

# Dallas-Fort Worth-Arlington Housing Affordability Outlook



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# Dallas-Fort Worth-Arlington Housing Affordability Outlook 1Q2022

## About this Report

Texas Real Estate Research Center economists continuously monitor many facets of both state and local housing markets. *Dallas-Fort Worth-Arlington Housing Affordability Outlook* summarizes significant housing activity and trends as related to affordability in the Dallas-Fort-Worth-Arlington MSA. 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 the Dallas-Fort Worth-Arlington MSA. 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).

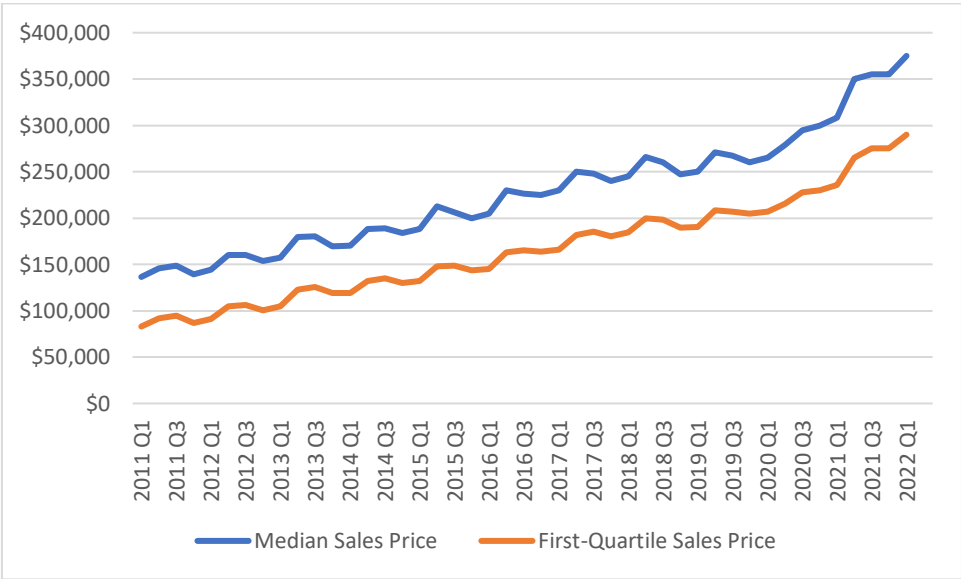
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### Purchase Affordability

The first quarter saw an uptick in both the median sales price and first-quartile sales price for the Dallas-Fort Worth-Arlington MSA (Figure 1).<sup>1</sup> The year-over-year (YOY) growth in median sales price and first-quartile sales price in the Dallas-Fort Worth-Arlington MSA measured 21.8 percent and 22.9 percent, respectively, significantly higher than average YOY growth for the first quarter (Table 1). The median sales price measured \$375,000, while the first-quartile sales price measured \$290,000. Meanwhile, median family income grew a robust 9.4 percent from 2021 to 2022 (Table 2). However, despite strong growth in family income, the more substantial increase in home prices will continue to squeeze purchase affordability, the ability of a household to buy a home.

Meanwhile, mortgage interest rates remained low by historical standards, averaging 3.82 percent in 1Q2022(Figure 2). All other things being equal, lower mortgage interest rates translate into lower monthly mortgage payments and ease purchase affordability. The Federal Reserve is widely anticipated to continue to raise the federal funds rate over the near-term to reduce inflationary pressures, which will likely prompt additional increases in mortgage interest rates. The average rate on the 30-year fixed-rate mortgage increased nearly 1 percentage point in March, rising from 3.76 percent to 4.67 percent. For more information on the effect of mortgage interest rates on purchase affordability, please see “How Higher Interest Rates Affect Homebuying” at <https://assets.recenter.tamu.edu/Documents/Articles/2339.pdf>.

**Figure 1. Median and First-Quartile Sales Prices, Dallas-Fort Worth-Arlington MSA**



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

<sup>1</sup> The first quartile reflects the lowest-priced 25 percent of homes sold in a particular geography. The first-quartile sales price represents the highest home price among those lowest-priced 25 percent of homes sold. If the price of the lowest 25 percent of homes sold ranges from \$100,000 to \$150,000, then the first-quartile sales price would be \$150,000.

**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	\$136,500		\$83,000	
1Q2012	\$144,500	5.9%	\$90,900	9.5%
1Q2013	\$157,000	8.7%	\$104,900	15.4%
1Q2014	\$170,000	8.3%	\$119,000	13.4%
1Q2015	\$188,000	10.6%	\$132,000	10.9%
1Q2016	\$205,000	9.0%	\$145,000	9.8%
1Q2017	\$230,000	12.2%	\$166,000	14.5%
1Q2018	\$245,000	6.5%	\$184,900	11.4%
1Q2019	\$249,900	2.0%	\$190,425	3.0%
1Q2020	\$264,900	6.0%	\$206,999	8.7%
1Q2021	\$308,000	16.3%	\$236,000	14.0%
<b>1Q2022</b>	<b>\$375,000</b>	<b>21.8%</b>	<b>\$290,000</b>	<b>22.9%</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	\$55,300		\$69,100	
2012	\$56,100	1.4%	\$70,100	1.4%
2013	\$54,000	-3.7%	\$67,500	-3.7%
2014	\$54,300	0.6%	\$67,900	0.6%
2015	\$56,300	3.7%	\$70,400	3.7%
2016	\$57,350	1.9%	\$71,700	1.8%
2017	\$58,700	2.4%	\$73,400	2.4%
2018	\$61,750	5.2%	\$77,200	5.2%
2019	\$66,500	7.7%	\$83,100	7.6%
2020	\$68,950	3.7%	\$86,200	3.7%
2021	\$71,200	3.3%	\$89,000	3.2%
<b>2022</b>	<b>\$77,900</b>	<b>9.4%</b>	<b>\$97,400</b>	<b>9.4%</b>

