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RESEARCH REPORT

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Housing Affordability In Howard County and Central Maryland

Introduction

Over the last several years, housing prices have rapidly increased in Howard County and across the Baltimore region. The increase is not unique to this area alone as prices in most metropolitan areas across the country have also escalated, including the nearby Washington metropolitan area. Common reasons often given for this sharp jump include record low mortgage rates, the fall of the stock market at the beginning of the decade making real estate a more attractive investment option, an increased demand in housing as job growth continues while housing supply remains constrained, and investor speculation. Whatever the reasons, housing prices have dramatically risen since 2000, and as a result housing affordability has become more of a problem for the average resident seeking to buy.

This report takes a look at housing affordability over recent years. Comparisons back to 1995 are included to provide some recent historical perspective on the issue. The focus is on comparing Howard County to other counties in central Maryland to determine relative impacts over time.

Methodology Used

The methodology used in this report to gauge affordability is not new. It is the same general methodology used by the Maryland Department of Housing and Community Development (DHCD), which reports housing affordability across the State in its monthly Blueprint Maryland publication.[1] The methodology is also commonly used by both the Maryland Association of Realtors and the National Association of Realtors. The purpose of this report is to use this same general methodology to present results comparing Howard County and other central Maryland counties.

The methodology generates a Housing Affordability Index (HAI), a single value that can be compared across jurisdictions and over time. The HAI is the ratio of the median household income to the qualifying income necessary to by a median priced home. Qualifying income is

[1] DHCD's reports can be accessed from their web site at: http://www.blueprintmaryland.com

the necessary income required to make the monthly payments (principle, interest, taxes, and insurance) for a median priced home based on mortgage interest rates and typical borrowing standards. The HAI has a value of 100 when the median-income household has a sufficient income to purchase a median-priced home. When the ratio is above 100 the typical household has more income than necessary to purchase a typical house. When the ratio falls below 100 the typical household has less income than necessary to purchase a typical house.

When studying this issue there are generally two indices, one for repeat homebuyers and one for first time homebuyers. It is assumed for first time homebuyers that both their household income and the home price is less. Based on survey data from the National Association of Realtors, the household income for first time homebuyers is 57% of the median, and the first time home price is 85% of the median home price. Furthermore, it is assumed that first time homebuyers only place a 5% down payment on the home as opposed to a 20% down payment for repeat homebuyers. By placing only 5% down, the mortgage rate is increased by a half a percentage point to pay for private mortgage insurance.[2] Because of these factors, homes are less affordable for first time homebuyers. All these assumptions are used in the current analysis.

Annual median income data come from the Maryland Department of Planning. Monthly median income data is derived by the Howard County Department of Planning and Zoning (DPZ) Research Division based on prorating annual values for 2004. Monthly estimates for 2005 are derived by prorating an annual estimate based on past trends using a linear regression formula.

Median home prices are from the Metropolitan Regional Information Systems, Incorporated, a multiple listing service for Maryland, Washington DC and Virginia. The Maryland state average is based on information from the Maryland Association of Realtors compiled from MRIS and Coastal Association.

Average annual mortgage interest rates are from the Federal Housing Finance Board's Monthly Interest Rate Survey using their composite rate for conventional loans. The annual data specifically compiled for Maryland is used. For the monthly rates, the U.S. national average is used, given state and local data are not available by month. In both cases, effective interest rates are used, which includes contract interest rate plus all fees and points amortized over a 10-year period. Ten years is an estimate of the average life of conventional mortgages.

Qualifying income is based on the Federal National Mortgage Association (Fannie Mae) qualifying ratio of 25%. This means that the monthly principle and interest payment cannot exceed 25% of the median household income.[3]

[2] Private mortgage insurance or PMI is generally required for homebuyers who make less than a 20% down payment. This can be paid as a separate monthly fee or rolled into a higher interest rate with the same net effect. The general standard used by the mortgage industry is an extra half percentage point increase in the mortgage rate with a 5% down payment.

[3] This ratio does not include taxes and insurance. When these are included the ratio is generally between 28% and 36% depending on other outstanding debt owed by the homebuyer as well as their credit score. By using Fannie Mae's ratio, the analysis is simplified and is consistent with what is used by Maryland DHCD as well as the Maryland and National Association of Realtors.

What The Results Mean

With any statistical analysis, the outcome has to be put in context of both the data used and exactly what is being analyzed. For example, what does it mean to say that a typical household with a median income can afford a median priced home? The use of medians attempts to answer the question of what the average household can afford. But what is the average household? It only applied to a small segment of the population. Those with higher incomes can afford to buy more than the average house compared to those with lower incomes who can't, and maybe they end up as renters or buy the supply of below average cost homes. There is a common phrase that says, "everything is affordable to someone," and reducing people to statistics is always difficult.

Furthermore, the market is dynamic and variable. When conducting statistical analysis, variables need to be fixed in order to make comparisons. Reality is much more complex than these fixed values. For example, interest rates can vary widely depending on credit, so someone with excellent credit may be able to afford larger mortgage due to a lower interest rate. Also, in many instances, people choose to pay a higher percentage of their monthly income, often in excess of 50%, in order to live in a larger, more expensive home. Some residents are able to make larger down payments than others, perhaps garnered from years of saving, or perhaps from an inheritance. The transfer of wealth from one generation to the next is enormous and is expected to grow into the future as baby boomers retire, with a large portion of the wealth derived from housing equity.

Another issue to think about when observing the results of this analysis is that the median income for each jurisdiction is used to analyze the affordability of that jurisdiction. For example, Howard County has the highest median income in the State and this is what is used to gauge affordability in Howard County. But what about someone who wants to move from another County into Howard? It may be wise, and beyond the scope of this report, to base an analysis on the median income of the region for all counties.

These issues and questions are not raised with the intent to provide answers, and are rhetorical in a sense, but rather raised to express that the subject of affordable housing is a complex issue and cannot necessarily be defined by the set of numbers presented in this report. That said, however, the results discussed below are a good gauge of what has happened over time across jurisdictions using standard and consistent factors. They can help frame and provide a context for these philosophical points and nuances, but should not be used to define them.

It is interesting to note that this issue is not new. A report prepared for the Howard County Office of Planning and Zoning in 1980 states:

