

## HIGHLIGHTS

### Home Prices and Hurricanes

The recent devastation brought by Hurricane Katrina to several Gulf States raises the question: “How will house prices be affected in that area of the country?” Anecdotal indications suggest that, at least for some less-affected communities, the influx of displaced citizens may elevate prices significantly.<sup>1</sup> Properties in the New Orleans area that escaped significant damage may also experience high appreciation rates.<sup>2</sup>

Although Hurricane Katrina’s destruction is unique in many ways, the effects of Hurricane Andrew—America’s second most destructive Hurricane<sup>3</sup>—on real estate prices in Florida may provide some insight into price effects that may result. Because the HPI data used in this release contain limited information on Katrina’s immediate impact, a direct assessment of the overall housing market impact of Katrina is not yet possible.

On August 24, 1992, Hurricane Andrew struck Florida, causing significant damage in a number of communities in Miami-Dade County (which now comprises the “Miami-Miami Beach-Kendall, FL Metropolitan Statistical Area Division (MSAD)). The storm’s radius of destruction was relatively small and much of the devastation was concentrated in southern portions of the county, including the communities of Florida City and Homestead.<sup>4</sup> In fact, little destruction occurred in the northern half of the county.<sup>5</sup> Damage to the north in Broward County (the Forth Lauderdale-Pompano Beach-Deerfield Beach, FL MSAD) was limited.<sup>6</sup>

Given the concentrated nature of the storm, to investigate the storm’s effect on housing market activity and prices, this analysis divides Miami-Dade County into three areas. A “hardest hit” area is identified, containing homes with zip codes in the southern-most section

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<sup>1</sup> See “Baton Rouge’s Real Estate Boom: Families Uprooted by Katrina Looking for a Place to Live in State Capital, Sending Prices Surging” (available at: [money.cnn.com/2005/09/11/real\\_estate/baton\\_rouge\\_boom/](http://money.cnn.com/2005/09/11/real_estate/baton_rouge_boom/)). See also: Perkins, Broderick, “Baton Rouge’s Overnight Bubble,” Realty Times, September 14, 2005 (available at: [realtymtimes.com/rtcpages/20050914\\_batonrouge.htm](http://realtymtimes.com/rtcpages/20050914_batonrouge.htm)) and Korade, Matthew, “Post-Katrina Real Estate Boom” The Anniston Star (available at: [www.msnbc.msn.com/id/9648387/](http://www.msnbc.msn.com/id/9648387/))

<sup>2</sup> See Thomas, Greg, “Unflooded Areas Poised for Real Estate Boom,” *The Times-Picayune*, September 17, 2005 (available at: [www.wjmc.org/katrina/InTheNews/TimesPicayune09172005.pdf](http://www.wjmc.org/katrina/InTheNews/TimesPicayune09172005.pdf)).

<sup>3</sup> See [www.nhc.noaa.gov/pastcost.shtml](http://www.nhc.noaa.gov/pastcost.shtml) and [fafds.floodcert.com/images/main/Hurricane%20Katrina%20Fact%20Sheet%20PUBLIC%20v%202.pdf](http://fafds.floodcert.com/images/main/Hurricane%20Katrina%20Fact%20Sheet%20PUBLIC%20v%202.pdf).

<sup>4</sup> See Smith, Stanley “Demography of Disaster: Population Estimates After Hurricane Andrew” (available at: [http://www.bebr.ufl.edu/Articles/PRPR\\_1996.pdf](http://www.bebr.ufl.edu/Articles/PRPR_1996.pdf)).