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

Purchase affordability continued to decline YOY as the gap between median sales price and family income continued to increase. For households earning the median family income for Dallas in 2021 (\$97,400), the median sales price for 1Q2022 was not affordable to them unless the home price-to-income multiplier approximated 4.0 (Table 3). Only 25.8 percent of homes sold in 1Q2022 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 \$125,000 annually to be able 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>\$85,000</b>	\$170,000	\$212,500	\$255,000	\$297,500	\$340,000	<b>\$382,500</b>	<b>\$425,000</b>	<b>\$467,500</b>
	<b>\$90,000</b>	\$180,000	\$225,000	\$270,000	\$315,000	\$360,000	<b>\$405,000</b>	<b>\$450,000</b>	<b>\$495,000</b>
	<b>\$95,000</b>	\$190,000	\$237,500	\$285,000	\$332,500	<b>\$380,000</b>	<b>\$427,500</b>	<b>\$475,000</b>	<b>\$522,500</b>
<b>Median Family Income</b>	<b>\$97,400</b>	\$194,800	\$243,500	\$292,200	\$340,900	<b>\$389,600</b>	<b>\$438,300</b>	<b>\$487,000</b>	<b>\$535,700</b>
	<b>\$100,000</b>	\$200,000	\$250,000	\$300,000	\$350,000	<b>\$400,000</b>	<b>\$450,000</b>	<b>\$500,000</b>	<b>\$550,000</b>
	<b>\$105,000</b>	\$210,000	\$262,500	\$315,000	\$367,500	<b>\$420,000</b>	<b>\$472,500</b>	<b>\$525,000</b>	<b>\$577,500</b>
	<b>\$110,000</b>	\$220,000	\$275,000	\$330,000	<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	\$345,000	<b>\$402,500</b>	<b>\$460,000</b>	<b>\$517,500</b>	<b>\$575,000</b>	<b>\$632,500</b>
<b>Workforce Households (120%)</b>	<b>\$116,900</b>	\$233,800	\$292,250	\$350,700	<b>\$409,150</b>	<b>\$467,600</b>	<b>\$526,050</b>	<b>\$584,500</b>	<b>\$642,950</b>
	<b>\$120,000</b>	\$240,000	\$300,000	\$360,000	<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	\$312,500	<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	\$325,000	<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	\$337,500	<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	\$350,000	<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	\$362,500	<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>	\$310,000	<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>
	<b>\$160,000</b>	\$320,000	<b>\$400,000</b>	<b>\$480,000</b>	<b>\$560,000</b>	<b>\$640,000</b>	<b>\$720,000</b>	<b>\$800,000</b>	<b>\$880,000</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 1Q2022 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>\$85,000</b>	3.7%	8.2%	16.5%	27.0%	40.5%	51.8%	61.5%	68.6%
	<b>\$90,000</b>	4.6%	10.3%	20.3%	32.9%	46.5%	57.4%	66.2%	72.4%
	<b>\$95,000</b>	5.5%	12.4%	24.2%	38.0%	51.5%	61.7%	70.0%	75.6%
<b>Median Family Income</b>	<b>\$97,400</b>	5.7%	13.6%	25.8%	40.5%	53.4%	63.6%	71.4%	77.0%
	<b>\$100,000</b>	6.8%	15.4%	28.5%	43.8%	56.4%	66.2%	73.5%	78.5%
	<b>\$105,000</b>	8.0%	18.0%	32.9%	48.2%	60.6%	69.2%	76.1%	80.7%
	<b>\$110,000</b>	9.5%	21.5%	37.5%	52.8%	64.3%	72.4%	78.5%	82.9%
	<b>\$115,000</b>	11.1%	24.6%	41.7%	56.7%	67.8%	75.0%	80.6%	84.6%
<b>Workforce Households (120%)</b>	<b>\$116,900</b>	11.5%	25.8%	43.8%	57.8%	68.6%	76.2%	81.1%	85.1%
	<b>\$120,000</b>	13.3%	28.5%	46.5%	60.6%	70.8%	77.5%	82.5%	86.4%
	<b>\$125,000</b>	15.4%	31.7%	50.4%	63.5%	73.5%	79.5%	84.2%	87.7%
	<b>\$130,000</b>	17.7%	36.0%	54.1%	67.0%	75.5%	81.3%	85.8%	88.9%
	<b>\$135,000</b>	20.3%	39.4%	57.4%	69.2%	77.5%	82.9%	87.1%	90.0%
	<b>\$140,000</b>	22.9%	43.8%	60.6%	71.9%	79.4%	84.5%	88.3%	91.0%
	<b>\$145,000</b>	25.5%	46.9%	63.3%	74.1%	81.0%	85.9%	89.4%	91.7%
	<b>\$150,000</b>	28.5%	50.4%	66.2%	76.1%	82.5%	87.1%	90.4%	92.8%
	<b>\$155,000</b>	31.4%	53.2%	68.5%	77.6%	83.8%	87.9%	91.3%	93.4%
	<b>\$160,000</b>	34.4%	56.4%	70.8%	79.4%	85.0%	89.1%	92.0%	94.0%

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 5). At a 3.39 percent rate, this payment was \$2,579 for the median sales price in 1Q2022, nearly three times the total monthly mortgage payment for the median-priced home in 1Q2011.

