

# Texas Housing Affordability Outlook



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TEXAS A&M UNIVERSITY

Texas Real Estate Research Center

TECHNICAL REPORT

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## About this Report

Texas Real Estate Research Center economists continuously monitor many facets of both state and local housing markets. The *Texas Housing Affordability Outlook* summarizes significant state housing activity and trends as related to affordability. Home prices reflect single-family existing homes unless otherwise stated. This report does not seasonally adjust home prices.

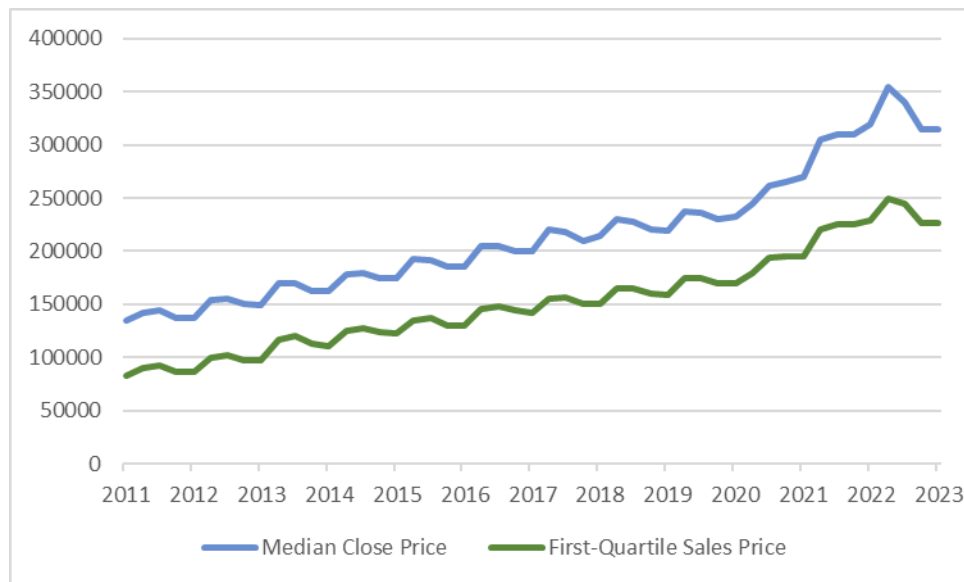
This publication is designed to be a one-stop resource for information on housing affordability for potential homebuyers in Texas. We hope you find them as useful as we do. Your feedback is always appreciated. Send comments and suggestions to [info@recenter.tamu.edu](mailto:info@recenter.tamu.edu).

Dr. Adam Perdue, Dr. Harold D. Hunt, and Reece Neathery

## Purchase Affordability

Affordability metrics increased on a quarterly basis through 1Q2023. Average mortgage rates fell from the fourth quarter as median and first-quartile home purchase prices stayed flat. On year-over-year (YOY) basis, mortgage rates were up significantly, decreasing purchase affordability. Although down significantly from the highs in the second and third quarters, on a YOY basis, the median and first-quartile home prices were down 3.6 and 4.1 percent, respectively (Figure 1 and Table 1). Average 30-year mortgage interest rates fell to 6.37 percent from 6.66 percent last quarter. That is a 2.55 percentage point increase from the average of 3.82 percent in 1Q2022.

**Figure 1. Texas' Median and First-Quartile Sales Prices**



Source: Texas Real Estate Research Center at Texas A&M University

**Table 1. Median Sales Price and First-Quartile Sales Price by Quarter**

Year	Median Home Price	YOY Change	First-Quartile Home Price	YOY Change
1Q2011	\$134,368		\$83,000	
1Q2012	\$137,500	2.3%	\$86,500	4.2%
1Q2013	\$148,900	8.3%	\$97,000	12.1%
1Q2014	\$162,500	9.1%	\$111,000	14.4%
1Q2015	\$175,000	7.7%	\$123,000	10.8%
1Q2016	\$185,000	5.7%	\$130,000	5.7%
1Q2017	\$200,000	8.1%	\$142,000	9.2%
1Q2018	\$214,000	7.0%	\$150,000	5.6%
1Q2019	\$219,000	2.3%	\$159,000	6.0%
1Q2020	\$232,000	5.9%	\$170,000	6.9%
1Q2021	\$270,000	16.4%	\$195,000	14.7%
1Q2022	\$319,600	18.4%	\$229,500	17.7%
<b>1Q2023</b>	<b>\$308,000</b>	<b>-3.6%</b>	<b>\$220,000</b>	<b>-4.1%</b>

Source: Texas Real Estate Research Center at Texas A&M University

**Table 2. Median Family Income by Year**

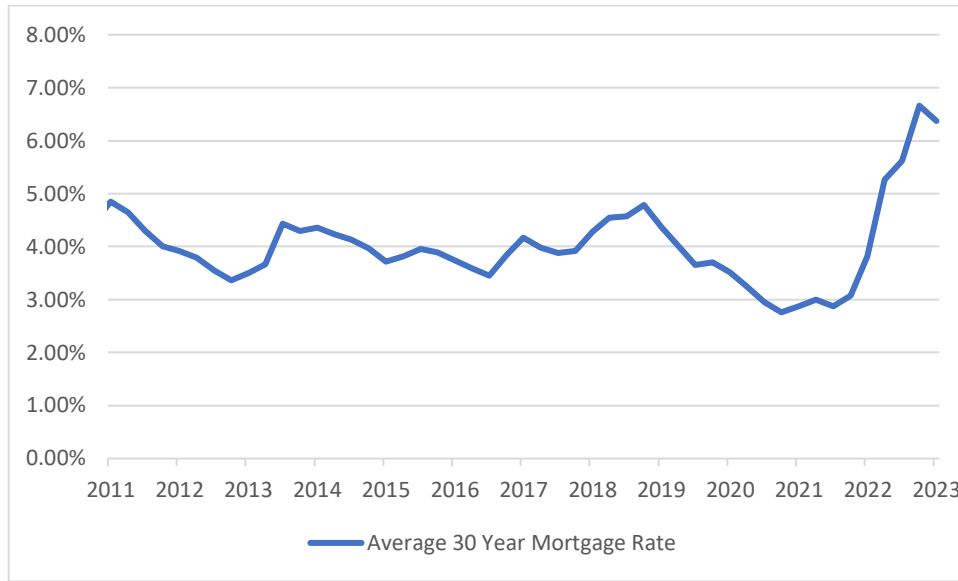
Year	Income for First-Time Homebuyers	YOY Change	Median Family income	YOY Change
2011	\$47,600		\$59,500	
2012	\$48,250	1.4%	\$60,300	1.3%
2013	\$48,100	-0.3%	\$60,100	-0.3%
2014	\$48,250	0.3%	\$60,300	0.3%
2015	\$50,300	4.2%	\$62,900	4.3%
2016	\$50,250	-0.1%	\$62,800	-0.2%
2017	\$51,850	3.2%	\$64,800	3.2%
2018	\$55,050	6.2%	\$68,800	6.2%
2019	\$56,950	3.5%	\$71,200	3.5%
2020	\$59,600	4.7%	\$74,500	4.6%
2021	\$60,100	0.8%	\$75,100	0.8%
2022	\$67,250	11.9%	\$85,300	13.6%
<b>2023*</b>	-	-	-	-

\* 2023 Estimates have not yet been released. 2022 estimated incomes are used where necessary.

Note: The income for first-time homebuyers reflects the income limit for low-income families, who earn no more than 80 percent of the median family income. This table reflects income figures for a four-person family.

Source: United States Department of Housing and Urban Development

**Figure 2. 30-Year Fixed Rate Mortgage Average in the United States**



Sources: Federal Reserve Economic Data and Freddie Mac

### Repeat Homebuyer

Despite recent substantial YOY growth in family income, still-elevated home prices suppressed purchase affordability. For households earning the median family income for Texas in 2022 (\$85,300), the median sales price for 1Q2023 was not affordable unless the home price-to-income multiplier exceeded 3.5 (Table 3). Just more than one-third (34.6 percent) of homes sold in 1Q2023 were affordable to households earning the median family income with a home price-to-income multiplier of 3 (Table 4). Households would have to earn \$105,000 annually to afford the median sales price with a home price-to-income multiplier of 3.

**Table 3. Maximum Home Price Affordable by Family Income  
and Home Price-to-Income Multiplier**

		Home-Purchasing Power							
	Family Income	2	2.5	3	3.5	4	4.5	5	5.5
<b>Median Family Income</b>	<b>\$85,300</b>	\$170,600	\$213,250	\$255,900	\$298,550	<b>\$341,200</b>	<b>\$383,850</b>	<b>\$426,500</b>	<b>\$469,150</b>
	<b>\$90,000</b>	\$180,000	\$225,000	\$270,000	<b>\$315,000</b>	<b>\$360,000</b>	<b>\$405,000</b>	<b>\$450,000</b>	<b>\$495,000</b>
	<b>\$95,000</b>	\$190,000	\$237,500	\$285,000	<b>\$332,500</b>	<b>\$380,000</b>	<b>\$427,500</b>	<b>\$475,000</b>	<b>\$522,500</b>
	<b>\$100,000</b>	\$200,000	\$250,000	\$300,000	<b>\$350,000</b>	<b>\$400,000</b>	<b>\$450,000</b>	<b>\$500,000</b>	<b>\$550,000</b>
<b>Workforce Households (120%)</b>	<b>\$102,400</b>	\$204,800	\$256,000	\$307,200	<b>\$358,400</b>	<b>\$409,600</b>	<b>\$460,800</b>	<b>\$512,000</b>	<b>\$563,200</b>
	<b>\$105,000</b>	\$210,000	\$262,500	<b>\$315,000</b>	<b>\$367,500</b>	<b>\$420,000</b>	<b>\$472,500</b>	<b>\$525,000</b>	<b>\$577,500</b>
	<b>\$110,000</b>	\$220,000	\$275,000	<b>\$330,000</b>	<b>\$385,000</b>	<b>\$440,000</b>	<b>\$495,000</b>	<b>\$550,000</b>	<b>\$605,000</b>
	<b>\$115,000</b>	\$230,000	\$287,500	<b>\$345,000</b>	<b>\$402,500</b>	<b>\$460,000</b>	<b>\$517,500</b>	<b>\$575,000</b>	<b>\$632,500</b>
	<b>\$120,000</b>	\$240,000	\$300,000	<b>\$360,000</b>	<b>\$420,000</b>	<b>\$480,000</b>	<b>\$540,000</b>	<b>\$600,000</b>	<b>\$660,000</b>
	<b>\$125,000</b>	\$250,000	<b>\$312,500</b>	<b>\$375,000</b>	<b>\$437,500</b>	<b>\$500,000</b>	<b>\$562,500</b>	<b>\$625,000</b>	<b>\$687,500</b>
	<b>\$130,000</b>	\$260,000	<b>\$325,000</b>	<b>\$390,000</b>	<b>\$455,000</b>	<b>\$520,000</b>	<b>\$585,000</b>	<b>\$650,000</b>	<b>\$715,000</b>
	<b>\$135,000</b>	\$270,000	<b>\$337,500</b>	<b>\$405,000</b>	<b>\$472,500</b>	<b>\$540,000</b>	<b>\$607,500</b>	<b>\$675,000</b>	<b>\$742,500</b>
	<b>\$140,000</b>	\$280,000	<b>\$350,000</b>	<b>\$420,000</b>	<b>\$490,000</b>	<b>\$560,000</b>	<b>\$630,000</b>	<b>\$700,000</b>	<b>\$770,000</b>
	<b>\$145,000</b>	\$290,000	<b>\$362,500</b>	<b>\$435,000</b>	<b>\$507,500</b>	<b>\$580,000</b>	<b>\$652,500</b>	<b>\$725,000</b>	<b>\$797,500</b>
	<b>\$150,000</b>	\$300,000	<b>\$375,000</b>	<b>\$450,000</b>	<b>\$525,000</b>	<b>\$600,000</b>	<b>\$675,000</b>	<b>\$750,000</b>	<b>\$825,000</b>
	<b>\$155,000</b>	<b>\$310,000</b>	<b>\$387,500</b>	<b>\$465,000</b>	<b>\$542,500</b>	<b>\$620,000</b>	<b>\$697,500</b>	<b>\$775,000</b>	<b>\$852,500</b>

