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Policy Development & Research

Analysis of the Caguas, Puerto Rico Housing Market

As of October 1, 2002



ECONOMIC RESEARCH

U.S. Department of Housing and Urban Development

Foreword

This analysis has been prepared for the assistance and guidance of the U.S. Department of Housing and Urban Development (HUD) in its operations. The factual information, findings, and conclusions may be useful also to builders, mortgagees, and others concerned with local housing conditions and trends. The analysis does not purport to make determinations with respect to the acceptability of any particular mortgage insurance proposals that may be under consideration in a particular locality or the housing market area.

The factual framework for this analysis was developed by HUD's Economic and Market Analysis Division as thoroughly as possible on the basis of information available on the "as-of" date from both local and national sources. As such, they may be modified by subsequent developments. We wish to express our appreciation to those industry sources and government officials who provided data and information on local economic and housing market conditions.

This analysis takes into consideration changes in the economic, demographic, and housing inventory characteristics of the market area during three periods: 1990 to 2000, 2000 to the as-of date of the analysis ("Current date"), and from the Current date to a "Forecast date." The analysis presents counts and estimates of employment, population, households, and housing inventory as of the 1990 and 2000 censuses and as of the Current and Forecast dates. For the purposes of this analysis the forecast period is 24 months.

The prospective demand expressed in the analysis should not be construed as a forecast of building activity; rather, it presents the prospective housing production that would maintain a reasonable balance in demand-supply relationship given the market's condition on the as-of date of the analysis. This analysis was prepared by Mr. Juan J. Fernández, the Division's Field Economist in the Caribbean Field Office, based on fieldwork conducted in October 2002. If there are questions regarding the findings and conclusions of the analysis, he may be reached at (787) 766-5400, extension 2035.

Housing Market Area

The Caguas Housing Market Area (HMA) comprises the municipalities of Caguas, Cayey, Cidra, Gurabo, and San Lorenzo, which together form the Caguas Primary Metropolitan Statistical Areas (PMSA). The Caguas PMSA jointly with the San Juan and Arecibo PMSAs constitute Puerto Rico's Consolidated Metropolitan Statistical Area. Caguas is located in east central Puerto Rico approximately 20 miles south of San Juan.

The Caguas HMA has strong economic ties with neighboring urban centers like San Juan, Bayamon, Guaynabo, and Trujillo Alto in the San Juan metropolitan area. The opening of the PR-52 expressway connecting San Juan and Caguas in late 1979 provided ready access to the Caguas HMA from surrounding metropolitan and nonmetropolitan cities, improving considerably the region's economic base over the years. Recent announcements of continued investment in highway construction and reconstruction in the HMA over the next few years, together with plans for a future extension of the San Juan Urban Commuter Train to Caguas, will further improve the infrastructure of the region and facilitate its continued economic development.

Summary

The economic base of the Caguas HMA has become less and less dependent on agricultural activities, turning to manufacturing, services, trade, and other nonagricultural employment sectors. Recently, total nonagricultural employment growth has declined, except for the services and government employment sectors, which have been the components of the economy that are showing strength. Nonagricultural employment is expected to show growth during the forecast period due to the infusion of new jobs in the pharmaceutical sector, which has become the backbone of manufacturing in the HMA. Caguas, as the principal city within the HMA, is home to most of the commercial, industrial, and residential development that has taken place since 2000.

The Caguas HMA has strong economic ties with the neighboring San Juan-Bayamon metropolitan area. Approximately 35 percent of the residents of the HMA commute to work in the San Juan metropolitan area. Because of its status as a bedroom community of the San Juan area, the HMA continues to experience population and household growth despite slow growth in most employment sectors of the HMA. Housing construction has remained relatively healthy, showing steady growth in recent years. Housing production, especially sales housing, has been mostly responsible for this growth and demand for new housing has remained generally healthy during the last 24 months, aided by all-time low mortgage interest rates, and relatively lower housing production costs.