Table 6 shows the home price-to-income multiplier by mortgage interest rate. A 3.39 percent interest rate translates into a home price-to-income multiplier of 3.64<sup>2</sup>, meaning a household could afford a maximum home price of 3.64 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 3.39 percent mortgage interest rate was \$103,151 for the median sales price in 1Q2022 (Table 7). An estimated 49.9 percent of existing homeowners in the Dallas-Fort Worth-Arlington MSA could afford the median sales price in 1Q2022 with a 3.39 percent interest rate (Table 8), a decline of over 30 percentage points from 1Q2011.

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

		Mortgage Interest Rate						
Year	Home Price	3%	<b>3.39%</b>	3.5%	4%	4.5%	5%	5.5%
1Q2011	\$136,500	\$915	<b>\$939</b>	\$945	\$976	\$1,008	\$1,041	\$1,075
1Q2012	\$144,500	\$969	<b>\$994</b>	\$1,001	\$1,034	\$1,067	\$1,102	\$1,138
1Q2013	\$157,000	\$1,053	<b>\$1,080</b>	\$1,087	\$1,123	\$1,160	\$1,198	\$1,236
1Q2014	\$170,000	\$1,140	<b>\$1,169</b>	\$1,177	\$1,216	\$1,256	\$1,297	\$1,339
1Q2015	\$188,000	\$1,261	<b>\$1,293</b>	\$1,302	\$1,345	\$1,389	\$1,434	\$1,481
1Q2016	\$205,000	\$1,375	<b>\$1,410</b>	\$1,420	\$1,466	\$1,514	\$1,564	\$1,615
1Q2017	\$230,000	\$1,542	<b>\$1,582</b>	\$1,593	\$1,645	\$1,699	\$1,754	\$1,811
1Q2018	\$245,000	\$1,643	<b>\$1,685</b>	\$1,697	\$1,752	\$1,810	\$1,869	\$1,930
1Q2019	\$249,900	\$1,676	<b>\$1,718</b>	\$1,731	\$1,787	\$1,846	\$1,906	\$1,968
1Q2020	\$264,900	\$1,776	<b>\$1,822</b>	\$1,835	\$1,895	\$1,957	\$2,021	\$2,086
1Q2021	\$308,000	\$2,065	<b>\$2,118</b>	\$2,133	\$2,203	\$2,275	\$2,349	\$2,426
<b>1Q2022</b>	<b>\$375,000</b>	<b>\$2,515</b>	<b>\$2,579</b>	<b>\$2,597</b>	<b>\$2,682</b>	<b>\$2,770</b>	<b>\$2,860</b>	<b>\$2,953</b>

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

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

<sup>2</sup> The home price-to-income multiplier assumes a 30-year loan term, 80 percent loan-to-value ratio, 30 percent DTI ratio, and property taxes and insurance of 4 percent.



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

Mortgage Interest Rate	Home Price-to-Income Multiplier
3%	3.73
<b>3.39%</b>	<b>3.64</b>
3.5%	3.61
4%	3.50
4.5%	3.38
5%	3.28
5.5%	3.17