Note: Figures in red indicate the maximum affordable home price meets or exceeds the current median sales price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 4. Percentage of Homes Sold in 1Q2023 Affordable by Family Income and Home Price-to-Income Multiplier**

	Family Income	Home-Purchasing Power							
		2	2.5	3	3.5	4	4.5	5	5.5
<b>Median Family Income</b>	<b>\$85,300</b>	13.9%	22.5%	34.6%	46.4%	57.6%	66.1%	73.2%	78.0%
	<b>\$90,000</b>	15.8%	26.1%	38.7%	51.6%	61.9%	70.1%	76.4%	80.6%
	<b>\$95,000</b>	17.9%	29.0%	43.1%	55.6%	65.9%	73.3%	78.9%	82.8%
	<b>\$100,000</b>	20.1%	33.3%	48.0%	60.0%	69.6%	76.4%	81.4%	85.0%
<b>Workforce Households (120%)</b>	<b>\$102,400</b>	20.4%	34.6%	49.3%	61.1%	70.4%	77.3%	82.0%	85.6%
	<b>\$105,000</b>	22.2%	36.3%	51.6%	63.0%	72.3%	78.4%	83.1%	86.4%
	<b>\$110,000</b>	24.8%	40.3%	55.4%	66.7%	75.0%	80.6%	85.0%	88.0%
	<b>\$115,000</b>	27.5%	43.4%	58.5%	69.7%	77.3%	82.4%	86.4%	89.2%
	<b>\$120,000</b>	30.1%	48.0%	61.9%	72.3%	79.4%	84.2%	87.9%	90.4%
	<b>\$125,000</b>	33.3%	50.6%	64.9%	74.5%	81.4%	85.6%	88.9%	91.3%
	<b>\$130,000</b>	36.1%	54.2%	67.6%	76.8%	82.7%	87.0%	90.1%	92.2%
	<b>\$135,000</b>	38.7%	56.5%	70.1%	78.4%	84.2%	88.1%	91.0%	92.9%
	<b>\$140,000</b>	41.8%	60.0%	72.3%	80.3%	85.5%	89.1%	91.8%	93.6%
	<b>\$145,000</b>	44.7%	62.1%	74.4%	81.7%	86.7%	90.2%	92.5%	94.1%
	<b>\$150,000</b>	48.0%	64.9%	76.4%	83.1%	87.9%	91.0%	93.2%	94.7%
	<b>\$155,000</b>	50.4%	66.8%	77.8%	84.3%	88.6%	91.5%	93.7%	95.1%

Source: Texas Real Estate Research Center at Texas A&M University

### Mortgage Interest Rate

Holding home price constant, the total monthly mortgage payment increases as the mortgage interest rate increases (Table 5). At a 6.37 percent rate, this payment was \$2,563 for the median-priced home in 1Q2023, more than twice the total monthly mortgage payment for the median-priced home in 4Q2011.

Table 6 shows the home price-to-income multiplier by mortgage interest rate. A 6.37 percent interest rate translates into a home price-to-income multiplier of 3,<sup>1</sup> meaning a household could afford a maximum home price three times its annual income. The home price-to-income multiplier declines as the mortgage interest rate increases.

The income required to qualify for a loan with a 6.37 percent mortgage interest rate was \$102,523 for the median sales price in 1Q2023, more than 20 percent higher than the median

<sup>1</sup> The home price-to-income multiplier assumes a 30-year loan term, 80 percent loan-to-value (LTV) ratio, 30 percent debt-to-income (DTI) ratio, and property taxes and insurance of 4 percent.





family income (\$85,300) (Table 7). An estimated 42.5 percent of households in Texas could afford the median sales price in 1Q2023 with a 6.66 percent interest rate (Table 8), a decline of almost 25 percentage points from 1Q2011.

**Table 5. Total Monthly Mortgage Payment for Repeat Buyers by Mortgage Interest Rate**

Year	Home Price	Mortgage Interest Rate						
		3%	4%	5%	6%	<b>6.37%</b>	6.5%	7%
1Q2011	\$134,368	\$901	\$961	\$1,025	\$1,092	<b>\$1,118</b>	\$1,127	\$1,163
1Q2012	\$137,500	\$922	\$983	\$1,049	\$1,118	<b>\$1,144</b>	\$1,154	\$1,190
1Q2013	\$148,900	\$999	\$1,065	\$1,136	\$1,211	<b>\$1,239</b>	\$1,249	\$1,289
1Q2014	\$162,500	\$1,090	\$1,162	\$1,240	\$1,321	<b>\$1,352</b>	\$1,363	\$1,407
1Q2015	\$175,000	\$1,174	\$1,252	\$1,335	\$1,423	<b>\$1,456</b>	\$1,468	\$1,515
1Q2016	\$185,000	\$1,241	\$1,323	\$1,411	\$1,504	<b>\$1,540</b>	\$1,552	\$1,601
1Q2017	\$200,000	\$1,341	\$1,431	\$1,526	\$1,626	<b>\$1,664</b>	\$1,678	\$1,731
1Q2018	\$214,000	\$1,435	\$1,531	\$1,632	\$1,740	<b>\$1,781</b>	\$1,795	\$1,852
1Q2019	\$219,000	\$1,469	\$1,566	\$1,671	\$1,780	<b>\$1,822</b>	\$1,837	\$1,896
1Q2020	\$232,000	\$1,556	\$1,659	\$1,770	\$1,886	<b>\$1,931</b>	\$1,946	\$2,008
1Q2021	\$270,000	\$1,811	\$1,931	\$2,060	\$2,195	<b>\$2,247</b>	\$2,265	\$2,337
1Q2022	\$319,600	\$2,143	\$2,286	\$2,438	\$2,598	<b>\$2,660</b>	\$2,681	\$2,766
<b>1Q2023</b>	<b>\$308,000</b>	<b>\$2,065</b>	<b>\$2,203</b>	<b>\$2,349</b>	<b>\$2,504</b>	<b>\$2,563</b>	<b>\$2,584</b>	<b>\$2,666</b>

Note: Assumes a 30-year loan term, 80 percent LTV ratio, 30 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 6. Home Price-to-Income Multiplier for Repeat Buyers by Mortgage Interest Rate**

Mortgage Interest Rate	Home Purchasing Power
3%	3.73
4%	3.50
5%	3.28
6%	3.08
<b>6.37%</b>	<b>3.00</b>
6.5%	2.98
7%	2.89

Note: Assumes a 30-year loan term, 80 percent LTV ratio, 30 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University



**Table 7. Required Qualifying Income for Repeat Buyers by Mortgage Interest Rate**

Year	Home Price	Mortgage Interest Rate						
		3%	4%	5%	6%	<b>6.37%</b>	6.5%	7%
1Q2011	\$134,368	\$36,044	\$38,444	\$40,998	\$43,695	<b>\$44,727</b>	\$45,093	\$46,522
1Q2012	\$137,500	\$36,884	\$39,340	\$41,953	\$44,714	<b>\$45,769</b>	\$46,144	\$47,607
1Q2013	\$148,900	\$39,942	\$42,601	\$45,432	\$48,421	<b>\$49,564</b>	\$49,970	\$51,554
1Q2014	\$162,500	\$43,590	\$46,492	\$49,581	\$52,843	<b>\$54,091</b>	\$54,534	\$56,262
1Q2015	\$175,000	\$46,943	\$50,069	\$53,395	\$56,908	<b>\$58,252</b>	\$58,729	\$60,590
1Q2016	\$185,000	\$49,626	\$52,930	\$56,447	\$60,160	<b>\$61,580</b>	\$62,085	\$64,053
1Q2017	\$200,000	\$53,649	\$57,221	\$61,023	\$65,038	<b>\$66,573</b>	\$67,119	\$69,246
1Q2018	\$214,000	\$57,405	\$61,227	\$65,295	\$69,591	<b>\$71,234</b>	\$71,817	\$74,093
1Q2019	\$219,000	\$58,746	\$62,657	\$66,820	\$71,217	<b>\$72,898</b>	\$73,495	\$75,824
1Q2020	\$232,000	\$62,233	\$66,377	\$70,787	\$75,444	<b>\$77,225</b>	\$77,858	\$80,325
1Q2021	\$270,000	\$72,427	\$77,249	\$82,381	\$87,801	<b>\$89,874</b>	\$90,611	\$93,482
1Q2022	\$319,600	\$85,732	\$91,440	\$97,515	\$103,931	<b>\$106,384</b>	\$107,256	\$110,655
<b>1Q2023</b>	<b>\$308,000</b>	<b>\$82,620</b>	<b>\$88,121</b>	<b>\$93,976</b>	<b>\$100,158</b>	<b>\$102,523</b>	<b>\$103,363</b>	<b>\$106,639</b>