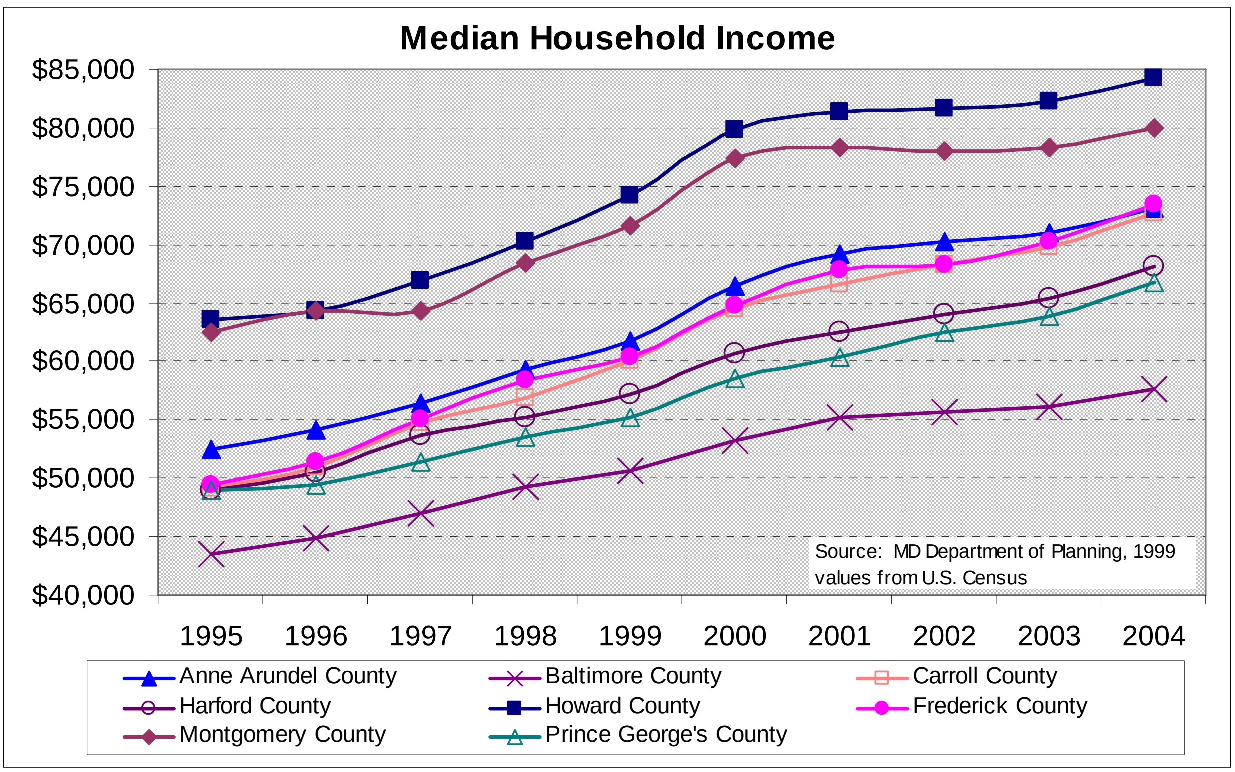
> The median income of county households is $28,171. Applying the rule-of-thumb of housing affordability of twice the annual income yields a housing unit value of $56,342 in 1978 dollars. This is over $6,600 less than the median value of houses sold in the county in 1978. This shortfall indicates that many county residents cannot afford to buy a home. A 1979 survey showed that most public employees in Howard County could not purchase a home in the county with the income from their public job. Excepting teachers, 64 percent of all county employees made less than $14,600. Participation in the U.S. Department of Housing and Urban Development Section 8 program permits household income up to $31,296 for a three bedroom house in the housing market area which includes Howard County. This

level of prospective disparity leads to families having to pay a disproportionate share of their incomes for housing or not to be able to afford standard units. [4]

That report was written in a period of high inflation and rapidly rising interest rates (national mortgage rates averaged close to 12.5% in 1980). It has been a much different period now with record low mortgage interest rates and quickly escalating housing prices. Every period has its challenges. This report looks at affordability since 1995, and doesn't make comparisons back to 1980. The reference above, however, indicates that the affordable housing discussion in Howard County has been an ongoing debate for quite some time.

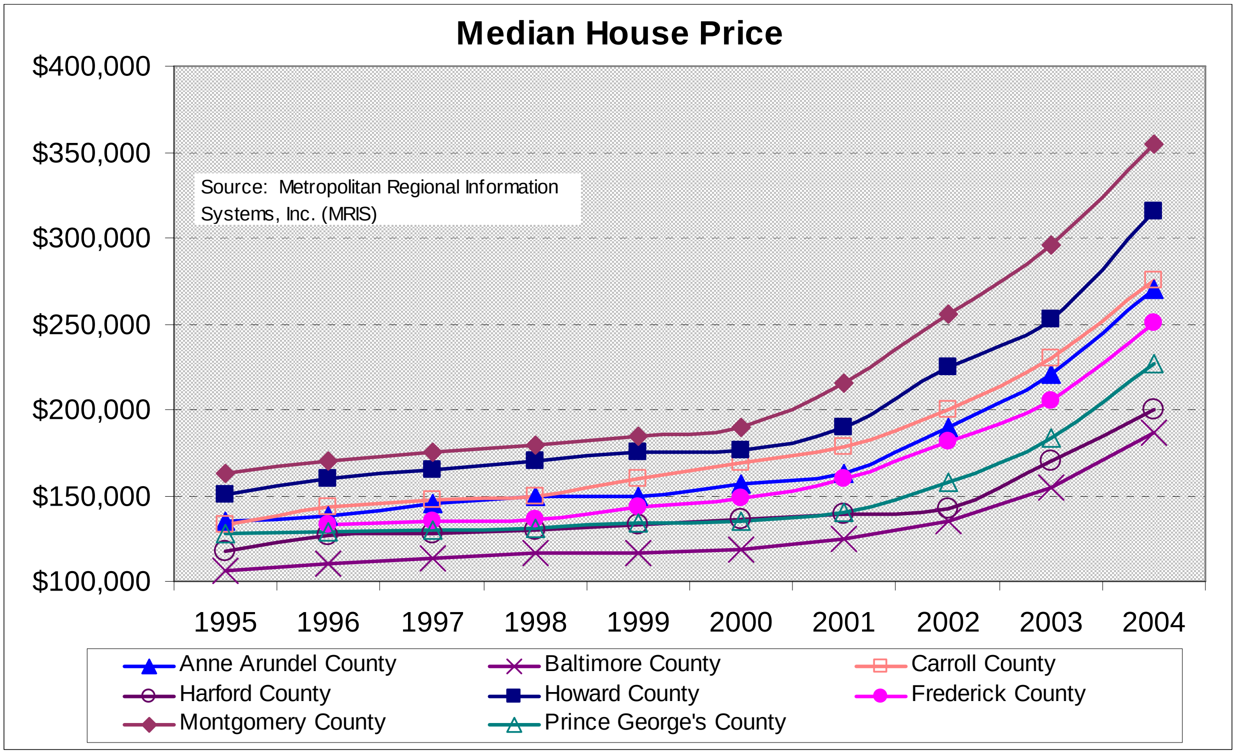
Repeat Homebuyers Affordability – 1995 to 2004 Annual Results

The series of charts below show the main components that make up the HAI. The first chart shows the median income for the central Maryland counties from 1995 to 2004. Howard County has had the highest median income, followed by Montgomery County. This is followed by Anne Arundel, Frederick and then Carroll counties. Next comes Harford and then Prince George's followed by Baltimore County. In all cases, incomes have risen gradually over time.