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%	<b>3.39%</b>	3.5%	4%	4.5%	5%	5.5%
1Q2011	\$136,500	\$36,616	<b>\$37,547</b>	\$37,814	\$39,054	\$40,332	\$41,648	\$43,001
1Q2012	\$144,500	\$38,762	<b>\$39,748</b>	\$40,030	\$41,342	\$42,696	\$44,089	\$45,521
1Q2013	\$157,000	\$42,115	<b>\$43,186</b>	\$43,493	\$44,919	\$46,389	\$47,903	\$49,459
1Q2014	\$170,000	\$45,602	<b>\$46,762</b>	\$47,095	\$48,638	\$50,230	\$51,870	\$53,554
1Q2015	\$188,000	\$50,430	<b>\$51,713</b>	\$52,081	\$53,788	\$55,549	\$57,362	\$59,225
1Q2016	\$205,000	\$54,991	<b>\$56,389</b>	\$56,791	\$58,652	\$60,572	\$62,549	\$64,580
1Q2017	\$230,000	\$61,697	<b>\$63,266</b>	\$63,716	\$65,804	\$67,959	\$70,177	\$72,456
1Q2018	\$245,000	\$65,720	<b>\$67,392</b>	\$67,872	\$70,096	\$72,391	\$74,753	\$77,181
1Q2019	\$249,900	\$67,035	<b>\$68,740</b>	\$69,229	\$71,498	\$73,839	\$76,249	\$78,725
1Q2020	\$264,900	\$71,059	<b>\$72,866</b>	\$73,385	\$75,790	\$78,271	\$80,825	\$83,450
1Q2021	\$308,000	\$82,620	<b>\$84,722</b>	\$85,325	\$88,121	\$91,006	\$93,976	\$97,028
<b>1Q2022</b>	<b>\$375,000</b>	<b>\$100,592</b>	<b>\$103,151</b>	<b>\$103,885</b>	<b>\$107,290</b>	<b>\$110,802</b>	<b>\$114,419</b>	<b>\$118,135</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%	<b>3.39%</b>	3.5%	4%	4.5%	5%	5.5%
1Q2011	\$136,500	80.8%	<b>80.1%</b>	79.9%	78.9%	78.0%	77.0%	76.0%
1Q2012	\$144,500	79.0%	<b>78.3%</b>	78.1%	77.1%	76.1%	75.1%	74.0%
1Q2013	\$157,000	76.5%	<b>75.7%</b>	75.5%	74.4%	73.3%	72.2%	71.0%
1Q2014	\$170,000	74.2%	<b>73.4%</b>	73.1%	72.0%	70.8%	69.6%	68.4%
1Q2015	\$188,000	71.0%	<b>70.0%</b>	69.8%	68.5%	67.2%	65.9%	64.6%
1Q2016	\$205,000	68.6%	<b>67.6%</b>	67.3%	66.0%	64.6%	63.2%	61.8%
1Q2017	\$230,000	65.4%	<b>64.4%</b>	64.0%	62.6%	61.1%	59.6%	58.0%
1Q2018	\$245,000	64.6%	<b>63.5%</b>	63.2%	61.7%	60.2%	58.6%	57.2%
1Q2019	\$249,900	65.7%	<b>64.6%</b>	64.3%	62.8%	61.3%	59.9%	58.5%
1Q2020	\$264,900	64.5%	<b>63.4%</b>	63.1%	61.6%	60.2%	58.8%	57.4%
1Q2021	\$308,000	59.4%	<b>58.2%</b>	57.9%	56.3%	54.7%	53.0%	51.4%
<b>1Q2022</b>	<b>\$375,000</b>	<b>51.0%</b>	<b>49.9%</b>	<b>49.6%</b>	<b>48.1%</b>	<b>46.5%</b>	<b>45.0%</b>	<b>43.3%</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 \$2,579 for the median sales price in 1Q2022, nearly three times 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 3.64<sup>3</sup>, meaning a household could afford a maximum home price of 3.64 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 \$103,151 for the median sales price in 1Q2022 (Table 11). An estimated 49.9 percent of existing homeowners in the Dallas-Fort Worth-Arlington MSA could afford the median sales price in 1Q2022 with an 80 percent LTV ratio (Table 12), a decline of over 30 percentage points from 1Q2011.

<sup>3</sup> The home price-to-income multiplier is based on a 30-year loan term, 3.39 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 9. Total Monthly Mortgage Payment for Repeat Buyers by LTV Ratio**

Year	Home Price	LTV Ratio				
		80%	85%	90%	95%	100%
1Q2011	\$136,500	<b>\$939</b>	\$969	\$1,034	\$1,066	\$1,098
1Q2012	\$144,500	<b>\$994</b>	\$1,026	\$1,094	\$1,128	\$1,162
1Q2013	\$157,000	<b>\$1,080</b>	\$1,114	\$1,189	\$1,226	\$1,263
1Q2014	\$170,000	<b>\$1,169</b>	\$1,207	\$1,287	\$1,327	\$1,368
1Q2015	\$188,000	<b>\$1,293</b>	\$1,334	\$1,424	\$1,468	\$1,512
1Q2016	\$205,000	<b>\$1,410</b>	\$1,455	\$1,553	\$1,601	\$1,649
1Q2017	\$230,000	<b>\$1,582</b>	\$1,633	\$1,742	\$1,796	\$1,850
1Q2018	\$245,000	<b>\$1,685</b>	\$1,739	\$1,855	\$1,913	\$1,971
1Q2019	\$249,900	<b>\$1,718</b>	\$1,774	\$1,893	\$1,951	\$2,010
1Q2020	\$264,900	<b>\$1,822</b>	\$1,880	\$2,006	\$2,069	\$2,131
1Q2021	\$308,000	<b>\$2,118</b>	\$2,186	\$2,333	\$2,405	\$2,478
<b>1Q2022</b>	<b>\$375,000</b>	<b>\$2,579</b>	<b>\$2,662</b>	<b>\$2,840</b>	<b>\$2,928</b>	<b>\$3,017</b>

Note: Assumes a 30-year loan term, 3.39 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 10. Home Price-to-Income Multiplier for Repeat Buyers by LTV Ratio**

LTV Ratio	Home Price-to-Income Multiplier
<b>80%</b>	<b>3.64</b>
85%	3.52
90%	3.30
95%	3.20
100%	3.11

