

## The role of home prices, interest rates and wages

**E**ach quarter, the Alaska Department of Labor and Workforce Development compiles the Alaska Affordability Index, a useful tool for monitoring housing affordability in Alaska over time.

The index measures how three main economic factors interact: home sales prices, average incomes and interest rates. It creates a value that can be used to measure housing affordability consistently.

### The Alaska Affordability Index defined

The index essentially tells you how many people have to bring in a paycheck in order to afford a home. It measures the number of wage earners in a household that are required to obtain a mortgage for an average-priced home, given the average interest rate and the average income.

The index assumes a 15 percent down payment on a 30-year fixed rate conventional mortgage. A monthly payment is determined, based on the average sales price for a single-family home, the average income and the average interest rate.

That monthly payment is then used to calculate the required monthly income needed to qualify for the mortgage. The required monthly income is then divided by the average income to yield the index value.

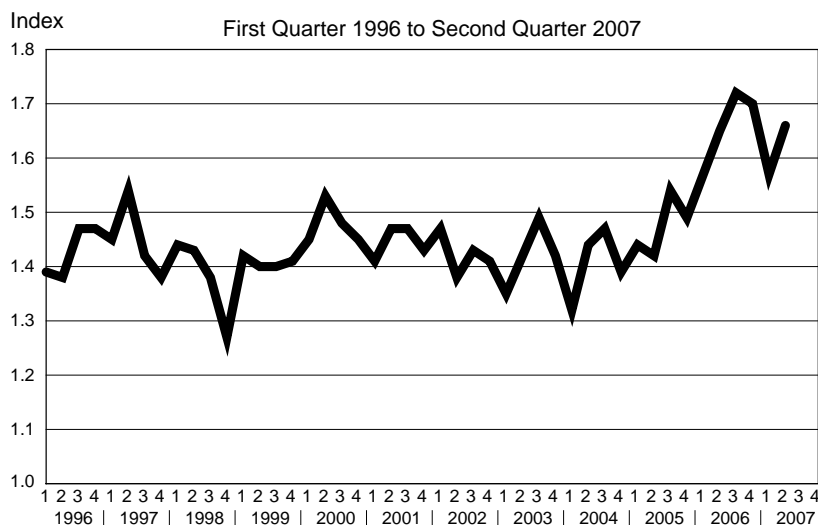
The resulting index value is the number of wage earners required to afford the average-priced single-family home.

An index value of 1.0 means that the income of exactly one person is required to afford an average-priced home. A number higher than 1.0 means that more than one person's income is required to afford a home, thus the housing is less affordable.

The index measures housing affordability based on factors that the Department of Labor measures on a regular basis. (See Methodology in box.) There are, however, other factors that should also be considered when determining affordability that aren't included in the index. Many of those factors are unique to the home-buyer's situation and are difficult or impossible to measure consistently.

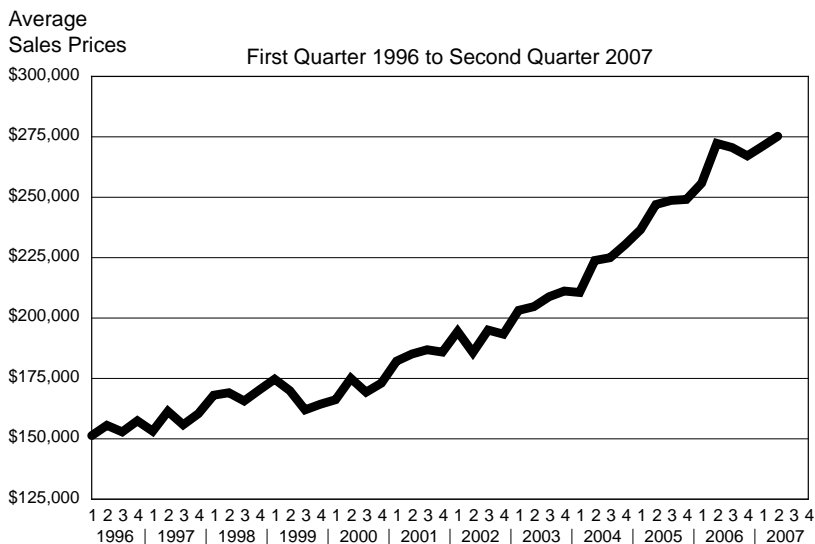
Some of those factors include insurance costs, both for hazard and mortgage insurance; property taxes, which can vary by the area and the size of the property; utility costs, which can be a

