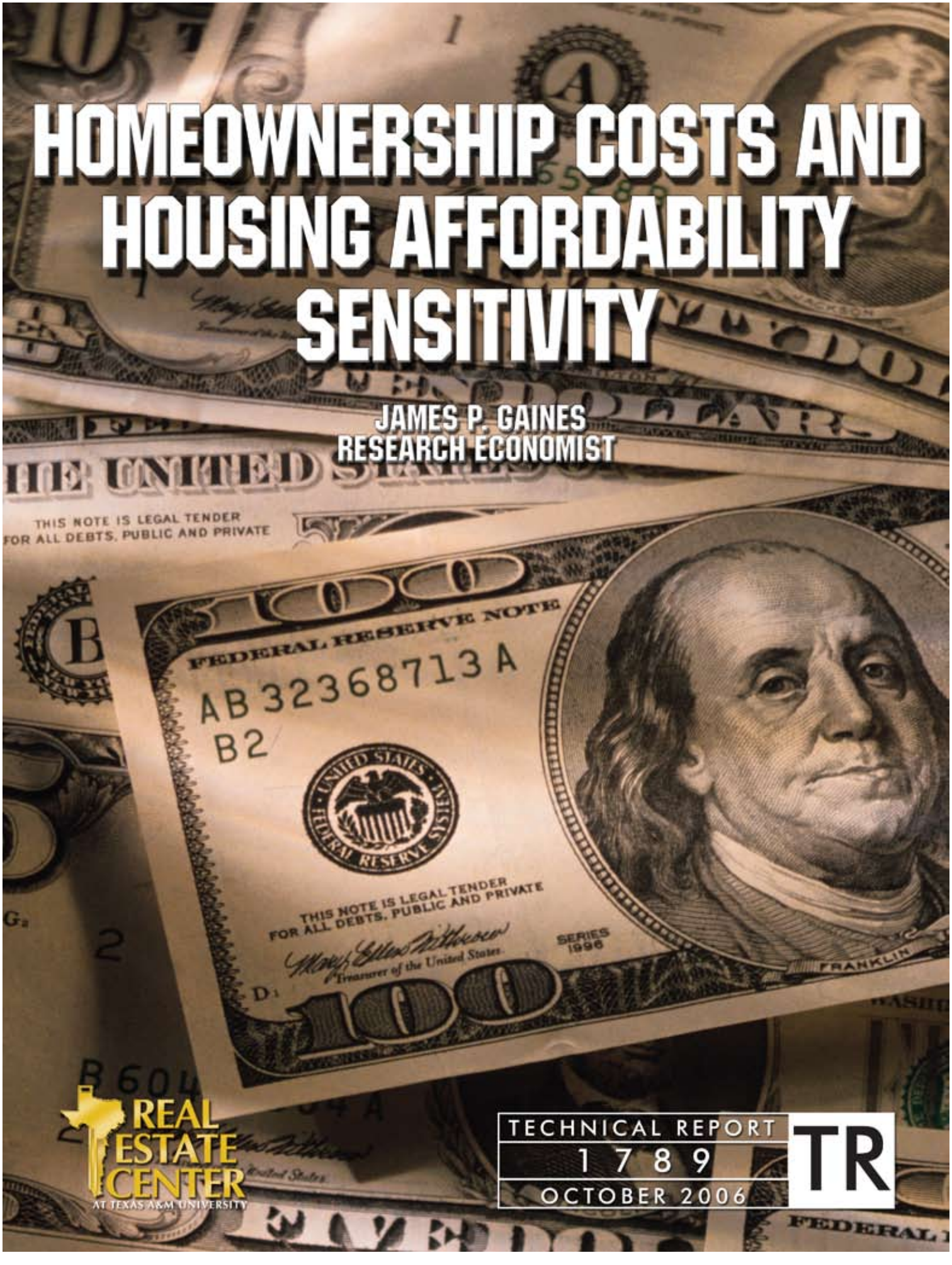

HOMEOWNERSHIP COSTS AND HOUSING AFFORDABILITY SENSITIVITY

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Homeownership has been a fundamental objective of most Americans since Colonial times. The U.S. government promoted and encouraged land (home) ownership until the policy became explicit in the 1949 Housing Act, which called for the specific goal of a "safe and decent home" for all.

Over the years the government created numerous agencies and organizations (HUD, FHA, FNMA, FHLMC, GNMA) and enacted a plethora of programs expressly to enable more people to become homeowners through direct assistance or through more attractive and available home acquisition financing. The national homeownership rate is now at an all-time high following several years of historically low mortgage interest rates. Despite all the government initiatives, homeownership requires that buyers earn sufficient income to pay for a home.

The term "housing affordability" refers to the ability to acquire a home at a given price. A housing affordability "gap" reflects the difference between what households can afford to pay each month, at some standard ratio of monthly income, versus what it actually costs to acquire and occupy a home.

Most interest in affordable housing focuses on the gap between what low- and moderate-income working households can afford relative to actual housing costs in the local market. Safe, quality housing for this substantial portion of the population is critical to the overall welfare and prosperity of the nation.

Texas Housing Affordability

Texas remains one of the most housing-affordable states in the union, but price and component homeownership cost increases coupled with slower household income increases have created concerns about future home affordability gaps. As real estate agents, homeowners and prospective homeowners know, the key to acquiring a home is qualifying for the purchase mortgage. Qualifying is primarily a function of the relationship between the buyer's income and the projected costs of homeownership.

Traditional housing affordability indexes typically measure the degree to which the median-income household (or family) is able to qualify for a loan to buy the median-priced house in an area, based on a set of assumed financing terms. The Texas Housing Affordability Index (THAI), reported quarterly by the Real Estate Center at Texas A&M University reflects the ratio of local median family income to the estimated required income to qualify to finance the purchase of the statewide median-priced house and for each Texas metropolitan area. (The THAI uses family median income as estimated annually by HUD rather than median household income.) The THAI's estimated 2005 statewide affordability index of 1.68 signifies that a family earning the statewide median family income has 68 percent more income than the estimated required income to finance the acquisition of the statewide median-priced home.

The THAI assumes the purchaser needs to qualify for an 80 percent, fixed-rate loan at current interest rates, and the monthly mortgage payment (not including taxes and insurance) should be no greater than 25 percent of the borrower's gross monthly income. In other areas of the country, especially in the highest-priced housing markets in California, Florida and the northeast, comparable affordability index figures routinely hover in the 0.15 to 0.40 range, indicating that a median-income family has no hope of acquiring the median-priced home. In these areas, a median-income family has great difficulty acquiring any housing and is forced into smaller, lower-priced and often lower-quality units.

Other recurring housing costs, such as maintenance and transportation, also affect housing choices and affordability. Earlier this year, the Brookings Institution's Centers for Transit Oriented Development and Neighborhood Technology published a report suggesting incorporation of commuting costs into the affordability equation.[1] The rationale for this follows that the substantial rise in oil and gas prices and the fact that site location choices of developers and households directly affect a homeowner's daily, weekly and monthly commuting costs, which have grown to a significant proportion of income. This analysis does not include transportation costs of homeownership.

Required Income And Component Home Costs

Homeownership affordability rests on the relationship between household income and total monthly ownership costs. Table 1 indicates the amount of income required to finance a home purchased at various price levels, based on the stated assumptions. Because the annual cost of utilities has become a significant portion of total monthly housing expenses (exceeding, for example, the cost of property insurance), for this analysis the traditional PITI measure expands to PITUI — principal, interest, taxes, utilities and insurance. For simplicity, mortgage insurance costs for a greater-than-80-percent loan have been omitted.

[1] The Brookings Institution, Center for Transit-Oriented Development and Center for Neighborhood Technology, "The Affordability Index: A New Tool for Measuring the True Affordability of a Housing Choice," January 2006.

Total monthly costs, under the assumptions applied, equal about one percent of the home price. Table 1 data reveal that a buyer can afford to purchase a house priced at a maximum of 2.52 times annual income. If household income is $50,000, a buyer should be able to afford (qualify for) a home priced at no more than $126,000 (2.52 × 50,000). If homeownership costs or the qualifying ratio increase, the price multiplier decreases, meaning the same income will support a lower maximum-priced home. If taxes go up, if interest rates increase, if property insurance costs rise, if utility costs go up, the maximum price of an "affordable" home goes down.

Other qualifying factors considered when a household applies for a new loan are size of the household, amount of other debts, spending habits and the buyer's credit rating. This analysis assumes that other credit factors are neutral and qualifying for the home loan is based solely on the cost-to-income ratio.

The assumptions regarding home costs detailed in Table 1 are reasonable for most Texas communities. For a $125,000 home, the annual cost of property insurance would be $1,000, annual property taxes would be $3,750, and annual utilities would run $2,500. Monthly costs would be $83.33, $312.50 and 208.33, respectively, for a total monthly cost of $604.16. The monthly mortgage payment is an additional $637.02, about 51 percent of the total monthly cost of $1,241.19, which is about 1 percent of the home price.

Table 1A below shows computed annual and monthly costs for a range of effective utility rates, property tax rates and insurance rates for a $125,000 home. The base assumption level for each component cost is highlighted.

Table 1. Required Income to Purchase Home Based on Specified Assumptions

Interest Rate	**6 percent, fixed-rate mortgage**
Qualifying ratio	**30 percent, monthly housing costs/monthly income**
Local Taxes	**3 percent of home value**
Property Insurance	**0.8 percent of home value**
Utilities	**2 percent of home value**
Down payment	**15 percent**
Loan	**85 percent, 30-year**

House Price	Total Monthly Housing Cost	Required Income to Qualify	Maximum Home Price Multiplier
$20,000	$198.59	$7,944	2.52
30,000	297.89	11,915	2.52
40,000	397.18	15,887	2.52
50,000	496.48	19,859	2.52
60,000	595.77	23,831	2.52
70,000	695.07	27,803	2.52
75,000	744.71	29,789	2.52
80,000	794.36	31,774	2.52
90,000	893.66	35,746	2.52
100,000	992.95	39,718	2.52
125,000	1,241.19	49,648	2.52
150,000	1,489.43	59,577	2.52
175,000	1,737.66	69,507	2.52
200,000	1,985.90	79,436	2.52
225,000	2,234.14	89,366	2.52
250,000	2,482.38	99,295	2.52
275,000	2,730.62	109,225	2.52
300,000	2,978.85	119,154	2.52
350,000	3,475.33	139,013	2.52
400,000	3,971.81	158,872	2.52
450,000	4,468.28	178,731	2.52
500,000	4,964.76	198,590	2.52

Source: Real Estate Center at Texas A&M University

Affordability and Income Sensitivity

The sensitivity of housing affordability relative to income is fairly obvious. Assuming the conditions for acquiring a property as stated above and applying the price multiplier from Table 1, the maximum-priced home households at different income levels can afford are distributed as depicted in Table 2.

Applying the same financing assumptions across each income level produces a simple, linear result. Each additional dollar of income results in an increase of $2.52 in the maximum home price. For each increment of $5,000 in income, the maximum home price increases by a constant $12,600. The higher the multiplier, (that is, the lower total monthly housing costs are), the greater the additional maximum home price for every additional dollar of income. If different financing terms and/or other costs apply to different income levels, the multiplier would change accordingly. For example, if higher-income households make larger down payments, the total amount financed (and hence the monthly payment) declines, resulting in a greater maximum price multiplier for those income groups.

Mortgage Interest Rate Sensitivity

Historically low mortgage interest rates offset higher home prices between 2002 and 2005, causing overall national housing affordability to climb significantly according to the National Association of Realtors (NAR). However, that trend will reverse as prices increase faster than household incomes, and if the Federal Reserve pushes mortgages rates up further. NAR's national, composite affordability index declined from 130.7 in 2003 to 114.6 in 2005 and to 102.8 by July 2006, reflecting the changes in prices and interest rates over that period. The metropolitan boom markets that experienced the highest annual price increases over the past four years also saw housing affordability decline rapidly despite lower interest rates and more favorable financing qualifying terms.

Mortgage interest rates in 2006 have exceeded rates in the prior three years. Just how high rates may go is not certain. Holding other assumed component costs constant, Table 3 shows how required income increases and the price multiplier declines as the mortgage interest rate increases from 3 percent to 9 percent. The highlighted 6 percent interest rate line is the same as Table 1.