[4] Housing Policies and Implementation Strategies, prepared by Hammer, Siler, George Associates, August 22, 1980

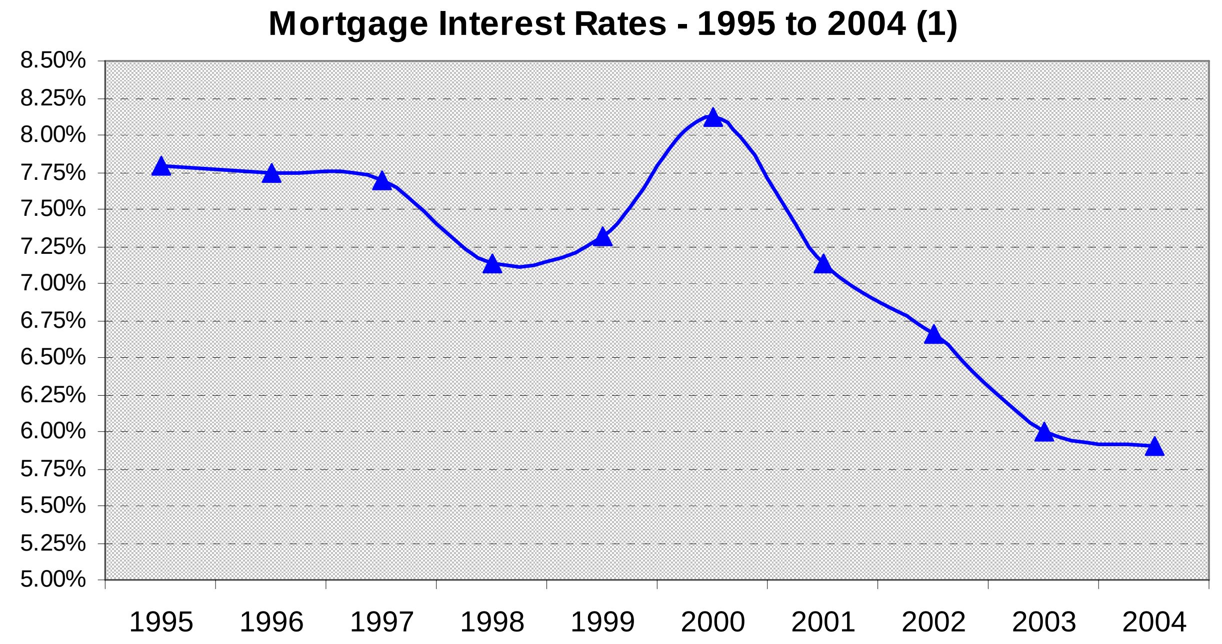
The chart below shows the increase in median house prices for the same counties. Home prices rose gradually from 1995 to 2000. After 2000, prices increased sharply. Montgomery County has the highest median, followed by Howard, Carroll, Anne Arundel, Frederick, Prince George's, Harford, and Baltimore County, respectively.



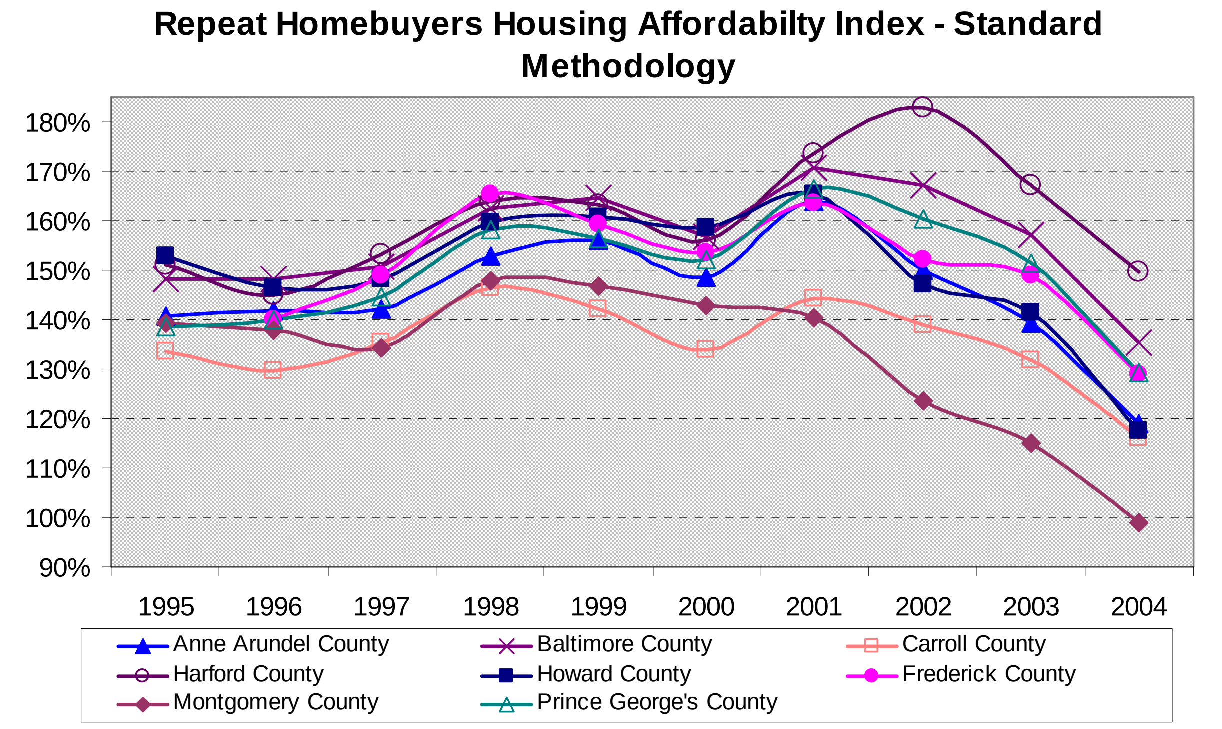
The next chart shows mortgage interest rates during this period. In 1995, interest rates averaged 7.75%. In 2000, they were slightly higher at a little more than 8%. Since 2000, rates have dropped considerably to less than 6% in 2004. The last time rates were this low was in the early 1960's.

Economists have argued that housing prices have increased so sharply since 2000 in part because interest rates have dropped considerably during this time period. It is true that as interest rates decline housing payments are less and thus buyers can afford more expensive homes. The second chart below, which shows the HAI for repeat homebuyers, indicates however that housing has become less affordable during this period. The combination of rising incomes and declining interest rates is not enough to offset the sharp increase in home prices resulting in reduced affordability.

From 1995 to 2000 affordability remained about the same or rose slightly. From 2000 to 2001, the HAI increased for most jurisdictions, and then dropped relatively quickly thereafter. By 2004, the repeat homebuyers HAI was still greater than 100 for all jurisdictions except Montgomery County which dropped to just below 100. As indicated earlier, the HAI has a value of 100 when the median-income household has a sufficient income to purchase a median-priced home. When the ratio is above 100 the typical household has more income than necessary to purchase a typical house. When the ratio falls below 100 the typical household has less income than necessary to purchase a typical house. So despite the drop housing was still considered affordable for repeat homebuyers. Harford County was the most affordable and Montgomery County the least. Howard, Anne Arundel, and Carroll Counties were the next least affordable after Montgomery.