<sup>5</sup> See Smith, Stanley “Demography of Disaster: Population Estimates After Hurricane Andrew” (available at: [www.bebr.ufl.edu/Articles/PRPR\\_1996.pdf](http://www.bebr.ufl.edu/Articles/PRPR_1996.pdf)). Professor Smith reports that “North Kendall Drive” was designated as the upper end of the “Hurricane Area.” North Kendall Drive, which lies in zip code 33176, is an east-west thoroughfare that divides the metropolitan area into two roughly equal parts. The distance between zip code 33176 and zip code 33018, which lies near the upper boundary of the metropolitan area, is roughly 17 miles. The distance between zip code 33176 and zip code 33034, which lies at the southern end of the metropolitan area, is also approximately 17 miles. (For zip code maps of the Miami-Dade area, see [www.florida-business-data.com/maps/zip-codes/Miami-Dade-County.htm](http://www.florida-business-data.com/maps/zip-codes/Miami-Dade-County.htm). A zip code-to-zip code distance estimator can be found at: [www.melissadata.com/Lookups/zipdistance.asp](http://www.melissadata.com/Lookups/zipdistance.asp)).

<sup>6</sup> See [www.hurricanecity.com/city/fortlauderdale.htm](http://www.hurricanecity.com/city/fortlauderdale.htm) and Smith, Stanley “Demography of Disaster: Population Estimates after Hurricane Andrew” (available at: [http://www.bebr.ufl.edu/Articles/PRPR\\_1996.pdf](http://www.bebr.ufl.edu/Articles/PRPR_1996.pdf)).

of that metropolitan area.<sup>7</sup> A small set of zip codes just north of the hardest hit area are then identified and are described simply as the region “adjacent” to the hardest hit area.<sup>8</sup> The remainder of the zip codes in the county comprise a “less-affected” area and are in the northern-most parts of Miami-Dade County.

The usual HPI methodology employs quarterly data. Unfortunately, because Hurricane Andrew hit Florida in late August, midway through the third quarter, the use of quarterly data does not lend itself to a convenient analysis of the immediate after-effects of the hurricane. To remedy the problem, this analysis employs *trimester* data; the first trimester of the year includes January through April; May through August comprise the second trimester, and the third trimester includes September through December. Because the entirety of the third trimester of 1992 occurred *after* Hurricane Andrew struck Florida, the trimester system provides a useful way of studying the hurricane’s effects. Because it includes four months of data for a given analysis period (rather than three months used in quarterly analyses), it also adds some precision to the estimation of the index.

Figure 1 shows home sales activity during the early 1990s for the various areas in Miami-Dade County. For the hardest-hit zip codes, the effects of the Hurricane are quite apparent; the most recent HPI data provided to OFHEO by the Enterprises show that a sharp decline in the number of purchase transactions occurred in the third trimester of 1992 relative to the second trimester. Although some portion of the decline likely stems from seasonal factors,<sup>9</sup> the 28 percent decline in purchase transactions relative to the second trimester is much larger than one would expect given historical seasonal patterns. As is evident in the graph, other areas within Miami-Dade County did not experience similar declines in purchase transaction activity.

Figure 2 shows appreciation patterns over time for the three zip code groupings within Miami-Dade County. The graph plots appreciation rates relative to the same trimester the year before.

In all of the areas, the graph suggests that price appreciation rates were positively affected by Hurricane Andrew. Homes in the hardest-hit area experienced relatively stable appreciation rates in the first eight months after the hurricane, but then saw a rather dramatic acceleration in appreciation thereafter. Prices in the other parts of Miami-Dade County saw similarly impressive increases in appreciation rates. For all of the areas, appreciation rates grew by roughly 5-6 percentage points in the 20 months following the hurricane. After about two years, appreciation patterns in all of the regions fell to rates close to pre-hurricane levels.

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<sup>7</sup> The set of “hardest hit” zip codes includes: 33156, 33176, 33186, 1196, 1158, 33189, 33157, 33177, 33187, 33170, 33190, 33030, 33031, 33032, 33033, 33034, 33035, and 33039.

<sup>8</sup> The set of “adjacent” zip codes includes: 33143, 33173, 33183, 33193, 33155, 33165, 33175, 33185, 33146, and 33133.