Table 1A. Annual and Monthly Utility, Tax and Insurance Costs, $125,000 Home

Effective Utility Rate	Monthly Utility Costs for a Home Priced $125,000	Annual Utility Costs for a Home Priced $125,000	Local Effective Tax Rate	Annual Tax for a Home Priced at $125,000	Monthly Tax for a Home Priced at	Property Insurance Rate	Annual Cost for a Home Priced at $125,000
0.50%	$52.08	$625.00	2.0%	$2,500	$208.33	0.30%	$375
0.75%	78.13	937.50	2.1%	2,625	218.75	0.40%	500
1.00%	104.17	1,250.00	2.2%	2,750	229.17	0.50%	625
1.25%	130.21	1,562.50	2.3%	2,875	239.58	0.60%	750
1.50%	156.25	1,875.00	2.4%	3,000	250.00	0.70%	875
1.75%	182.29	2,187.50	2.5%	3,125	260.42	0.80%	1,000
2.00%	208.33	2,500.00	2.6%	3,250	270.83	0.90%	1,125
2.25%	234.38	2,812.50	2.7%	3,375	281.25	1.00%	1,250
2.50%	260.42	3,125.00	2.8%	3,500	291.67	1.10%	1,375
2.75%	286.46	3,437.50	2.9%	3,625	302.08	1.20%	1,500
3.00%	312.50	3,750.00	3.0%	3,750	312.50	1.30%	1,625
3.25%	338.54	4,062.50	3.1%	3,875	322.92	1.40%	1,750
3.50%	364.58	4,375.00	3.2%	4,000	333.33	1.50%	1,875
3.75%	390.63	4,687.50	3.3%	4,125	343.75	1.60%	2,000
4.00%	416.67	5,000.00	3.4%	4,250	354.17	1.70%	2,125
4.25%	442.71	5,312.50	3.5%	4,375	364.58	1.80%	2,250
4.50%	468.75	5,625.00	3.6%	4,500	375.00	1.90%	2,375
4.75%	494.79	5,937.50	3.7%	4,625	385.42	2.00%	2,500
5.00%	520.83	6,250.00	3.8%	4,750	395.83	2.10%	2,625
			3.9%	4,875	406.25	2.20%	2,750
			4.0%	5,000	416.67	2.30%	2,875
			4.1%	5,125	427.08	2.40%	3,000
			4.2%	5,250	437.50	2.50%	3,125
			4.3%	5,375	447.92	2.60%	3,250
			4.4%	5,500	458.33	2.70%	3,375
			4.5%	5,625	468.75	2.80%	3,500
			4.6%	5,750	479.17	2.90%	3,625
			4.7%	5,875	489.58	3.00%	3,750
			4.8%	6,000	500.00		
			4.9%	6,125	510.42		
			5.0%	6,250	520.83		

Source: Real Estate Center at Texas A&M University

Table 2. Maximum House Price at Different Income Levels With 2.52 Maximum Price Multiplier

Household Income	Maximum House Price
$10,000	$25,200
15,000	37,800
20,000	50,400
25,000	63,000
30,000	75,600
35,000	88,200
40,000	100,800
45,000	113,400
50,000	126,000
55,000	138,600
60,000	151,200
65,000	163,800
70,000	176,400
75,000	189,000
80,000	201,600
85,000	214,200
90,000	226,800
95,000	239,400
100,000	252,000
105,000	264,600
110,000	277,200
115,000	289,800
120,000	302,400
125,000	315,000
130,000	327,600
140,000	352,800
150,000	378,000

Source: Real Estate Center at Texas A&M University

At a 3 percent mortgage interest rate, a household can qualify to purchase a home priced 2.97 times its annual income; at 9 percent, however, that figure drops to 2.14 times income — 28 percent less. A $150,000 home at a 3 percent interest rate requires an income of $50,500. But at 9 percent, an annual income of $70,000 is required — nearly 39 percent more to buy the same priced home. For households earning less, a $150,000 home would simply be unaffordable.

The required income data in Table 3 reveal that for every one-quarter of 1 percent (0.25 percent) increase in the interest rate, required income increases by an average of 1.37 percent. If interest rates increase by a full percentage point, say from 5 percent to 6 percent, required income increases by nearly 5.5 percent. If interest rates rose from 6 percent to 7.5 percent, household income would have to increase by another 6.85 percent. As the required income increases, households earning less than the new required amount are forced to acquire lower-priced homes, thus lowering overall housing affordability. This impact on Texas households is described later.

If the prevailing mortgage interest rate increased from 5 percent to 6 percent, the price multiplier declines from 2.66 to 2.52. Instead of being able to qualify for a $133,000 home, a household with $50,000 income would be limited to a home priced no more than $126,000. Every quarter-percent increase in the interest rate causes the maximum price multiplier to decrease by an average of 0.035 and the maximum home price to decline by an average of $6,900 (the actual decline is greater at lower interest rates and less at higher rates).

Approximately 30 percent of all conventional home loans in the United States during 2005 were adjustable rate mortgages (ARMs) that require interest rate adjustments, typically after one, two, three, five or seven years. If, after the first adjustment, the interest rate for an existing loan goes from 5 percent to 6 percent, the homeowner's income would have to increase by approximately 5.5 percent for the PITUI payment to remain at no more than 30 percent of gross monthly income.

If this adjustment occurs after just one year, it is highly probable that income will not increase by that much, putting additional stress on the owner's budget to maintain ownership or other spending. If the rate continues to ratchet upward faster than income, the percentage of household income devoted to homeownership will also increase, leaving less discretionary income for other purposes. Borrowers will increasingly be forced to sell their properties, refinance their ARM loans at fixed rates or spend a higher proportion of their monthly income on basic housing costs. If none of these options are available, higher foreclosure rates result.

Local Property Tax Rates

Local property tax rates significantly affect housing choices and affordability. Table 4 reports the required income and maximum home price multiplier at a range of effective local property tax rates. The effective property tax rate represents the total property taxes paid for all purposes (school, city, county and special jurisdictions) expressed as a percentage of the market value of the property. This rate includes all nominal tax rates as well as homestead and any other assessment exemptions. If a property is assessed and taxed at 100 percent of market value, the effective tax rate equals the nominal tax rate; if a property is assessed for something less than its market value or some type of exemption or other deduction is applied (the homestead exemption, for example), the effective rate is lower than the nominal rate.

The highlighted 3.0 percent local tax rate reflects the same results as in Tables 1 and 2 for a 6.0 percent mortgage interest rate. The price multiplier increases overall 38.5 percent as the effective tax rate decreases, going from 2.08 at a 5.5 percent effective rate to 2.88 at a 1.5 percent effective rate.

On average, household income must increase 8.2 percent for every 1.0 percentage point increase in the effective tax rate to afford the same priced home. Conversely, a 1 percent decline in the effective property tax rate reduces the income required to buy the same home. If the local effective tax rate declines from 3.0 percent to 2.5 percent, the required income to purchase a $125,000 home, for example, declines from $49,648 to $47,564, a 4.2 percent decrease. Households with income between these two amounts would now be able to qualify for a $125,000 home, whereas they could not at the higher tax rate.

Property Insurance Rates

Property insurance costs are typically a smaller portion of the total costs of homeownership, but as many property owners in Texas discovered after the hurricanes and floods of the past several years, a season of high payouts for claims can cause

Table 3. Required Income, Maximum Price Multiplier at Different Mortgage Interest Rates*

Mortgage Interest Rate (percent)	Annual Income Required for a Home Priced at								Maximum Price Multiplier	Required Income Increase (percent)
	$75,000	$125,000	$150,000	$175,000	$200,000	$250,000	$300,000	$400,000		
3.00	25,251	42,085	50,502	58,919	67,336	84,170	101,004	134,671	2.97	
3.25	25,598	42,663	51,196	59,728	68,261	85,326	102,391	136,521	2.93	1.37
3.50	25,951	43,251	51,901	60,551	69,202	86,502	103,803	138,403	2.89	1.38
3.75	26,309	43,849	52,619	61,389	70,159	87,698	105,238	140,317	2.85	1.38
4.00	26,674	44,457	53,348	62,240	71,131	88,914	106,696	142,262	2.81	1.39
4.25	27,044	45,074	54,089	63,104	72,119	90,148	108,178	144,237	2.77	1.39
4.50	27,420	45,701	54,841	63,981	73,121	91,402	109,682	146,243	2.74	1.39
4.75	27,802	46,337	55,604	64,871	74,139	92,673	111,208	148,277	2.70	1.39
5.00	28,189	46,982	56,378	65,774	75,171	93,963	112,756	150,341	2.66	1.39
5.25	28,581	47,635	57,162	66,689	76,217	95,271	114,325	152,433	2.62	1.39
5.50	28,979	48,298	57,957	67,617	77,276	96,595	115,914	154,553	2.59	1.39
5.75	29,381	48,969	58,762	68,556	78,350	97,937	117,524	156,699	2.55	1.39
6.00	29,789	49,648	59,577	69,507	79,436	99,295	119,154	158,872	2.52	1.39
6.25	30,201	50,335	60,402	70,469	80,535	100,669	120,803	161,071	2.48	1.38
6.50	30,618	51,030	61,235	71,441	81,647	102,059	122,471	163,295	2.45	1.38
6.75	31,039	51,732	62,079	72,425	82,771	103,464	124,157	165,543	2.42	1.38
7.00	31,465	52,442	62,930	73,419	83,907	104,884	125,861	167,814	2.38	1.37
7.25	31,895	53,159	63,791	74,423	85,055	106,318	127,582	170,109	2.35	1.37
7.50	32,330	53,883	64,660	75,437	86,213	107,767	129,320	172,427	2.32	1.36
7.75	32,769	54,614	65,537	76,460	87,383	109,228	131,074	174,765	2.29	1.36
8.00	33,211	55,352	66,422	77,492	88,563	110,703	132,844	177,125	2.26	1.35
8.25	33,657	56,095	67,315	78,534	89,753	112,191	134,629	179,506	2.23	1.34
8.50	34,107	56,845	68,215	79,584	90,953	113,691	136,429	181,906	2.20	1.34
8.75	34,561	57,601	69,122	80,642	92,162	115,203	138,243	184,325	2.17	1.33
9.00	35,018	58,363	70,036	81,708	93,381	116,726	140,072	186,762	2.14	1.32

Source: Real Estate Center at Texas A&M University
*Based on Table 1 assumptions except interest rate

Table 4. Required Income and Home Price Multiplier, Selected Local Effective Property Tax Rates*

Local Tax Rate (percent)	Annual Income Required for a Home Priced at:								Maximum Price Multiplier	Required Increased Income (percent)
	$75,000	$125,000	$150,000	$175,000	$200,000	$250,000	$300,000	$400,000		
1.5	26,039	43,398	52,077	60,757	69,436	86,795	104,154	138,872	2.88	
1.6	26,289	43,814	52,577	61,340	70,103	87,628	105,154	140,206	2.85	0.96
1.7	26,539	44,231	53,077	61,923	70,769	88,462	106,154	141,539	2.83	0.95
1.8	26,789	44,648	53,577	62.507	71,436	89,295	107,154	142,872	2.80	0.94
1.9	27,039	45,064	54,077	63,090	72,103	90,128	108,154	144,206	2.77	0.93
2.0	27,289	45,481	54,577	63,673	72,769	90,962	109,154	145,539	2.75	0.92
2.1	27,539	45,898	55,077	64,257	73,436	91,795	110,154	146,872	2.72	0.92
2.2	27,789	46,314	55,577	64,840	74,103	92,628	111,154	148,206	2.70	0.91
2.3	28,039	46,731	56,077	65,423	74,769	93,462	112,154	149,539	2.67	0.9
2.4	28,289	47,148	56,577	66,007	75,436	94,295	113,154	150,872	2.65	0.89
2.5	28,539	47,564	57,077	66,590	76,103	95,128	114,154	152,206	2.63	0.88
2.6	28,789	47,981	57,577	67,173	76,769	95,962	115,154	153,539	2.61	0.88
2.7	29,039	48,398	58,077	67,757	77,436	96,795	116,154	154,872	2.58	0.87
2.8	29,289	48,814	58,577	68,340	78,103	97,628	117,154	156,206	2.56	0.86
2.9	29,539	49,231	59,077	68,923	78,769	98,462	118,154	157,539	2.54	0.85
3.0	29,789	49,648	59,577	69,507	79,436	99,295	119,154	158,872	2.52	0.85
3.1	30,039	50,064	60,077	70,090	80,103	100,128	120,154	160,206	2.50	0.84
3.2	30,289	50,481	60,577	70,673	80,769	100,962	121,154	161,539	2.48	0.83
3.3	30,539	50,898	61,077	71,257	81,436	101,795	122,154	162,872	2.46	0.83
3.4	30,789	51,314	61,577	71,840	82,103	102,628	123,154	164,206	2.44	0.82
3.5	31,039	51,731	62,077	72,423	82,769	103,462	124,154	165,539	2.42	0.81
3.6	31,289	52,148	62,577	73,007	83,436	104,295	125,154	166,872	2.40	0.81
3.7	31,539	52,564	63,077	73,590	84,103	105,128	126,154	168,206	2.38	0.8
3.8	31,789	52,981	63,577	74,173	84,769	105,962	127,154	169,539	2.36	0.79
3.9	32,039	53,398	64,077	74,757	85,436	106,795	128,154	170,872	2.34	0.79
4.0	32,289	53,814	64,577	75,340	86,103	107,628	129,154	172,206	2.32	0.78
4.1	32,539	54,231	65,077	75,923	86,769	108,462	130,154	173,539	2.30	0.77
4.2	32,789	54,648	65,577	76,507	87,436	109,295	131,154	174,872	2.29	0.77
4.3	33,039	55,064	66,077	77,090	88,103	110,128	132,154	176,206	2.27	0.76
4.4	33,289	55,481	66,577	77,673	88,769	110,962	133,154	177,539	2.25	0.76
4.5	33,539	55,898	67,077	78,257	89,436	111,795	134,154	178,872	2.24	0.75
4.6	33,789	56,314	67,577	78,840	90,103	112,628	135,154	180,206	2.22	0.75
4.7	34,039	56,731	68,077	79,423	90,769	113,462	136,154	181,539	2.20	0.74
4.8	34,289	57,148	68,577	80,007	91,436	114,295	137,154	182,872	2.19	0.73
4.9	34,539	57,564	69,077	80,590	92,103	115,128	138,154	184,206	2.17	0.73
5.0	34,789	57,981	69,577	81,173	92,769	115,962	139,154	185,539	2.16	0.72
5.1	35,039	58,398	70,077	81,757	93,436	116,795	140,154	186,872	2.14	0.72
5.2	35,289	58,814	70,577	82,340	94,103	117,628	141,154	188,206	2.13	0.71
5.3	35,539	59,231	71,077	82,923	94,769	118,462	142,154	189,539	2.11	0.71
5.4	35,789	59,648	71,577	83,507	95,436	119,295	143,154	190,872	2.10	0.70
5.5	36,039	60,064	72,077	84,090	96,103	120,128	144,154	192,206	2.08	0.70

Source: Real Estate Center at Texas A&M University
*Based on Table 1 assumptions, except for variations in effective tax rate

these costs to change rapidly and significantly. This analysis includes the effective cost of property insurance expressed as a percentage of total property value. Consider the estimated required incomes over the range of effective property insurance rates from 0.30 percent to 3.00 percent of property value depicted in Table 5. (See Table 1A for the annual dollar costs for a $125,000 home over the same range of effective property insurance rates.) Again, the 0.80 percent base case from Table 1 is highlighted.

