measures of household loan performance remained relatively strong. However, Hurricane Katrina hit hardest in an area of the nation that historically has lagged the nation in terms of poverty rates and credit performance. Accordingly, many households in the region were somewhat vulnerable to financial shocks. For example, one-fifth of Louisianans were already living below the poverty line before Katrina. The average credit score in New Orleans was 633 during second quarter 2005 and the 60-day delinquency rate was 5.4 percent.<sup>3</sup> These figures compared with an average national credit score of 662 and a delinquency rate of 4.2 percent. Given the relative financial weakness of many Gulf Coast households at the time of the hurricanes, any resulting consumer credit deterioration could be more pronounced than if the storms had hit a less vulnerable subset of the population. This risk may be mitigated to the extent that

these borrowers tended to hold smaller average loan balances than borrowers in most other regions.

Louisiana officials report that they are expecting an increase in the number of personal bankruptcies filed in the state.<sup>4</sup> Historical research shows that over the past 25 years, states where major hurricanes made landfall have seen bankruptcy filings subsequently increase 50 percent faster than filings in states not affected by the storms (see Chart 6). The largest deterioration is typically seen two to three years after the hurricanes hit, suggesting that Louisiana and Mississippi may continue to experience increased credit quality problems during the next few years.

*Susan Burhouse, Financial Economist*  
*Nathan H. Powell, Financial Economist*

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<sup>3</sup> TransUnion LLC. TransUnion's credit score is the TransRisk score, derived from TransUnion's Trend Database. All data received were depersonalized and aggregated from consumer credit reports.

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<sup>4</sup> Associated Press, "Expected Surge in Katrina-Related Bankruptcies May Come Too Late for Some," *WTNH.com*, October 5, 2005, [www.wtnh.com/Global/story.asp?S=3941308](http://www.wtnh.com/Global/story.asp?S=3941308).



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## FDIC Outlook

Summer 2004

### Special Feature This Quarter

In Person: An Interview with Bank One Chief Economist Diana Swank

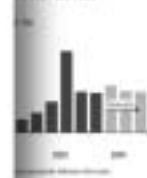
Richard Brown interviews Bank One Chief Economist and the Outlook about the housing market, consumer credit, and the outlook for business in the United States and abroad.



Bank One Chief Economist Diana Swank. Photo: Frank the Banker/Robert H. Harbeck.

### Outlook in Charts

Projected to Grow at About a 4% Pace This Year



Nationally, solid economic growth is expected for the rest of 2004, which bodes well for regional economies. More than two years after the recession's end, job-growth strength is strengthening. Investments, manufacturing job-hires continue to weigh down overall job growth in some of the FDIC's regions.

While the FDIC's outlook for banks remains positive, the industry faces some challenges. Among other things, rising interest rates may affect some customers in high-risk lending segments and could cause some to curtail lending activities when prices have been steady recently. But the FDIC's high concentrations of commercial real estate—particularly in the Sun Belt and Atlanta—remain soundly underwritten. Overall, the banking industry is well positioned to meet these challenges, with assets at near record levels. See page 14.

### Is Quarter

Is Marlier to Banks?

Based on major changes in revenue and very large institutions. For them, net interest margin as a performance ratio. See page 22.

recovery. However, in a rising interest rate environment, higher sensitivity yields may not offset the loss in bond values. See page 20.

### Implications of Rural Depopulation in the Great Plains for Community Banks

Bankers focused on depopulating rural counties reported lower growth rates than banks in growing rural counties. However, some banks have employed strategies to remain successful, despite the unfavorable demographic trends unfolding around them. See page 26.

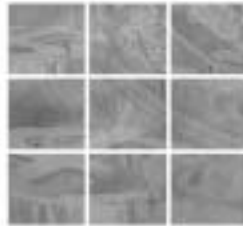
### Are Strong Gains since 2000—

...are the income inequality between bond yields and market rates, given the recession had supported strong aggregate bank profitability throughout the recession and subsequent

## FDIC Banking Review

Options for Pricing Federal Deposit Insurance

Evaluating the Vulnerability of Banks and Thrifts to a Real Estate Crisis



### FDIC

Assessing the Banking Industry's Exposure to an Implicit Government Guarantee of GSEs

March 1, 2004

The recent statements about mortgage profits at Fannie Mae and Freddie Mac's underperformance in 2003 have raised the capital benefits that the GSEs enjoy. GSE status: Large concentrations of investments that are directly insured in some situations to view the banking system impacts that the GSEs enjoy.

Effect on GSE

Effect on GSE

Effect on GSE

## FDIC State Profile

### Alabama

Alabama's total banking assets are \$10.1 billion.

Alabama's total banking deposits are \$10.1 billion.

Alabama's total banking loans are \$10.1 billion.



## FDIC Quarterly Banking Profile

### Industry Earnings for Quarterly Full-Year Results

Lower Expenses for Real Estate, Higher Investment Revenue

Net Interest Margins Higher Than Average

Assets of Insured Institutions Rise More Than 20 Percent

The House Continues to Set Record

Net Income From Regional League Bankers

FDIC's 2003 Performance

FDIC's 2003 Performance

FDIC's 2003 Performance

FDIC's 2003 Performance

FDIC's 2003 Performance

FDIC's 2003 Performance

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FDIC's 2003 Performance

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