<sup>9</sup> Over the 1983-1991 period, the number of purchases in the third trimester was, on average, nine percent below the number reported for the second trimester.

Figure 3 reveals that the uptick in appreciation rates during the period immediately following Hurricane Andrew was a localized phenomenon. When compared with appreciation rates in other urban areas in Florida,<sup>10</sup> including Broward and Palm Beach counties, post-hurricane appreciation rates in the Miami-Dade County were impressive. In the four years before the hurricane struck, appreciation rates in the county exceeded those in the rest of urbanized Florida by an average of approximately 2.7 percentage points. In the following two years, that difference grew to an average of about 4.8 percentage points.<sup>11</sup>

Figures 4 and 5 study whether Hurricane Andrew's effect on home prices varied across different price strata. One might expect that communities with more expensive homes *vis-a-vis* the hardest hit area experienced smaller growth in appreciation rates than comparably priced areas. Displaced residents moving to nearby communities presumably sought comparably priced neighborhoods when conducting their home searches.

Figure 4 reveals that comparably-priced and some more expensive areas in Miami-Dade County seem to have experienced accelerating appreciation. Even much more expensive zip codes--those having median prices more than 50 percent above prices in the hardest hit areas--seem to have benefited, albeit at a somewhat diminished level.<sup>12</sup>

Figure 5 studies relative appreciation patterns in Broward County (the Ft. Lauderdale-Pompano Beach-Deerfield Beach, MSAD), whose real estate market was also reportedly affected by the hurricane.<sup>13</sup> The graph suggests that, if the hurricane caused any upward price pressure in that county, the effects were only felt at the lower end of the price spectrum. In fact, appreciation rates in that segment of the county's real estate market were already increasing steadily prior to the hurricane and thus it is difficult to distinguish the hurricane's effects from ongoing price trends.

