

Revised Texas Housing Affordability Index

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Beginning with the first quarter of 2005, the Real Estate Center at Texas A&M University has revised its calculations of the Texas Housing Affordability Index (THAI) to be more consistent with other published indices and to reduce the complexity and subjectivity of the analysis that goes into the computations.

What THAI Measures

Housing affordability refers to the capacity to purchase a house, which typically revolves around the ability to qualify for the purchase mortgage. The basic interpretation of the THAI remains the same: the index reflects general housing affordability in terms of the ability of the median-income family to purchase the median-priced, existing house in the area using standard, conventional financing terms.

A ratio of exactly 1.0 indicates that the median family income is exactly equal to the income a conventional lender would require for the family to purchase the median-priced house. A ratio of less than 1.0 means that a median-income family has insufficient income to qualify for the loan to purchase the median-priced house. A ratio greater than 1.0 indicates that a median-income family earns more than enough to buy the median-priced house (that is, the family could afford to buy a house priced above the median price).

The equation for the affordability index is:

Index = Median Family Income (MFI)
Required Income to Qualify for a Conventional
Purchase Mortgage (RI)

Where: $RI = \frac{\text{Required Monthly Mortgage Payment} \times 12}{\text{Qualifying Ratio (QR)}}$

Affordability index estimates for different areas are often compared to estimate overall housing affordability of one area relative to another. For example, if Area A has an affordability index of 1.2 and Area B has an affordability index of 0.90, the implication is that housing is more affordable in Area A than in Area B. Another interpretation is that housing prices are significantly higher relative to local income in Area B than in Area A (or, conversely, incomes are lower relative to home prices in Area B than in Area A).

Dramatic differences may exist between two area indices. Care must be taken in making such comparisons because the data used to make the estimates may not be comparable. For example, local lending practices may be different. Family income distributions may vary or any number of other influences may not be included. While index values give an indication of affordability, the index should not be relied upon as the sole measure.

Comparing the index value for the same geographic area over time can be a useful indicator of the affordability trend within the area, especially if data sources and uses are constant.

Changes to THAI Calculations

Changes were made to three principal elements of the THAI: estimated local median family income, local property tax and insurance costs of homeownership and effective mortgage interest rate.

Median Family Income

Unfortunately, there is no official median family income estimate provided on a quarterly basis at the metropolitan or county level. Overall median incomes generally do not change that rapidly, and the data collection process is cumbersome and uneconomical.

In prior years, the Center estimated the median income based on quarterly wage and income statistics reported by the Bureau of Labor Statistics (BLS) adjusted by estimated growth or change factors in the income and local factors reflecting different income levels across the state. The data were estimated and adjusted on a quarterly basis for all households, as defined by the Census Bureau. This process is complicated and includes subjective estimates on the composition and magnitude of local wages and salaries and the appropriate growth factors.

Because of the method used to estimate local median income, it was difficult to compare the Center's estimated housing affordability index with others created by the National Association of Realtors and other researchers. The new approach uses a standard, nonbiased source of median family income that is consistent and applicable in the general real estate industry. The median family income divides the distribution of all families into two equal groups: half of the families earn incomes less than the median, and half of the families earn incomes greater than the median.

By U.S. Census Bureau definition, a family consists of two or more people (one of whom is the householder) related by birth, marriage or adoption residing in the same housing unit. A household consists of all people who occupy a housing unit regardless of relationship. A household may consist of a person living alone or multiple unrelated individuals or families living together.

The principal difference in the two measures is that median family income does not include any single-person households. The National Association of Realtors Housing Affordability Index uses median family income to measure whether the "typical" family (one earning the median income) can afford the "typical" house (the median-priced, existing house in the locale).

^{1.} See: HUD MD Family Income Estimate; www.huduser.org/Datasets/II.html, FY2005 Income Limits and previous years.

The Department of Housing and Urban Development (HUD) provides annual estimates of median family income by Metropolitan Statistical Area (MSA) and by nonmetropolitan county for purposes of determining local income qualification levels for HUD and other government housing programs and initiatives. The HUD estimates also include estimated family income deciles (10 percent intervals). Interpolating between the 20th and 30th deciles, for example, yields an estimated quartile (25 percent) median family income for each area used to estimate family income for first-time homebuyers.

For six Texas localities that report median home prices but are included in the HUD MSA estimates, the Center applies county-level Federal Financial Institutions Examination Council (FFIEC) median family income estimates. The FFIEC further refines the HUD income estimates down to county and even census-track levels based on historical allocations and ratios of areawide median income.