Note: Assumes a 30-year loan term, 3.39 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	\$136,500	<b>\$37,547</b>	\$38,756	\$41,350	\$42,636	\$43,922
1Q2012	\$144,500	<b>\$39,748</b>	\$41,028	\$43,773	\$45,135	\$46,496
1Q2013	\$157,000	<b>\$43,186</b>	\$44,577	\$47,560	\$49,039	\$50,518
1Q2014	\$170,000	<b>\$46,762</b>	\$48,268	\$51,498	\$53,099	\$54,701
1Q2015	\$188,000	<b>\$51,713</b>	\$53,379	\$56,950	\$58,722	\$60,493
1Q2016	\$205,000	<b>\$56,389</b>	\$58,205	\$62,100	\$64,032	\$65,963
1Q2017	\$230,000	<b>\$63,266</b>	\$65,304	\$69,673	\$71,840	\$74,007
1Q2018	\$245,000	<b>\$67,392</b>	\$69,562	\$74,217	\$76,526	\$78,834
1Q2019	\$249,900	<b>\$68,740</b>	\$70,954	\$75,702	\$78,056	\$80,411
1Q2020	\$264,900	<b>\$72,866</b>	\$75,213	\$80,246	\$82,741	\$85,237
1Q2021	\$308,000	<b>\$84,722</b>	\$87,450	\$93,302	\$96,204	\$99,106
<b>1Q2022</b>	<b>\$375,000</b>	<b>\$103,151</b>	<b>\$106,473</b>	<b>\$113,598</b>	<b>\$117,131</b>	<b>\$120,664</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, 3.39 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	Loan-to-Value Ratio				
		80%	85%	90%	95%	100%
1Q2011	\$136,500	<b>80.1%</b>	79.2%	77.2%	76.2%	75.3%
1Q2012	\$144,500	<b>78.3%</b>	77.4%	75.3%	74.3%	73.3%
1Q2013	\$157,000	<b>75.7%</b>	74.7%	72.4%	71.3%	70.2%
1Q2014	\$170,000	<b>73.4%</b>	72.3%	69.9%	68.7%	67.6%
1Q2015	\$188,000	<b>70.0%</b>	68.8%	66.2%	65.0%	63.7%
1Q2016	\$205,000	<b>67.6%</b>	66.3%	63.5%	62.2%	60.8%
1Q2017	\$230,000	<b>64.4%</b>	63.0%	59.9%	58.4%	56.9%
1Q2018	\$245,000	<b>63.5%</b>	62.1%	59.0%	57.6%	56.3%
1Q2019	\$249,900	<b>64.6%</b>	63.2%	60.2%	58.8%	57.5%
1Q2020	\$264,900	<b>63.4%</b>	61.9%	59.1%	57.7%	56.4%
1Q2021	\$308,000	<b>58.2%</b>	56.7%	53.4%	51.8%	50.2%
<b>1Q2022</b>	<b>\$375,000</b>	<b>49.9%</b>	<b>48.5%</b>	<b>45.3%</b>	<b>43.8%</b>	<b>42.2%</b>

Note: Assumes a 30-year loan term, 3.39 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 3.64<sup>4</sup> (Table 13), meaning a household could afford a maximum home price of 3.64 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 \$103,151 for the median sales price in 1Q2022 (Table 14). An estimated 49.9 percent of existing homeowners in the Dallas-Fort Worth-Arlington MSA could afford the median sales price in 1Q2022 with a 30 percent DTI ratio (Table 15), a decline of over 30 percentage points from 1Q2011.

<sup>4</sup> The home price-to-income multiplier is based on a 30-year loan term, 3.39 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 Price-to-Income Multiplier
20%	2.42
25%	3.03
<b>30%</b>	<b>3.64</b>
35%	4.24
40%	4.85
45%	5.45
50%	6.06