Note: The required qualifying income reflects the minimum income a household must earn to qualify for a mortgage loan for a particular home price. Assumes a 30-year loan term, 80 percent LTV ratio, 30 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 8. Percentage of Repeat Buyers Who Earned Required Qualifying Income by Mortgage Interest Rate**

Year	Home Price	Mortgage Interest Rate						
		3%	4%	5%	6%	<b>6.37%</b>	6.5%	7%
1Q2011	\$134,368	74.6%	72.6%	70.4%	68.1%	<b>67.2%</b>	66.9%	65.7%
1Q2012	\$137,500	73.9%	72.0%	69.8%	67.5%	<b>66.6%</b>	66.3%	65.1%
1Q2013	\$148,900	71.3%	69.6%	67.3%	64.8%	<b>63.8%</b>	63.5%	62.3%
1Q2014	\$162,500	68.2%	66.8%	64.3%	61.8%	<b>60.9%</b>	60.6%	59.3%
1Q2015	\$175,000	65.3%	64.3%	61.8%	59.3%	<b>58.3%</b>	57.9%	56.5%
1Q2016	\$185,000	63.0%	63.4%	60.9%	58.2%	<b>57.1%</b>	56.8%	55.3%
1Q2017	\$200,000	59.9%	61.8%	59.1%	56.2%	<b>55.1%</b>	54.7%	53.2%
1Q2018	\$214,000	57.0%	60.6%	57.8%	54.8%	<b>53.6%</b>	53.2%	51.7%
1Q2019	\$219,000	55.9%	61.2%	58.4%	55.4%	<b>54.3%</b>	53.9%	52.4%
1Q2020	\$232,000	53.3%	60.0%	57.0%	54.0%	<b>53.0%</b>	52.6%	51.3%
1Q2021	\$270,000	45.4%	54.6%	51.8%	48.8%	<b>47.6%</b>	47.2%	45.6%
1Q2022	\$319,600	37.2%	48.2%	44.9%	41.9%	<b>40.9%</b>	40.5%	39.1%
<b>1Q2023</b>	<b>\$308,000</b>	<b>39.0%</b>	<b>50.1%</b>	<b>46.8%</b>	<b>43.4%</b>	<b>42.5%</b>	<b>42.1%</b>	<b>40.8%</b>

Note: Assumes a 30-year loan term, 80 percent LTV ratio, 30 percent DTI ratio, and additional costs of homeownership at 4 percent of home price. As repeat homebuyers constitute owner-occupied households, this table reflects income data solely for owner-occupied households.

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

## LTV Ratio

Holding home price constant, the total monthly mortgage payment increases as the LTV ratio increases (Table 9). For an 80 percent LTV ratio, the mortgage payment was \$2,563 for the median-priced home in 1Q2023, more than twice the total monthly mortgage payment for the median-priced home in 1Q2011.

Table 10 shows the home price-to-income multiplier by LTV ratio. An 80 percent LTV ratio translates into a home price-to-income multiplier of 3,<sup>2</sup> meaning a household could afford a maximum home price three times its annual income. The home price-to-income multiplier declines as the LTV ratio increases.

The income required to qualify for a loan with an 80 percent LTV ratio was \$102,523 for the median sales price in 1Q2023 (Table 11). An estimated 42.5 percent of Texas households could afford the median sales price in 1Q2023 with an 80 percent LTV ratio (Table 12), a decline of almost 25 percentage points from 1Q2011.

**Table 9. Total Monthly Mortgage Payment for Repeat Buyers by LTV Ratio**

Year	Home Price	LTV Ratio				
		80%	85%	90%	95%	100%
1Q2011	\$134,368	<b>\$1,118</b>	\$1,160	\$1,202	\$1,244	\$1,286
1Q2012	\$137,500	<b>\$1,144</b>	\$1,187	\$1,230	\$1,273	\$1,316
1Q2013	\$148,900	<b>\$1,239</b>	\$1,286	\$1,332	\$1,378	\$1,425
1Q2014	\$162,500	<b>\$1,352</b>	\$1,403	\$1,454	\$1,504	\$1,555
1Q2015	\$175,000	<b>\$1,456</b>	\$1,511	\$1,565	\$1,620	\$1,675
1Q2016	\$185,000	<b>\$1,540</b>	\$1,597	\$1,655	\$1,713	\$1,770
1Q2017	\$200,000	<b>\$1,664</b>	\$1,727	\$1,789	\$1,851	\$1,914
1Q2018	\$214,000	<b>\$1,781</b>	\$1,848	\$1,914	\$1,981	\$2,048
1Q2019	\$219,000	<b>\$1,822</b>	\$1,891	\$1,959	\$2,027	\$2,096
1Q2020	\$232,000	<b>\$1,931</b>	\$2,003	\$2,075	\$2,148	\$2,220
1Q2021	\$270,000	<b>\$2,247</b>	\$2,331	\$2,415	\$2,499	\$2,584
1Q2022	\$319,600	<b>\$2,660</b>	\$2,759	\$2,859	\$2,959	\$3,058
<b>1Q2023</b>	<b>\$308,000</b>	<b>\$2,563</b>	<b>\$2,659</b>	<b>\$2,755</b>	<b>\$2,851</b>	<b>\$2,947</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 30 percent DTI ratio, and additional costs of homeownership at 4 percent of home price. A mortgage insurance premium of 0.5 percent is added to loans with an LTV ratio of 90 percent or more.

Source: Texas Real Estate Research Center at Texas A&M University

<sup>2</sup> The home price-to-income multiplier is based on a 30-year loan term, 6.37 percent mortgage interest rate, 30 percent DTI ratio, and property taxes and insurance of 4 percent. A 0.5 percent mortgage insurance premium is added to loans with a 90 percent or more LTV ratio.



**Table 10. Home Price-to-Income Multiplier  
for Repeat Buyers by LTV Ratio**

<b>LTV Ratio</b>	<b>Home Purchasing Power</b>
<b>80%</b>	<b>3.00</b>
85%	2.90
90%	2.79
95%	2.70
100%	2.61

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 30 percent DTI ratio, and additional costs of homeownership at 4 percent of home price. A mortgage insurance premium of 0.5 percent is added to loans with an LTV ratio of 90 percent or more.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 11. Required Qualifying Income for Repeat Buyers by LTV Ratio**

Year	Home Price	LTV Ratio				
		80%	85%	90%	95%	100%
1Q2011	\$134,368	<b>\$44,727</b>	\$46,402	\$48,078	\$49,754	\$51,429
1Q2012	\$137,500	<b>\$45,769</b>	\$47,484	\$49,199	\$50,913	\$52,628
1Q2013	\$148,900	<b>\$49,564</b>	\$51,421	\$53,278	\$55,135	\$56,992
1Q2014	\$162,500	<b>\$54,091</b>	\$56,117	\$58,144	\$60,170	\$62,197
1Q2015	\$175,000	<b>\$58,252</b>	\$60,434	\$62,617	\$64,799	\$66,981
1Q2016	\$185,000	<b>\$61,580</b>	\$63,888	\$66,195	\$68,502	\$70,809
1Q2017	\$200,000	<b>\$66,573</b>	\$69,068	\$71,562	\$74,056	\$76,550
1Q2018	\$214,000	<b>\$71,234</b>	\$73,902	\$76,571	\$79,240	\$81,909
1Q2019	\$219,000	<b>\$72,898</b>	\$75,629	\$78,360	\$81,091	\$83,822
1Q2020	\$232,000	<b>\$77,225</b>	\$80,118	\$83,012	\$85,905	\$88,798
1Q2021	\$270,000	<b>\$89,874</b>	\$93,241	\$96,608	\$99,976	\$103,343
1Q2022	\$319,600	<b>\$106,384</b>	\$110,370	\$114,356	\$118,341	\$122,327
<b>1Q2023</b>	<b>\$308,000</b>	<b>\$102,523</b>	<b>\$106,364</b>	<b>\$110,205</b>	<b>\$114,046</b>	<b>\$117,887</b>

Note: The required qualifying income reflects the minimum income a household must earn to qualify for a mortgage loan for a particular home price. Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 30 percent DTI ratio, and additional costs of homeownership at 4 percent of home price. A mortgage insurance premium of 0.5 percent is added to loans with an LTV ratio of 90 percent or more.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 12. Percentage of Repeat Buyers Who Earned Required Qualifying Income by LTV Ratio**

Year	Home Price	LTV Ratio				
		80%	85%	90%	95%	100%
1Q2011	\$134,368	<b>67.2%</b>	65.8%	64.3%	62.9%	61.6%
1Q2012	\$137,500	<b>66.6%</b>	65.2%	63.7%	62.4%	61.1%
1Q2013	\$148,900	<b>63.8%</b>	62.4%	61.0%	59.6%	58.2%
1Q2014	\$162,500	<b>60.9%</b>	59.4%	57.9%	56.4%	54.9%
1Q2015	\$175,000	<b>58.3%</b>	56.7%	55.1%	53.5%	51.8%
1Q2016	\$185,000	<b>57.1%</b>	55.4%	53.8%	52.1%	50.4%
1Q2017	\$200,000	<b>55.1%</b>	53.4%	51.6%	49.8%	48.2%
1Q2018	\$214,000	<b>53.6%</b>	51.8%	50.1%	48.7%	47.2%
1Q2019	\$219,000	<b>54.3%</b>	52.5%	51.0%	49.5%	47.9%
1Q2020	\$232,000	<b>53.0%</b>	51.4%	49.8%	48.2%	46.6%
1Q2021	\$270,000	<b>47.6%</b>	45.7%	43.9%	42.0%	40.7%
1Q2022	\$319,600	<b>40.9%</b>	39.3%	37.6%	36.0%	34.4%
<b>1Q2023</b>	<b>\$308,000</b>	<b>42.5%</b>	<b>40.9%</b>	<b>39.3%</b>	<b>37.8%</b>	<b>36.2%</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 30 percent DTI ratio, and additional costs of homeownership at 4 percent of home price. A mortgage insurance premium of 0.5 percent is added to loans with an LTV ratio of 90 percent or more. As repeat homebuyers constitute owner-occupied households, this table reflects income data solely for owner-occupied households.

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

### DTI Ratio

A 30 percent DTI ratio translates into a home price-to-income multiplier of 3<sup>3</sup> (Table 13), meaning a household could afford a maximum home price three times its annual income at that interest rate. The home price-to-income multiplier increases as the DTI ratio increases.