For example, Collin County is within the Dallas-Plano-Irving MSA. The overall median family income for the MSA is \$65,100, based on the estimate for Dallas County. However, because median home sales price data for Collin County is collected separately, the Center used the FFIEC median family income estimate for Collin County of \$99,609, a significantly higher median income than for the entire area. The other areas treated in this fashion include Fort Bend and Montgomery Counties in the Houston MSA; Denton County and Tarrant Counties in the Dallas MSA; and Hays County (San Marcos) in the Austin MSA.

Local Property Taxes and Insurance Costs

The second major adjustment to the THAI was elimination of local property taxes and homeowners insurance for each locale. These rates vary significantly, not only from county to county within an MSA but also within the same county. Center staff chose to eliminate the calculation and adjust the qualifying ratio accordingly.

Loan underwriting standards require that the debt-to-income (DTI) ratio for a prospective homebuyer not exceed a certain level or percentage. To qualify for the mortgage loan, the monthly mortgage payment plus escrow for property taxes and insurance (the common monthly costs of owning the home) cannot exceed a stipulated percentage of the borrower's gross monthly income.

That percentage is referred to as the Qualifying Ratio (QR) and establishes the maximum percentage of gross monthly income allocable to monthly housing costs. If taxes and insurance (or other normal monthly costs) are included, the QR would naturally be a greater percentage of monthly income. Not including an allocation for taxes and insurance lowers the applicable QR to determine the borrower's suitability.

In the past, the Center estimated the tax and insurance costs of homeownership from reported county and city property tax rates and state insurance rates and applied a 28 percent QR. Following the lead of conventional mortgage underwriting standards and the QR applied by NAR and others, the Center

now applies a 25 percent QR directly to the mortgage payment alone to estimate the income required for a homebuyer to qualify for a conventional, 80 percent home loan.

Mortgage Interest Rates

The third major change in computation of the THAI is the interest rate used to estimate the required monthly payment. Previously, the Center used the *weighted average contract rate* of fixed- and adjustable-rate loans according to the Federal Housing Finance Board (FHFB). The weighting was based on how many of each type loan were closed in each market.

The Center now uses the *effective rate* reported by FHFB's Monthly Survey of Rates and Terms on Conventional, Single-Family Non-farm Mortgage Loans for selected metropolitan areas. Houston, Dallas and San Antonio are now reported. (Historically, San Antonio has not been reported.) The state rate is equal to the Dallas Federal Reserve District rate, and the national rate reflects the average effective rate of all fixed-rate loans closed monthly during the quarter. ³ The effective rate includes the amortization of initial fees and charges made to close the loan. The quarterly rate is derived from the average of the three monthly rates reported in the FHFB data for the period covered.

As FHFB only reports rates for the three major MSAs in Texas, other Texas areas covered by the THAI were assumed to have rates equal to that of the major metro area they are a part of or equal to the state average. Accordingly, all of the home-price reporting areas within the three major MSAs are assumed to have equivalent prevailing interest rates (for example, Collin County and Arlington in the Dallas MSA and Galveston and Fort Bend County in Houston). Other Texas MSAs not included in the FHFB report and not part of one of the large MSAs are assumed to have prevailing interest rates equal to the nearest major MSA or equal to the state rate. These areas' applicable interest rates were assigned as follows:

- Brownsville, Harlingen, McAllen, San Angelo and Victoria were assumed equal to the San Antonio MSA's reported rate;
- Abilene, Amarillo, Austin, College Station-Bryan, Corpus Christi, El Paso, Killeen, Longview, Lubbock, Lufkin, Nacogdoches, Temple, Texarkana, Tyler, Waco and Wichita Falls were assumed equal to the reported statewide average interest rate.
- Beaumont, Port Arthur, Brazoria, Galveston and Montgomery County were assumed equal to the Houston MSA's reported rate.
- Arlington, Fort Worth, Palestine, Paris and Sherman-Denison were assumed equal to the Dallas MSA's reported rate.

First Quarter 2005 THAI

The first quarter 2005 THAI for selected Texas reporting areas (areas for which median home sales prices were collected) is depicted in Table 1. The new data significantly raise the level of

^{2.} For these areas the Center uses the average median family income of the census tracks located within the area as estimated by FFIEC.