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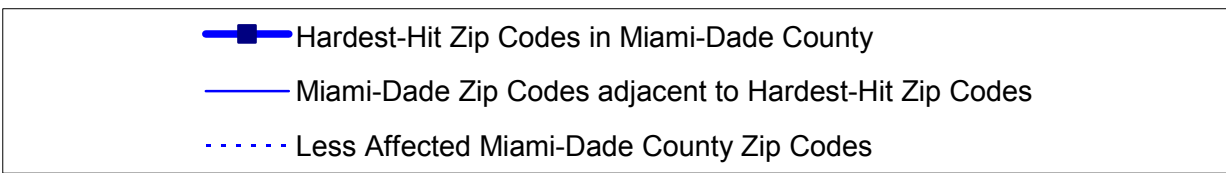
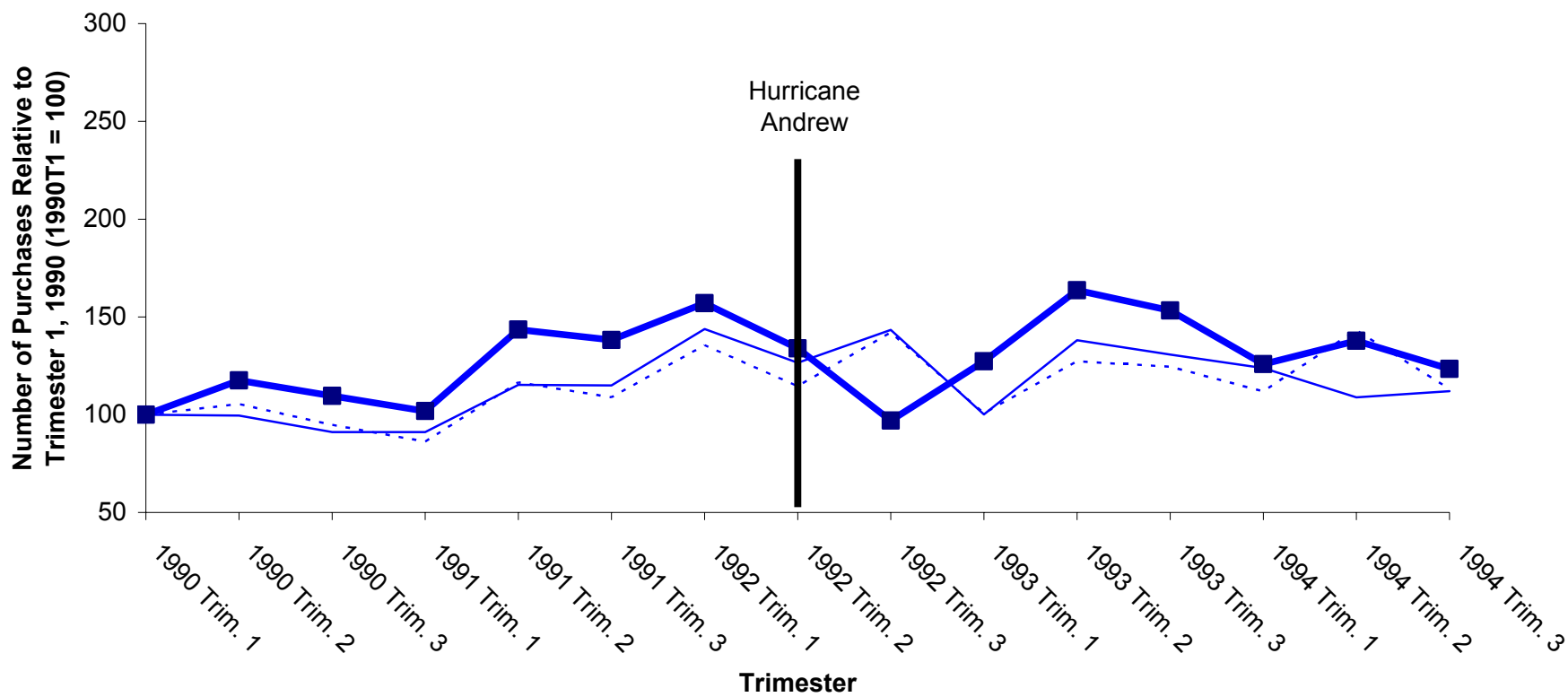
<sup>10</sup> Consistent with convention, "urban areas" are defined as those within metropolitan statistical areas.

<sup>11</sup> The general finding that Miami-Dade properties had high relatively high appreciation rates does not change if Broward and Palm Beach Counties are removed from the "rest of urbanized Florida" comparison group.