### The Alaska Affordability Index Single-family homes, statewide 1996 to 2007



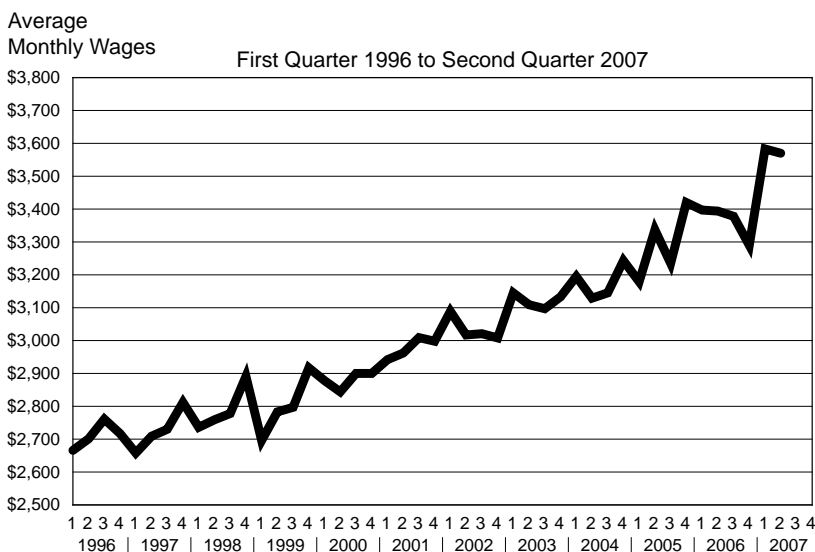
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

## 2 Average Sales Prices Single-family homes, statewide 1996 to 2007



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

## 3 Average Monthly Wages Statewide 1996 to 2007



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

large part of monthly housing costs and can vary depending on energy types; and adjustable rate mortgages, which can mean monthly payments can increase or decrease, sometimes dramatically, based on interest rate changes.

### Analyzing the index

Housing affordability has varied over the past 10 years. (See Exhibit 1.) At times when housing has become less affordable, conditions in the market (such as a decrease in interest rates) seem to adjust, making housing more affordable. Conversely, when housing becomes more affordable, economic factors have a way of making housing less affordable. Plotting the Alaska Affordability Index on a quarterly basis over the last 10 years, a zigzag pattern can be observed indicating these fluctuations in affordability.

However, housing has seen a trend of diminishing affordability since the second quarter of 2004. What makes this trend unique is there has been no significant correction toward increased affordability. In addition, the affordability index values have hit their highest levels since the index was created in 1992, indicating that housing is at the least-affordable level since the data has been collected.

Looking at average selling prices for single-family homes independently of other variables may give the impression that housing is becoming less affordable due to skyrocketing sales prices. Although average sales prices have been increasing at a record pace in recent years (see Exhibit 2), this in and of itself is not causing the recent trend in diminishing housing affordability. Rather, affordability is diminishing due to the combination of increasing sales prices, slow to moderate wage growth (see Exhibit 3) and interest rates that are slowly beginning to rise.

During the feverish housing market in the 2004-2005 period, housing was more affordable than it is in 2007. Even though sales prices are leveling off and income is increasing, interest rates have crept up and are now back at levels not seen in more than five years. (See Exhibit 4.) A few years ago, lower interest rates meant that homebuyers could borrow money for less;

that in turn made monthly mortgage payments smaller. Smaller monthly payments meant that less monthly income was required to afford an average-priced home.

Now that the interest rate component of the equation has risen off the historic low levels, money is becoming more expensive to borrow. With average sales prices still high and average wages increasing modestly, housing affordability is waning.

### A look at regional differences in affordability

Regionally, there are differences in housing affordability primarily due to differences in wages and home sales prices. Looking at the 10-year average index value for each selected area of the state (see Exhibit 5), areas where housing is less affordable have historically had higher average sales prices due to limited housing availability. The Bethel Census Area, and the Kodiak Island and Juneau boroughs have generally been less affordable than other areas. Index values for the Bethel Census Area have averaged 2.11 over the past 10 years, while the Kodiak Island and Juneau boroughs have averaged 1.82 and 1.75, respectively.

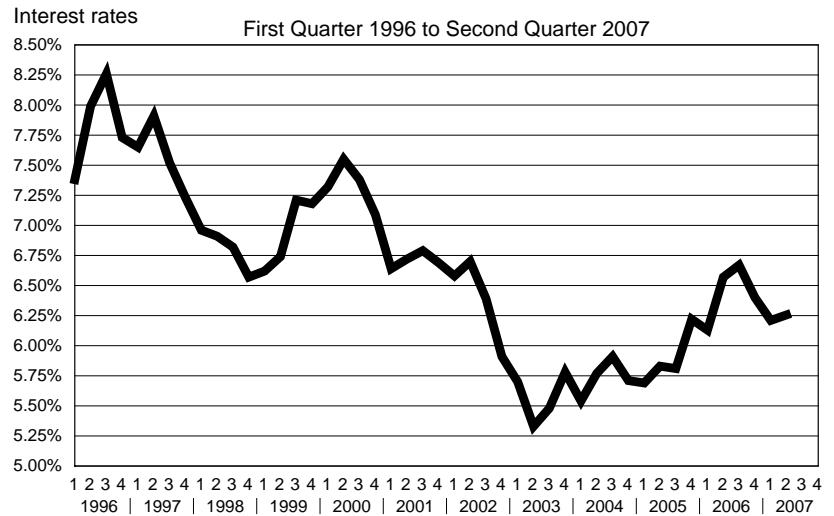
Areas with more affordable housing may not necessarily have much lower sales prices than less affordable areas; rather, the relationship between wages and average sales prices is more balanced.