^{3.} Federal Housing Finance Board, Monthly Interest Rate Survey, Table 4, Average for Major Metropolitan Areas: Loans Closed and Table 6, Averages by District: Loans Closed. The state rate equals the Dallas Federal Reserve District rate. The national rate is from Table 2, National Averages for All Major Lenders: Loans Closed.

the affordability index from previously reported estimates. The higher index measures tend to confirm the intuitive belief that Texas housing is particularly affordable relative to many other areas of the country, especially in a climate of relatively low interest rates and modest house price appreciation.

The higher local and state indices primarily result from employing the greater HUD median family income estimates rather than the prior computed incomes. Although both estimates are based on Bureau of Labor Statistics and census data, the growth estimates and more comprehensive nature of the HUD estimate results in family income estimates greater than the previous estimates. Consequently, revising the THAI to

match the NAR methodology clearly shows just how affordable Texas homes are.

For the state as a whole, the data indicate an affordability index of 1.79, which compares favorably to the Center-computed United States index of 1.34 and to the NAR first quarter index measure for the country at 132.9 (equivalent to 1.33). The NAR index indicates that a median-income family nationally earns 32.9 percent more than necessary to qualify for a loan to purchase the national median-priced house at \$188,800. The Texas median-income family earns 79 percent more than necessary to acquire the median-priced Texas house at \$129,100.

	Table 1. Tex	U		•			
Location	1Q05 Median Home Price	1Q05 Interest Rate (Percent)	Required Monthly Payment at 80% Loan to Value	Required Income to Qualify at 25 Percent QR	2005 HUD Median Family Income	Texas Housing Affordability Index	
Abilene	72,700	5.93	346.09	16,612	47,200	2.84	
Amarillo	102,600	5.93	488.42	23,444	49,850	2.13	
Arlington	121,600	5.88	575.76	27,636	62,700	2.27	
Austin	153,900	5.93	732.63	35,166	67,300	1.91	
Baytown	129,700	5.95	618.76	29,701	61,000	2.05	
Beaumont	97,800	5.95	466.58	22,396	48,850	2.18	
Brazoria (Brazoria Co.)	104,000	5.95	496.15	23,815	63,200	2.65	
Brownsville	89,600	6.21	439.48	21,095	31,850	1.51	
Bryan-College Station	126,900	5.93	604.10	28,997	54,000	1.86	
Collin Co.	175,700	5.88	831.91	39,932	99,609	2.49	
Corpus Christi	116,500	5.93	554.59	26,620	47,000	1.77	
Dallas	147,700	5.88	699.34	33,568	65,100	1.94	
Denton (Denton Co.)	153,600	5.88	727.27	34,909	74,480	2.13	
El Paso	105,400	5.93	501.75	24,084	38,250	1.59	
Fort Bend Co.	153,100	5.95	730.40	35,059	79,982	2.28	
Fort Worth	102,500	5.88	485.32	23,296	62,700	2.69	
Galveston	133,800	5.95	638.32	30,639	59,800	1.95	
Garland	107,700	5.88	509.94	24,477	65,100	2.66	
Harlingen	78,500	6.21	385.04	18,482	31,850	1.72	
Houston	134,800	5.95	643.09	30,868	61,000	1.98	
Irving	116,500	5.88	551.61	26,477	65,100	2.46	
Killeen	0	5.93	0.00	· -	47,500	-	
Longview	92,900	5.93	442.25	21,228	47,500	2.24	
Lubbock	93,700	5.93	446.06	21,411	47,150	2.20	
Lufkin (Angelina Co.)	86,300	5.93	410.83	19,720	44,465	2.25	
McAllen	96,000	6.21	470.87	22,602	29,800	1.32	
Montgomery Co. Nacogdoches	147,800	5.95	705.11	33,845	68,728	2.03	
(Nacogdoches Co.)	61,900	5.93	294.67	14,144	42,156	2.98	
Northeast Tarrant Co.	151,500	5.88	717.33	34,432	63,178	1.83	
Odessa-Midland	76,200	5.93	373.76	17,940	48,500	2.79	
Palestine (Anderson Co.)	75,600	5.88	357.96	17,182	44,841	2.61	
Paris (Lamar Co.)	91,700	5.88	434.19	20,841	41,672	2.00	
Port Arthur	78,200	5.95	373.07	17,907	61,000	3.41	
San Angelo	84,000	5.93	412.02	19,777	45,050	2.35	
San Antonio	119,100	6.21	584.18	28,041	50,500	1.80	
San Marcos (Hays Co.)	0	6.21	0.00	-	58,646	-	
Sherman-Denison	93,600	5.88	443.18	21,273	51,400	2.42	
Temple	97,000	5.93	461.76	22,165	65,100	2.94	
Texarkana	86,200	5.93	410.35	19,697	45,550	2.31	
Tyler	117,100	5.93	557.45	26,758	50,950	1.90	
Victoria	95,600	5.93	468.91	22,508	53,000	2.43	
Waco	88,400	5.93	420.82	20,200	47,350	2.34	
Wichita Falls	90,600	5.93	431.30	20,702	47,350	2.29	
Texas	129,100	5.93	614.58	29,500	52,900	1.79	
United States	188,800	5.93	898.77	43,141	58,000	1.34	

Note: - represents an area or time period for which we did not have median home price data.