Low renter income levels in the area discourage the production of new nonsubsidized rental units because marketable rents are generally not sufficient to support land and construction costs for large-scale projects. Historically, demand for market-rate rentals has been met by conversion of single-family units to rentals, construction of second-story

apartments above existing single-family dwellings, and by small-scale construction of walk-up apartment projects containing 4 to 6 units per building.

The demand-supply conditions in the HMA's sales and rental housing markets can be described as balanced overall. Demand for new sales housing has been healthy and is expected to continue to show moderate growth during the forecast period, with somewhat softer conditions reported in the higher-priced segment of the sales market. Additional rental housing demand will continue to be met by the sources noted above and by subsidized rental programs.

During the 2-year forecast period demand for new sales housing is estimated at 1,550 units annually while demand for new rental housing is estimated at 220 rental units a year.

Economy of the Area

Total employment in the HMA increased at a healthy average annual rate of 3,010, or 3.7 percent during the 1990s. During 2001, however, employment decreased by 2,219. Data for the 12-month period ending September 2002 indicate employment has surpassed the 2000 level and is 2,369, or 2.2 percent higher than the preceding 12-month period. See Table 1 for HMA labor force and employment trends since 1992.

The economic base of the housing market area has historically become less dependent on agricultural activities, turning to manufacturing, services, trade, and other nonagricultural employment sectors. During the 1990s total nonagricultural employment grew at an average annual rate of 1,540, or 2.8 percent. The HMA's nonagricultural employment peaked at 72,800 in 2000 before falling to 72,100 during 2001. For the 12-month period ending September 2002 nonagricultural employment averaged 71,233.

Recent trends show manufacturing employment reaching its highest level of 15,900 in 1997, falling to 14,400 in 1998, and partially recovering to 15,300 in 2001. During the current 12-month period ending September 2002 manufacturing employment has managed to roughly maintain its 2001 levels. About two-thirds of the employment in manufacturing is in nondurable goods. The 2000 Puerto Rico Department of Labor's Annual Census of Manufacturing Industries identified a total of 218 manufacturing plants within the HMA with a total payroll of 14,788 employees earning an average hourly rate of \$9.42 per hour.

Nonmanufacturing employment has been growing at a faster pace than manufacturing employment, except for a recent slight decline from 57,142 to 56,000 between the current 12-month period ending September 2002 and the comparable period a year ago. It is expected that this trend, away from goods-producing employment such as manufacturing and construction, will continue during the forecast period.

Total nonagricultural employment is expected to increase during the next 2 years to a total of 72,000. This increase is consistent with the anticipated gains from new job

commitments to take place during the forecast period. The strong presence of the pharmaceutical industry will ensure stable job growth during the forecast period. Increases are also expected in the nonmanufacturing sector, such as the trade and construction areas, that will be fueled by the commonwealth government's plans to build additional affordable housing and public infrastructure projects in the HMA. This will be the result of the further development of the HMA, particularly its central city of Caguas.

The HMA's unemployment rate is currently estimated at 11 percent. Although the HMA has felt the effects of a declining manufacturing base, job losses have almost come to a standstill. New plant openings and expansions are expected to bring more than 1,000 new jobs to the HMA during the next 2 years.

An historical series by industry for total nonagricultural wage and salary employment trends for the period 1992 through the 12-month period ending September 2002 is presented in Table 2.

Household Incomes

The median family income in the HMA in April 2000 was \$17,509. This represents a 72-percent increase over the \$10,183 reported by the 1990 census. HUD's Economic and Market Analysis Division estimates that the family income for the area as of 2003 is \$20,100.

Population

The HMA has experienced moderate population growth since 1990. Between 1990 and 2000 the HMA's population increased at an average of 2,886, or 1.0 percent a year. The current population of the HMA is estimated at 314,700, an average annual increase of 2,534 or 0.8 percent over the April 2000 figure of 308,365. The city of Caguas had a population of 140,502 in 2000. It is estimated that the population of the city is presently about 141,600, approximately 45 percent of the population of the HMA.