The Kenai Peninsula and Fairbanks North Star boroughs have historically been among the more affordable areas in Alaska, each having an index value of 1.33. Anchorage, Alaska's largest city, had an average index value of 1.51.

The Matanuska-Susitna Borough, which had an average index value of 1.58 (higher than the statewide average of 1.46), has a unique housing situation given its proximity to Anchorage. People who own a home in Mat-Su and work in Anchorage benefit from lower Mat-Su housing costs and higher wages in Anchorage. The Alaska Affordability Index value for that housing situation was 1.23, the most affordable of any individual area by itself.

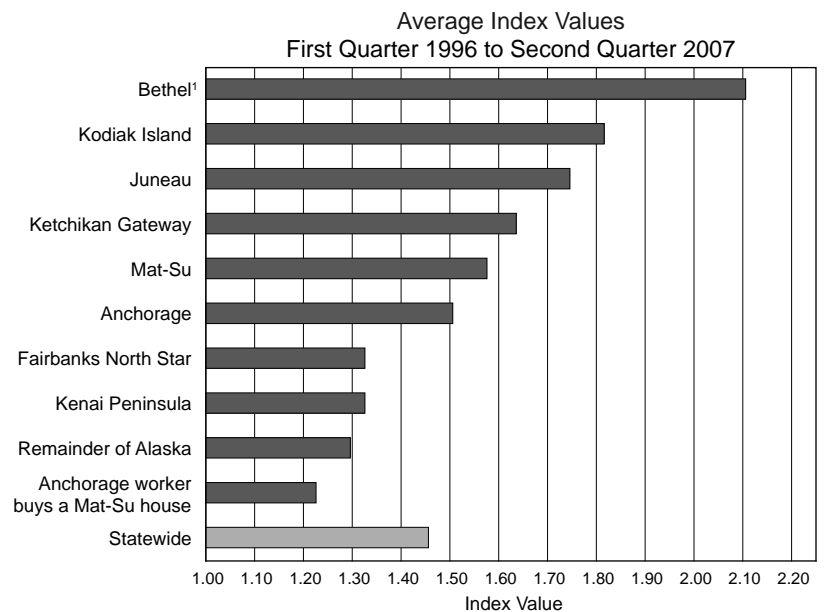
But the Mat-Su home with the Anchorage wage scenario doesn't include the cost of the com-

## Quarterly Average Interest Rates Statewide, 1996 to 2007 **4**



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

## Alaska Affordability Index Single-family residences, 1996 to 2007 **5**



<sup>1</sup> Census Area

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

mute, which can be significant, considering current high gas prices and the length and frequency of the commute.

### **What does the future hold?**

The Alaska Affordability Index doesn't provide a mechanism for forecasting. However, to buck the recent trend of diminishing housing affordability, one of three economic factors that make up the index must change direction.

Affordability could be achieved either through a reduction in average sales prices, an increase

in average wages, an interest rate decrease or some combination of all three. The Federal Reserve cut the federal funds rate by a half-percentage point in September and by a quarter-point in October. Those moves will probably keep interest rates fairly low for the foreseeable future. What impact wages and average selling prices will have on affordability given lower interest rates remains to be seen.

### **Methodology**

The index value used in the Alaska Affordability Index is the estimated average monthly mortgage payment for an area divided by the average monthly wage in that area. The type of mortgage is a 30-year conventional mortgage with a fixed interest rate. A 15 percent down payment is assumed. The type of dwelling is a single-family residence.

The average wage is based on wages reported by employers to the Alaska Department of Labor and Workforce Development. Employers report wages when they submit their unemployment insurance tax reports each quarter.

The estimated average monthly mortgage payment is based on the average home sales price and the fixed interest rate. The Department of Labor surveys Alaska mortgage lenders each quarter to collect that information for the Alaska Housing Finance Corporation. The survey results, called the Quarterly Survey of Lending Activity, are published quarterly both on the Department of Labor's Research and Analysis Web site (a summary) and the AHFC's Web site (a more extensive description).

To see a summary of the Quarterly Survey of Lending Activity on Research and Analysis' Web site, go to [almis.labor.state.ak.us](http://almis.labor.state.ak.us). Click on "Cost of Living" in the far left column, then "Housing Costs, Rent/Buy/Build."

To see more background on the Quarterly Survey of Lending Activity, go to AHFC's Web site at [ahfc.state.ak.us](http://ahfc.state.ak.us), click on "Reference Materials" in the far left column, then "Alaska Housing Market Indicators" and "Publications." Choose the date for the publication called *Alaska Housing Market Indicators*, then go to its Table of Contents.

The Alaska Affordability Index, which the Department of Labor also creates for AHFC, is available on AHFC's Web site. (See the instructions in the above paragraph to go to *Alaska Housing Market Indicators*' Table of Contents.)