Source: Real Estate Center at Texas A&M University

Table 2. Revised Texas Housing Affordability Index Estimates: 1Q2005 – 1999

Location	1Q05	2004	2003	2002	2001	2000	1999
Abilene	2.84	3.14	2.83	2.40	2.29	2.37	2.28
Amarillo	2.13	2.79	2.25	2.00	1.97	1.97	1.97
Arlington	2.27	3.03	2.23	2.16	2.16	2.13	2.23
Austin	1.91	2.59	1.89	1.87	1.71	1.53	1.66
Baytown	2.05	2.86	1.95	1.82	1.94	1.83	1.96
Beaumont	2.18	2.82	2.16	2.11	2.09	1.93	2.05
Brazoria (Brazoria Co.)	2.65	3.55	0.00	2.49	2.68	2.54	2.63
Brownsville	1.51	2.07	1.54	1.23	1.54	1.47	1.50
Bryan–College Station	1.86	2.79	1.88	1.62	1.48	1.62	1.71
Collin Co.	2.49	2.93	2.53	2.05	1.99	1.87	1.98
Corpus Christi	1.77	2.55	2.00	1.85	1.92	0.00	1.84
Dallas	1.94	2.60	1.94	1.87	1.82	1.74	1.85
Denton Co.	2.13	2.74	2.17	1.96	1.87	1.75	1.86
El Paso	1.59	2.14	1.78	1.67	1.69	1.58	1.67
Fort Bend Co.	2.28	3.16	2.27	1.95	2.01	1.95	2.04
Fort Worth	2.69	3.87	2.72	2.62	2.75	2.64	2.74
Galveston	1.95	3.61	2.04	0.00	1.61	1.86	2.34
Garland	2.66	-	2.61	2.48	2.54	2.46	2.60
Harlingen	1.72	1.92	0.00	0.00	1.47	1.19	1.36
Houston	1.98	3.02	1.95	1.87	1.97	1.85	2.05
Irving	2.46	2.44	2.44	2.42	2.27	2.30	2.51
Killeen	-	2.86	2.33	1.97	2.05	2.07	2.08
Longview	2.24	2.62	2.28	0.00	1.98	1.81	1.85
Lubbock	2.20	2.74	2.19	2.10	2.15	1.87	2.11
Lufkin (Angelina Co.)	2.25	2.94	2.96	2.07	1.86	1.91	2.00
McAllen	1.32	1.84	0.00	0.00	1.34	1.37	1.35
Montgomery Co.	2.03	2.64	2.10	1.80	1.84	1.64	1.78
Nacogdoches (Nacogdoches. Co.)	2.98	2.81	2.09	_	_	_	-
Northeast Tarrant Co.	1.83	2.30	1.81	1.69	1.68	1.56	1.67
Odessa-Midland	2.79	3.08	2.58	2.44	2.57	2.25	2.17
Palestine (Anderson Co.)	2.61	3.56	-	-	_	2.10	2.29
Paris (Lamar Co.)	2.00	3.04	2.35	2.27	2.35	1.99	2.26
Port Arthur	2.73	3.81	2.78	2.78	0.00	2.39	2.67
San Angelo	2.35	3.01	2.30	2.31	2.24	2.08	2.14
San Antonio	1.80	2.60	1.92	1.77	1.87	1.74	1.80
San Marcos (Hays Co.)	_	4.51	0.00	0.00	1.89	1.77	2.00
Sherman-Denison	2.42	-	2.58	2.10	2.21	2.17	2.12
Temple	2.14	2.61	2.11		-	-	1.85
Texarkana	2.31	-	2.38	-	-	-	-
Tyler	1.90	2.47	1.93	1.88	1.93	1.83	1.90
Victoria	2.43	3.11	2.39	2.18	2.26	1.91	2.14
Waco	2.34	3.04	2.02	-	-	-	
Wichita Falls	2.29	2.27	3.59	2.15	2.21	2.22	2.16
Texas	1.79	1.46	1.81	1.68	1.69	1.58	1.74
United States	1.34	1.53	1.61	1.43	1.45	1.38	1.38

Note: – represents an area or time period for which we did not have median home price data. Source: Real Estate Center at Texas A&M University

A five-year perspective of the revised THAI employing the new measures for median family income and interest rate and omitting the property tax and insurance components is shown in Table 2. The data indicate that Texas has been a highly affordable housing state for some time.