The income required to qualify for a loan with a 30 percent DTI ratio was \$102,523 for the median sales price in 1Q2023 (Table 14). An estimated 42.5 percent of Texas households could afford the median sales price in 1Q2023 with a 30 percent DTI ratio (Table 15), a decline of almost 25 percentage points from 1Q2011.

<sup>3</sup> The home price-to-income multiplier is based on a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and property taxes and insurance of 4 percent.

**Table 13. Home Price-to-Income Multiplier  
for Repeat Buyers by DTI Ratio**

DTI Ratio	Home Purchasing Power
20%	2.00
25%	2.50
<b>30%</b>	<b>3.00</b>
35%	3.50
40%	4.01
45%	4.51
50%	5.01

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 14. Required Qualifying Income for Repeat Buyers by DTI Ratio**

Year	Home Price	DTI Ratio						
		20%	25%	<b>30%</b>	35%	40%	45%	50%
1Q2011	\$134,368	\$67,090	\$53,672	<b>\$44,727</b>	\$38,337	\$33,545	\$29,818	\$26,836
1Q2012	\$137,500	\$68,654	\$54,923	<b>\$45,769</b>	\$39,231	\$34,327	\$30,513	\$27,462
1Q2013	\$148,900	\$74,346	\$59,477	<b>\$49,564</b>	\$42,483	\$37,173	\$33,043	\$29,738
1Q2014	\$162,500	\$81,136	\$64,909	<b>\$54,091</b>	\$46,364	\$40,568	\$36,061	\$32,455
1Q2015	\$175,000	\$87,378	\$69,902	<b>\$58,252</b>	\$49,930	\$43,689	\$38,834	\$34,951
1Q2016	\$185,000	\$92,371	\$73,896	<b>\$61,580</b>	\$52,783	\$46,185	\$41,054	\$36,948
1Q2017	\$200,000	\$99,860	\$79,888	<b>\$66,573</b>	\$57,063	\$49,930	\$44,382	\$39,944
1Q2018	\$214,000	\$106,850	\$85,480	<b>\$71,234</b>	\$61,057	\$53,425	\$47,489	\$42,740
1Q2019	\$219,000	\$109,347	\$87,477	<b>\$72,898</b>	\$62,484	\$54,673	\$48,599	\$43,739
1Q2020	\$232,000	\$115,838	\$92,670	<b>\$77,225</b>	\$66,193	\$57,919	\$51,483	\$46,335
1Q2021	\$270,000	\$134,811	\$107,849	<b>\$89,874</b>	\$77,035	\$67,406	\$59,916	\$53,924
1Q2022	\$319,600	\$159,576	\$127,661	<b>\$106,384</b>	\$91,187	\$79,788	\$70,923	\$63,831
<b>1Q2023</b>	<b>\$308,000</b>	<b>\$153,785</b>	<b>\$123,028</b>	<b>\$102,523</b>	<b>\$87,877</b>	<b>\$76,892</b>	<b>\$68,349</b>	<b>\$61,514</b>

Note: The required qualifying income reflects the minimum income a household must earn to qualify for a mortgage loan for a particular home price. Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 15. Percentage of Repeat Buyers Who Earned Required Qualifying Income by DTI Ratio**

Year	Home Price	DTI Ratio						
		20%	25%	30%	35%	40%	45%	50%
1Q2011	\$134,368	49.5%	59.9%	<b>67.2%</b>	72.7%	76.8%	80.1%	82.7%
1Q2012	\$137,500	48.9%	59.3%	<b>66.6%</b>	72.1%	76.3%	79.6%	82.2%
1Q2013	\$148,900	45.1%	56.3%	<b>63.8%</b>	69.7%	74.2%	77.7%	80.5%
1Q2014	\$162,500	41.9%	52.9%	<b>60.9%</b>	66.9%	71.7%	75.4%	78.4%
1Q2015	\$175,000	39.1%	49.7%	<b>58.3%</b>	64.4%	69.5%	73.4%	76.6%
1Q2016	\$185,000	37.7%	48.2%	<b>57.1%</b>	63.5%	68.6%	72.7%	75.9%
1Q2017	\$200,000	35.4%	46.4%	<b>55.1%</b>	61.9%	67.1%	71.3%	74.7%
1Q2018	\$214,000	34.6%	45.2%	<b>53.6%</b>	60.7%	66.0%	70.3%	73.8%
1Q2019	\$219,000	35.4%	45.9%	<b>54.3%</b>	61.4%	66.7%	70.8%	74.2%
1Q2020	\$232,000	34.2%	44.4%	<b>53.0%</b>	60.1%	65.6%	69.9%	73.4%
1Q2021	\$270,000	28.1%	38.9%	<b>47.6%</b>	54.7%	60.8%	65.7%	69.5%
1Q2022	\$319,600	22.8%	32.2%	<b>40.9%</b>	48.4%	54.7%	60.0%	64.5%
<b>1Q2023</b>	<b>\$308,000</b>	<b>22.9%</b>	<b>34.1%</b>	<b>42.5%</b>	<b>50.2%</b>	<b>56.3%</b>	<b>61.6%</b>	<b>65.9%</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and additional costs of homeownership at 4 percent of home price. As repeat homebuyers constitute owner-occupied households, this table reflects income data solely for owner-occupied households.

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

### Property Taxes & Insurance

Holding home price constant, the total monthly mortgage payment increases as the annual costs of property taxes and insurance increase (Table 16). Assuming the cost of property taxes and insurance is 4 percent of the home price, the monthly mortgage payment was \$2,563 for the median sales price in 1Q2023, more than twice the total monthly mortgage payment for the median-priced home in 1Q2011.

Table 17 shows the home price-to-income multiplier by the costs of property taxes and insurance. A 4 percent property tax and insurance rate translates into a home price-to-income multiplier of 3,<sup>4</sup> meaning a household could afford a maximum home price three times its annual income. The home price-to-income multiplier declines as the mortgage interest rate increases.

The income required to qualify for a loan with property taxes and insurance at 4 percent of home price was \$102,523 for the median sales price in 1Q2023 (Table 18). An estimated 42.5 percent of Texas households could afford the median sales price in 1Q2023 with property taxes

<sup>4</sup> The home price-to-income multiplier is based on a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio.

and insurance at 4 percent of home price (Table 19), a decline of 25 percentage points from 1Q2011.

**Table 16. Total Monthly Mortgage Payment for Repeat Buyers by Additional Homeownership Costs**

Year	Home Price	Property Taxes & Insurance				
		2%	3%	4%	5%	6%
1Q2011	\$134,368	\$894	\$1,006	<b>\$1,118</b>	\$1,230	\$1,342
1Q2012	\$137,500	\$915	\$1,030	<b>\$1,144</b>	\$1,259	\$1,373
1Q2013	\$148,900	\$991	\$1,115	<b>\$1,239</b>	\$1,363	\$1,487
1Q2014	\$162,500	\$1,081	\$1,217	<b>\$1,352</b>	\$1,488	\$1,623
1Q2015	\$175,000	\$1,165	\$1,310	<b>\$1,456</b>	\$1,602	\$1,748
1Q2016	\$185,000	\$1,231	\$1,385	<b>\$1,540</b>	\$1,694	\$1,848
1Q2017	\$200,000	\$1,331	\$1,498	<b>\$1,664</b>	\$1,831	\$1,998
1Q2018	\$214,000	\$1,424	\$1,603	<b>\$1,781</b>	\$1,959	\$2,138
1Q2019	\$219,000	\$1,457	\$1,640	<b>\$1,822</b>	\$2,005	\$2,187
1Q2020	\$232,000	\$1,544	\$1,737	<b>\$1,931</b>	\$2,124	\$2,317
1Q2021	\$270,000	\$1,797	\$2,022	<b>\$2,247</b>	\$2,472	\$2,697
1Q2022	\$319,600	\$2,127	\$2,393	<b>\$2,660</b>	\$2,926	\$3,192
<b>1Q2023</b>	<b>\$308,000</b>	<b>\$2,050</b>	<b>\$2,306</b>	<b>\$2,563</b>	<b>\$2,820</b>	<b>\$3,076</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 17. Home Price-to-Income Multiplier for Repeat Buyers by Additional Homeownership Costs**

Property Taxes & Insurance	Home Purchasing Power
2%	3.76
3%	3.34
<b>4%</b>	<b>3.00</b>
5%	2.73
6%	2.50

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio.

Source: Texas Real Estate Research Center at Texas A&M University



**Table 18. Required Qualifying Income for Repeat Homebuyers  
by Additional Homeownership Costs**

Year	Home Price	Property Taxes & Insurance				
		2%	3%	4%	5%	6%
1Q2011	\$134,368	\$35,769	\$40,248	<b>\$44,727</b>	\$49,206	\$53,685
1Q2012	\$137,500	\$36,603	\$41,186	<b>\$45,769</b>	\$50,353	\$54,936
1Q2013	\$148,900	\$39,637	\$44,601	<b>\$49,564</b>	\$54,527	\$59,491
1Q2014	\$162,500	\$43,258	\$48,674	<b>\$54,091</b>	\$59,508	\$64,924
1Q2015	\$175,000	\$46,585	\$52,418	<b>\$58,252</b>	\$64,085	\$69,918
1Q2016	\$185,000	\$49,247	\$55,414	<b>\$61,580</b>	\$67,747	\$73,914
1Q2017	\$200,000	\$53,240	\$59,907	<b>\$66,573</b>	\$73,240	\$79,907
1Q2018	\$214,000	\$56,967	\$64,100	<b>\$71,234</b>	\$78,367	\$85,500
1Q2019	\$219,000	\$58,298	\$65,598	<b>\$72,898</b>	\$80,198	\$87,498
1Q2020	\$232,000	\$61,758	\$69,492	<b>\$77,225</b>	\$84,958	\$92,692
1Q2021	\$270,000	\$71,874	\$80,874	<b>\$89,874</b>	\$98,874	\$107,874
1Q2022	\$319,600	\$85,078	\$95,731	<b>\$106,384</b>	\$117,038	\$127,691
<b>1Q2023</b>	<b>\$308,000</b>	<b>\$81,990</b>	<b>\$92,256</b>	<b>\$102,523</b>	<b>\$112,790</b>	<b>\$123,056</b>

Note: The required qualifying income reflects the minimum income a household must earn to qualify for a mortgage loan for a particular home price. Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 19. Percentage of Repeat Homeowners Who Earned Required Qualifying Income by Additional Homeownership Costs**

Year	Home Price	Property Taxes & Insurance				
		2%	3%	4%	5%	6%
1Q2011	\$134,368	74.8%	71.0%	<b>67.2%</b>	63.4%	59.9%
1Q2012	\$137,500	74.3%	70.5%	<b>66.6%</b>	62.8%	59.3%
1Q2013	\$148,900	72.1%	68.0%	<b>63.8%</b>	60.1%	56.3%
1Q2014	\$162,500	69.5%	65.0%	<b>60.9%</b>	56.9%	52.8%
1Q2015	\$175,000	67.1%	62.6%	<b>58.3%</b>	54.0%	49.7%
1Q2016	\$185,000	66.2%	61.6%	<b>57.1%</b>	52.6%	48.1%
1Q2017	\$200,000	64.7%	59.9%	<b>55.1%</b>	50.4%	46.4%
1Q2018	\$214,000	63.6%	58.6%	<b>53.6%</b>	49.2%	45.2%
1Q2019	\$219,000	64.2%	59.2%	<b>54.3%</b>	50.0%	45.9%
1Q2020	\$232,000	63.0%	57.9%	<b>53.0%</b>	48.7%	44.4%
1Q2021	\$270,000	57.9%	52.6%	<b>47.6%</b>	42.6%	38.8%
1Q2022	\$319,600	51.8%	45.9%	<b>40.9%</b>	36.5%	32.2%
<b>1Q2023</b>	<b>\$308,000</b>	<b>53.5%</b>	<b>47.8%</b>	<b>42.5%</b>	<b>38.3%</b>	<b>34.1%</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio. As repeat homebuyers constitute owner-occupied households, this table reflects income data solely for owner-occupied households.