Note: Assumes a 30-year loan term, 3.39 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	\$136,500	\$56,321	\$45,056	<b>\$37,547</b>	\$32,183	\$28,160	\$25,031	\$22,528
1Q2012	\$144,500	\$59,621	\$47,697	<b>\$39,748</b>	\$34,069	\$29,811	\$26,498	\$23,849
1Q2013	\$157,000	\$64,779	\$51,823	<b>\$43,186</b>	\$37,017	\$32,389	\$28,791	\$25,912
1Q2014	\$170,000	\$70,143	\$56,114	<b>\$46,762</b>	\$40,082	\$35,071	\$31,175	\$28,057
1Q2015	\$188,000	\$77,570	\$62,056	<b>\$51,713</b>	\$44,326	\$38,785	\$34,475	\$31,028
1Q2016	\$205,000	\$84,584	\$67,667	<b>\$56,389</b>	\$48,334	\$42,292	\$37,593	\$33,834
1Q2017	\$230,000	\$94,899	\$75,919	<b>\$63,266</b>	\$54,228	\$47,450	\$42,177	\$37,960
1Q2018	\$245,000	\$101,088	\$80,871	<b>\$67,392</b>	\$57,765	\$50,544	\$44,928	\$40,435
1Q2019	\$249,900	\$103,110	\$82,488	<b>\$68,740</b>	\$58,920	\$51,555	\$45,827	\$41,244
1Q2020	\$264,900	\$109,299	\$87,439	<b>\$72,866</b>	\$62,457	\$54,650	\$48,577	\$43,720
1Q2021	\$308,000	\$127,082	\$101,666	<b>\$84,722</b>	\$72,618	\$63,541	\$56,481	\$50,833
<b>1Q2022</b>	<b>\$375,000</b>	<b>\$154,727</b>	<b>\$123,781</b>	<b>\$103,151</b>	<b>\$88,415</b>	<b>\$77,363</b>	<b>\$68,767</b>	<b>\$61,891</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, 3.39 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	\$136,500	65.9%	74.4%	<b>80.1%</b>	84.0%	86.9%	89.1%	90.7%
1Q2012	\$144,500	63.5%	72.4%	<b>78.3%</b>	82.5%	85.5%	87.8%	89.7%
1Q2013	\$157,000	59.7%	69.3%	<b>75.7%</b>	80.3%	83.7%	86.3%	88.4%
1Q2014	\$170,000	56.3%	66.5%	<b>73.4%</b>	78.2%	81.8%	84.6%	86.8%
1Q2015	\$188,000	51.7%	62.5%	<b>70.0%</b>	75.4%	79.4%	82.5%	84.9%
1Q2016	\$205,000	48.9%	59.6%	<b>67.6%</b>	73.4%	77.6%	80.9%	83.6%
1Q2017	\$230,000	45.0%	55.7%	<b>64.4%</b>	70.6%	75.3%	78.8%	81.7%
1Q2018	\$245,000	44.0%	55.2%	<b>63.5%</b>	69.9%	74.7%	78.3%	81.2%
1Q2019	\$249,900	45.2%	56.3%	<b>64.6%</b>	70.9%	75.6%	79.1%	81.9%
1Q2020	\$264,900	44.2%	55.1%	<b>63.4%</b>	69.9%	74.7%	78.4%	81.2%
1Q2021	\$308,000	37.9%	49.0%	<b>58.2%</b>	65.0%	70.5%	74.8%	78.2%
<b>1Q2022</b>	<b>\$375,000</b>	<b>29.1%</b>	<b>40.8%</b>	<b>49.9%</b>	<b>57.7%</b>	<b>63.8%</b>	<b>68.8%</b>	<b>72.9%</b>

Note: Assumes a 30-year loan term, 3.39 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 and 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 \$2,579 for the median sales price in 1Q2022, nearly three times 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 3.64<sup>5</sup>, meaning a household could afford a maximum home price of 3.64 times its annual income. The home price-to-income multiplier declines as the costs of property taxes and insurance increase.

The income required to qualify for a loan with property taxes and insurance at 4 percent of home price was \$103,151 for the median sales price in 1Q2022 (Table 18). An estimated 49.9 percent of existing homeowners in the Dallas-Fort Worth-Arlington MSA could afford the median

<sup>5</sup> The home price-to-income multiplier is based on a 30-year loan term, 3.39 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio.

sales price in 1Q2022 with property taxes and insurance at 4 percent of home price (Table 19), a decline of over 30 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	\$136,500	\$711	\$825	<b>\$939</b>	\$1,052	\$1,166
1Q2012	\$144,500	\$753	\$873	<b>\$994</b>	\$1,114	\$1,235
1Q2013	\$157,000	\$818	\$949	<b>\$1,080</b>	\$1,210	\$1,341
1Q2014	\$170,000	\$886	\$1,027	<b>\$1,169</b>	\$1,311	\$1,452
1Q2015	\$188,000	\$979	\$1,136	<b>\$1,293</b>	\$1,449	\$1,606
1Q2016	\$205,000	\$1,068	\$1,239	<b>\$1,410</b>	\$1,581	\$1,751
1Q2017	\$230,000	\$1,198	\$1,390	<b>\$1,582</b>	\$1,773	\$1,965
1Q2018	\$245,000	\$1,276	\$1,481	<b>\$1,685</b>	\$1,889	\$2,093
1Q2019	\$249,900	\$1,302	\$1,510	<b>\$1,718</b>	\$1,927	\$2,135
1Q2020	\$264,900	\$1,380	\$1,601	<b>\$1,822</b>	\$2,042	\$2,263
1Q2021	\$308,000	\$1,605	\$1,861	<b>\$2,118</b>	\$2,375	\$2,631
<b>1Q2022</b>	<b>\$375,000</b>	<b>\$1,954</b>	<b>\$2,266</b>	<b>\$2,579</b>	<b>\$2,891</b>	<b>\$3,204</b>

Note: Assumes a 30-year loan term, 3.39 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 and Insurance	Home Price-to-Income Multiplier
2%	4.80
3%	4.14
<b>4%</b>	<b>3.64</b>
5%	3.24
6%	2.93