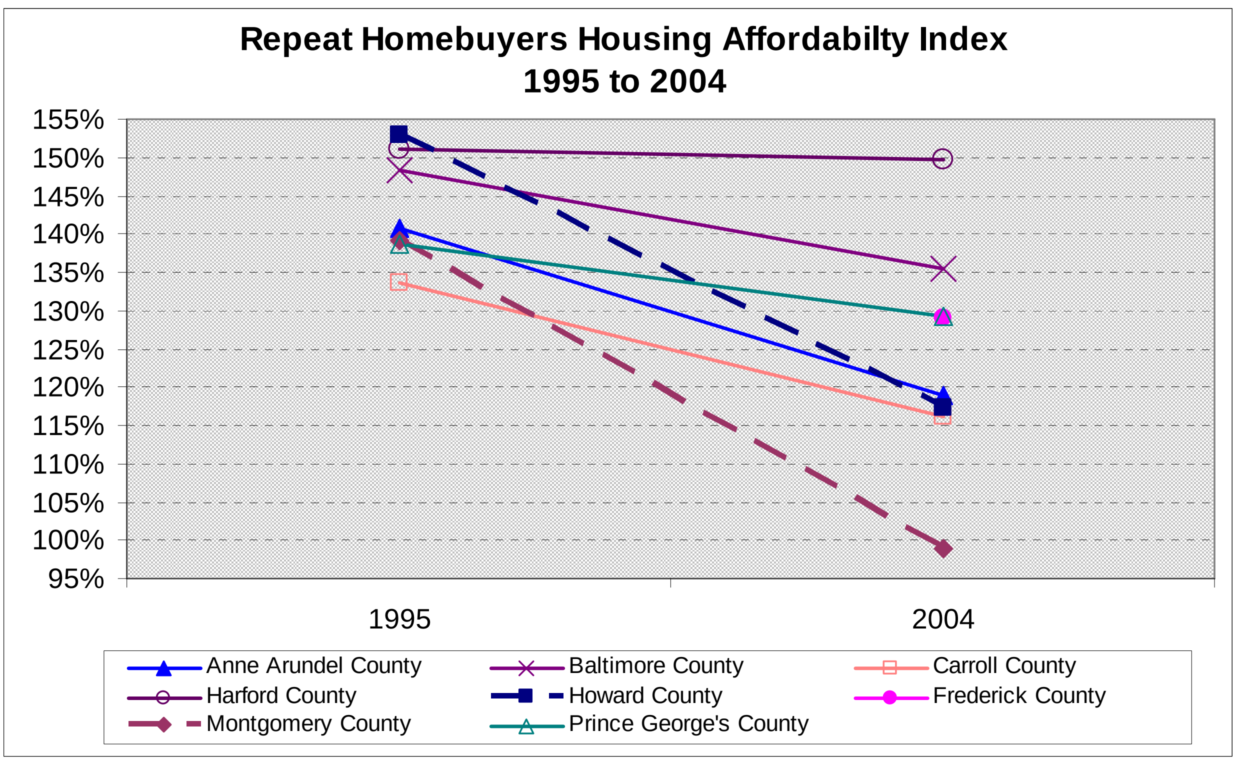


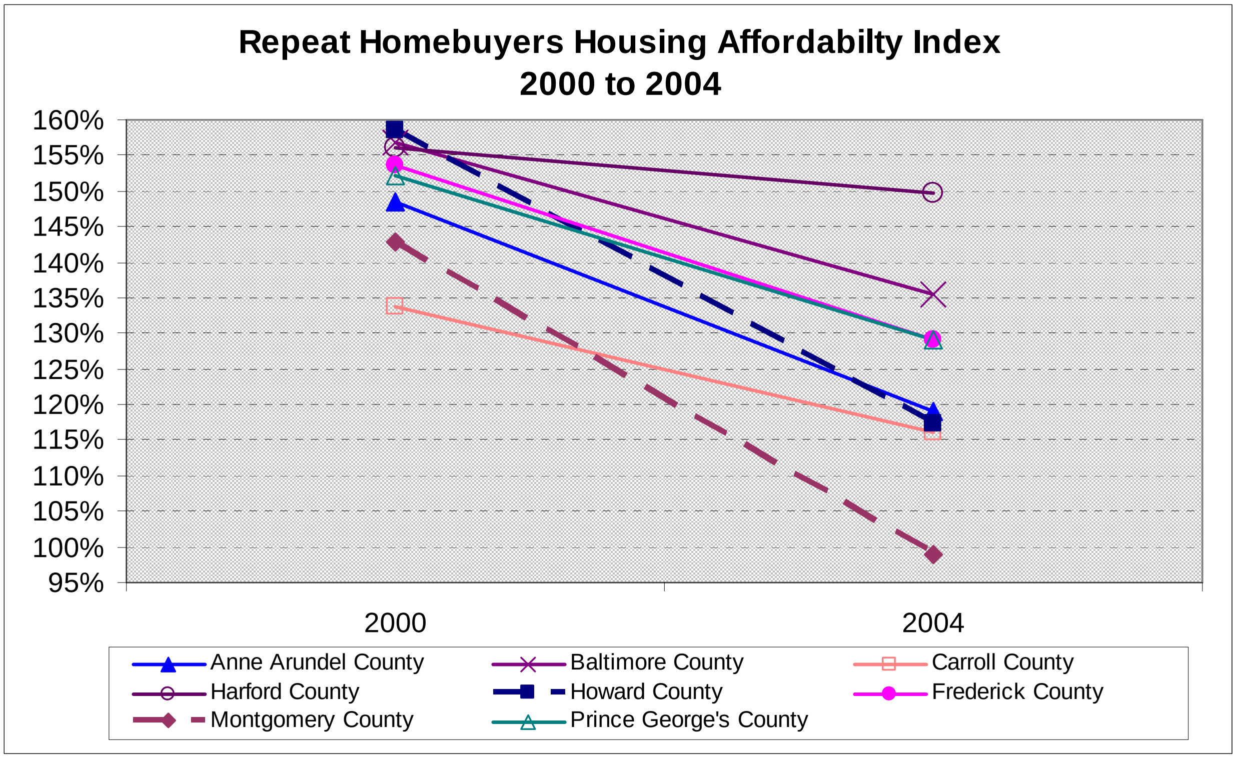
(1) Average Annual Rates from the Federal Housing Finance Board's Monthly Interest Rate Survey - composite rate for conventional loans. Annual data compiled for Maryland is used. Effective interest rates used, which includes contract interest rate plus all fees and points amortized over a 10-year period. Ten years is an estimate of the average life of conventional mortgages.