During the 1990–2000 decade there was an average net natural increase in population (births minus deaths) of approximately 2,900 a year in the HMA. When compared with the average annual change of total population, net out-migration was only about 7 persons a year. Since 2000 there has been an average net natural increase of approximately 2,525 a year with no net out-migration estimated for the period. In the city of Caguas there was an average net natural increase of 1,350 a year during the 1990–2000 decade. Notwithstanding, there was a net out-migration from the city of 645 persons a year, mostly to other municipalities within the HMA where housing is less expensive. This trend in net out-migration from the central city of Caguas to the Remainder of the HMA has continued during the current period and is expected to continue during the forecast period.

In October 2004 the population of the HMA is expected to reach 319,800. This is a projected average annual increase of 2,550 persons and an annual growth rate of 0.8 percent above the October 2002 population estimate of 314,700. Projected population increases in the HMA during the forecast period are explained by in-migration brought about by new industry moving in as well relocation of new residents to the area. It is expected that the population of the city of Caguas will reach 142,200 in October 2004.

Households

The HMA experienced rapid household growth of about 1,840, or 2.0 percent annually during the 1990–2000 decade. As of October 2002 there were approximately 104,900 households in the HMA. This represents an average annual growth rate of 1,698 households, or 1.7 percent since 2000. A similar, though slightly lower rate of household growth is expected during the forecast period, based on anticipated employment gains in the HMA. It is estimated that an average of 1,550 households will be added annually during the forecast period.

Household growth in the city of Caguas has been slower than in the HMA despite a generous net natural population increase since 1990. This is so because of out-migration of households to the remainder of the HMA. The city is expected to grow by approximately 620 households annually over the next 2 years.

Of the 104,900 occupied housing units in the HMA in October 2002, approximately 75.7 percent, or 79,450 units were owner-occupied. This ratio is greater than the 74.8 percent in 2000 and the 73.6 percent in 1990. This is due to the continued preference for owning rather than renting a home. Recent building permit activity suggests a continued shift to owner occupancy can be expected during the forecast period.

See Table 3 for population and household trends in the HMA from 1990 to October 1, 2004.

Housing Inventory

Between 1992 and 1999 a total of 8,450 housing units were authorized by building permit in the HMA, of which 7,523, or almost 90 percent were single-family units. A total of 5,670 housing units were permitted in the HMA between 2000 and October 2002. Approximately 2,311 units, or 41 percent of these units were authorized in the city of Caguas. The number of single-family units receiving permits increased significantly to 1,364 in 2000 and 2,151 in 2001. During the first 9 months of 2002, 1,539 single-family units were permitted. Residential building permit data for the HMA, the central city of Caguas, and the Remainder of the HMA by structure type from 1992 through September 2002 are shown on Table 5. There were approximately 530 housing units under construction in the HMA in October 2002. Approximately 94 percent of these units were single-family structures.

The HMA experienced a boom in its year-round housing inventory from 1960 to 1989. Sixty-two percent of the units in the current housing inventory were added during that period. In October 2002 there were 114,700 units in the year-round housing inventory of the HMA, a net increase of 4,635 units since April 2000. The average annual increase of 1,854 units since 2000 is roughly the same as the average annual increase in the housing inventory from 1990 to 2000. The average yearly increase in the housing supply during the 2000 to October 2002 period was higher than the average yearly increase in households. As a result, total vacancy rates have risen slightly since 2000.

The 2000 census estimated that 4,115 or 3.7 percent of all the units in the housing inventory of the HMA were substandard because of a lack of complete plumbing facilities. In 1980 the percentage of substandardness in the HMA was substantially higher at 12 percent. The percentage of substandard units has decreased significantly in the HMA as a result of the substantial amount of new housing built in the HMA in recent years and the availability of assisted housing programs that have upgraded the housing stock during the same period. As of October 2002 there were 3,226 units of public housing constructed in the HMA. The city of Caguas contains 1,800 units or 56 percent of the HMA total.