Note: Assumes a 30-year loan term, 3.39 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	\$136,500	\$28,447	\$32,997	<b>\$37,547</b>	\$42,097	\$46,647
1Q2012	\$144,500	\$30,114	\$34,931	<b>\$39,748</b>	\$44,564	\$49,381
1Q2013	\$157,000	\$32,719	\$37,953	<b>\$43,186</b>	\$48,419	\$53,653
1Q2014	\$170,000	\$35,429	\$41,095	<b>\$46,762</b>	\$52,429	\$58,095
1Q2015	\$188,000	\$39,180	\$45,446	<b>\$51,713</b>	\$57,980	\$64,246
1Q2016	\$205,000	\$42,723	\$49,556	<b>\$56,389</b>	\$63,223	\$70,056
1Q2017	\$230,000	\$47,933	\$55,599	<b>\$63,266</b>	\$70,933	\$78,599
1Q2018	\$245,000	\$51,059	\$59,225	<b>\$67,392</b>	\$75,559	\$83,725
1Q2019	\$249,900	\$52,080	\$60,410	<b>\$68,740</b>	\$77,070	\$85,400
1Q2020	\$264,900	\$55,206	\$64,036	<b>\$72,866</b>	\$81,696	\$90,526
1Q2021	\$308,000	\$64,188	\$74,455	<b>\$84,722</b>	\$94,988	\$105,255
<b>1Q2022</b>	<b>\$375,000</b>	<b>\$78,151</b>	<b>\$90,651</b>	<b>\$103,151</b>	<b>\$115,651</b>	<b>\$128,151</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, 3.39 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	\$136,500	86.7%	83.4%	<b>80.1%</b>	76.7%	73.2%
1Q2012	\$144,500	85.3%	81.9%	<b>78.3%</b>	74.7%	71.2%
1Q2013	\$157,000	83.5%	79.6%	<b>75.7%</b>	71.8%	67.9%
1Q2014	\$170,000	81.6%	77.5%	<b>73.4%</b>	69.2%	65.1%
1Q2015	\$188,000	79.1%	74.6%	<b>70.0%</b>	65.5%	60.9%
1Q2016	\$205,000	77.3%	72.5%	<b>67.6%</b>	62.7%	57.9%
1Q2017	\$230,000	74.9%	69.7%	<b>64.4%</b>	59.1%	54.2%
1Q2018	\$245,000	74.4%	68.9%	<b>63.5%</b>	58.1%	53.6%
1Q2019	\$249,900	75.3%	69.9%	<b>64.6%</b>	59.4%	54.7%
1Q2020	\$264,900	74.4%	68.9%	<b>63.4%</b>	58.3%	53.4%
1Q2021	\$308,000	70.1%	63.9%	<b>58.2%</b>	52.5%	47.4%
<b>1Q2022</b>	<b>\$375,000</b>	<b>63.4%</b>	<b>56.5%</b>	<b>49.9%</b>	<b>44.4%</b>	<b>38.9%</b>

Note: Assumes a 30-year loan term, 3.39 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

Purchase affordability continued to decline YOY for Texas' first-time homebuyers, particularly among the lowest-income cohorts. Despite sustained low mortgage interest rates, the uptick in the first-quartile sales price left homeownership increasingly unaffordable for lower-income households.

Table 20 shows the maximum home price affordable by family income and home-purchasing power. For example, households earning between \$29,200 and \$48,700 annually (i.e., between 31 and 50 percent of median family income) could afford a maximum home price between \$87,600 and \$146,100 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 \$116,800 and \$194,800 should the home price-to-income multiplier measure 4.

Depending on the home price-to-income multiplier, only households earning at least \$55,000 annually could afford the first-quartile sales price in 1Q2022. 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 11.5 percent of homes for sale were affordable to households earning no more than 80 percent of area median income in 1Q2022 (Table 21).

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

		Home Price-to-Income Multiplier							
	Family Income	2	2.5	3	3.5	4	4.5	5	5.5
	\$15,000	\$30,000	\$37,500	\$45,000	\$52,500	\$60,000	\$67,500	\$75,000	\$82,500
	\$20,000	\$40,000	\$50,000	\$60,000	\$70,000	\$80,000	\$90,000	\$100,000	\$110,000
	\$25,000	\$50,000	\$62,500	\$75,000	\$87,500	\$100,000	\$112,500	\$125,000	\$137,500
Extremely Low-Income (30%)	\$29,200	\$58,400	\$73,000	\$87,600	\$102,200	\$116,800	\$131,400	\$146,000	\$160,600
	\$30,000	\$60,000	\$75,000	\$90,000	\$105,000	\$120,000	\$135,000	\$150,000	\$165,000
	\$35,000	\$70,000	\$87,500	\$105,000	\$122,500	\$140,000	\$157,500	\$175,000	\$192,500
	\$40,000	\$80,000	\$100,000	\$120,000	\$140,000	\$160,000	\$180,000	\$200,000	\$220,000
	\$45,000	\$90,000	\$112,500	\$135,000	\$157,500	\$180,000	\$202,500	\$225,000	\$247,500
Very Low-Income (50%)	\$48,700	\$97,400	\$121,750	\$146,100	\$170,450	\$194,800	\$219,150	\$243,500	\$267,850
	\$50,000	\$100,000	\$125,000	\$150,000	\$175,000	\$200,000	\$225,000	\$250,000	\$275,000
	\$55,000	\$110,000	\$137,500	\$165,000	\$192,500	\$220,000	\$247,500	\$275,000	<b>\$302,500</b>
	\$60,000	\$120,000	\$150,000	\$180,000	\$210,000	\$240,000	\$270,000	<b>\$300,000</b>	<b>\$330,000</b>
	\$65,000	\$130,000	\$162,500	\$195,000	\$227,500	\$260,000	<b>\$292,500</b>	<b>\$325,000</b>	<b>\$357,500</b>
	\$70,000	\$140,000	\$175,000	\$210,000	\$245,000	\$280,000	<b>\$315,000</b>	<b>\$350,000</b>	<b>\$385,000</b>
	\$75,000	\$150,000	\$187,500	\$225,000	\$262,500	<b>\$300,000</b>	<b>\$337,500</b>	<b>\$375,000</b>	<b>\$412,500</b>
Low-Income (80%)	\$77,900	\$155,800	\$194,750	\$233,700	\$272,650	<b>\$311,600</b>	<b>\$350,550</b>	<b>\$389,500</b>	<b>\$428,450</b>
	\$80,000	\$160,000	\$200,000	\$240,000	\$280,000	<b>\$320,000</b>	<b>\$360,000</b>	<b>\$400,000</b>	<b>\$440,000</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 1Q2022 Affordable by Family Income and Home Price-to-Income Multiplier**