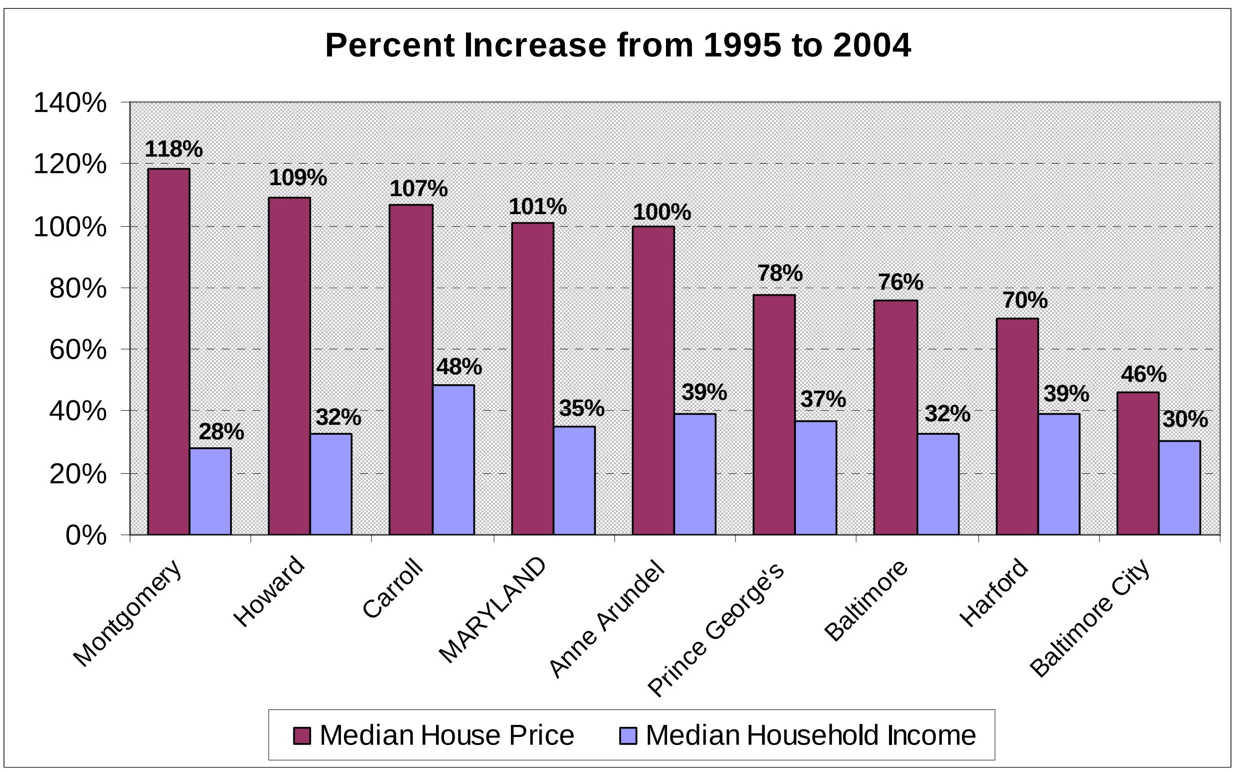


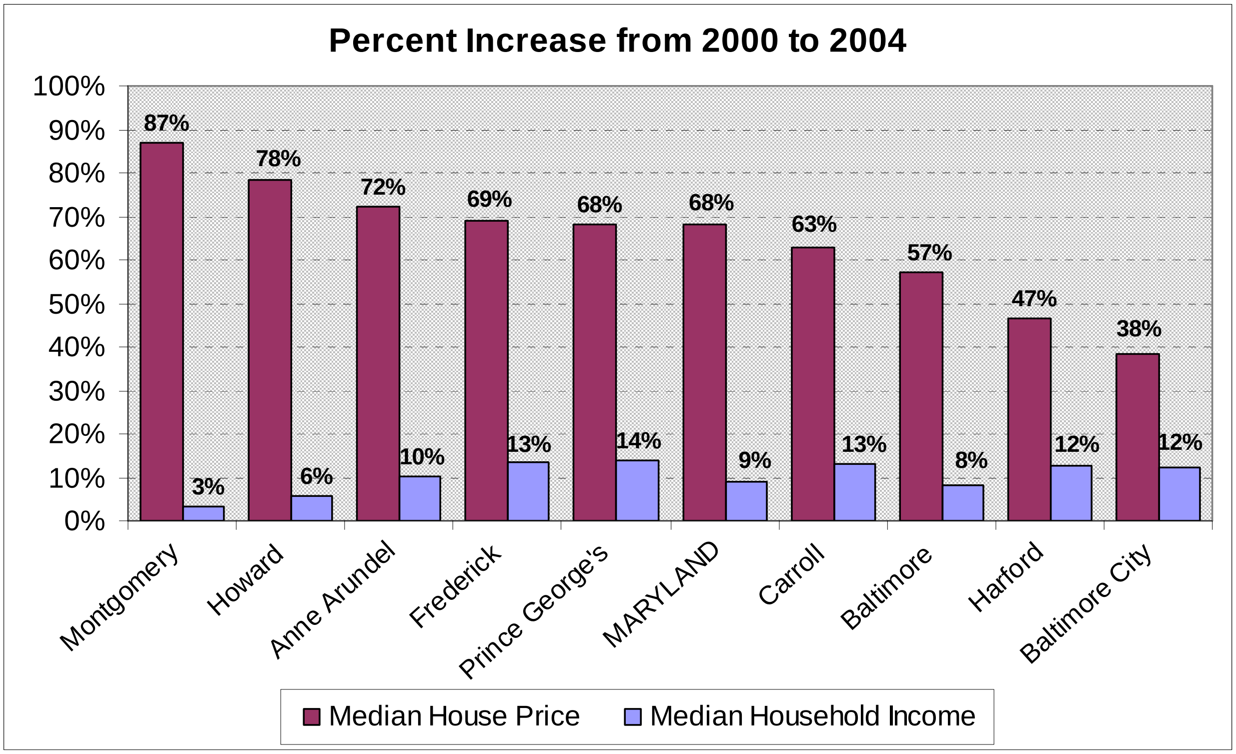
The following charts show the straight line change from 1995 to 2004 and 2000 to 2004, respectively. In both charts, Montgomery and Howard Counties have the steepest end to end slopes indicating the most significant declines in the HAI. This results from the rapidly increasing home prices in those two counties. Of all the jurisdictions, Howard County was the most affordable in both 1995 and 2000, but dropped to the third least affordable by 2004, following Montgomery and Carroll. Note again that these ratios are based on the County median incomes, where Howard had the highest in the region. So despite the high incomes in Howard, affordability has suffered due to the relatively large increase in housing prices.

This is further illustrated in the last two charts, particularly the second which compares the percent increase of median income to that of housing prices from 2000 to 2004. The median household income in Howard rose just 6% compared to a 78% increase in the median home price. For Montgomery County, the difference is even more drastic, with only a 3% increase in the median income and an 87% increase in the median home price. On the other hand, for Harford County, the most affordable county in 2004, home prices increased the least (47% from 2000 to 2004) while incomes rose a relatively high 12%.




Repeat Homebuyers Housing Affordabilty Index
2000 to 2004
160%
155%
150%
145%
140%
135%
130%
125%
120%
115%
110%
105%
100%
95%
2000
2004
Anne Arundel County
Baltimore County
Carroll County
Harford County
Howard County
Frederick County
Montgomery County
Prince George's County