Sources: American Community Survey, U.S. Census Bureau, and Texas Real Estate Research Center

## First-Time Homebuyer

Higher mortgage interest rates and a sustained high first-quartile sales price diminished purchase affordability for Texas' first-time homebuyers in 1Q2023. Table 20 shows the maximum home price affordable by family income and home-purchasing power. For example, households earning between \$25,250 and \$42,000 annually (i.e., between 31 and 50 percent of median family income) could afford a maximum home price between \$75,750 and \$126,000 with a home price-to-income multiplier of 3. Meanwhile, the range in the maximum home price affordable to that range in household income rises to between \$101,000 and \$168,000 should the home price-to-income multiplier measure 4.

Depending on the home price-to-income multiplier, only households earning at least \$40,000 annually could afford the first-quartile sales price in 1Q2023. Homeownership is largely not feasible to households earning no more than 50 percent of Texas' median family income. In fact, homeownership really only becomes viable for households earning at least 80 percent of area median income. Even at that point it largely depends on whether mortgage lenders are willing to accept loans with high home price-to-income multipliers. Moreover, few homes are available for sale at these income thresholds. For instance, with a home price-to-income

multiplier of 3, only 20.3 percent of homes for sale were affordable to households earning no more than 80 percent of area median income in 1Q2023 (Table 21).

**Table 20. Maximum Home Price Affordable by Family Income and Home Price-to-Income Multiplier**

		Home-Purchasing Power							
	Family Income	2	2.5	3	3.5	4	4.5	5	5.5
	<b>\$25,000</b>	\$50,000	\$62,500	\$75,000	\$87,500	\$100,000	\$112,500	\$125,000	\$137,500
<b>Extremely Low-Income (30%)</b>	<b>\$25,250</b>	\$50,500	\$63,125	\$75,750	\$88,375	\$101,000	\$113,625	\$126,250	\$138,875
	<b>\$30,000</b>	\$60,000	\$75,000	\$90,000	\$105,000	\$120,000	\$135,000	\$150,000	\$165,000
	<b>\$35,000</b>	\$70,000	\$87,500	\$105,000	\$122,500	\$140,000	\$157,500	\$175,000	\$192,500
	<b>\$40,000</b>	\$80,000	\$100,000	\$120,000	\$140,000	\$160,000	\$180,000	\$200,000	<b>\$220,000</b>
<b>Very Low-Income (50%)</b>	<b>\$42,000</b>	\$84,000	\$105,000	\$126,000	\$147,000	\$168,000	\$189,000	\$210,000	<b>\$231,000</b>
	<b>\$45,000</b>	\$90,000	\$112,500	\$135,000	\$157,500	\$180,000	\$202,500	<b>\$225,000</b>	<b>\$247,500</b>
	<b>\$50,000</b>	\$100,000	\$125,000	\$150,000	\$175,000	\$200,000	<b>\$225,000</b>	<b>\$250,000</b>	<b>\$275,000</b>
	<b>\$55,000</b>	\$110,000	\$137,500	\$165,000	\$192,500	<b>\$220,000</b>	<b>\$247,500</b>	<b>\$275,000</b>	<b>\$302,500</b>
	<b>\$60,000</b>	\$120,000	\$150,000	\$180,000	\$210,000	<b>\$240,000</b>	<b>\$270,000</b>	<b>\$300,000</b>	<b>\$330,000</b>
	<b>\$65,000</b>	\$130,000	\$162,500	\$195,000	<b>\$227,500</b>	<b>\$260,000</b>	<b>\$292,500</b>	<b>\$325,000</b>	<b>\$357,500</b>
<b>Low-Income (80%)</b>	<b>\$67,250</b>	\$134,500	\$168,125	\$201,750	<b>\$235,375</b>	<b>\$269,000</b>	<b>\$302,625</b>	<b>\$336,250</b>	<b>\$369,875</b>
	<b>\$70,000</b>	\$140,000	\$175,000	\$210,000	<b>\$245,000</b>	<b>\$280,000</b>	<b>\$315,000</b>	<b>\$350,000</b>	<b>\$385,000</b>
	<b>\$75,000</b>	\$150,000	\$187,500	<b>\$225,000</b>	<b>\$262,500</b>	<b>\$300,000</b>	<b>\$337,500</b>	<b>\$375,000</b>	<b>\$412,500</b>
	<b>\$80,000</b>	\$160,000	\$200,000	<b>\$240,000</b>	<b>\$280,000</b>	<b>\$320,000</b>	<b>\$360,000</b>	<b>\$400,000</b>	<b>\$440,000</b>
	<b>\$85,000</b>	\$170,000	\$212,500	<b>\$255,000</b>	<b>\$297,500</b>	<b>\$340,000</b>	<b>\$382,500</b>	<b>\$425,000</b>	<b>\$467,500</b>
<b>Median Family Income</b>	<b>\$85,300</b>	\$170,600	\$213,250	<b>\$255,900</b>	<b>\$298,550</b>	<b>\$341,200</b>	<b>\$383,850</b>	<b>\$426,500</b>	<b>\$469,150</b>

Note: Figures in red indicate the maximum affordable home price meets or exceeds the first-quartile home sales price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 21. Percentage of Homes Sold in 1Q2023 Affordable by Family Income and Home Price-to-Income Multiplier**

		Home-Purchasing Power							
	Family Income	2	2.5	3	3.5	4	4.5	5	5.5
	\$25,000	1.1%	1.7%	2.6%	3.4%	4.6%	5.5%	6.9%	8.3%
Extremely Low-Income (30%)	\$25,250	1.1%	1.7%	2.6%	3.4%	4.6%	5.5%	7.0%	8.4%
	\$30,000	1.6%	2.6%	3.7%	4.9%	6.4%	8.1%	10.4%	12.9%
	\$35,000	2.2%	3.4%	4.9%	6.5%	8.8%	11.3%	14.8%	18.1%
	\$40,000	2.9%	4.6%	6.4%	8.8%	12.1%	15.8%	20.1%	24.8%
Very Low-Income (50%)	\$42,000	3.1%	4.9%	7.0%	9.6%	13.2%	17.3%	22.2%	27.6%
	\$45,000	3.7%	5.5%	8.1%	11.3%	15.8%	20.3%	26.1%	31.7%
	\$50,000	4.6%	6.9%	10.4%	14.8%	20.1%	26.1%	33.3%	40.3%
	\$55,000	5.4%	8.3%	12.9%	18.1%	24.8%	31.7%	40.3%	48.2%
	\$60,000	6.4%	10.4%	15.8%	22.2%	30.1%	38.7%	48.0%	55.4%
	\$65,000	7.6%	12.3%	18.8%	26.4%	36.1%	45.0%	54.2%	61.0%
Low-Income (80%)	\$67,250	7.8%	13.2%	20.2%	28.7%	37.9%	48.2%	56.4%	63.2%
	\$70,000	8.8%	14.8%	22.2%	31.4%	41.8%	51.6%	60.0%	66.7%
	\$75,000	10.4%	17.1%	26.1%	36.3%	48.0%	56.5%	64.9%	71.0%
	\$80,000	12.1%	20.1%	30.1%	41.8%	53.0%	61.9%	69.6%	75.0%
	\$85,000	13.9%	22.4%	34.5%	46.3%	57.6%	66.0%	73.2%	77.9%
Median Family Income	\$85,300	13.9%	22.5%	34.6%	46.4%	57.6%	66.1%	73.2%	78.0%

Source: Texas Real Estate Research Center at Texas A&M University

### Mortgage Interest Rate

Holding home price constant, the total monthly mortgage payment increases as the mortgage interest rate increases (Table 22). A 6.37 percent rate brought the mortgage payment to \$2,106 for the first-quartile sales price in 1Q2023, over 2.5 times the total monthly mortgage payment for the same home in 1Q2011.

Table 23 shows the home price-to-income multiplier by mortgage interest rate. A 6.37 percent interest rate translates into a home price-to-income multiplier of 3.05, meaning a

household could afford a maximum home price 3.05 times its annual income. The home price-to-income multiplier declines as the mortgage interest rate increases.

The income required to qualify for a loan with a 6.37 percent mortgage interest rate was \$72,193 for the first-quartile sales price in 1Q2023 (Table 24). An estimated 29.2 percent of Texas renters could afford the first-quartile sales price in 1Q2022 with a 6.37 percent interest rate (Table 25), a decline of over 28 percentage points from 1Q2011.