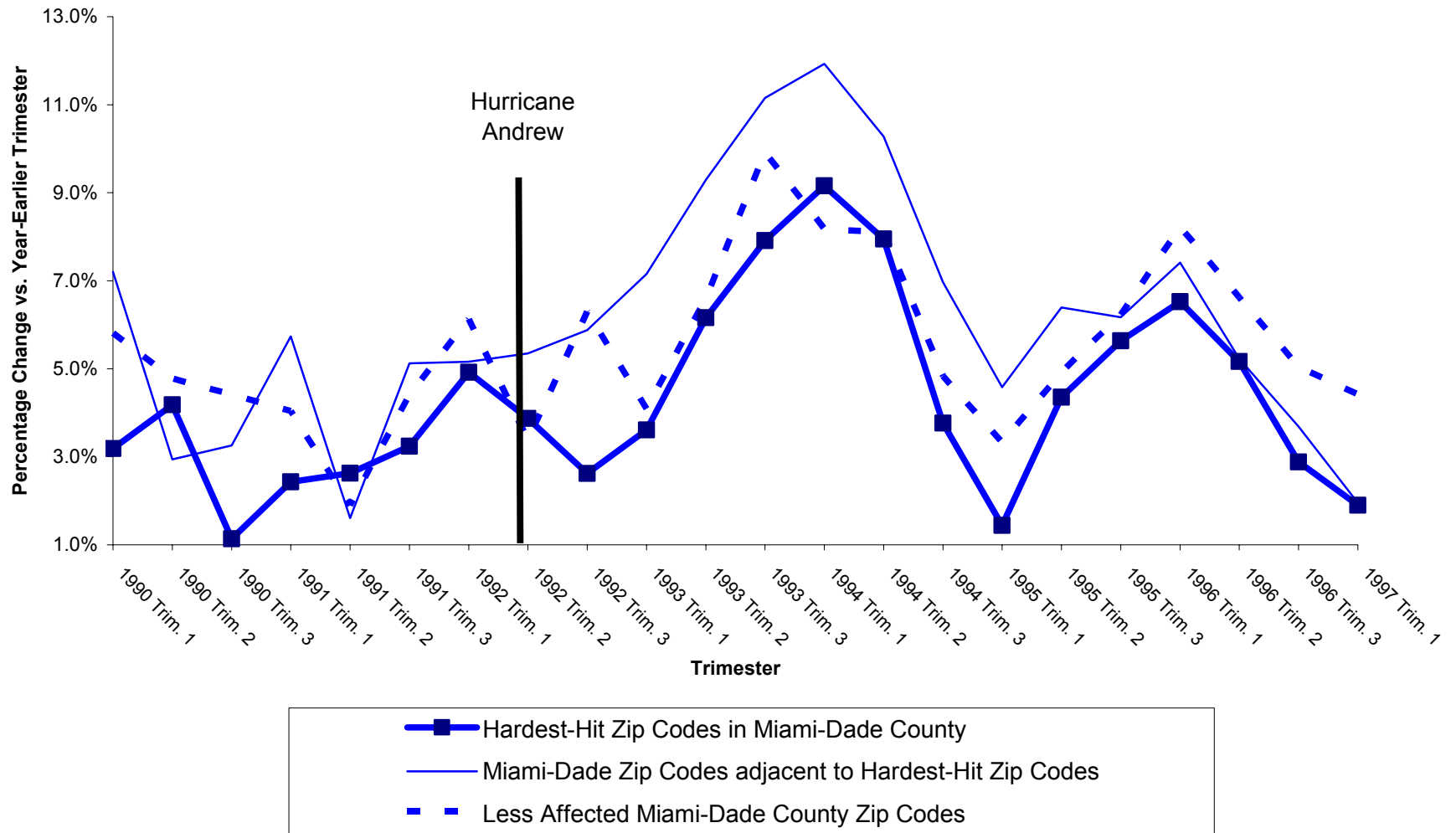
<sup>12</sup> Median home prices for each zip code are calculated using homes with mortgages originated in 1991.

<sup>13</sup> See, for example, Benedick, Robin, "Hurricane Andrew Left Legacy of Higher Housing Costs," Sun-Sentinel.Com, August 20, 2002 (available at: [www.sun-sentinel.com/news/weather/hurricane/sfl-sbuildaug20.0.5553762.story](http://www.sun-sentinel.com/news/weather/hurricane/sfl-sbuildaug20.0.5553762.story)).