The trend of increasing affordability may have peaked in 2004, however. Many of the individual metropolitan areas have a lower affordability index in first quarter 2005 than in first quarter 2004 after showing a steady increase since 1999. The lower affordability index measures generally reflect slower income growth throughout the state over the past couple of years coupled with increased median home prices and a slight increase in interest rates since 2003.

Limiting Factors and Cautions

Readers should interpret individual affordability indices as general indicators of housing prices relative to local incomes, not as statistically certain measures. The individual data components of the computation each contribute to the usefulness and the limitations of the measure.

Median house prices are derived from sales reported by the local area multiple listing services and boards of Realtors. While representative of what is happening in a locale, these sales only reflect properties sold by Realtors in the area during that quarter and do not include properties not sold by Realtors. Thus, the median price in any given quarter may be influenced by the inventory of sales during that quarter as well as other factors.

This explains why in some quarters the median price may actually be less than in a previous quarter, when it is commonly believed that prices are increasing. The median price in many communities is for single-family residential dwelling units. The data may or may not reflect the inclusion of condominiums or any other forms of owner-occupied, multifamily residential housing.

Although home price is important, the ultimate decision on whether to purchase is based on down payment required and the monthly payment a prospective owner would have to pay to own a property. How large a mortgage the borrower can obtain and the mortgage interest rate affect these two items the most.

Mortgage interest rates can and do vary from one community to another. Interest rates are not generally available for each locale, so assumptions have been made based purely on geography. As data are only available at the state level and for the major MSAs in the state, local rates require assignment rather than observation or collection.

The whole concept of the affordability index measure as employed here, and in most other situations, assumes standard, conventional mortgage terms and conditions. The Texas index is based on a buyer obtaining an 80 percent, fixed-rate conventional mortgage for a 30-year term. The index first assumes that buyers have the necessary down payment and use it to avoid having to add a private mortgage insurance premium to the interest rate.

Today's housing markets are flooded with alternative financing packages, programs and terms aimed at increasing the number of qualified buyers. FHA-insured and VA-guaranteed loans make houses more affordable to buyers who do not have

the 20 percent down payment and those who elect not to use their capital for that purpose.

It is impossible to account for all the different types of home mortgages available in the market when generalizing about overall housing affordability. Some sources reporting affordability indices now include an index based on an adjustable rate mortgage (ARM), which typically carries a significantly lower initial interest rate that adjusts at a designated point in the future.

Median income contributes the most imprecise data point in the whole equation. Like the NAR and others, the Center has chosen to use median family income. Families are defined