For every 1.0 percentage point increase in the effective property insurance rate, required income must increase on average about 8.0 percent for a household to be able to afford the same priced home. At an effective insurance cost of 0.50 percent, for example, a household would need an income of $58,100 to acquire a $150,000 home. If the insurance cost increased to 2.0 percent, required income would be $65,100, 12 percent more. The overall impact on the maximum price multiplier is the least of the component costs analyzed, increasing a total of only 23.5 percent, from 2.13 at the highest effective property insurance rate to 2.63 at the lowest rate.

Utility Costs

Utility costs are nonoptional costs of homeownership and are typically far more volatile than interest rates, property tax rates or insurance rates. Utility providers can add "fuel adjustment" charges to customers' monthly bills as the cost of generating electricity increases or as the cost of gas rises. The seasonality of use and demand, which causes the summer

Table 5. Required Income, Home Price Multiplier at Different Property Insurance Rates*

Property Insurance Rate (percent)	Annual Income Required for a Home Priced at:								Maximum Price Multiplier	Required Increased Income (percent)
	$75,000	$125,000	$150,000	$175,000	$200,000	$250,000	$300,000	$400,000		
0.3	$28,539	$47,564	$57,077	$66,590	$76,103	$95,128	$114,154	$152,206	2.63	
0.4	28,789	47,981	57,577	67,173	76,769	95,962	115,154	153,539	2.61	0.88
0.5	29,039	48,398	58,077	67,757	77,436	96,795	116,154	154,872	2.58	0.87
0.6	29,289	48,814	58,577	68,340	78,103	97,628	117,154	156,206	2.56	0.86
0.7	29,539	49,231	59,077	68,923	78,769	98,462	118,154	157,539	2.54	0.85
0.8	29,789	49,648	59,577	69,507	79,436	99,295	119,154	158,872	2.52	0.85
0.9	30,039	50,064	60,077	70,090	80,103	100,128	120,154	160,206	2.50	0.84
1.0	30,289	50,481	60,577	70,673	80,769	100,962	121,154	161,539	2.48	0.83
1.1	30,539	50,898	61,077	71,257	81,436	101,795	122,154	162,872	2.46	0.83
1.2	30,789	51,314	61,577	71,840	82,103	102,628	123,154	164,206	2.44	0.82
1.3	31,039	51,731	62,077	72,423	82,769	103,462	124,154	165,539	2.42	0.81
1.4	31,289	52,148	62,577	73,007	83,436	104,295	125,154	166,872	2.40	0.81
1.5	31,539	52,564	63,077	73,590	84,103	105,128	126,154	168,206	2.38	0.8
1.6	31,789	52,981	63,577	74,173	84,769	105,962	127,154	169,539	2.36	0.79
1.7	32,039	53,398	64,077	74,757	85,436	106,795	128,154	170,872	2.34	0.79
1.8	32,289	53,814	64,577	75,340	86,103	107,628	129,154	172,206	2.32	0.78
1.9	32,539	54,231	65,077	75,923	86,769	108,462	130,154	173,539	2.30	0.77
2.0	32,789	54,648	65,577	76,507	87,436	109,295	131,154	174,872	2.29	0.77
2.1	33,039	55,064	66,077	77,090	88,103	110,128	132,154	176,206	2.27	0.76
2.2	33,289	55,481	66,577	77,673	88,769	110,962	133,154	177,539	2.25	0.76
2.3	33,539	55,898	67,077	78,257	89,436	111,795	134,154	178,872	2.24	0.75
2.4	33,789	56,314	67,577	78,840	90,103	112,628	135,154	180,206	2.22	0.75
2.5	34,039	56,731	68,077	79,423	90,769	113,462	136,154	181,539	2.20	0.74
2.6	34,289	57,148	68,577	80,007	91,436	114,295	137,154	182,872	2.19	0.73
2.7	34,539	57,564	69,077	80,590	92,103	115,128	138,154	184,206	2.17	0.73
2.8	34,789	57,981	69,577	81,173	92,769	115,962	139,154	185,539	2.16	0.72
2.9	35,039	58,398	70,077	81,757	93,436	116,795	140,154	186,872	2.14	0.72
3.0	35,289	58,814	70,577	82,340	94,103	117,628	141,154	188,206	2.13	0.71

Source: Real Estate Center at Texas A&M University
*Based on Table 1 assumptions except property insurance rate

months to be much more expensive than winter throughout Texas, also contributes to the volatility of utility costs.

Some lenders now include a monthly "other costs" component (typically assumed to include utility and maintenance costs) to the qualifying ratio for loan approval. Other lenders do not incorporate utility costs into their underwriting calculations, even though these expenses are major factors in overall affordability and potential loan default.

Utilities are defined as electricity, natural or propane gas and water-sewer services. Utility costs are not normally associated with a percentage of property value. These costs vary based on home size, quality of construction, insulation, size of family and usage. They are highly seasonal and can vary significantly based on a local utility company's efficiency and business practices. Insights about housing cost impacts and affordability can be gained by looking at variations in utility costs. At the highlighted base case of 2 percent, annual utility costs equal $2,500, or an average $208.33 per month for a $125,000 home.

Table 6 shows the variations in required income and the maximum home price multiplier to purchase a home at the selected price levels as a result of deviations in effective annual utility costs.

The impact of utility cost variances is greater than the other component cost impacts. A one percentage point increase in the effective utility rate from 1 to 2 percent, for example, requires a 9.2 percent increase in income to qualify for the same priced home; from 2 to 3 percent requires an 8.4 percent income increase; and from 3 to 4 percent requires 7.7 percent more income to buy the same home. The maximum price multiplier ranges from 2.01 to 2.88, roughly a 43 percent difference from low to high. The range in the multiplier is almost identical to the range for the mortgage interest rate and the effective property tax rate.

The impact of changes in the component costs is summarized in Table 7, which indicates the the percentage increase in required household income relative to a one percentage point increase in each of the four component costs, averaged over the range of estimates applied.

As any two or more component costs increase, the required household income increases even more. For example, if the mortgage interest rate rose from 6 percent to 7 percent and effective property taxes grew from 3 percent to 4 percent, the required income to afford a $125,000 home would increase from $49,648 to $56,609, or 14 percent. The marginal households in this example (households with an income between these two amounts) would no longer be able to afford a $125,000 home.

Table 6. Required Income, Maximum Home Price Multiplier at Different Effective Utility Rates*

Effective Annual Utility Rate (percent)	Annual Income Required for a Home Priced at:								Maximum Price Multiplier	Required Increased Income (percent)
	$75,000	$125,000	$150,000	$175,000	$200,000	$250,000	$300,000	$400,000		
0.50	$26,039	$43,398	$52,077	$60,757	$69,436	$86,795	$104,154	$138,872	2.88	
0.75	26,664	44,439	53,327	62,215	71,103	88,878	106,654	142,206	2.81	2.40
1.00	27,289	45,481	54,577	63,673	72,769	90,962	109,154	145,539	2.75	2.34
1.25	27,914	46,523	55,827	65,132	74,436	93,045	111,654	148,872	2.69	2.29
1.50	28,539	47,564	57,077	66,590	76,103	95,128	114,154	152,206	2.63	2.24
1.75	29,164	48,606	58,327	68,048	77,769	97,212	116,654	155,539	2.57	2.19
2.00	29,789	49,648	59,577	69,507	79,436	99,295	119,154	158,872	2.52	2.14
2.25	30,414	50,689	60,827	70,965	81,103	101,378	121,654	162,206	2.47	2.10
2.50	31,039	51,731	62,077	72,423	82,769	103,462	124,154	165,539	2.42	2.06
2.75	31,664	52,773	63,327	73,882	84,436	105,545	126,654	168,872	2.37	2.01
3.00	32,289	53,814	64,577	75,340	86,103	107,628	129,154	172,206	2.32	1.97
3.25	32,914	54,856	65,827	76,798	87,769	109,712	131,654	175,539	2.28	1.94
3.50	33,539	55,898	67,077	78,257	89,436	111,795	134,154	178,872	2.24	1.90
3.75	34,164	56,939	68,327	79,715	91,103	113,878	136,654	182,206	2.20	1.86
4.00	34,789	57,981	69,577	81,173	92,769	115,962	139,154	185,539	2.16	1.83
4.25	35,414	59,023	70,827	82,632	94,436	118,045	141,654	188,872	2.12	1.80
4.50	36,039	60,064	72,077	84,090	96,103	120,128	144,154	192,206	2.08	1.76
4.75	36,664	61,106	73,327	85,548	97,769	122,212	146,654	195,539	2.05	1.73
5.00	37,289	62,148	74,577	87,007	99,436	124,295	149,154	198,872	2.01	1.70

Source: Real Estate Center at Texas A&M University
*Based on Table 1 assumptions except for effective utility rate

Table 7. Percentage Increase in Required Household Income Needed to Cover a 1 Percentage Point Increase in Each Housing Component Cost

	Average Percent Increase in Required Income to Afford Same Priced Home
Mortgage Interest Rate	5.5
Effective Propety Tax Rate	8.2
Effective Property Insurance Rate	8.0
Effective Utility Rate	8.4

Source: Real Estate Center at Texas A&M University

Future Affordability

In today's economic climate of unstable homeownership costs, the income requirements to buy a house are steadily in flux. Future housing affordability will be affected by numerous market forces, especially by the following.

1. **Home Prices.** The general increase in home prices through natural market forces, inflation and increased production costs require prospective homeowners to have more income to qualify to purchase a home. General upward pressure on home prices makes entry-level housing targeted to lower-income households more difficult for those household to afford. So far, Texas has avoided the dramatic price increases reported for most east and west coast boom markets, keeping homeownership more attainable for a greater number of Texas households. Affordability will become an increasing concern for Texas markets as they begin to experience higher rates of home priceappreciation relative to increases in household income.
2. **Component Costs.** In addition to the monthly mortgage payment, homeowners pay property taxes, property insurance and utility costs to occupy and maintain their homes. Cost and value changes impact affordability most at the lower price and income levels, where even a few hundred dollars difference in required income may affect a large number of households. Even slightly higher mortgage interest rates or other component costs make a great deal of difference to buyers with marginal income trying to qualify for a home loan. In general, a one percentage point increase in any of the component costs requires an 8 percent greater household income to afford the same home.
3. **Home Inventory.** Home prices ultimately reflect the relative balance between housing demand and housing supply. Inventory of lower-priced homes typically adjusts more slowly than higher-priced homes. The availability of lower-priced properties greatly relies on houses to "filter down" in price as they age and as neighborhoods transition to less affluent residents. Relatively few new units are constructed in the lower price levels as lot prices and construction costs increase and as builders and developers strive to capture higher profit margins on higher-priced homes. Numerous federal, state and local housing initiatives target builders to construct more lower-priced homes, but these programs typically have not been able to induce significant quantities of new, low-priced houses relative to demand.

4. **Rent vs. Monthly Ownership Costs**. At some point, as monthly homeownership costs rise, renting becomes a more economically viable option. During the housing boom of the past several years, residential rent levels have generally been flat as rental properties have competed with start-up and first-time homeownership. Additionally, a significant number of investors entered the residential market, buying previously owner-occupied homes and converting them to rental properties. For many households, especially lower-income households, renting is by far the better (or maybe the only) financial housing option. Changes in ownership component costs, demographic patterns and slower growth in relative income levels are moving the rental "break-even" point higher up the income distribution scale.
5. **Capital and Home Financing**. Housing is a highly capital-intensive, interest-rate-sensitive market. Fundamental market changes often reflect changes in the cost and adequacy of credit and funding. The recent housing boom was fueled by a capital-driven mortgage credit market, resulting in an excessive supply and greatly reduced cost of capital for housing. This abundance led to aggressive lending practices and less restrictive loan underwriting processes, especially targeted to low- and moderate-income households with little equity capital and often little homebuying experience.

These practices may gradually decrease as lenders face rising foreclosure rates, as regulators focus more on financial institutions' increasingly risky loan portfolios, and as other investment markets attract capital away from housing. In the future, meeting the income qualifying ratio suggested above may not be enough to qualify, particularly if lenders apply lower qualifying ratios to monthly income for the same level of expenses or require greater equity investments (down payments) by prospective homebuyers.

Housing Affordability and Texas Household Income Distributions

The quantitative definition of affordable housing for low- to moderate-income working households varies significantly from place to place. Affordable housing in San Francisco, for example, may be priced at $300,000, a high price by most standards, but still less than 50 percent of the local median-priced home.

In Texas, affordable housing for working households generally refers to homes with a total monthly PITUI cost ranging from $750 to $1,250, corresponding roughly to homes priced from $75,000 to $125,000 per the assumptions in Table 1 and to household incomes between $30,000 and $50,000 per Table 2. Most previous efforts to estimate affordable housing do not include utility costs in the monthly housing cost equation, so the results here generally indicate fewer households able to afford houses priced at similar levels as other research studies.

The real test for housing affordability relates the range of required income necessary to qualify to acquire a home with the distribution of income earned by households in a given area and the available housing inventory at different price points. Table 8 displays the number of households by income in Texas according to the U.S. Census Bureau's 2004 American Community Survey.

Summarizing Table 8 into broader income categories results in the simple distribution of Texas households by income shown in Table 9.