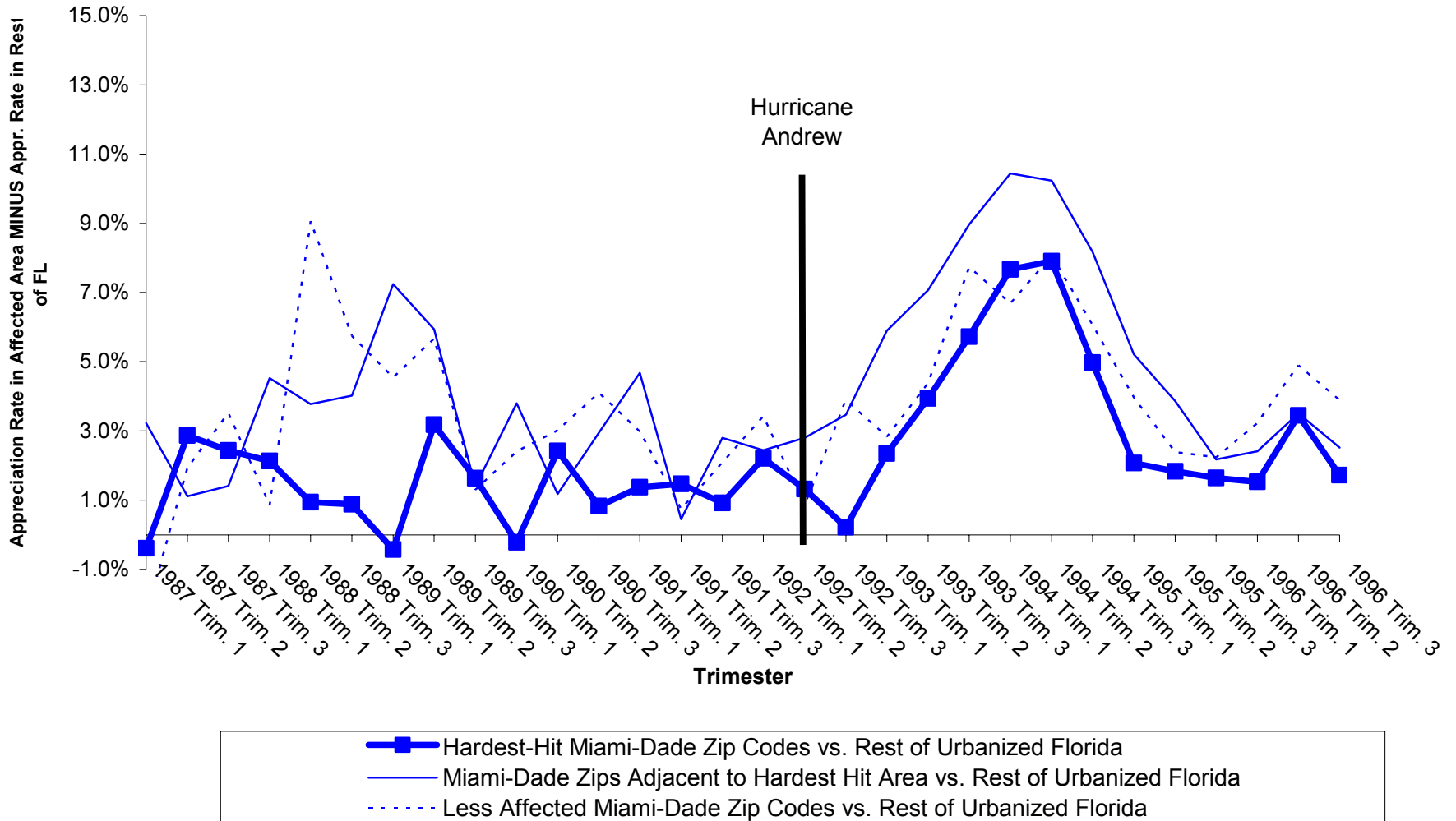
**Figure 1**  
**Relative Purchase Activity by Trimester**  
*Miami-Dade County (Miami-Miami Beach-Kendall, FL MSAD)*