Table 3. Revised Texas First-Time Home Buyer Affordability Index: 1Q2005							
Location	First Quartile Median Home Price	First-Time Loan at 90 Percent	P&I @ Rate + 0.5 Percent	Required Income to Qualify @ 25 Percent	MFI First Quartile HUD	First Time Homebuyer Housing Affordability Index	
Abilene	44,400	39,960	250.74	12,035	28,250	2.35	
Amarillo	66,300	59,670	374.41	17,972	28,975	1.61	
Arlington	93,500	84,150	525.26	25,213	36,800	1.46	
Austin	115,700	104,130	653.39	31,363	39,550	1.26	
Baytown	95,100	85,590	538.18	25,832	32,100	1.24	
Beaumont	64,600	58,140	365.57	17,548	26,775	1.53	
Brazoria (Brazoria Co.)	75,200	67,680	425.56	20,427	36,100	1.77	
Brownsville	63,400	57,060	368.57	17,692	16,550	0.94	
Bryan-College Station	90,600	81,540	511.64	24,559	27,350	1.11	
Collin Co.	139,800	125,820	785.36	37,698	36,500	0.97	
Corpus Christi	80,300	72,270	453.47	21,767	25,250	1.16	
Dallas	106,400	95,760	597.73	28,691	36,500	1.27	
Denton (Denton Co.)	121,700	109,530	683.68	32,817	36,500	1.11	
El Paso	77,700	69,930	438.79	21,062	20,925	0.99	
Fort Bend Co.	116,100	104,490	657.02	31,537	32,850	1.04	
Fort Worth	74,200	66,780	416.84	20,008	36,800	1.84	
Galveston	78,900	71,010	446.50	21,432	32,100	1.50	
Garland	88,100	79,290	494.93	23,756	36,500	1.54	
Harlingen	52,300	47,070	304.04	14,594	16,550	1.13	
Houston	98,000	88,200	554.59	26,620	32,850	1.23	
Irving Killeen	95,100	85,590 -	534.25	25,644	36,500 29,700	1.42	
Longview	61,100	54,990	345.05	16,562	26,750	1.62	
Lubbock	67,100	60,390	378.93	18,189	26,725	1.47	
Lufkin (Angelina Co.)	64,000	57,600	361.42	17,348	26,575	1.53	
McAllen	60,100	54,090	349.39	16,771	15,600	0.93	
Montgomery Co.	104,300	93,870	590.24	28,331	32,850	1.16	
Nacogdoches (Nacogdoches Co.)	37,500	33,750	211.77	10,165	23,475	2.31	
Northeast Tarrant Co.	111,600	100,440	626.94	30,093	36,800	1.22	
Odessa-Midland	40,500	36,450	235.45	11,301	27,550	2.44	
Palestine (Anderson Co.)	43,500	39,150	244.37	11,730	26,050	2.22	
Paris (Lamar Co.)	55,600	50,040	312.35	14,993	24,700	1.65	
Port Arthur	44,600	40,140	252.39	12,115	26,775	2.21	
San Angelo	57,400	51,660	333.69	16,017	26,600	1.66	
San Antonio	81,200	73,080	472.05	22,659	29,050	1.28	
San Marcos (Hays Co.)	-	-	-	-	39,550	-	
Sherman-Denison	60,200	54,180	338.19	16,233	30,250	1.86	
Temple	74,200	66,780	419.03	20,113	29,700	1.48	
Texarkana	58,000	52,200	327.54	15,722	23,975	1.52	
Tyler	78,900	71,010	445.57	21,387	29,500	1.38	
Victoria	67,000	60,300	389.50	18,696	30,000	1.60	
Waco	54,900	49,410	310.03	14,882	27,125	1.82	
Wichita Falls	59,000	53,100	333.19	15,993	28,725	1.80	
Texas	89,400	80,460	504.86	24,233	29,854	1.23	
United States	160,500	144,450	906.38	43,506	31,909	0.73	

Note: - represents an area or time period for which we did not have median home price data.

Source: Real Estate Center at Texas A&M University

as a group of two or more people related by birth, marriage or adoption residing together. By contrast, a household is any person or group of people who occupy a housing unit as their usual place of residence. The key differentiation is the exclusion of the individual occupant-owner. Whereas statistically "households" occupy housing units, the affordability index concept focuses on families acquiring owner-occupied single-family units.

The difficulty in measuring median income as well as the lack of timely, geographically specific data led the Center to use a common estimate that is universally available. THAI computations and estimates are, therefore, replicable and open to additional scrutiny and review by others.⁴

First-Time Homebuyers Affordability Index

First-time homebuyers in Texas found housing much more affordable throughout the state in the first quarter of 2005, especially compared with the affordability level for the nation.

The First-Time Homebuyer's Affordability Index (FTHAI) uses the first quartile home prices for each reporting location to represent the price of an entry-level home in that

area. Correspondingly, the applicable income for first-time homebuyers equals the first quartile family income estimate from the HUD median family income estimates database. The state's quartile income equaled the average quartile-to-median income ratio applied to the state median family income.

Further, first-time homebuyers are assumed to obtain a 90 percent conventional loan to finance the purchase, reflecting less available capital for a down payment. The interest rate on a first-time loan equals the reported quarterly rate plus 0.5 percent, reflecting the higher risk of the loan as well as the cost of private mortgage insurance, which many lenders require on loans for more than 80 percent of the purchase price.

The FTHAI depicted in Table 4 was 1.23 statewide in first quarter 2005 compared with a national index value of 0.73. In other words, the income of a first-time buyer in Texas was 23 percent greater than needed to qualify for an entry-level home. First-time homebuyers around the country, however, typically had less than three-quarters of the necessary income and could not qualify for a loan to purchase the entry-level house. The U.S. affordability index relied on NAR estimates of income and entry-level home price.

^{4.} NAR, for example, computes its own estimate of median family income, making it difficult for others to replicate it exactly.



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