The summary data reveal that nearly 1.8 million households, or nearly 23 percent of all Texas households, have annual incomes less than $20,000, and another 1.9 million households, or the next 25 percent of the total households, have an annual income between $20,000 and $40,000. Overall, approximately 48 percent of all Texas households have an annual income less than $40,000.

Applying the home acquisition qualifying criteria described earlier, the 1.8 million households earning less than $20,000 cannot afford a home priced greater than about $50,000. The 1.9 million households with $20,000 to $40,000 annual income cannot afford a home priced greater than about $100,000.

Table 8. Household Income Distribution in Texas

Income Interval	Number of Households	Percent of Total	Cumulative Percentage
Less than $10,000	793,944	10.2	10.2
$10,000–$14,999	508,265	6.5	16.7
$15,000–$19,999	483,768	6.2	22.9
$20,000–$24,999	536,113	6.9	29.8
$25,000–$29,999	493,067	6.3	36.1
$30,000–$34,999	469,441	6.0	42.2
$35,000–$39,999	438,242	5.6	47.8
$40,000–$44,999	419,601	5.4	53.2
$45,000–$49,999	358,280	4.6	57.8
$50,000–$59,999	645,108	8.3	66.0
$60,000–$74,999	758,616	9.7	75.8
$75,000–$99,999	789,569	10.1	85.9
$100,000–$124,999	459,489	5.9	91.8
$125,000–$149,999	239,351	3.1	94.9
$150,000–$199,999	203,453	2.6	97.5
$200,000 or more	194,546	2.5	100.0
Total Households	7,790,853		
Median Household Income	$41,759		

Sources: U.S. Census Bureau, 2004 American Community Survey and Real Estate Center at Texas A&M University

Table 9. Summary of Texas Household Income Distribution

Annual Income Range	Number of Households	Percent of Households
<$19,999	1,785,977	23
20,000–39,999	1,936,863	25
40,000–59,999	1,422,989	18
60,000–99,999	1,548,185	20
100,000–149,999	698,840	9
>$150,000	397,999	5

Source: Real Estate Center at Texas A&M University

Combining the required income to qualify for different home prices (Table 1) with the statewide household income distribution (Table 8) produces Table 10, which shows the number of households by the maximum affordable home they can qualify for and Figure 1, an affordability pyramid that reflects the household distribution in the table.

Based on the estimated affordability distribution in Table 10, 4.475 million households, or 57.5 percent of all Texas households, cannot afford to purchase a house unless it is priced less than $125,000. Conversely, 3.315 million households, or 43.5 percent of all Texas households, can afford to buy a home priced above $125,000.

Of the first group, approximately 2.8 million or 35.9 percent of all Texas households cannot afford to buy a home priced above $75,000 (that is, total housing costs (PITUI) can be no more than $745 per month). Housing availability for this group ranges from public housing and publicly assisted housing at the lower end to free-market housing at the upper end of the range.

Households that require housing between $75,000 and $125,000 are a primary focal point of many local housing agencies, community development associations and affordable housing advocacy organizations. This group contains almost 1.7 million Texas households with annual incomes between $30,000 and $50,000 per year, including a broad array of occupational groups such as teachers, policemen, firefighters, EMS personnel and clerical workers.

Table 10. Number of Texas Households by Maximum Price Affordable Home*

Highest Priced Home	Number of Households	Percent of Total
<$75,000	2,794,399	35.9
75,000–125,000	1,681,135	21.6
125,000–150,000	643,074	8.3
150,000–175,000	508,043	6.5
175,000–200,000	417,904	5.4
200,000–250,000	627,228	8.1
250,000–300,000	374,290	4.8
300,000–400,000	382,883	4.9
400,000–500,000	161,618	2.1
>$500,000	200,278	2.6
Totals	7,790,853	100.0

Sources: U.S. Census Bureau, 2004 American Community Survey and Real Estate Center at Texas A&M University

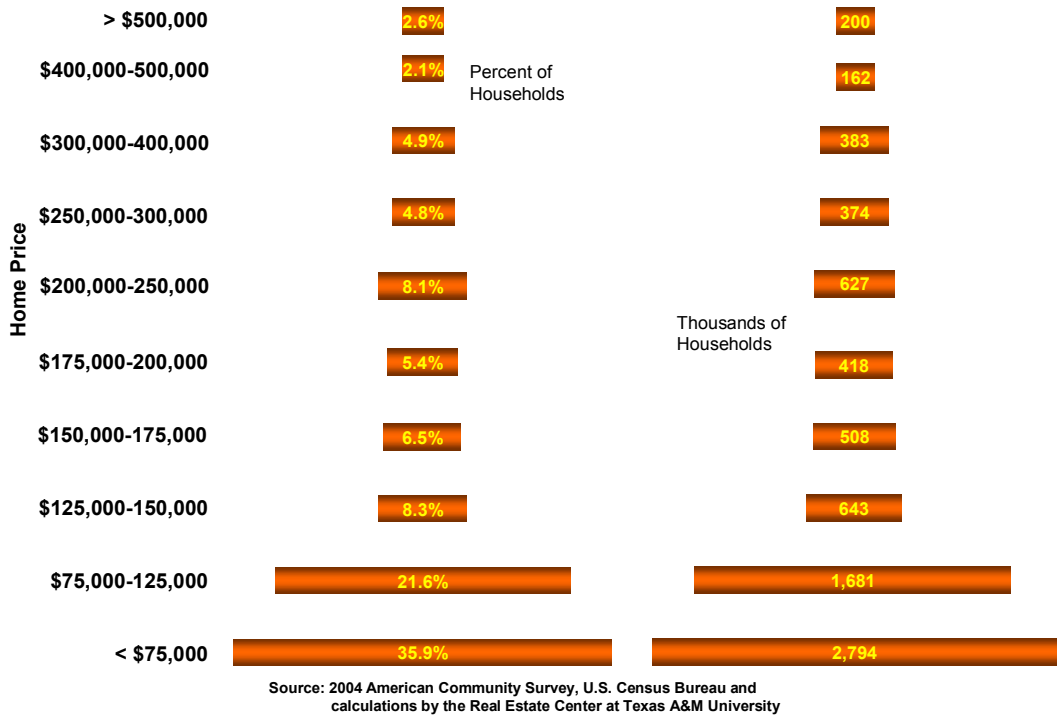
*Based on set of cost and financing assumptions in Table 1

Stock of Housing Available

Comparing the number of households by maximum affordable home price with inventory of owner-occupied housing units by price shows the magnitude of the difference between demand and supply at each price level. Figure 2 presents the estimated value distribution of the nearly 5.1 million, owner-occupied homes in Texas.

Figure 1. Texas Affordability Pyramid

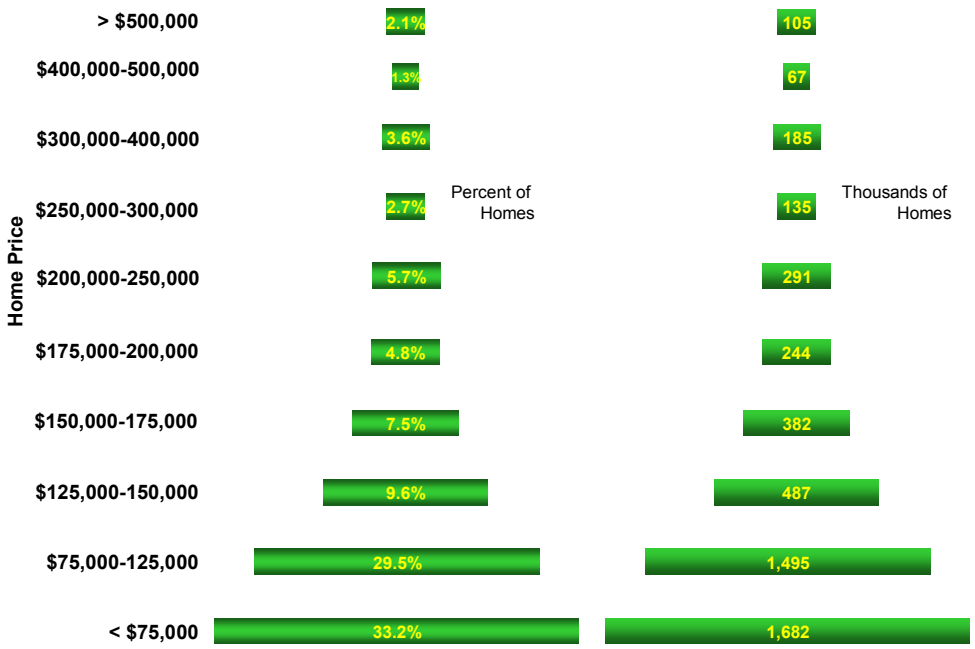
Texas Households by the Maximum Priced Home They Can Afford



Source: 2004 American Community Survey, U.S. Census Bureau and calculations by the Real Estate Center at Texas A&M University

The 2004 American Community Survey data indicated that 5.1 million owner-occupied units provide housing for about 65 percent of all Texas households, and the remaining 2.72 million units, or 35 percent, are renter-occupied housing units. It should be noted that these aggregate numbers say nothing about the distribution of the stock of housing by counties, towns or metro areas nor do the data relate to the quality of the housing units counted. The data do not include households in group quarters (e.g., dormitories), institutions or those that are homeless.

Figure 2. Texas Owner-Occupied Homes Distribution by Value

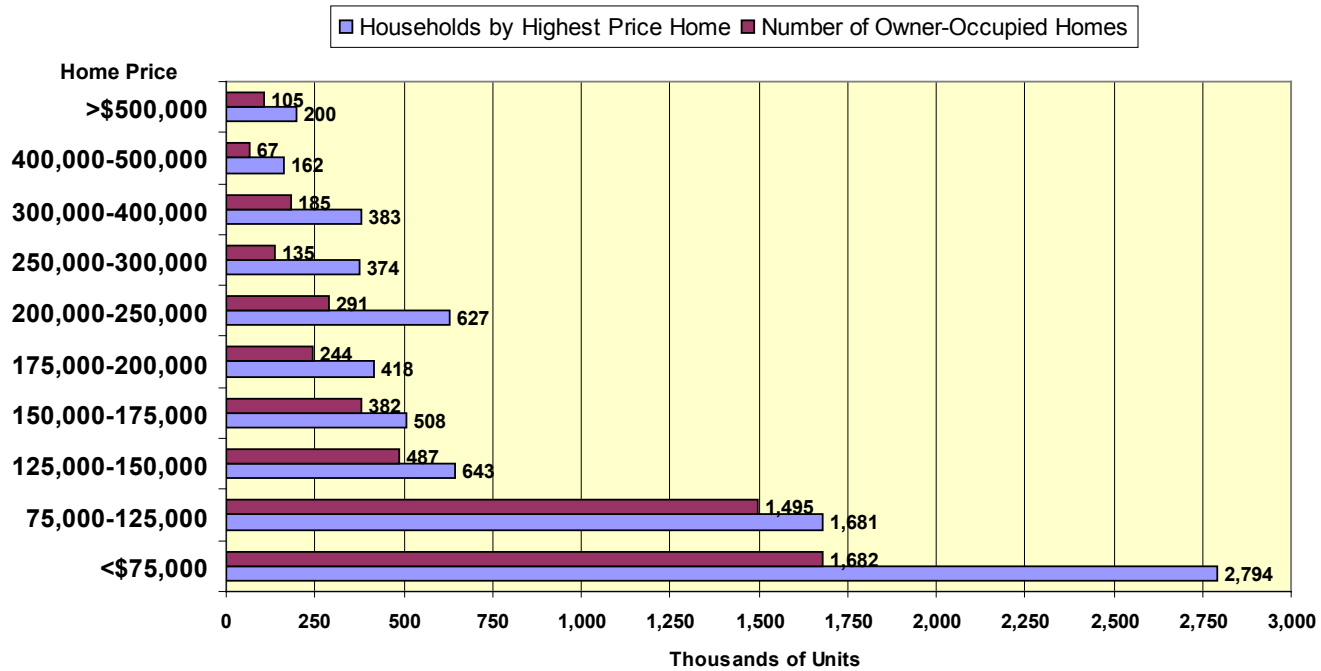


Source: 2004 American Community Survey, U.S. Census Bureau and Real Estate Center at Texas A&M University

The estimated number of owner-occupied units relative to the number of households that can afford a home in each price interval is depicted in Figure 3. The gap in available owner-occupied units across each price category represents the number of renter-occupied units, especially in the lower price categories. At the higher-priced levels, many households actually live in a home worth less than what their income would allow them to qualify for. For example, a household may have sufficient income to qualify for a home priced above $500,000, but may live in a home in the $400,000 to $500,000 or lower range.

The distribution of occupied housing by income shown in Table 11 corroborates the reliance of lower-income households on rental housing.

Figure 3. Number of Texas Households by Highest-Priced Affordable Home Relative to Inventory of Owner-Occupied Homes



Source: 2004 American Community Survey, U.S. Census Bureau; Real Estate Center at Texas A&M University

Statewide, households with less than $10,000 annual income rent rather than own by a nearly 2-to-1 ratio. Slightly more than half of the households with annual incomes between $10,000 and $15,000 rent, and exactly half of the $15,000 to $20,000 households rent. The proportion of owner-occupant households increases dramatically as annual income increases, reaching 95 percent for households earning $150,000 or more per year. These proportions change at the local metropolitan levels.

Affordability and Price Sensitivity

According to the National Association of Home Builders and the National Association of Realtors, between 2000 and 2005 the median price of a new home increased 42.5 percent and the median price of an existing home increased 50 percent. Despite this significant level of general price increase, the first half of this decade also saw extraordinary increases in the rate of homeownership and a sharp rise in homeownership participation by households previously not included. However, continuing increases in construction costs and higher existing home prices relative to household income levels are now causing valid concerns about future housing affordability.