**Figure 2**  
**Appreciation Rates in**  
***Miami-Dade County (Miami-Miami Beach-Kendall, FL MSAD)***

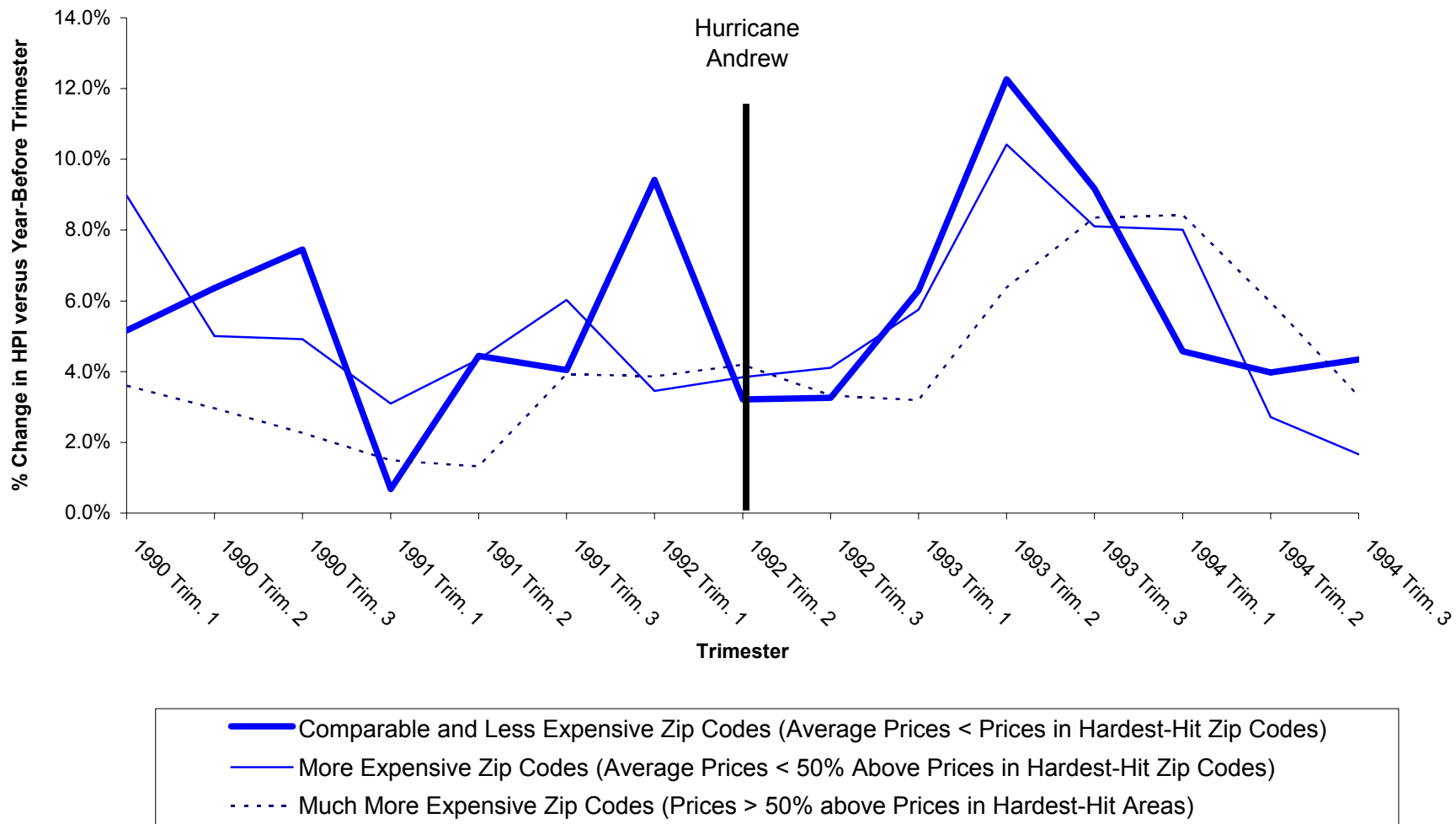


**Figure 3**  
**House Prices Appreciation Rates in Affected**  
**Zip Codes vs. Rest of Florida**



**Figure 4: Appreciation Rates in *Miami-Dade County*  
(*Miami-Miami Beach-Kendall, FL MSAD*)**

By Relative Price Levels



**Figure 5: Appreciation Rates in Broward County  
(Ft. Lauderdale-Pompano Beach-Deerfield Beach MSAD)**

By Relative Price Levels