**Table 22. Total Monthly Mortgage Payment for First-Time Buyers by Mortgage Interest Rate**

Year	Home Price	Mortgage Interest Rate						
		3%	4%	5%	6%	<b>6.37%</b>	6.5%	7%
1Q2011	\$83,000	\$631	\$676	\$724	\$775	<b>\$794</b>	\$801	\$828
1Q2012	\$86,500	\$657	\$705	\$755	\$808	<b>\$828</b>	\$835	\$863
1Q2013	\$97,000	\$737	\$790	\$847	\$906	<b>\$928</b>	\$936	\$968
1Q2014	\$111,000	\$844	\$904	\$969	\$1,037	<b>\$1,062</b>	\$1,072	\$1,107
1Q2015	\$123,000	\$935	\$1,002	\$1,073	\$1,149	<b>\$1,177</b>	\$1,187	\$1,227
1Q2016	\$130,000	\$988	\$1,059	\$1,135	\$1,214	<b>\$1,244</b>	\$1,255	\$1,297
1Q2017	\$142,000	\$1,079	\$1,157	\$1,239	\$1,326	<b>\$1,359</b>	\$1,371	\$1,417
1Q2018	\$150,000	\$1,140	\$1,222	\$1,309	\$1,401	<b>\$1,436</b>	\$1,448	\$1,496
1Q2019	\$159,000	\$1,208	\$1,295	\$1,388	\$1,485	<b>\$1,522</b>	\$1,535	\$1,586
1Q2020	\$170,000	\$1,292	\$1,385	\$1,484	\$1,587	<b>\$1,627</b>	\$1,641	\$1,696
1Q2021	\$195,000	\$1,482	\$1,589	\$1,702	\$1,821	<b>\$1,866</b>	\$1,882	\$1,945
1Q2022	\$229,500	\$1,744	\$1,870	\$2,003	\$2,143	<b>\$2,197</b>	\$2,216	\$2,289
<b>1Q2023</b>	<b>\$220,000</b>	<b>\$1,672</b>	<b>\$1,792</b>	<b>\$1,920</b>	<b>\$2,054</b>	<b>\$2,106</b>	<b>\$2,124</b>	<b>\$2,195</b>

Note: Assumes a 30-year loan term, 95 percent LTV ratio, 35 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 23. Home Price-to-Income Multiplier  
for First-Time Buyers by Mortgage Interest Rate**

Mortgage Interest Rate	Home Purchasing Power
3%	3.84
4%	3.58
5%	3.34
6%	3.12
<b>6.37%</b>	<b>3.05</b>
6.5%	3.02
7%	2.92

Note: Assumes a 30-year loan term, 95 percent LTV ratio, 35 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 24. Required Qualifying Income by Mortgage Interest Rate**

Year	Home Price	Mortgage Interest Rate						
		3%	4%	5%	6%	<b>6.37%</b>	6.5%	7%
1Q2011	\$83,000	\$21,625	\$23,184	\$24,835	\$26,573	<b>\$27,236</b>	\$27,472	\$28,388
1Q2012	\$86,500	\$22,537	\$24,161	\$25,883	\$27,694	<b>\$28,385</b>	\$28,630	\$29,586
1Q2013	\$97,000	\$25,273	\$27,094	\$29,025	\$31,055	<b>\$31,830</b>	\$32,105	\$33,177
1Q2014	\$111,000	\$28,921	\$31,005	\$33,214	\$35,538	<b>\$36,424</b>	\$36,739	\$37,965
1Q2015	\$123,000	\$32,047	\$34,356	\$36,804	\$39,380	<b>\$40,362</b>	\$40,711	\$42,070
1Q2016	\$130,000	\$33,871	\$36,312	\$38,899	\$41,621	<b>\$42,659</b>	\$43,028	\$44,464
1Q2017	\$142,000	\$36,998	\$39,663	\$42,490	\$45,463	<b>\$46,597</b>	\$47,000	\$48,568
1Q2018	\$150,000	\$39,082	\$41,898	\$44,883	\$48,024	<b>\$49,222</b>	\$49,648	\$51,304
1Q2019	\$159,000	\$41,427	\$44,412	\$47,576	\$50,905	<b>\$52,176</b>	\$52,626	\$54,383
1Q2020	\$170,000	\$44,293	\$47,484	\$50,868	\$54,427	<b>\$55,785</b>	\$56,267	\$58,145
1Q2021	\$195,000	\$50,806	\$54,467	\$58,348	\$62,431	<b>\$63,989</b>	\$64,542	\$66,696
1Q2022	\$229,500	\$59,795	\$64,104	\$68,672	\$73,477	<b>\$75,310</b>	\$75,961	\$78,496
<b>1Q2023</b>	<b>\$220,000</b>	<b>\$57,320</b>	<b>\$61,450</b>	<b>\$65,829</b>	<b>\$70,435</b>	<b>\$72,193</b>	<b>\$72,817</b>	<b>\$75,247</b>

Note: The required qualifying income reflects the minimum income a household must earn to qualify for a mortgage loan for a particular home price. Assumes a 30-year loan term, 95 percent LTV ratio, 35 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 25. Percentage of Renter-Occupied Households That Earned Required Qualifying Income by Mortgage Interest Rate**

Year	Home Price	Mortgage Interest Rate						
		3%	4%	5%	6%	<b>6.37%</b>	6.5%	7%
1Q2011	\$83,000	66.2%	63.6%	61.0%	58.4%	<b>57.4%</b>	57.0%	55.7%
1Q2012	\$86,500	65.3%	62.7%	60.0%	57.4%	<b>56.4%</b>	56.0%	54.6%
1Q2013	\$97,000	61.7%	59.1%	56.3%	53.4%	<b>52.3%</b>	51.9%	50.4%
1Q2014	\$111,000	57.4%	54.4%	51.4%	48.3%	<b>47.3%</b>	47.0%	45.7%
1Q2015	\$123,000	54.2%	51.0%	48.2%	45.4%	<b>44.4%</b>	44.0%	42.6%
1Q2016	\$130,000	53.3%	50.4%	47.6%	44.7%	<b>43.6%</b>	43.2%	41.7%
1Q2017	\$142,000	51.7%	48.8%	45.8%	42.7%	<b>41.4%</b>	41.0%	39.3%
1Q2018	\$150,000	51.4%	48.5%	45.3%	42.0%	<b>40.8%</b>	40.3%	39.0%
1Q2019	\$159,000	50.9%	47.7%	44.4%	41.2%	<b>40.2%</b>	39.9%	38.6%
1Q2020	\$170,000	49.4%	46.1%	42.8%	40.1%	<b>39.1%</b>	38.7%	37.3%
1Q2021	\$195,000	44.6%	41.7%	38.7%	35.5%	<b>34.3%</b>	33.9%	32.2%
1Q2022	\$229,500	39.0%	35.6%	32.0%	28.2%	<b>26.8%</b>	26.5%	25.4%
<b>1Q2023</b>	<b>\$220,000</b>	<b>41.0%</b>	<b>37.7%</b>	<b>34.3%</b>	<b>30.6%</b>	<b>29.2%</b>	<b>28.7%</b>	<b>26.9%</b>

Note: Assumes a 30-year loan term, 95 percent LTV ratio, 35 percent DTI ratio, and additional costs of homeownership at 4 percent of home price. As first-time homebuyers constitute renter-occupied households, this table reflects income data solely for renter-occupied households.

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

### LTV Ratio

Holding home price constant, the total monthly mortgage payment increases as the LTV ratio increases (Table 26). For a 95 percent LTV ratio, this payment amounted to \$2,135 for the first-quartile sales price in 1Q2023, over 2.5 times the total monthly mortgage payment for the same home in 4Q2011.

Table 27 shows the home price-to-income multiplier by LTV ratio. A 95 percent LTV ratio translates into a home price-to-income multiplier of 3.05,<sup>5</sup> meaning a household could afford a maximum home price 3.05 times its annual income. The home price-to-income multiplier declines as the LTV ratio increases.

The income required to qualify for a loan with a 95 percent LTV ratio was \$72,193 for the first-quartile sales price in 1Q2023 (Table 28). An estimated 29.2 percent of Texas renters could

<sup>5</sup> The home price-to-income multiplier is based on a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 35 percent DTI ratio, and property taxes and insurance of 4 percent.



afford the first-quartile sales price in 1Q2023 with a 95 percent LTV ratio (Table 29), a decline of over 28 percentage points from 1Q2011.

**Table 26. Total Monthly Mortgage Payment by LTV Ratio**

Year	Home Price	LTV Ratio				
		95%	96.5%	97%	98%	100%
1Q2011	\$83,000	<b>\$794</b>	\$803	\$805	\$811	\$822
1Q2012	\$86,500	<b>\$828</b>	\$836	\$839	\$845	\$856
1Q2013	\$97,000	<b>\$928</b>	\$938	\$941	\$947	\$960
1Q2014	\$111,000	<b>\$1,062</b>	\$1,073	\$1,077	\$1,084	\$1,099
1Q2015	\$123,000	<b>\$1,177</b>	\$1,189	\$1,193	\$1,201	\$1,218
1Q2016	\$130,000	<b>\$1,244</b>	\$1,257	\$1,261	\$1,270	\$1,287
1Q2017	\$142,000	<b>\$1,359</b>	\$1,373	\$1,378	\$1,387	\$1,406
1Q2018	\$150,000	<b>\$1,436</b>	\$1,450	\$1,455	\$1,465	\$1,485
1Q2019	\$159,000	<b>\$1,522</b>	\$1,537	\$1,543	\$1,553	\$1,574
1Q2020	\$170,000	<b>\$1,627</b>	\$1,644	\$1,649	\$1,661	\$1,683
1Q2021	\$195,000	<b>\$1,866</b>	\$1,886	\$1,892	\$1,905	\$1,930
1Q2022	\$229,500	<b>\$2,197</b>	\$2,219	\$2,227	\$2,242	\$2,272
<b>1Q2023</b>	<b>\$220,000</b>	<b>\$2,106</b>	<b>\$2,127</b>	<b>\$2,135</b>	<b>\$2,149</b>	<b>\$2,178</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 35 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 27. Home Price-to-Income Multiplier for First-Time Buyers by LTV Ratio**

LTV Ratio	Home Purchasing Power
<b>95%</b>	<b>3.05</b>
96.5%	3.02
97%	3.01
98%	2.99
100%	2.95

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 35 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 28. Required Qualifying Income by LTV Ratio**