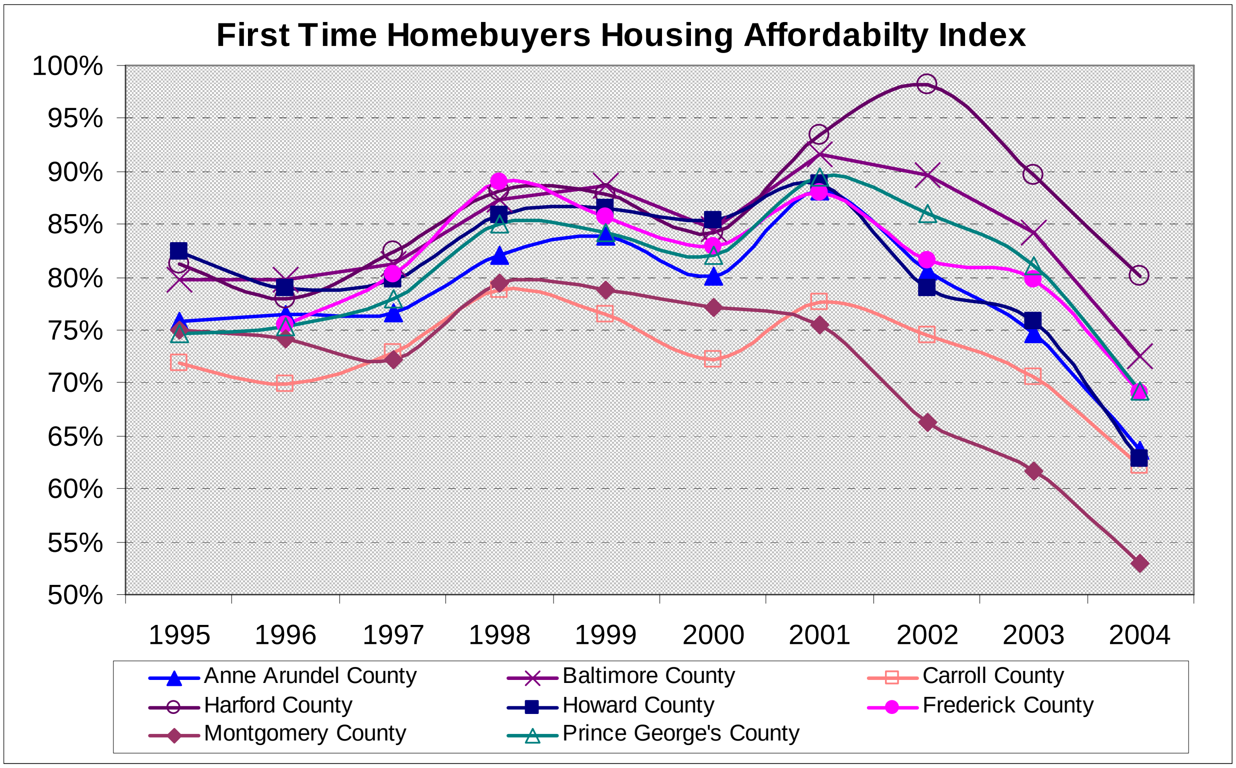

Percent Increase from 1995 to 2004
140%
120%
100%
80%
60%
40%
20%
0%
118%
28%
109%
32%
107%
48%
101%
35%
100%
39%
78%
37%
76%
32%
70%
39%
46%
30%
Montgomery
Howard
Carroll
MARYLAND
Anne Arundel
Prince George's
Baltimore
Harford
Baltimore City
Median House Price
Median Household Income



First Time Homebuyers Affordability – 1995 to 2004 Annual Results

As indicated in the earlier section of this report describing the methodology, the first time homebuyers HAI adjusts the results based on two additional factors derived from survey data: 1) the household incomes for first time homebuyers are assumed to be 57% of the median, and 2) the median home price for first time homebuyers is 85% of the median. In addition, it is assumed that first time homebuyers place a 5% down payment versus the traditional 20%. Interest rates are thus somewhat higher given private mortgage insurance is factored in. The result of this is that affordability drops for first time homebuyers as shown in the chart below. The relative differences over time and between jurisdictions remain the same, however.

For all jurisdictions the HAI drops below 100 indicating that the typical household has less income than necessary to purchase a typical house for the first time. More specifically, given Howard County's first time homebuyer HAI of 63% in 2004, it can be stated that in Howard County the typical first time buyer could only afford a home priced 37% below the median priced home available to first time buyers. This price is $168,683 (63% of 267,750, which is 85% of the $315,000 median in 2004). The price is a slightly lower $159,871 for Montgomery County.