Table 12 shows the estimated number of Texas households that can no longer afford a given home as the price of that home increases by $5,000 increments, assuming the conditions in Table 1.

The data indicate that about 23 percent of all Texas households can afford a home priced no greater than $50,000; conversely, 77 percent can afford a home priced at $50,000 or more. If that same home increases in price to $55,000, only 74.5 percent of Texas households can afford the home, or 2.7 percent fewer households than if the home were priced at $50,000. In this situation, 2.7 percent of all Texas households equal 211,403 households that could afford the home priced at $50,000 but not at $55,000. Averaging this result suggests that 42,281 fewer households can afford the same home for every $1,000 increase in price from $50,000 to $55,000.

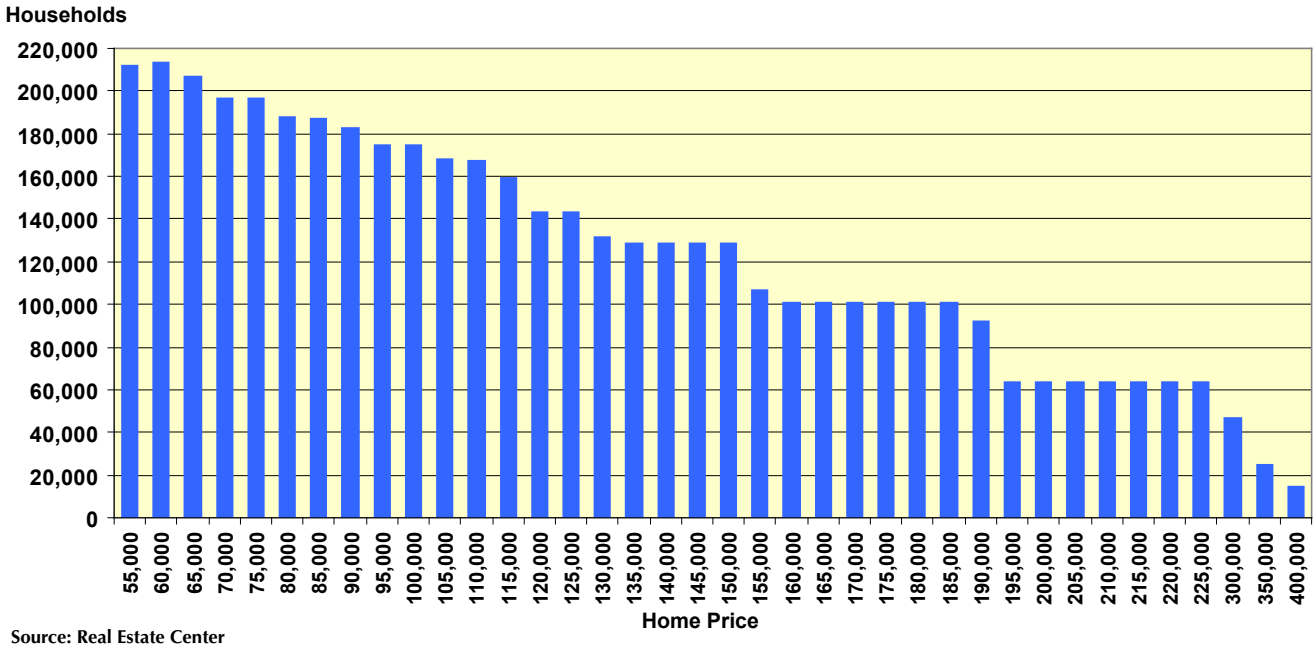
Table 11. Occupied Housing Units by Income

Income Distribution Owner Occupied	Estimated Number of Households	Percent of Total Households in Income Group
Less than $10,000	307,331	38.7
$10,000–$14,999	233,744	46.0
$15,000–$19,999	242,025	50.0
$20,000–$24,999	283,746	52.9
$25,000–$34,999	525,793	54.6
$35,000–$49,999	761,445	62.6
$50,000–$74,999	1,031,317	73.5
$75,000–$99,999	673,822	85.3
$100,000–$149,999	637,580	91.2
$150,000 or more	377,916	95.0
Renter occupied:		
Less than $10,000	486,613	61.3
$10,000–$14,999	274,521	54.0
$15,000–$19,999	241,743	50.0
$20,000–$24,999	252,367	47.1
$25,000–$34,999	436,715	45.4
$35,000–$49,999	454,678	37.4
$50,000–$74,999	372,407	26.5
$75,000–$99,999	115,747	14.7
$100,000–$149,999	61,260	8.8
$150,000 or more	20,083	5.0

Source: U.S. Census Bureau, 2004 American Community Survey

Table 12 clearly reveals that a significantly greater number of households are affected by price increases as the price increases for lower-priced homes than for higher-priced homes. However, the number of households affected within each $5,000 price increment declines as the total price increases. This impact is graphically portrayed in Figure 4 below.

Figure 4. Number of Fewer Households That Can Afford the Same Home Per $5,000 Price Increase in Home Price



Source: Real Estate Center

Table 12. Number of Texas Households That Cannot Afford the Same Home as the Price Increases by $5,000

House Price	Total Required Monthly Payment	Minimum Required Income to Qualify	Percentage of Households That Cannot Afford This Price	Percentage of Households That Can Afford This Price or More	Percentage Fewer Households That Can Afford This Price	Number of Fewer Households That Can Afford This Price	Average Number of Fewer Households Per $1,000 Price Increase
$50,000	$496.48	$19,859	22.8	77.2			
55,000	546.12	21,845	25.5	74.5	2.7	211,403	42,281
60,000	595.77	23,831	28.2	71.8	2.7	212,976	42,595
65,000	645.42	25,817	30.8	69.2	2.6	205,836	41,167
70,000	695.07	27,803	33.4	66.6	2.5	195,876	39,175
75,000	744.71	29,789	35.9	64.1	2.5	195,876	39,175
80,000	794.36	31,774	38.3	61.7	2.4	187,391	37,478
85,000	844.01	33,760	40.7	59.3	2.4	186,490	37,298
90,000	893.66	35,746	43.0	57.0	2.3	181,739	36,348
95,000	943.30	37,732	45.2	54.8	2.2	174,096	34,819
100,000	992.95	39,718	47.5	52.5	2.2	174,096	34,819
105,000	1,042.60	41,704	49.6	50.4	2.2	167,654	33,531
110,000	1,092.25	43,690	51.8	48.2	2.1	166,691	33,338
115,000	1,141.89	45,676	53.8	46.2	2.0	158,317	31,663
120,000	1,191.54	47,662	55.6	44.4	1.8	142,330	28,466
125,000	1,241.19	49,648	57.4	42.6	1.8	142,330	28,466
130,000	1,290.84	51,633	59.1	40.9	1.7	130,574	26,115
135,000	1,340.48	53,619	60.8	39.2	1.6	128,125	25,625
140,000	1,390.13	55,605	62.4	37.6	1.6	128,125	25,625
145,000	1,439.78	57,591	64.1	35.9	1.6	128,125	25,625
150,000	1,489.43	59,577	65.7	34.3	1.6	128,125	25,625
155,000	1,539.07	61,563	67.1	32.9	1.4	106,273	21,255
160,000	1,588.72	63,549	68.4	31.6	1.3	100,443	20,089
165,000	1,638.37	65,535	69.6	30.4	1.3	100,443	20,089
170,000	1,688.02	67,521	70.9	29.1	1.3	100,443	20,089
175,000	1,737.66	69,507	72.2	27.8	1.3	100,443	20,089
180,000	1,787.31	71,492	73.5	26.5	1.3	100,443	20,089
185,000	1,836.96	73,478	74.8	25.2	1.3	100,443	20,089
190,000	1,886.61	75,464	76.0	24.0	1.2	91,573	18,315
195,000	1,936.25	77,450	76.8	23.2	0.8	62,723	12,545
200,000	1,985.90	79,436	77.6	22.4	0.8	62,723	12,545
205,000	2,035.55	81,422	78.4	21.6	0.8	62,723	12,545
210,000	2,085.20	83,408	79.2	20.8	0.8	62,723	12,545
215,000	2,134.85	85,394	80.0	20.0	0.8	62,723	12,545
220,000	2,184.49	87,380	80.8	19.2	0.8	62,723	12,545
225,000	2,234.14	89,366	81.6	18.4	0.8	62,723	12,545
300,000	2,978.85	119,154	90.4	9.6	8.8	45,860	9,172
350,000	3,475.33	139,013	93.5	6.5	3.1	24,160	4,832
400,000	3,971.81	158,872	95.4	4.6	1.8	14,129	2,826
Average Number of Households Per $1,000 (Through $225,000)							26,204

Source: Real Estate Center at Texas A&M University

Table 12A. Average Number of Households Unable to Afford the Same Home as the Price Increases by $5,000

Home Price Range	Average Number of Households Per $5,000 Increase	Implied Number of Households Per $1,000 Increase
$50,000–$100,000	192,578	38,516
$100,000–$150,000	142,040	28,408
$150,000–$190,000	100,063	20,013
$190,000–$225,000	62,723	12,545

Source: Real Estate Center at Texas A&M University
*Based on set of cost and financing assumptions in Table 1

Summarizing the total results indicates that on average, 192,578 fewer Texas households can afford to acquire the same home for every $5,000 increase in home price from $50,000 to $100,000, (an average of 38,516 fewer households that can afford the same house per $1,000 increase within that price range). Similarly, an average of 142,040 households per $5,000 price increase from $100,000 to $150,000 are unable to afford the same home (28,408 households per $1,000 increase). An average of 100,063 households per $5,000 price increase from $155,000 to $190,000 cannot afford the same home (20,013 households per $1,000 increase). For homes priced

between $50,000 and $225,000, on average about 26,204 fewer Texas households can afford the same home for every $1,000 increase in price (Table 12A).

Affordability and Mortgage Interest Rate Sensitivity

Changes in prevailing mortgage interest rates significantly alter the number of households that can afford a home in a given price range. In 2000, the national 30-year FHLMC conforming fixed-rate mortgage averaged 8.05 percent. That rate declined to 5.83, 5.84 and 5.87 percent in 2003, 2004 and 2005, respectively. Through the first half of 2006, the 30-year fixed-rate mortgage averaged 6.42 percent. Interest rates in Texas have been even lower.

This roughly 220 basis points decline in the prevailing mortgage interest rate fueled the national housing boom of the past three years. Table 13 illustrates that as the interest rate declines from 8 percent to 5 percent, the number of Texas households that can afford more expensive homes increases dramatically. Holding other component costs constant, at an 8 percent mortgage rate, 3.1 million households are limited to a home priced no greater than $75,000. At a 5 percent mortgage rate, however, only 2.1 million households are limited to a $75,000 or less home. Nearly 1 million households would be able to afford a higher priced home as the mortgage interest rate declined from 8 percent to 5 percent.

The reverse is equally true. If the mortgage interest rate rises from the assumed 6 percent to 7 percent, the maximum home price multiplier declines from 2.52 to 2.38 and an additional 158,352 households would be limited to a home priced no greater than $75,000. Similarly, an additional 181,972 more households would be limited to a home priced no greater than $125,000.

The number of households forced to shift to lower-priced homes as the component cost changes depends on the number of households on the margin as the required income changes to meet the 30 percent qualifying ratio test. For example, at a 5 percent interest rate, the required income for a $125,000 home is $46,982, but that changes to $49,648 at a 6 percent rate, a $2,666 or 5.7 percent differential in required income.

Marginal households are those households that earn an amount between these two levels and are forced to acquire a less expensive home at the higher rate. According to the data in Table 13, an increase in the mortgage interest rate from 5 percent to 6 percent increases the number of households limited to a home priced less than $125,000 by about 33,299 households.

The change in the number of households limited to a given price range depends on the magnitude of the difference in the required income. Households will be limited to a less expensive home as interest rates increase, but some households will go from the upper end of the same price range to the lower end, while others will shift to the next lower range. The cumulative effect of households shifting downward with rising rates (or any of the other component costs) causes the number of total households limited to some of the lower price ranges to actually decrease. For example, as the interest rate increases from 6 percent to 7 percent, the number of households limited to homes priced no greater than $150,000 declines from 643,074 to 552,300.

Affordability and Local Effective Property Tax Rates

Local property taxes typically rank second only to the mortgage payment in total monthly costs of a home. Over the years, numerous studies, theories and explanations have emerged related to the relationship between local taxes, home values and homeownership. Clearly, local property taxes affect home affordability by increasing the monthly cost of ownership, and forcing household income to be higher to qualify for acquisition financing. The value relationship is not as obvious or consistent.

Property owners expect to pay ad valorem property taxes. A property tax value impact typically arises if actual taxes differ substantially from perceived "fair" taxes relative to the services provided. Research indicates that the value-depressing effects of property taxes can be offset if the market places sufficient value on the services provided by the tax.