Year	Home Price	LTV Ratio				
		95%	96.5%	97%	98%	100%
1Q2011	\$83,000	<b>\$27,236</b>	\$27,517	\$27,610	\$27,797	\$28,171
1Q2012	\$86,500	<b>\$28,385</b>	\$28,677	\$28,774	\$28,969	\$29,358
1Q2013	\$97,000	<b>\$31,830</b>	\$32,158	\$32,267	\$32,485	\$32,922
1Q2014	\$111,000	<b>\$36,424</b>	\$36,799	\$36,924	\$37,174	\$37,674
1Q2015	\$123,000	<b>\$40,362</b>	\$40,778	\$40,916	\$41,193	\$41,747
1Q2016	\$130,000	<b>\$42,659</b>	\$43,098	\$43,245	\$43,537	\$44,123
1Q2017	\$142,000	<b>\$46,597</b>	\$47,077	\$47,236	\$47,556	\$48,195
1Q2018	\$150,000	<b>\$49,222</b>	\$49,729	\$49,898	\$50,235	\$50,911
1Q2019	\$159,000	<b>\$52,176</b>	\$52,712	\$52,891	\$53,249	\$53,965
1Q2020	\$170,000	<b>\$55,785</b>	\$56,359	\$56,551	\$56,933	\$57,699
1Q2021	\$195,000	<b>\$63,989</b>	\$64,647	\$64,867	\$65,306	\$66,184
1Q2022	\$229,500	<b>\$75,310</b>	\$76,085	\$76,343	\$76,860	\$77,893
<b>1Q2023</b>	<b>\$220,000</b>	<b>\$72,193</b>	<b>\$72,935</b>	<b>\$73,183</b>	<b>\$73,678</b>	<b>\$74,669</b>

Note: The required qualifying income reflects the minimum income a household must earn to qualify for a mortgage loan for a particular home price. Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 35 percent DTI ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 29. Percentage of Renter-Occupied Households That Earned Required Qualifying Income by LTV Ratio**

Year	Home Price	LTV Ratio				
		95%	96.5%	97%	98%	100%
1Q2011	\$83,000	<b>57.4%</b>	57.0%	56.8%	56.5%	56.0%
1Q2012	\$86,500	<b>56.4%</b>	55.9%	55.8%	55.5%	54.9%
1Q2013	\$97,000	<b>52.3%</b>	51.8%	51.7%	51.3%	50.7%
1Q2014	\$111,000	<b>47.3%</b>	46.9%	46.8%	46.5%	46.0%
1Q2015	\$123,000	<b>44.4%</b>	43.9%	43.8%	43.5%	42.9%
1Q2016	\$130,000	<b>43.6%</b>	43.1%	43.0%	42.7%	42.0%
1Q2017	\$142,000	<b>41.4%</b>	40.9%	40.8%	40.4%	39.7%
1Q2018	\$150,000	<b>40.8%</b>	40.2%	40.0%	39.8%	39.3%
1Q2019	\$159,000	<b>40.2%</b>	39.8%	39.7%	39.4%	38.9%
1Q2020	\$170,000	<b>39.1%</b>	38.6%	38.5%	38.2%	37.6%
1Q2021	\$195,000	<b>34.3%</b>	33.8%	33.6%	33.3%	32.6%
1Q2022	\$229,500	<b>26.8%</b>	26.5%	26.4%	26.1%	25.7%
<b>1Q2023</b>	<b>\$220,000</b>	<b>29.2%</b>	<b>28.6%</b>	<b>28.4%</b>	<b>28.0%</b>	<b>27.2%</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 35 percent DTI ratio, and additional costs of homeownership at 4 percent of home price. As first-time homebuyers constitute renter-occupied households, this table reflects income data solely for renter-occupied households.

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

### DTI Ratio

A 35 percent DTI ratio translates into a home price-to-income multiplier of 3.05<sup>6</sup> (Table 30), meaning a household could afford a maximum home price 3.05 times its annual income. The home price-to-income multiplier increases as the DTI ratio increases.

The income required to qualify for a loan with a 35 percent DTI ratio was \$72,193 for the first-quartile sales price in 1Q2023 (Table 31). An estimated 29.2 percent of Texas households could afford the first-quartile sales price in 1Q2023 with a 35 percent DTI ratio (Table 32), a decline of over 28 percentage points from 4Q2011.

<sup>6</sup> The home price-to-income multiplier is based on a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and property taxes and insurance of 4 percent.

**Table 30. Home Price-to-Income Multiplier  
for First-Time Buyers by DTI Ratio**

DTI Ratio	Home Purchasing Power
20%	1.74
25%	2.18
30%	2.61
<b>35%</b>	<b>3.05</b>
40%	3.48
45%	3.92
50%	4.35

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 31. Required Qualifying Income for First-Time Buyers by DTI Ratio**

Year	Home Price	DTI Ratio						
		20%	25%	30%	<b>35%</b>	40%	45%	50%
1Q2011	\$83,000	\$47,663	\$38,131	\$31,776	<b>\$27,236</b>	\$23,832	\$21,184	\$19,065
1Q2012	\$86,500	\$49,673	\$39,739	\$33,116	<b>\$28,385</b>	\$24,837	\$22,077	\$19,869
1Q2013	\$97,000	\$55,703	\$44,562	\$37,135	<b>\$31,830</b>	\$27,852	\$24,757	\$22,281
1Q2014	\$111,000	\$63,743	\$50,994	\$42,495	<b>\$36,424</b>	\$31,871	\$28,330	\$25,497
1Q2015	\$123,000	\$70,634	\$56,507	\$47,089	<b>\$40,362</b>	\$35,317	\$31,393	\$28,254
1Q2016	\$130,000	\$74,654	\$59,723	\$49,769	<b>\$42,659</b>	\$37,327	\$33,179	\$29,861
1Q2017	\$142,000	\$81,545	\$65,236	\$54,363	<b>\$46,597</b>	\$40,772	\$36,242	\$32,618
1Q2018	\$150,000	\$86,139	\$68,911	\$57,426	<b>\$49,222</b>	\$43,069	\$38,284	\$34,456
1Q2019	\$159,000	\$91,307	\$73,046	\$60,871	<b>\$52,176</b>	\$45,654	\$40,581	\$36,523
1Q2020	\$170,000	\$97,624	\$78,099	\$65,083	<b>\$55,785</b>	\$48,812	\$43,388	\$39,050
1Q2021	\$195,000	\$111,981	\$89,584	\$74,654	<b>\$63,989</b>	\$55,990	\$49,769	\$44,792
1Q2022	\$229,500	\$131,792	\$105,434	\$87,862	<b>\$75,310</b>	\$65,896	\$58,574	\$52,717
<b>1Q2023</b>	<b>\$220,000</b>	<b>\$126,337</b>	<b>\$101,070</b>	<b>\$84,225</b>	<b>\$72,193</b>	<b>\$63,168</b>	<b>\$56,150</b>	<b>\$50,535</b>

Note: The required qualifying income reflects the minimum income a household must earn to qualify for a mortgage loan for a particular home price. Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and additional costs of homeownership at 4 percent of home price.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 32. Percentage of Households That Earned Required Qualifying Income by DTI Ratio**

Year	Home Price	DTI Ratio						
		20%	25%	30%	35%	40%	45%	50%
1Q2011	\$83,000	32.0%	42.4%	50.6%	<b>57.4%</b>	62.6%	66.9%	70.4%
1Q2012	\$86,500	31.0%	41.6%	49.5%	<b>56.4%</b>	61.6%	66.0%	69.6%
1Q2013	\$97,000	27.9%	37.5%	45.5%	<b>52.3%</b>	58.0%	62.4%	66.4%
1Q2014	\$111,000	23.8%	32.2%	40.8%	<b>47.3%</b>	53.2%	58.2%	62.2%
1Q2015	\$123,000	20.2%	29.7%	37.2%	<b>44.4%</b>	49.8%	55.1%	59.4%
1Q2016	\$130,000	18.7%	29.0%	36.0%	<b>43.6%</b>	49.3%	54.2%	58.7%
1Q2017	\$142,000	17.6%	26.9%	34.7%	<b>41.4%</b>	47.7%	52.5%	57.0%
1Q2018	\$150,000	17.4%	26.1%	34.5%	<b>40.8%</b>	47.2%	52.3%	56.4%
1Q2019	\$159,000	16.6%	24.7%	33.8%	<b>40.2%</b>	46.4%	51.8%	56.0%
1Q2020	\$170,000	15.0%	23.1%	32.0%	<b>39.1%</b>	44.7%	50.4%	54.9%
1Q2021	\$195,000	12.6%	19.4%	26.0%	<b>34.3%</b>	40.5%	45.4%	50.6%
1Q2022	\$229,500	9.2%	14.6%	21.2%	<b>26.8%</b>	34.2%	40.0%	44.7%
<b>1Q2023</b>	<b>\$220,000</b>	<b>10.3%</b>	<b>15.5%</b>	<b>22.8%</b>	<b>29.2%</b>	<b>36.4%</b>	<b>41.9%</b>	<b>46.4%</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and additional costs of homeownership at 4 percent of home price. As first-time homebuyers constitute renter-occupied households, this table reflects income data solely for renter-occupied households.

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

## Property Taxes & Insurance

Holding home price constant, the total monthly mortgage payment increases as additional annual homeownership costs (property taxes and insurance) increase (Table 33). With a rate of 4 percent of home price, this payment amounted to \$2,106 for the first-quartile sales price in 1Q2023, more than 2.5 times the total monthly mortgage payment for the same home in 1Q2011.

Table 34 shows the home price-to-income multiplier by the costs of property taxes and insurance. A 4 percent property tax and insurance rate translates into a home price-to-income multiplier of 3.05<sup>7</sup>, meaning a household could afford a maximum home price 3.05 times its annual income. The home price-to-income multiplier declines as the mortgage interest rate increases.

<sup>7</sup> The home price-to-income multiplier is based on a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and 35 percent DTI ratio.

The income required to qualify for a loan with property taxes and insurance at 4 percent of home price was \$72,193 for the first-quartile sales price in 1Q2023 (Table 35). An estimated 29.2 percent of Texas households could afford the first-quartile sales price in 1Q2023 with property taxes and insurance at 4 percent of home price (Table 36), a decline of over 28 percentage points from 1Q2011.