Housing Vacancy

The 2000 census reported a total of 2,692 vacant available housing units in the HMA, or 2.4 percent of the available housing inventory. Of the 2,692 vacant units 1,120 were available for sale, a sales vacancy rate of 1.5 percent, and 1,572 were available for rent, a renter vacancy rate of 5.8 percent.

Based on available data and personal information, it is estimated that there were 3,075 vacant available housing units in the HMA as of October 2002. Approximately 1,450 of the vacant units were for sale, for a homeownership vacancy rate of 1.8 percent. The sales vacancy rate increased from 1.5 to 1.8 percent due to slow sales, particularly in the \$200,000 and up single-family market, despite household growth and low mortgage interest rates occurring since 2000. The current rental vacancy rate of 6 percent is near that of the 2000 census rate of 5.8 percent, reflecting a relatively balanced rental market, based on historical household growth in the area. Rental market needs have been met primarily by conversion of single-family units to rentals, construction of second-story apartments above existing single-family dwellings, and small-scale construction of walk-up apartment buildings containing 4 to 6 units. For a detailed breakdown of the HMA's housing inventory tenure and vacancy status please refer to Table 4.

Sales Market Conditions

The housing construction industry in Puerto Rico in general has experienced healthy growth during the last 3 years, mostly as a result of constant and low interest rates as well as reasonably inexpensive oil prices. The Caguas HMA has shared in this growth, especially between the years of 1990 and 2000, with reported average increases in real estate values of approximately 12 percent per year.

Data gathered during the course of fieldwork indicated that the average sales price for new single-family homes was around \$246,000 with a wide range of \$70,000 to \$450,000 plus in October 2002. The \$70,000 sales unit was produced by utilizing less expensive affordable housing construction standards, coupled with favorable assisted down payments, permanent financing, and relatively convenient raw land prices. The average sales price of apartments was approximately \$124,000 with a narrower range of \$75,000 to \$168,000.

Sales market conditions are favorable in the HMA for units priced between \$90,000 and \$120,000 where units sell rapidly. Sales of dwellings in the \$120,000 to \$200,000 price bracket have been moderate, while sales of units with price tags above \$200,000 have been slow. Sales of units in this particular segment of the market are expected to remain slow in the HMA during the first half of 2003, but become stronger during the balance of the forecast period ending October 2004.

The current homeowner vacancy rate of 1.8 percent indicates a slightly softer sales market than that found at the time of the 2000 census, reflecting a more cautious consumer in a slow-moving economy despite attractively low mortgage interest rates. It is expected that the economy of the area will continue to expand during the forecast period but at a slightly reduced rate than that of recent years. Therefore, demand for additional housing during the forecast period will continue at its current moderate pace during the first half of 2003 and gain momentum during the balance of the forecast period ending in October 2004.

Current home mortgage interest rates have remained at historically low levels in a range of 5 to 6 percent. Predictions are that interest rates are expected to edge up a bit from current levels. However, any increments are foreseen to be small and are not expected to dampen the demand for housing during the 2-year forecast period, especially for units priced below \$200,000.

According to the 1990 census there were 3,839 condominium units in the HMA. New construction of such units between 1990 and 2002 was of minor importance when compared to single-family construction in the HMA. Only approximately 10 percent of the units permitted during this period were condominium units and the 1990 census listed 53 percent of condominium units for rent. Condominiums, therefore, play a relatively small role in the sales market.

Rental Market Conditions

The rental market remained relatively balanced between 1990 and 2000, with overall vacancy rates edging up from 5.1 percent to 5.8 percent, respectively. It is estimated that the current vacancy rate is around 6.0 percent. The estimated 6.0 percent vacancy rate suggests continued balanced market conditions where some rental new construction could be absorbed in the HMA.