An example of this is the local school tax rate. Studies

Table 13. Texas Housing Affordability Distribution at 5, 6, 7 and 8 Percent Mortgage Interest Rates

	At 8 Percent Interest	At 7 Percent Interest		At 6 Percent Interest		At 5 Percent Interest	
Highest Home Price	Number of Households That Can Afford No More Than	Number of Households That Can Afford No More Than	Number of Households Difference	Number of Households That Can Afford No More Than	Number of Households Difference	Number of Households That Can Afford No More Than	Number of Households Difference
<$75,000	3,116,692	2,952,751	–163,941	2,794,399	–158,352	2,128,361	–666,037
75,000–125,000	1,729,303	1,863,107	133,803	1,681,135	–181,972	1,647,836	–33,299
125,000–150,000	624,644	552,300	–72,343	643,074	90,774	627,744	–15,330
150,000–175,000	512,524	456,365	–56,158	508,043	51,678	525,670	17,627
175,000–200,000	349,646	548,811	199,166	417,904	–130,907	471,955	54,051
200,000–250,000	557,936	410,449	–147,486	627,228	216,779	593,547	–33,681
250,000–300,000	337,860	377,961	40,101	374,290	–3,671	425,091	50,801
300,000–400,000	274,626	376,091	101,465	382,883	6,792	465,772	82,889
400,000–500,000	134,722	100,702	–34,020	161,618	60,917	152,940	–8,679
>$500,000	152,900	152,315	–585	200,278	47,963	751,936	551,658

Sources: U.S. Census Bureau, 2004 American Community Survey and Real Estate Center at Texas A&M University

consistently show that the value of homes in perceived "desirable" school districts is greater than similar properties located in "less desirable" school districts, even if the "desirable" local school property tax rate is higher. Families bid up the prices of homes to live in the desirable school districts, even in the face of higher property taxes. If a school district does not have a favorable market image, property values suffer at a higher tax rate.

The market may also value other local services or lower total state and local taxes higher than the "cost" of higher property taxes. Other services might include, fire and police protection, planning and code enforcement, road maintenance and other local government services. If the market does not value the local services benefits greater than the cost of providing the services, the value-depressing effects of higher taxes may be substantial, especially if actual taxes significantly exceed perceived "fair" taxes for the area.

Total tax burden includes all other taxes, collectively, on a per capita or percentage of income basis. The value impact of local property taxes may depend upon how the market views the property tax relative to total taxes. The property tax is but one of several potential state and local taxes used to pay for public services. If relatively high property taxes are offset by lower other taxes, potentially negative property tax value impacts may again be reversed. Nationally, Texas ranks 14th in property tax burden per capita, but 36th in total state and local taxes per capita and 45th in state and local taxes as a percent of income.

Combining the required income to qualify for different home prices under the assumptions in Table 1 with the statewide household income distribution reported in the U.S. Census Bureau's 2004 American Community Survey results in the distribution of Texas housing affordability depicted in Table 14 at 2, 3 and 4 percent effective property tax rates.

Based on the estimated affordability distribution in Table 14 at the base-case assumed 3 percent effective tax rate, 4.476 million households, or 57.5 percent of all Texas households, cannot afford to purchase a house unless it is priced less than $125,000. If the effective tax rate is 2 percent, 4.177 million or 298,627 fewer households are limited to a $125,000 or less home; at a 4 percent tax rate 499.3 million or 517,404 more households cannot afford a home priced greater than $125,000.

Changes in the effective property tax rate create a significant downward shift in the maximum home price affordability. These changes are reflected in the maximum home price multiplier: an increase from a 2 percent effective property tax rate to a 3 percent rate reduces the price multiplier from 2.75 to 2.52 and further reduces it to 2.32 if the tax rate increases from 3 percent to 4 percent.

Again, the number of households forced to shift to lower-priced homes as the property tax rate changes depends on the number of households on the margin as the required income changes to meet the 30 percent qualifying ratio test. Some households will shift to lower-priced homes within the same price range category.

Affordability and Local Effective Insurance and Utility Rates

Mortgage lenders require buyers carry property insurance to protect the collateral value of the property, and prudent property owners buy coverage to protect against catastrophic losses. Property insurance costs are a relatively low monthly home cost component, and, therefore, typically cause only modest shifts in home affordability as they change. But as many property owners in Texas discovered after the hurricanes and floods of the past several years, they can change rapidly and significantly.

Utility costs represent significant costs of homeownership and are typically more volatile than interest rates, property tax rates or insurance rates. As the costs of energy generation and water-sewer services rise, they increasingly influence home-ownership afforability. Some lenders include a monthly "other costs" component (typically assumed to include utility and maintenance costs) to the qualifying ratio for loan approval. Other lenders do not incorporate utility costs into their underwriting calculations, even though these expenses are major factors in overall affordability and potential loan default.

Table 14. Texas Housing Affordability Distribution at Selected Effective Property Tax Rates

Maximum Home Price	At 2 Percent Property Tax Rate		At 3 Percent Property Tax Rate		At 4 Percent Property Tax Rate	
	Number of Households That Can Afford No More Than	Percent of Households	Number of Households That Can Afford No More Than	Percent of Households	Number of Households That Can Afford No More Than	Percent of Households
<$75,000	2,547,816	32.7	2,794,399	35.9	3,030,067	38.9
75,000–125,000	1,629,091	20.9	1,681,135	21.6	1,962,871	25.2
125,000–150,000	619,114	7.9	643,074	8.3	500,151	6.4
150,000–175,000	535,593	6.9	508,043	6.5	429,251	5.5
175,000–200,000	460,064	5.9	417,904	5.4	566,572	7.3
200,000–250,000	616,904	7.9	627,228	8.1	345,317	4.4
250,000–300,000	453,687	5.8	374,290	4.8	359,049	4.6
300,000–400,000	487,881	6.3	382,883	4.9	380,296	4.9
400,000–500,000	172,605	2.2	161,618	2.1	88,695	1.1
>$500,000	268,097	3.4	200,278	2.6	128,585	1.7

Sources: U.S. Census Bureau, 2004 American Community Survey and Real Estate Center at Texas A&M University

Table 15. Texas Households by Maximum-Priced Affordable Home at Selected Effective Insurance Rates*

Maximum Home Price	0.5 Percent Insurance Rate		0.8 Percent Insurance Rate		1.1 Percent Insurance Rate	
	Number of Households	Percent of Households	Number of Households	Percent of Households	Number of Households	Percent of Households
<$75,000	2,720,424	34.9	2,794,399	35.9	2,865,730	36.8
75,000–125,000	1,665,522	21.4	1,681,135	21.6	1,692,900	21.7
125,000–150,000	635,886	8.2	643,074	8.3	641,676	8.2
150,000–175,000	516,308	6.6	508,043	6.5	514,857	6.6
175,000–200,000	443,247	5.7	417,904	5.4	392,561	5.0
200,000–250,000	611,436	7.8	627,228	8.1	619,286	7.9
250,000–300,000	398,109	5.1	374,290	4.8	374,205	4.8
300,000–400,000	421,748	5.4	382,883	4.9	344,019	4.4
400,000–500,000	157,549	2.0	161,618	2.1	158,059	2.0
>$500,000	220,624	2.8	200,278	2.6	187,561	2.4

Sources: U.S. Census Bureau, 2004 American Community Survey and Real Estate Center at Texas A&M University
*Based on acquisition assumptions in Table 1

Table 16. Texas Households by Maximum-Priced Affordable Home at Selected Effective Utility Rates*

Highest Home Price	1 Percent Utility Rate		2 Percent Utility Rate		3 Percent Utility Rate	
	Number of Households	Percent of Households	Number of Households	Percent of Households	Number of Households	Percent of Households
<$75,000	2,547,816	32.7	2,794,399	35.9	3,030,067	38.9
75,000–125,000	1,629,091	20.9	1,681,135	21.6	1,716,738	22.0
125,000–150,000	619,114	7.9	643,074	8.3	630,523	8.1
150,000–175,000	535,593	6.9	508,043	6.5	537,854	6.9
175,000–200,000	460,064	5.9	417,904	5.4	339,934	4.4
200,000–250,000	616,904	7.9	627,228	8.1	579,112	7.4
250,000–300,000	453,687	5.8	374,290	4.8	359,049	4.6
300,000–400,000	487,881	6.3	382,883	4.9	289,935	3.7
400,000–500,000	172,605	2.2	161,618	2.1	142,777	1.8
>$500,000	268,097	3.4	200,278	2.6	164,864	2.1

Sources: U.S. Census Bureau, 2004 American Community Survey and Real Estate Center at Texas A&M University
*Based on acquisition assumptions in Table 1

Utilities here are defined as electricity, natural or propane gas and water-sewer services. Utility costs vary according to weather, home size, quality of construction, insulation, size of family and usage. They are highly seasonal and can vary significantly based on the local utility company's efficiency and business practices. Effective utility costs are actual total utility costs expressed as a percentage of property value.

Combining the required income to qualify for different home prices under the assumptions in Table 1 with the statewide household income distribution reported in the 2004 American Community Survey results in the distributions of Texas housing affordability depicted in Tables 15 and 16 for selected effective insurance and utility rates. In each table, all other homeownership costs remain equal to the assumed amounts shown in Table 1.

Changes in the effective insurance rate create a relatively modest downward shift in maximum home price affordability. The affordability impact of changes in effective insurance rates is reflected in changes in the maximum home price multiplier: an increase from a 0.50 percent rate to a 0.80 percent rate reduces the price multiplier from 2.58 to 2.52; it is further reduced to 2.46 if the rate increases from 0.80 percent to 1.1 percent.

The number of households forced to shift to a lower-priced home as the insurance rate changes again depends on the number of households on the margin as the required income changes to meet the 30 percent qualifying ratio test. For example, at a 0.50 percent insurance rate, the required income for a $125,000 home is $48,398. That jumps to $49,648 at a 0.80 percent tax rate, a modest $1,250 or 2.6 percent differential in required income.

According to the data in Table 5, an increase in the insurance rate from 0.50 percent to 0.80 percent increases the number of households limited to a home priced less than $125,000 by 89,588 households. If the effective property insurance rate rises from 0.80 percent to 1.1 percent, the number of households that can afford a home priced no greater than $125,000 increases from 4.48 million to 4.56 million or 83,096 households.

Changes in the utility rate cause a more substantial shift in housing affordability. At a 1 percent effective utility cost, the maximum home price multiplier equals 2.75, at 2 percent the multiplier equals 2.52 and at a 3 percent effective rate the multiplier becomes 2.32. At a 2 percent utility rate, the required income for a $125,000 home is $49,648. That increases to $53,814 at a 3 percent utility rate, representing

$4,166 or 8.4 percent additional required income to acquire the same priced home.

Again, the number of households forced to shift to lower-priced homes as the utility rate changes depends upon the number of households on the margin as the required income changes to meet the 30 percent qualifying ratio test. Under the base assumption with a 2.0 percent effective utility rate, 447.6 million or 57.4 percent of all Texas households cannot afford a home priced greater than $125,000. Holding all other costs constant, if the utility rate is 1.0 percent, 417.7 million or about 300,000 fewer Texas households are limited to a $125,000 home. If effective utility costs reach 3.0 percent, 474.7 million or 271,271 more Texas households are limited to a home priced no greater than $125,000.

The Four Principal Texas Metropolitan Areas

Local Housing Affordability

Renter-occupied housing is generally more prevalent in major urban areas than in smaller towns and communities. Statewide, 65 percent of households are owner-occupants. Table 17 shows the estimated percent of owner-occupied versus renter-occupied housing units in the four major urban areas of Texas.

This pattern of housing tenure results partly because of income levels in the major urban areas (that is, a greater concentration of lower-income households), but also because of local age distribution, household composition (more single-individual households) and economic conditions. Young people tend to migrate to the big cities in search of jobs, creating single-individual households that are primarily renters rather than owners. Austin leads the four major Texas metro areas with 39.1 percent of the total housing units renter-occupied.

The four principal Texas metropolitan areas, like most other major U.S. metro areas, have difficulty producing owner-occupied housing at the lower price points. Figures 5, 6, 7 and 8 show the number of households by the highest affordable home relative to the estimated inventory of owner-occupied housing units in each major Texas metropolitan area.

The dramatic shortage of owner-occupied homes in the under $75,000 price category is consistent with the predominant pattern of lower-income households renting rather than owning housing.