**Table 33. Total Monthly Mortgage Payment by Additional Homeownership Costs**

Year	Home Price	Property Taxes & Insurance				
		2%	3%	4%	5%	6%
1Q2011	\$83,000	\$656	\$725	<b>\$794</b>	\$864	\$933
1Q2012	\$86,500	\$684	\$756	<b>\$828</b>	\$900	\$972
1Q2013	\$97,000	\$767	\$848	<b>\$928</b>	\$1,009	\$1,090
1Q2014	\$111,000	\$877	\$970	<b>\$1,062</b>	\$1,155	\$1,247
1Q2015	\$123,000	\$972	\$1,075	<b>\$1,177</b>	\$1,280	\$1,382
1Q2016	\$130,000	\$1,028	\$1,136	<b>\$1,244</b>	\$1,353	\$1,461
1Q2017	\$142,000	\$1,122	\$1,241	<b>\$1,359</b>	\$1,477	\$1,596
1Q2018	\$150,000	\$1,186	\$1,311	<b>\$1,436</b>	\$1,561	\$1,686
1Q2019	\$159,000	\$1,257	\$1,389	<b>\$1,522</b>	\$1,654	\$1,787
1Q2020	\$170,000	\$1,344	\$1,485	<b>\$1,627</b>	\$1,769	\$1,910
1Q2021	\$195,000	\$1,541	\$1,704	<b>\$1,866</b>	\$2,029	\$2,191
1Q2022	\$229,500	\$1,814	\$2,005	<b>\$2,197</b>	\$2,388	\$2,579
<b>1Q2023</b>	<b>\$220,000</b>	<b>\$1,739</b>	<b>\$1,922</b>	<b>\$2,106</b>	<b>\$2,289</b>	<b>\$2,472</b>

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and 35 percent DTI ratio.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 34. Home Price-to-Income Multiplier for First-Time Buyers by Additional Homeownership Costs**

Property Taxes & Insurance	Home Purchasing Power
2%	3.69
3%	3.34
<b>4%</b>	<b>3.05</b>
5%	2.80
6%	2.60

Note: Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and 35 percent DTI ratio.

Source: Texas Real Estate Research Center at Texas A&M University

**Table 35. Required Qualifying Income by Additional Homeownership Costs**

Year	Home Price	Property Taxes & Insurance				
		2%	3%	4%	5%	6%
1Q2011	\$83,000	\$22,493	\$24,865	<b>\$27,236</b>	\$29,608	\$31,979
1Q2012	\$86,500	\$23,442	\$25,913	<b>\$28,385</b>	\$30,856	\$33,328
1Q2013	\$97,000	\$26,287	\$29,059	<b>\$31,830</b>	\$34,602	\$37,373
1Q2014	\$111,000	\$30,082	\$33,253	<b>\$36,424</b>	\$39,596	\$42,767
1Q2015	\$123,000	\$33,334	\$36,848	<b>\$40,362</b>	\$43,876	\$47,391
1Q2016	\$130,000	\$35,231	\$38,945	<b>\$42,659</b>	\$46,374	\$50,088
1Q2017	\$142,000	\$38,483	\$42,540	<b>\$46,597</b>	\$50,654	\$54,711
1Q2018	\$150,000	\$40,651	\$44,936	<b>\$49,222</b>	\$53,508	\$57,794
1Q2019	\$159,000	\$43,090	\$47,633	<b>\$52,176</b>	\$56,718	\$61,261
1Q2020	\$170,000	\$46,071	\$50,928	<b>\$55,785</b>	\$60,642	\$65,499
1Q2021	\$195,000	\$52,846	\$58,417	<b>\$63,989</b>	\$69,560	\$75,132
1Q2022	\$229,500	\$62,196	\$68,753	<b>\$75,310</b>	\$81,867	\$88,424
<b>1Q2023</b>	<b>\$220,000</b>	<b>\$59,621</b>	<b>\$65,907</b>	<b>\$72,193</b>	<b>\$78,478</b>	<b>\$84,764</b>

Note: The required qualifying income reflects the minimum income a household must earn to qualify for a mortgage loan for a particular home price. Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and 35 percent DTI ratio.

Source: Texas Real Estate Research Center at Texas A&M University



**Table 36. Percentage of Households That Earned the Required Qualifying Income by Additional Homeownership Costs**

Year	Home Price	Property Taxes & Insurance				
		2%	3%	4%	5%	6%
1Q2011	\$83,000	64.8%	60.9%	<b>57.4%</b>	53.8%	50.3%
1Q2012	\$86,500	63.8%	60.0%	<b>56.4%</b>	52.7%	49.1%
1Q2013	\$97,000	60.2%	56.3%	<b>52.3%</b>	48.3%	45.2%
1Q2014	\$111,000	55.7%	51.3%	<b>47.3%</b>	43.9%	40.6%
1Q2015	\$123,000	52.4%	48.1%	<b>44.4%</b>	40.6%	36.9%
1Q2016	\$130,000	51.5%	47.5%	<b>43.6%</b>	39.6%	35.7%
1Q2017	\$142,000	50.1%	45.8%	<b>41.4%</b>	37.3%	34.5%
1Q2018	\$150,000	49.8%	45.3%	<b>40.8%</b>	37.4%	34.2%
1Q2019	\$159,000	49.1%	44.4%	<b>40.2%</b>	36.9%	33.5%
1Q2020	\$170,000	47.6%	42.8%	<b>39.1%</b>	35.4%	31.6%
1Q2021	\$195,000	43.0%	38.6%	<b>34.3%</b>	30.0%	25.7%
1Q2022	\$229,500	37.1%	31.9%	<b>26.8%</b>	23.9%	21.0%
<b>1Q2023</b>	<b>\$220,000</b>	<b>39.2%</b>	<b>34.2%</b>	<b>29.2%</b>	<b>25.4%</b>	<b>22.6%</b>

Note: Because first-time homebuyers constitute renter-occupied households, this table reflects income data solely for renter-occupied households. Assumes a 30-year loan term, 6.37 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and 35 percent DTI ratio.

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

## Overview of Housing Affordability

Housing affordability persistently proves one of the most salient topics in housing markets across the state. Although definitions vary, housing affordability broadly denotes the relationship between home price (or rent) and household (or family) income.<sup>8</sup> As such, housing affordability generally reflects the two housing tenures: owner- and renter-occupied housing. However, Center economists further classify owner-occupied housing affordability into two distinct categories: purchase and repayment affordability.

This report focuses only on purchase affordability. Purchase affordability measures the ability of a household to buy a home. In other words, it reflects home-purchasing potential. Repayment affordability, on the other hand, measures an existing homeowner’s ability to make timely monthly mortgage payments. While purchase affordability involves all potential

<sup>8</sup> Household income reflects all households in the income distribution, including both family and nonfamily households, which consist of a householder living alone or a householder who shares his/her home with individual(s) of no relation to him/her. Meanwhile, family income includes only households in which the householder lives with at least one other related family member.

homebuyers, regardless of whether a household already owns a home, repayment affordability solely involves current homeowners (i.e., only owner-occupied households).

## Measuring Purchase Affordability

The vast majority of homebuyers—86 percent in Texas in 2020—rely on mortgage financing to purchase a home. As such, purchase affordability largely acts as a function of income, wealth, and credit. These three factors typically constitute the primary determinants of a mortgage applicant’s creditworthiness, or the applicant’s ability to repay the mortgage loan, a factor heavily weighed by the mortgage lender in the decision to extend mortgage financing to an applicant. In mortgage financing, income, wealth, and credit materialize through the DTI ratio, LTV ratio, and credit score.<sup>9</sup>

Other factors that affect purchase affordability include the mortgage interest rate, any additional costs of borrowing mortgage capital (such as the mortgage insurance premium, which is generally charged if the LTV ratio is 80 percent or higher), and the additional costs of homeownership—property taxes and insurance.

Table 37 shows how characteristics of a mortgage loan or applicant affect the maximum home price affordable to a particular household. Holding all else equal, an increase in the loan term decreases the total monthly mortgage payment, which increases the maximum affordable home price. Meanwhile, an increase in the DTI ratio also raises the maximum affordable home price. However, an increase in the mortgage interest rate, LTV ratio, additional costs of homeownership, and additional costs of borrowing mortgage capital increase the total monthly mortgage payment, which decreases the maximum affordable home price and reduces home-purchasing potential.

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<sup>9</sup> There are two types of DTI ratios: “front-end” and “back-end” ratios. The front-end DTI ratio measures mortgage debt as a percentage of household income, while the back-end ratio reflects total household debt—mortgage loans, car loans, credit card loans, student loans, etc.—as a percentage of household income. Should mortgage debt equal \$800 per month and the monthly household income equal \$2,400, then the front-end DTI ratio is 30 percent. Should total household debt equal \$1,200 per month, then the back-end DTI ratio is 50 percent. This report uses the front-end DTI ratio. The LTV ratio measures the household’s down payment as a percentage of the home price. A 5 percent down payment translates into a 95 percent LTV ratio.



**Table 37. How Loan, Applicant Characteristics Affect Purchase Affordability**

<b>Loan or Applicant Characteristics</b>	<b>Effect on Purchase Affordability</b>
Mortgage interest rate	An increase in the mortgage interest rate <b>diminishes</b> purchase affordability
Loan term	An increase in the loan term <b>increases</b> purchase affordability
LTV ratio	An increase in the loan-to-value ratio <b>diminishes</b> purchase affordability
DTI ratio	An increase in the debt-to-income ratio <b>increases</b> purchase affordability
Additional costs of homeownership (property taxes and insurance)	An increase in the additional costs of homeownership <b>diminishes</b> purchase affordability
Additional costs of borrowing mortgage capital (such as the mortgage insurance premium)	An increase in the additional costs of borrowing mortgage capital <b>diminishes</b> purchase affordability

Source: Texas Real Estate Research Center at Texas A&M University

The Center uses the home price-to-income multiplier (also known as “home-purchasing power”) to find the ratio between home price and household income, or the maximum home price affordable to a household of a particular income. For example, a multiplier of 3 indicates a household could afford a home priced at three times the household’s income (so, a household earning \$50,000 annually could afford a maximum home price of \$150,000).

The multiplier generally measures lower for conventional borrowers, a function of the lower DTI ratios that such borrowers tend to present, and higher for first-time borrowers, who depict higher DTI ratios. The home price-to-income multiplier typically measures around three for the repeat homebuyer, and between three and four for first-time homebuyers.

This report computes purchase affordability for both repeat and first-time homebuyers. For the repeat buyer, calculations in this report assume the prevailing mortgage interest rate (6.37 percent in 1Q2023),<sup>10</sup> 80 percent LTV ratio, 30 percent DTI ratio, and property taxes and insurance of 4 percent of home value. First-time homebuyers, who tend to be younger and therefore have not accumulated as much wealth or achieved peak earnings, tend to have higher LTV and DTI ratios. The lower income, wealth, and credit of first-time homebuyers generally reduces the maximum home price affordable to them. The calculations of purchase affordability for first-time homebuyers reflect the prevailing mortgage interest rate (6.37 percent in 1Q2023), 0.5 percent mortgage insurance premium, 95 percent LTV ratio, 35 percent DTI ratio, and property taxes and insurance of 4 percent of home value.

<sup>10</sup> The source for the prevailing mortgage interest rate is CoreLogic.



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