There was virtually no new unsubsidized rental unit construction in the HMA as of October 2002, except for approximately 30 units in small, walk-up projects containing 4 to 6 units per building. This may be attributed to the relative affordability and tax advantages of homeownership versus private rental housing. The relative lack of new rental construction since 2000, along with increased household formation propitiates additional rental new construction in the HMA.

Forecast Housing Demand

Demand for new housing in the HMA in the next 2 years, October 2002 to October 2004, is based on anticipated growth of 3,050 households. To this basic factor adjustments are made to account for current construction activity and vacancies, anticipated losses to the inventory, and tenure shift during the forecast period. Based on these considerations, annual demand for new housing is estimated at 1,770 units per year, 1,550 of which will be for new sales housing and 220 for rental housing.

The projected demand for 1,550 sales units a year will be mostly found in the single-family home market and will be for moderately priced units.

There is limited demand for new rental housing because homeownership is currently more attractive. The typical household prefers to purchase a home at still average affordable prices, rather than rent without the added incentives of equity build-up and tax deduction benefits.

It is expected that rental housing demand will continue to be met primarily by single-family conversions and small-scale apartment construction, as low renter income levels coupled with high cost of land and construction impede profitable development of new market-rate rental projects in the area.

Table 1
 Labor Force and Employment Trends
 Caguas PMSA HMA
 1992 to September 30, 2002

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Prior* 12 Mos.	Current** 12 Mos.
Labor Force	100,808	104,137	104,204	106,906	111,273	116,111	118,830	120,152	121,952	120,475	120,232	124,600
Employment	84,241	86,499	89,185	92,729	97,637	102,138	104,368	106,911	110,468	108,249	108,531	110,900
Unemployment	16,567	17,638	15,019	14,177	13,636	13,973	14,462	13,241	11,484	12,226	11,701	13,700
Rate	0.164	0.169	0.144	0.133	0.123	0.12	0.122	0.11	0.094	0.101	0.097	0.11

Notes: * From October 2000 to September 2001.

** From October 2001 to September 2002.

Source: Puerto Rico Department of Labor

Table 2
 Nonagricultural Wage and Salary Employment
 Caguas PMSA HMA
 1992 to September 30, 2002

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Prior* 12 Mos.	Current** 12 Mos.
Total	56,500	55,600	58,100	59,700	62,400	66,600	68,200	69,700	72,800	72,100	72,558	71,233
Manufacturing	15,900	14,600	14,600	14,800	15,700	15,900	15,800	14,400	15,300	15,300	15,416	15,233
Durables	5,100	5,300	5,200	4,600	4,800	4,800	4,900	4,500	5,200	5,000	5,083	4,875
Nondurables	10,800	9,300	9,400	10,200	10,900	11,100	10,900	9,900	10,100	10,300	10,333	10,358
Nonmanufacturing	40,600	41,000	43,500	44,900	46,700	50,700	52,400	55,300	57,500	56,800	57,142	56,000
Construction/Mining	1,500	1,700	1,600	2,600	2,700	3,100	3,100	4,100	4,300	4,100	4,175	3,808
Transportation/Utilities	500	500	600	800	700	700	1,100	1,500	1,600	1,600	1,558	1,550
Wholesale and Retail	11,700	12,000	12,800	13,200	13,600	14,800	15,600	16,600	17,600	17,900	17,950	17,575
Finance, Insurance, and Real Estate	1,200	1,300	1,600	1,700	1,700	1,700	1,700	1,700	1,500	1,600	1,558	1,525
Services	9,000	9,500	10,400	10,300	10,600	11,900	12,400	13,100	14,000	14,000	14,108	14,158
Government	16,700	16,000	16,500	16,300	17,400	18,500	18,500	18,300	18,500	17,600	17,792	17,383

Notes: * From October 2000 to September 2001.

** From October 2001 to September 2002.

Some totals may not add up because of rounding.