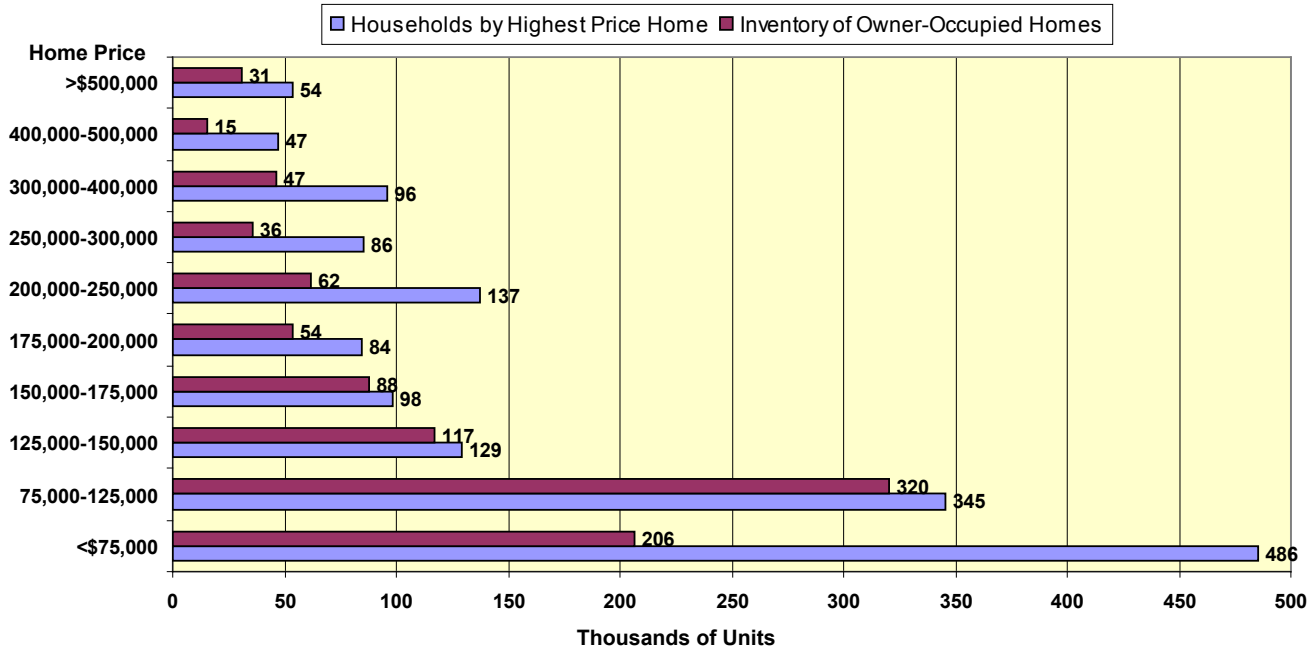
Figures 5–8 define the potential demand for owner-occupied

Table 17. Owner- and Renter-Occupied Units in Major Texas Metro Areas*

	Austin	Percent of Total	San Antonio	Percent of Total	Dallas	Percent of Total	Houston	Percent of Total
Total Units	514,131		590,135		1,355,719		1,563,125	
Owner-occupied	313,010	60.9	377,211	63.9	834,978	61.6	974,737	62.4
Renter-occupied	201,121	39.1	212,924	36.1	520,741	38.4	588,388	37.6

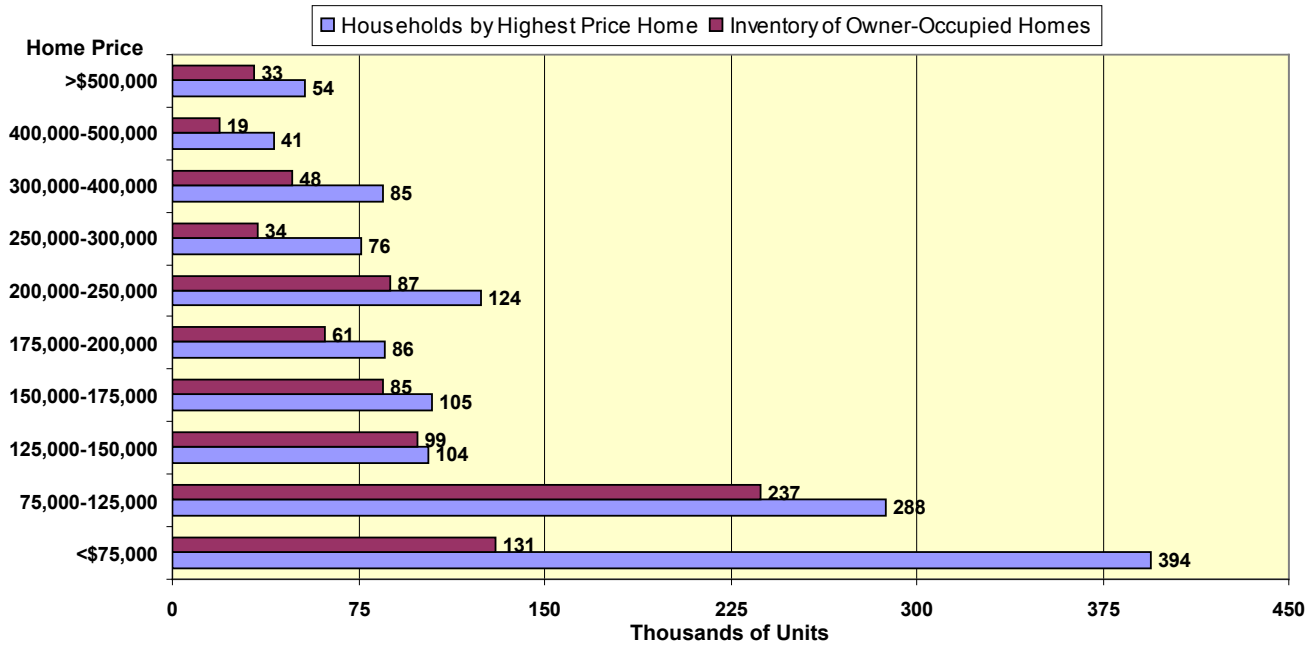
Source: U.S. Census Bureau, 2004 American Community Survey
*Dallas and Houston are PMSA areas, Austin and San Antonio are MSA areas.

Figure 5. Houston Households by Highest-Priced Affordable Home Relative to Inventory of Owner-Occupied Homes



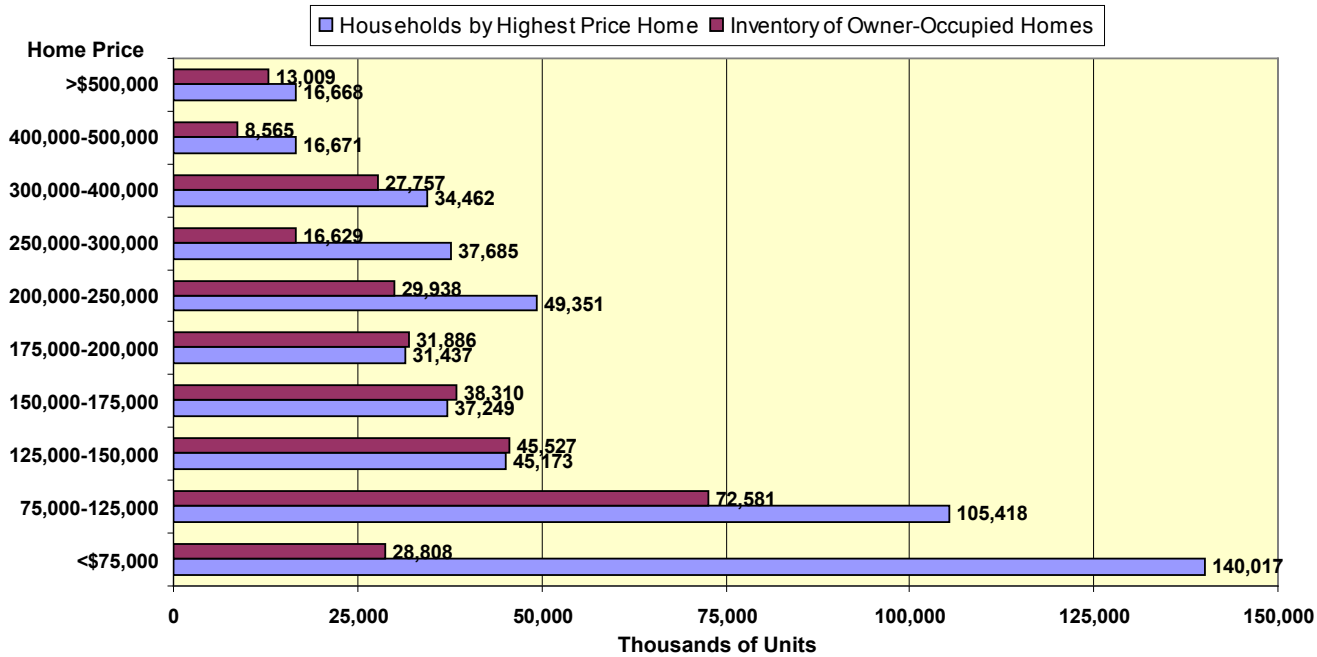
Source: 2004 American Community Survey, U.S. Census Bureau for Houston PMSA; Real Estate Center at Texas A&M University

Figure 6. Dallas Households by Highest-Priced Affordable Home Relative to Inventory of Owner-Occupied Homes



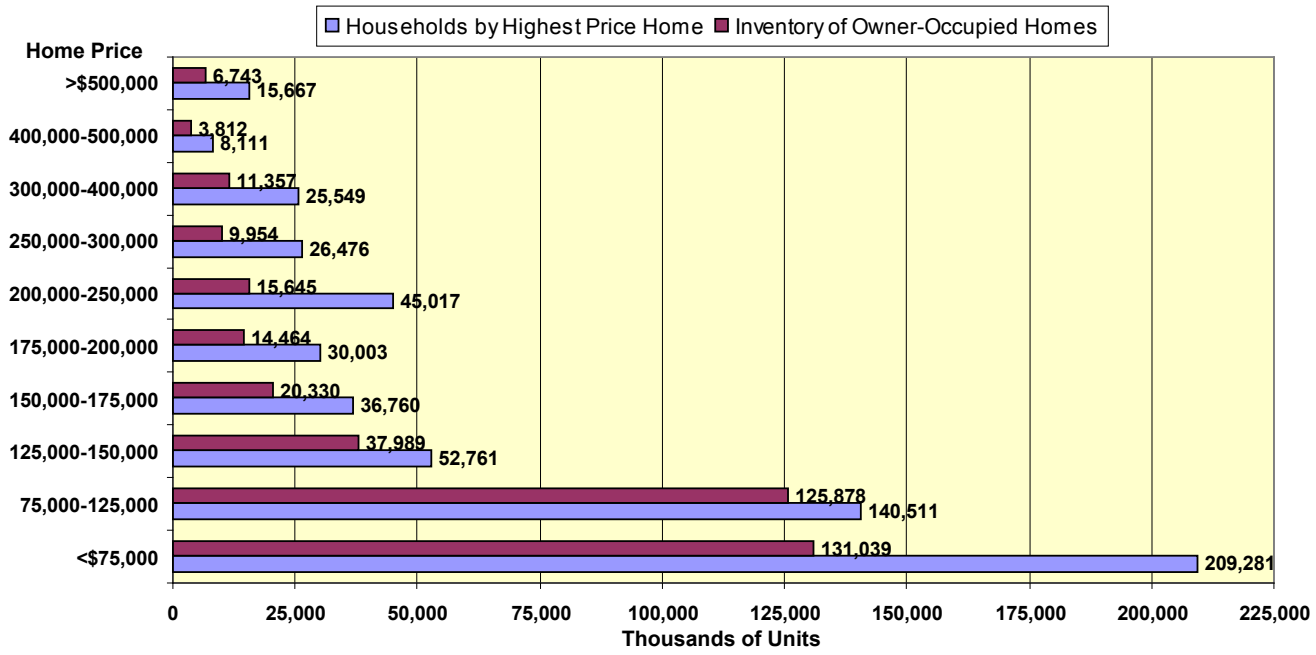
Source: 2004 American Community Survey, U.S. Census Bureau for Dallas PMSA; Real Estate Center at Texas A&M University

Figure 7. Austin Households by Highest-Priced Affordable Home Relative to the Inventory of Owner-Occupied Homes



Source: 2004 American Community Survey, U.S. Census Bureau for Austin–San Marcos MSA; Real Estate Center at Texas A&M University

Figure 8. San Antonio Households by Highest-Priced Affordable Home Relative to the Inventory of Owner-Occupied Homes



Source: 2004 American Community Survey, U.S. Census Bureau for San Antonio MSA; Real Estate Center at Texas A&M University

housing based on the maximum home price households can afford for the four major Texas metro areas. Table 18 presents the supply of owner-occupied housing relative to the potential demand by price interval for the four major metropolitan areas and the state. Variations in the pattern of supply-demand, especially for the lower price levels, are quite pronounced among the four major urban areas and relative to the state.

The supply-demand characteristics described in Table 11 generally follow existing concepts of housing tenure. Lower-income households tend to rent and higher-income households are predominantly owners. This pattern is fostered by supply and housing production and availability as well as monthly rent versus monthly ownership costs at different price levels.

As noted earlier, the market has difficulty producing new housing units for less than $75,000 because of land and construction costs and the lack of potential profit margins to the builders-developers. Moreover, at the lower income-price level, households find rents more financially appealing than ownership costs. Builders-developers are most active at the higher price levels where profit margins are attractive and the monthly ownership costs relative to rent favor ownership. In terms of analyzing housing affordability, though, the data are quite revealing.

Austin, for example, has little to offer potential homeowners in the under-$75,000 price range and even in the $75,000–$125,000 price range relative to the other major urban areas or statewide. On the other hand, Austin's estimated supply of owner-occupied units in the $125,000–$200,000 price ranges exceeds the indicated potential demand. Households that can afford housing in these price ranges would appear to have an ample supply from which to choose.

San Antonio, by comparison, has three times the relative supply of owner-occupied housing under $75,000 than Austin — nearly 63 percent versus 21 percent. However, San Antonio's supply of owner-occupied housing between $125,000 and $200,000 ranges from 72 percent to 48 percent of potential demand, which is the lowest distribution of relative supply among the four major metro areas as well as compared with the state.

For housing priced under $75,000, Austin

Table 18. Percent of Owner-Occupied Homes Relative to Potential Demand in Texas and the Four Principal Metropolitan Markets

Home Prices	Austin	San Antonio	Dallas	Houston	Texas
<$75,000	20.6%	62.6%	33.1%	42.5%	60.2%
$75,000–125,000	68.9%	89.6%	82.4%	92.7%	89.0%
$125,000–150,000	100.8%	72.0%	95.6%	90.4%	75.8%
$150,000–175,000	102.8%	55.3%	80.9%	89.0%	75.2%
$175,000–200,000	101.4%	48.2%	71.6%	63.6%	58.4%
$200,000–250,000	60.7%	34.8%	70.3%	45.0%	46.4%
$250,000–300,000	44.1%	37.6%	44.7%	41.7%	36.1%
$300,000–400,000	80.5%	44.5%	57.2%	48.7%	48.2%
$400,000–500,000	51.4%	47.0%	47.2%	31.8%	41.4%
>$500,000	78.0%	43.0%	61.7%	56.9%	52.6%

Source: Real Estate Center at Texas A&M University

and Dallas fall far short of satisfying potential demand, with Houston not far behind. Only San Antonio, with nearly 63 percent, has a supply of owner-occupied homes more than half of the potential demand. The data further reveal that Houston, Dallas and San Antonio have a fairly good supply of owner-occupied housing from $75,000–$125,000, with only Dallas having less than approximately 90 percent of the potential demand. Austin, however, has a stock of only 69 percent owner-occupied housing in this price range, far short of the statewide level of 89 percent.