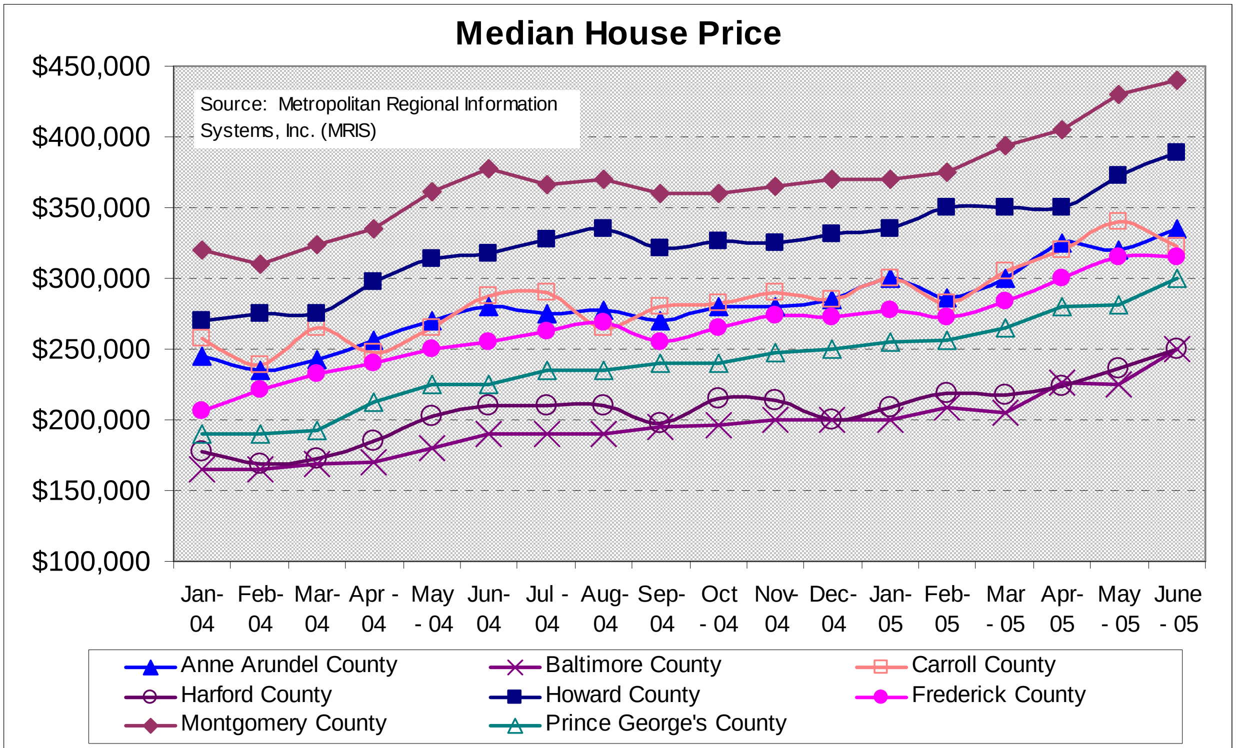


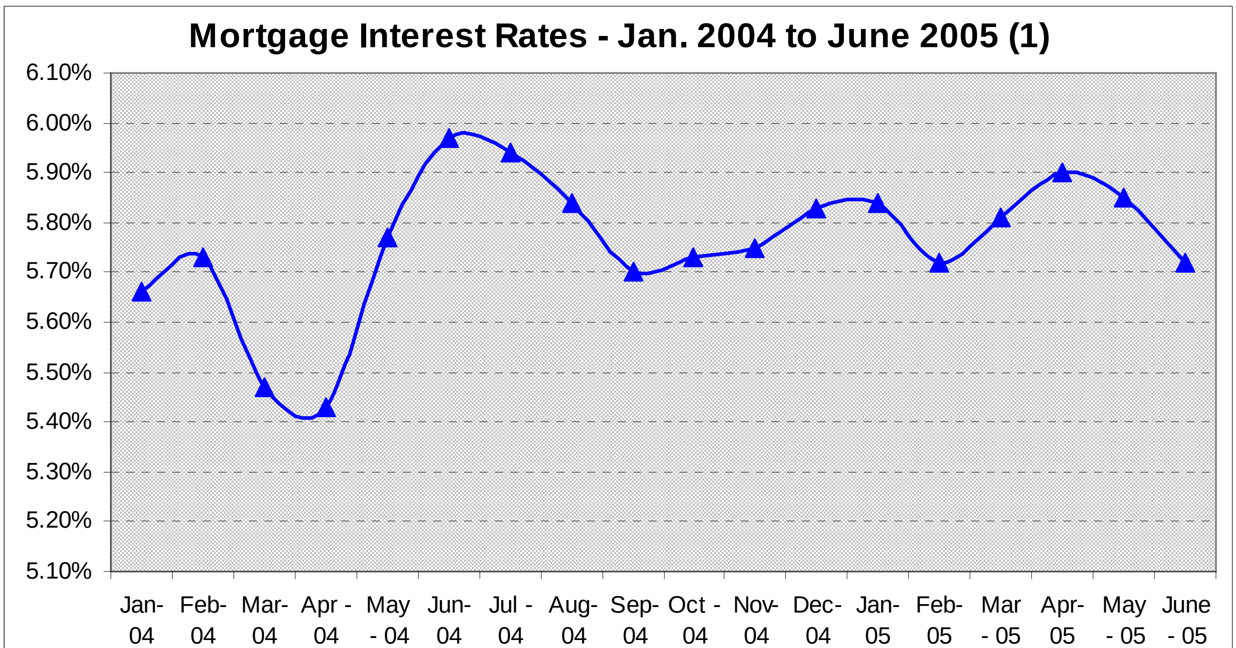
Repeat Homebuyers Affordability – Monthly Results Through June 2005

An analysis was also conducted on a monthly basis from information available through June, 2005. The first chart below shows that housing prices are continuing to rise into 2005. In Howard County, the median price for homes sold during the month of June was $388,500. In Montgomery County, the median was $440,000.

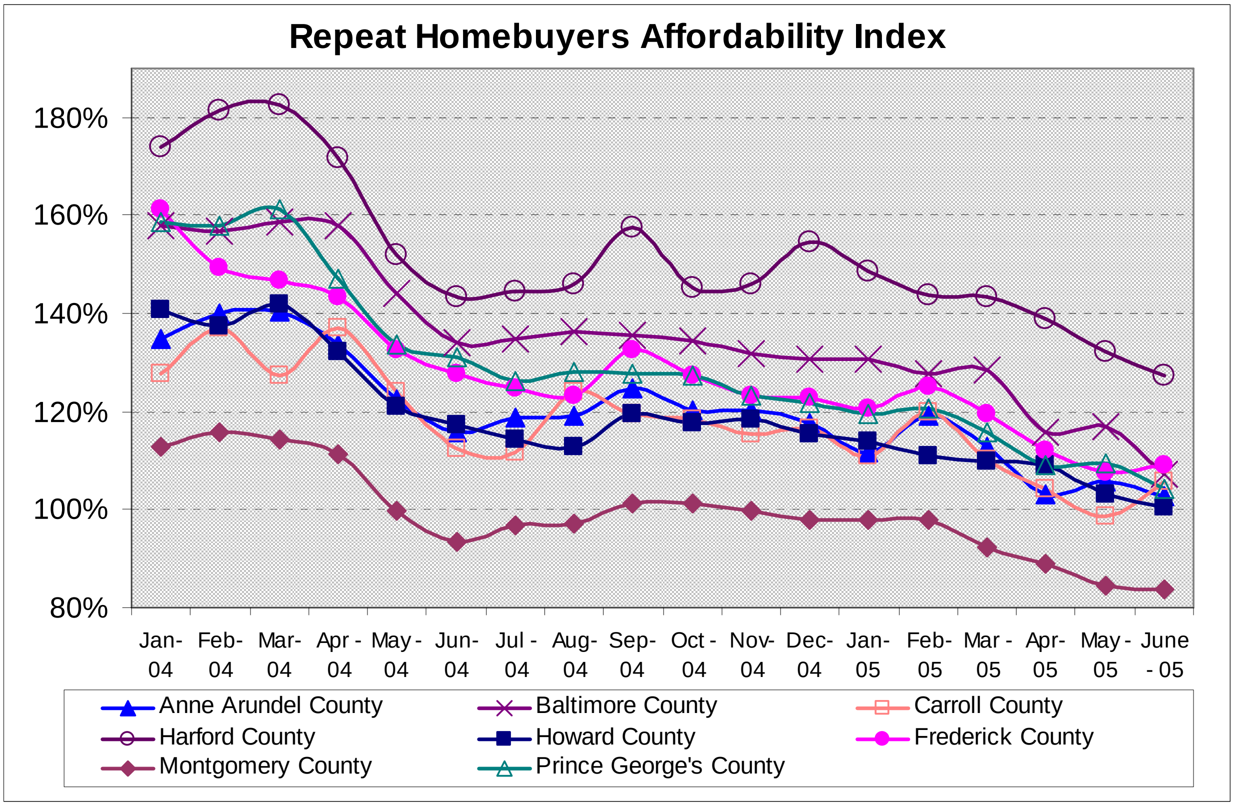
During that same time period, interest rates varied from a low of about 5.4% in April to a high of close to 6% in June. For most months, they hovered around 5.7% to 5.9%. This is shown in the second chart below.