Source: Puerto Rico Department of Labor, Bureau of Labor Statistics

Table 3
Population and Household Trends
Caguas PMSA HMA
1990 to October 1, 2004

	April 1, 1990	April 1, 2000	Current Date*	Forecast Date	Average Annual Change					
					1990 to 2000		2000 to Current		Current to Forecast	
					Number	Rate	Number	Rate	Number	Rate
<u>Population</u>										
Caguas PMSA	279,501	308,365	314,700	319,800	2,886	1.0	2,534	0.8	2,550	0.8
Caguas	133,447	140,502	141,600	142,200	706	0.5	439	0.3	300	0.2
Remainder	146,054	167,863	173,100	177,600	2,181	1.4	2,095	1.2	2,250	1.3
<u>Households</u>										
Caguas PMSA	82,248	100,654	104,900	108,000	1,840	2.0	1,698	1.7	1,550	1.5
Caguas	40,104	46,937	48,700	49,900	683	1.6	705	1.5	600	1.2
Remainder	42,144	53,717	56,200	58,100	1,157	2.5	993	1.8	950	1.7

Notes: * As of October 1, 2002.

Rate of change calculated on a compound basis.

Numbers have been rounded for comparison.

Sources: 1990 and 2000—U.S. Census Bureau

Current and Forecast—Estimates by Analyst

Table 4
 Housing Inventory Tenure and Vacancy
 Caguas PMSA HMA
 1990 to October 1, 2002

	HMA			Caguas City			Remainder		
	1990	2000	Current	1990	2000	Current	1990	2000	Current
Total Housing Inventory	90,128	110,065	114,700	43,293	50,568	52,500	46,835	59,497	62,200
Occupied Units	82,248	100,654	104,900	40,104	46,937	48,700	42,144	53,717	56,200
Owners	60,539	75,297	79,450	29,045	34,469	36,250	31,494	40,828	43,200
%	73.6	74.8	75.7	72.4	73.4	74.5	74.7	76.0	76.8
Renters	21,709	25,357	25,450	11,059	12,468	12,450	10,650	12,889	13,000
%	26.4	25.2	24.3	27.6	26.6	25.5	25.3	24.0	23.2
Vacant Units	7,880	9,411	9,800	3,189	3,631	3,900	4,691	5,780	5,900
Available Units	2,194	2,692	3,075	1,278	1,265	1,450	916	1,427	1,625
For Sale	1,035	1,120	1,450	653	529	660	382	591	790
Rate	1.7%	1.5%	1.8%	2.2%	1.5%	1.8%	1.2%	1.4%	1.8%
For Rent	1,159	1,572	1,625	625	736	790	534	836	835
Rate	5.1%	5.8%	6.0%	5.4%	5.6%	6.0%	4.8%	6.1%	6.0%
Other Vacant	5,686	6,719	6,725	1,911	2,366	2,450	3,775	4,353	4,275

Note: Numbers have been rounded for comparison.

Sources: 1990 and 2000—U.S. Census Bureau
 Current—Estimates by Analyst

Table 5
Residential Building Permit Activity
Caguas PMSA HMA
1992 to September 30, 2002

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002*
Caguas PMSA											
Total	942	665	1,138	1,099	1,161	1,109	1,217	1,119	1,396	2,426	1,848
Single-family	938	663	1,114	1,099	883	874	1,061	891	1,364	2,151	1,539
Multifamily	4	2	24	0	278	235	156	228	32	275	99
Caguas City											
Total	409	226	453	426	542	427	438	485	587	956	768
Single-family	407	224	449	426	264	227	296	340	560	681	686
Multifamily	2	2	4	0	278	200	142	145	27	275	82
Remainder											
Total	533	439	685	673	619	682	779	634	809	1,470	1,080
Single-family	531	439	665	673	619	647	765	551	804	1,470	853
Multifamily	2	0	20	0	0	35	14	83	5	0	17

*Note: January to September 2002.

Source: Puerto Rico Planning Board