All of the metro areas have an adequate supply of owner-occupied housing units at the upper price levels. Austin has the greatest coverage of higher-priced housing, which follows from its position as the metro area with the highest general home prices in the state. San Antonio, the lowest-priced housing market among the major metro areas, has the least coverage at the higher price levels, but is still about on par with the statewide levels for most of the prices.

Local Affordability and Price Sensitivity

The number of households that cannot afford the same home as the price increases for each of the four principal Texas metropolitan markets is depicted in Tables 19, 20, 21 and 22. Although the absolute numbers differ because of the size differences among the four metro markets, the general pattern of households priced out of the market for a particular home as prices increase is the same. The greatest impact is for lower-priced homes and smaller for higher-priced homes.

In Houston, for every $1,000 increase in the price of a home, an average of 4,953 households can no longer afford to buy the home. The number of households priced out of the market for a given property ranges from 7,511 households as the price increases from $70,000 to $71,000 to 2,747 households as the price of a home increases by $1,000 from $195,000. In Dallas the average number of households priced out of the market per $1,000 increase is 4,337, in Austin 1,638, and in San Antonio 1,927.

Table 19. Number of Houston Households That Cannot Afford the Same Home as Price Increases by $5,000

House Price	Total Required Monthly Payment	Minimum Required Income to Qualify	Percent of Households That Can Afford No More Than	Percent of Households That Can Afford at Least	Percent Fewer Households That Can Afford	Number Fewer Households That Can Afford	Average Number of Households Per $1,000 Price Increase
$70,000	$695.07	$27,803	28.4	71.6			
75,000	744.71	29,789	30.8	69.2	2.4	37,553	7,511
80,000	794.36	31,774	33.3	66.7	2.5	38,491	7,698
85,000	844.01	33,760	35.7	64.3	2.5	38,624	7,725
90,000	893.66	35,746	38.2	61.8	2.4	38,128	7,626
95,000	943.30	37,732	40.6	59.4	2.4	37,356	7,471
100,000	992.95	39,718	43.0	57.0	2.4	37,356	7,471
105,000	1,042.60	41,704	45.2	54.8	2.2	34,904	6,981
110,000	1,092.25	43,690	47.4	52.6	2.2	34,521	6,904
115,000	1,141.89	45,676	49.5	50.5	2.1	32,545	6,509
120,000	1,191.54	47,662	51.3	48.7	1.8	28,766	5,753
125,000	1,241.19	49,648	53.2	46.8	1.8	28,766	5,753
130,000	1,290.84	51,633	54.9	45.1	1.7	26,265	5,253
135,000	1,340.48	53,619	56.5	43.5	1.6	25,743	5,149
140,000	1,390.13	55,605	58.1	41.9	1.6	25,743	5,149
145,000	1,439.78	57,591	59.8	40.2	1.6	25,743	5,149
150,000	1,489.43	59,577	61.4	38.6	1.6	25,743	5,149
155,000	1,539.07	61,563	62.8	37.2	1.3	20,757	4,151
160,000	1,588.72	63,549	64.0	36.0	1.2	19,424	3,885
165,000	1,638.37	65,535	65.3	34.7	1.2	19,424	3,885
170,000	1,688.02	67,521	66.5	33.5	1.2	19,424	3,885
175,000	1,737.66	69,507	67.7	32.3	1.2	19,424	3,885
180,000	1,787.31	71,492	69.0	31.0	1.2	19,424	3,885
185,000	1,836.96	73,478	70.2	29.8	1.2	19,424	3,885
190,000	1,886.61	75,464	71.4	28.6	1.2	18,084	3,617
195,000	1,936.25	77,450	72.3	27.7	0.9	13,733	2,747
200,000	1,985.90	79,436	73.1	26.9	0.9	13,733	2,747
205,000	2,035.55	81,422	74.0	26.0	0.9	13,733	2,747
210,000	2,085.20	83,408	74.9	25.1	0.9	13,733	2,747
215,000	2,134.85	85,394	75.8	24.2	0.9	13,733	2,747
220,000	2,184.49	87,380	76.7	23.3	0.9	13,733	2,747
225,000	2,234.14	89,366	77.5	22.5	0.9	13,733	2,747
Average Number of Households Per $1,000 Price Increase							4,953

Source: Real Estate Center at Texas A&M University

Table 20. Number of Dallas Households That Cannot Afford the Same Home as Price Increases by $5,000

House Price	Total Required Monthly Payment	Minimum Required Income to Qualify	Percent of Households That Can Afford No More Than	Percent of Households That Can Afford at Least	Percent Fewer Households That Can Afford	Number Fewer Households That Can Afford	Average Number of Households Per $1,000 Price Increase
$70,000	$695.07	$27,803	27.0	73.0			
75,000	744.71	29,789	29.1	70.9	2.1	28,206	5,641
80,000	794.36	31,774	31.4	68.6	2.3	31,123	6,225
85,000	844.01	33,760	33.7	66.3	2.3	31,487	6,297
90,000	893.66	35,746	36.0	64.0	2.2	30,494	6,099
95,000	943.30	37,732	38.1	61.9	2.1	28,888	5,778
100,000	992.95	39,718	40.2	59.8	2.1	28,888	5,778
105,000	1,042.60	41,704	42.4	57.6	2.1	28,855	5,771
110,000	1,092.25	43,690	44.5	55.5	2.1	28,866	5,773
115,000	1,141.89	45,676	46.5	53.5	2.0	27,754	5,551
120,000	1,191.54	47,662	48.4	51.6	1.9	25,641	5,128
125,000	1,241.19	49,648	50.3	49.7	1.9	25,641	5,128
130,000	1,290.84	51,633	51.9	48.1	1.6	21,420	4,284
135,000	1,340.48	53,619	53.4	46.6	1.5	20,525	4,105
140,000	1,390.13	55,605	54.9	45.1	1.5	20,525	4,105
145,000	1,439.78	57,591	56.4	43.6	1.5	20,525	4,105
150,000	1,489.43	59,577	57.9	42.1	1.5	20,525	4,105
155,000	1,539.07	61,563	59.5	40.5	1.5	20,869	4,174
160,000	1,588.72	63,549	61.0	39.0	1.5	20,976	4,195
165,000	1,638.37	65,535	62.6	37.4	1.5	20,976	4,195
170,000	1,688.02	67,521	64.1	35.9	1.5	20,976	4,195
175,000	1,737.66	69,507	65.7	34.3	1.5	20,976	4,195
180,000	1,787.31	71,492	67.2	32.8	1.5	20,976	4,195
185,000	1,836.96	73,478	68.8	31.2	1.5	20,976	4,195
190,000	1,886.61	75,464	70.2	29.8	1.4	18,971	3,794
195,000	1,936.25	77,450	71.1	28.9	0.9	12,448	2,490
200,000	1,985.90	79,436	72.0	28.0	0.9	12,448	2,490
205,000	2,035.55	81,422	72.9	27.1	0.9	12,448	2,490
210,000	2,085.20	83,408	73.8	26.2	0.9	12,448	2,490
215,000	2,134.85	85,394	74.8	25.2	0.9	12,448	2,490
220,000	2,184.49	87,380	75.7	24.3	0.9	12,448	2,490
225,000	2,234.14	89,366	76.6	23.4	0.9	12,448	2,490
Average Number of Households Per $1,000 Price Increase							4,337

Source: Real Estate Center at Texas A&M University

Table 21. Number of Austin Households That Cannot Afford the Same Home as Price Increases by $5,000

House Price	Total Required Monthly Payment	Minimum Required Income to Qualify	Percent of Households That Can Afford No More Than	Percent of Households That Can Afford at Least	Percent Fewer Households That Can Afford	Number Fewer Households That Can Afford	Average Number of Households Per $1,000 Price Increase
$70,000	$695.07	$27,803	25.3	74.7			
75,000	744.71	29,789	27.2	72.8	1.9	9,896	1,979
80,000	794.36	31,774	29.5	70.5	2.3	11,675	2,335
85,000	844.01	33,760	31.8	68.2	2.3	11,892	2,378
90,000	893.66	35,746	34.1	65.9	2.3	11,570	2,314
95,000	943.30	37,732	36.2	63.8	2.1	11,051	2,210
100,000	992.95	39,718	38.4	61.6	2.1	11,051	2,210
105,000	1,042.60	41,704	40.3	59.7	2.0	10,074	2,015
110,000	1,092.25	43,690	42.3	57.7	1.9	9,919	1,984
115,000	1,141.89	45,676	44.1	55.9	1.9	9,686	1,937
120,000	1,191.54	47,662	45.9	54.1	1.8	9,249	1,850
125,000	1,241.19	49,648	47.7	52.3	1.8	9,249	1,850
130,000	1,290.84	51,633	49.5	50.5	1.8	9,062	1,812
135,000	1,340.48	53,619	51.3	48.7	1.8	9,028	1,806
140,000	1,390.13	55,605	53.0	47.0	1.8	9,028	1,806
145,000	1,439.78	57,591	54.8	45.2	1.8	9,028	1,806
150,000	1,489.43	59,577	56.5	43.5	1.8	9,028	1,806
155,000	1,539.07	61,563	58.0	42.0	1.5	7,727	1,545
160,000	1,588.72	63,549	59.5	40.5	1.4	7,381	1,476
165,000	1,638.37	65,535	60.9	39.1	1.4	7,381	1,476
170,000	1,688.02	67,521	62.3	37.7	1.4	7,381	1,476
175,000	1,737.66	69,507	63.8	36.2	1.4	7,381	1,476
180,000	1,787.31	71,492	65.2	34.8	1.4	7,381	1,476
185,000	1,836.96	73,478	66.6	33.4	1.4	7,381	1,476
190,000	1,886.61	75,464	68.0	32.0	1.3	6,805	1,361
195,000	1,936.25	77,450	68.9	31.1	1.0	4,935	987
200,000	1,985.90	79,436	69.9	30.1	1.0	4,935	987
205,000	2,035.55	81,422	70.8	29.2	1.0	4,935	987
210,000	2,085.20	83,408	71.8	28.2	1.0	4,935	987
215,000	2,134.85	85,394	72.8	27.2	1.0	4,935	987
220,000	2,184.49	87,380	73.7	26.3	1.0	4,935	987
225,000	2,234.14	89,366	74.7	25.3	1.0	4,935	987
Average Number of Households Per $1,000 Price Increase							1,638

Source: Real Estate Center at Texas A&M University

Table 22. Number of San Antonio Households That Cannot Afford the Same Home as Price Increases by $5,000

House Price	Total Required Monthly Payment	Minimum Required Income to Qualify	Percent of Households That Can Afford No More Than	Percent of Households That Can Afford at Least	Percent Fewer Households That Can Afford	Number Fewer Households That Can Afford	Average Number of Households Per $1,000 Price Increase
$70,000	$695.07	$27,803	32.7	67.3			
75,000	744.71	29,789	35.5	64.5	2.7	16,104	3,221
80,000	794.36	31,774	38.3	61.7	2.8	16,463	3,293
85,000	844.01	33,760	41.1	58.9	2.8	16,515	3,303
90,000	893.66	35,746	43.7	56.3	2.6	15,533	3,107
95,000	943.30	37,732	46.0	54.0	2.4	13,924	2,785
100,000	992.95	39,718	48.4	51.6	2.4	13,924	2,785
105,000	1,042.60	41,704	50.8	49.2	2.4	13,995	2,799
110,000	1,092.25	43,690	53.1	46.9	2.4	14,015	2,803
115,000	1,141.89	45,676	55.4	44.6	2.2	13,151	2,630
120,000	1,191.54	47,662	57.3	42.7	1.9	11,496	2,299
125,000	1,241.19	49,648	59.3	40.7	1.9	11,496	2,299
130,000	1,290.84	51,633	61.1	38.9	1.8	10,686	2,137
135,000	1,340.48	53,619	62.9	37.1	1.8	10,519	2,104
140,000	1,390.13	55,605	64.6	35.4	1.8	10,519	2,104
145,000	1,439.78	57,591	66.4	33.6	1.8	10,519	2,104
150,000	1,489.43	59,577	68.2	31.8	1.8	10,519	2,104
155,000	1,539.07	61,563	69.6	30.4	1.3	7,911	1,582
160,000	1,588.72	63,549	70.8	29.2	1.2	7,212	1,442
165,000	1,638.37	65,535	72.0	28.0	1.2	7,212	1,442
170,000	1,688.02	67,521	73.2	26.8	1.2	7,212	1,442
175,000	1,737.66	69,507	74.4	25.6	1.2	7,212	1,442
180,000	1,787.31	71,492	75.7	24.3	1.2	7,212	1,442
185,000	1,836.96	73,478	76.9	23.1	1.2	7,212	1,442
190,000	1,886.61	75,464	78.0	22.0	1.1	6,575	1,315
195,000	1,936.25	77,450	78.8	21.2	0.8	4,502	900
200,000	1,985.90	79,436	79.5	20.5	0.8	4,502	900
205,000	2,035.55	81,422	80.3	19.7	0.8	4,502	900
210,000	2,085.20	83,408	81.1	18.9	0.8	4,502	900
215,000	2,134.85	85,394	81.8	18.2	0.8	4,502	900
220,000	2,184.49	87,380	82.6	17.4	0.8	4,502	900
225,000	2,234.14	89,366	83.3	16.7	0.8	4,502	900
Average Number of Households Per $1,000 Price Increase							1,927

Source: Real Estate Center at Texas A&M University

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