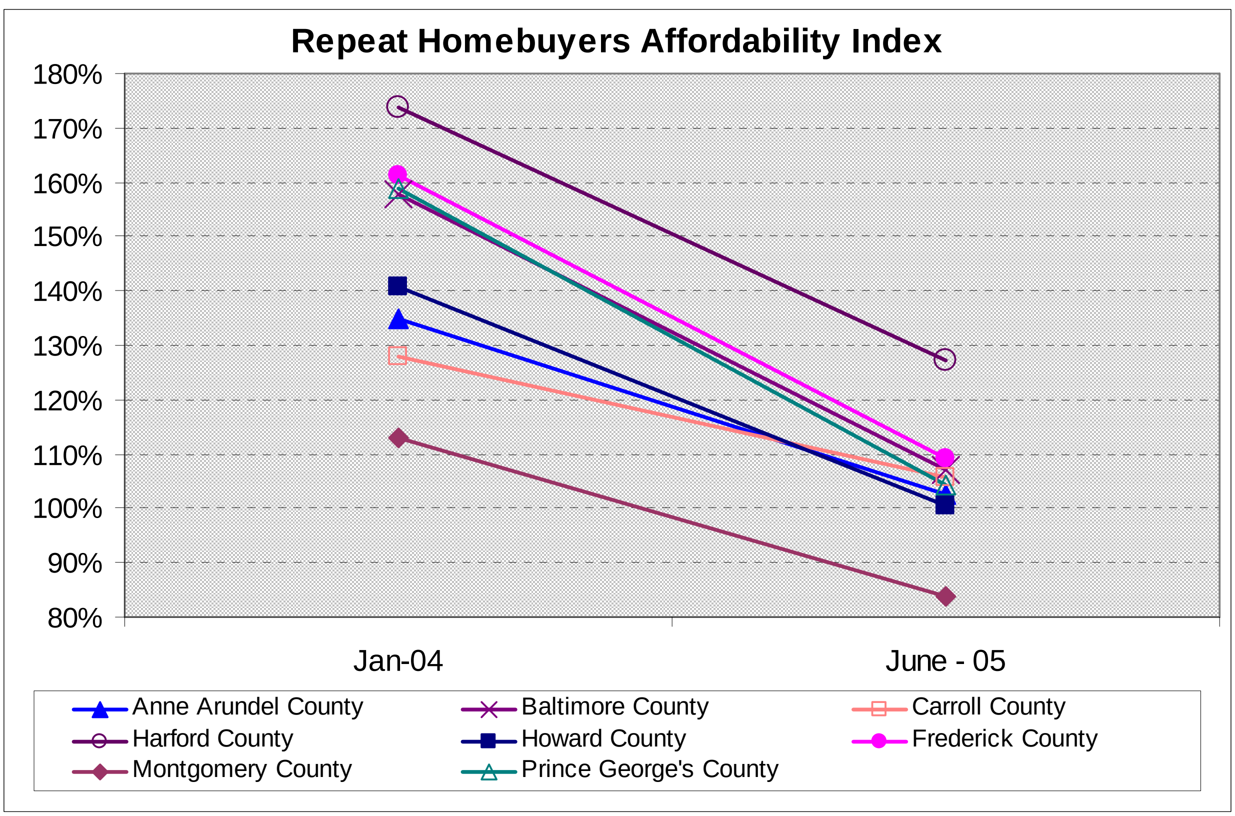
As would be expected, with the continuation of rising home prices throughout the year, affordability becomes less. This is shown in the third chart below. For Howard County, the HAI dropped to 100 in June. This indicates that the typical *repeat* homebuyer can just afford the typical home in Howard, and is significantly less than the 2001 index of 165, the year home prices started to exhibit steep increases. Montgomery County's repeat homebuyer's HAI was an even lower 84 in June, 2005. Harford County remains the most affordable county, although its index has also continued to decline.





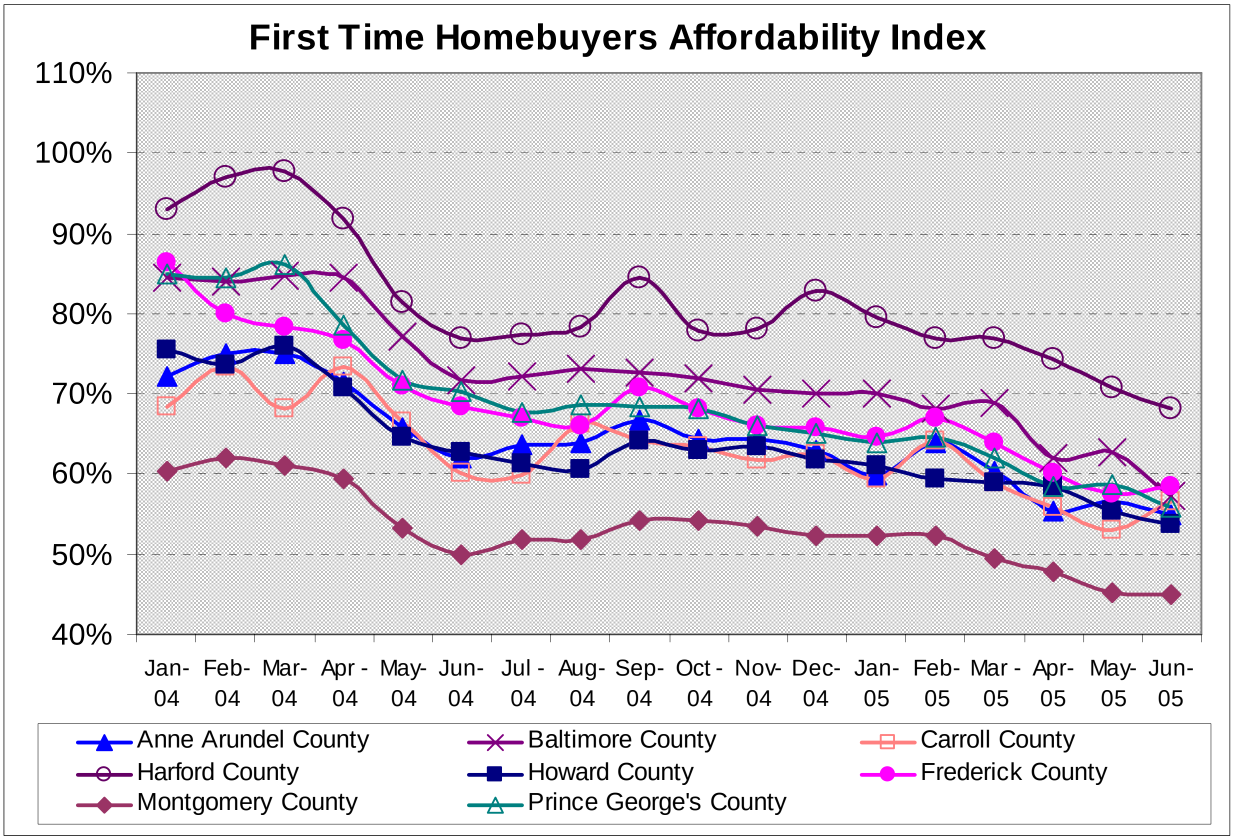
(1) Rates from the Federal Housing Finance Board's Monthly Interest Rate Survey - composite rate for conventional loans. U.S. national average used, given state and local data not available by month. Effective interest rates used, which includes contract interest rate plus all fees and points amortized over a 10-year period. Ten years is an estimate of the average life of conventional mortgages.


Repeat Homebuyers Affordability Index
180%
160%
140%
120%
100%
80%
Jan-04
Feb-04
Mar-04
Apr - 04
May - 04
Jun-04
Jul - 04
Aug-04
Sep-04
Oct - 04
Nov-04
Dec-04
Jan-05
Feb-05
Mar - 05
Apr-05
May - 05
June - 05
Anne Arundel County
Baltimore County
Carroll County
Harford County
Howard County
Frederick County
Montgomery County
Prince George's County


Repeat Homebuyers Affordability Index
180%
170%
160%
150%
140%
130%
120%
110%
100%
90%
80%
Jan-04
June - 05
Anne Arundel County
Baltimore County
Carroll County
Harford County
Howard County
Frederick County
Montgomery County
Prince George's County

First Time Homebuyers Affordability – Monthly Results Through June 2005

The final chart below shows the monthly first time homebuyers HAI from January, 2004 to June, 2005. In June, 2005 the HAI for Howard County was 54, the lowest of all jurisdictions except Montgomery County, which had a rate of 45.



Conclusion

It is clear from the information presented in this report that housing has become less affordable since the beginning of this decade. Despite record low mortgage rates and continued increases in household income, sharply increasing housing prices have resulted in a decline in affordability. In particular, affordability in Montgomery and Howard has declined the most when compared to other jurisdictions in central Maryland.

As indicated earlier, the affordable housing debate is not new in Howard County. The subject of affordable housing is a complex issue and cannot necessarily be defined by the set of numbers presented in this report. That said, however, the results discussed are a good gauge of what has happened over time across jurisdictions using standard and consistent factors.