		Home Price-to-Income Multiplier							
	Family Income	2	2.5	3	3.5	4	4.5	5	5.5
Extremely Low-Income (0-30%)	\$15,000	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%
	\$20,000	0.1%	0.1%	0.1%	0.2%	0.3%	0.4%	0.6%	0.8%
	\$25,000	0.1%	0.2%	0.2%	0.3%	0.6%	0.8%	1.2%	1.6%
	\$29,200	0.1%	0.2%	0.3%	0.6%	0.9%	1.3%	2.0%	2.9%
Very Low-Income (31-50%)	\$30,000	0.1%	0.2%	0.4%	0.7%	1.0%	1.5%	2.3%	3.3%
	\$35,000	0.2%	0.3%	0.7%	1.1%	1.8%	2.6%	4.2%	5.7%
	\$40,000	0.3%	0.6%	1.0%	1.8%	2.9%	4.6%	6.8%	9.5%
	\$45,000	0.4%	0.8%	1.5%	2.6%	4.6%	6.9%	10.3%	14.3%
Low-Income (51-80%)	\$48,700	0.5%	1.1%	2.0%	3.7%	5.7%	9.0%	13.6%	19.2%
	\$50,000	0.6%	1.2%	2.3%	4.2%	6.8%	10.3%	15.4%	21.5%
	\$55,000	0.8%	1.6%	3.3%	5.7%	9.5%	14.3%	21.5%	28.9%
	\$60,000	1.0%	2.3%	4.6%	8.0%	13.3%	20.3%	28.5%	37.5%
	\$65,000	1.3%	3.0%	6.0%	10.6%	17.7%	25.8%	36.0%	45.4%
	\$70,000	1.8%	4.2%	8.0%	14.1%	22.9%	32.9%	43.8%	52.8%
	\$75,000	2.3%	5.2%	10.3%	18.0%	28.5%	39.4%	50.4%	58.7%
\$77,900	2.6%	5.7%	11.5%	20.6%	31.5%	43.8%	53.4%	61.7%	
	\$80,000	2.9%	6.8%	13.3%	22.9%	34.4%	46.5%	56.4%	64.3%

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 3.48 percent rate brought the mortgage payment to \$2,279 for the first-quartile sales price in 1Q2022, nearly 3.5 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 3.48 percent interest rate translates into a home price-to-income multiplier of 3.71<sup>6</sup>, meaning a household could afford a maximum home price of 3.71 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 3.48 percent mortgage interest rate was \$78,129 for the first-quartile sales price in 1Q2022 (Table 24). An estimated 31 percent of renters in the Dallas-Fort Worth-Arlington MSA could afford the first-quartile sales price in 1Q2022 with a 3.48 percent interest rate (Table 25), a decline of nearly 40 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%	<b>3.48%</b>	3.5%	4%	4.5%	5%	5.5%
1Q2011	\$83,000	\$631	<b>\$652</b>	\$653	\$676	\$700	\$724	\$749
1Q2012	\$90,900	\$691	<b>\$714</b>	\$715	\$741	\$767	\$793	\$821
1Q2013	\$104,900	\$797	<b>\$824</b>	\$825	\$855	\$885	\$915	\$947
1Q2014	\$119,000	\$904	<b>\$935</b>	\$936	\$969	\$1,004	\$1,039	\$1,074
1Q2015	\$132,000	\$1,003	<b>\$1,037</b>	\$1,039	\$1,075	\$1,113	\$1,152	\$1,192
1Q2016	\$145,000	\$1,102	<b>\$1,139</b>	\$1,141	\$1,181	\$1,223	\$1,265	\$1,309
1Q2017	\$166,000	\$1,261	<b>\$1,304</b>	\$1,306	\$1,352	\$1,400	\$1,449	\$1,499
1Q2018	\$184,900	\$1,405	<b>\$1,453</b>	\$1,455	\$1,506	\$1,559	\$1,614	\$1,669
1Q2019	\$190,425	\$1,447	<b>\$1,496</b>	\$1,498	\$1,551	\$1,606	\$1,662	\$1,719
1Q2020	\$206,999	\$1,573	<b>\$1,627</b>	\$1,629	\$1,686	\$1,746	\$1,807	\$1,869
1Q2021	\$236,000	\$1,793	<b>\$1,854</b>	\$1,857	\$1,923	\$1,990	\$2,060	\$2,131
<b>1Q2022</b>	<b>\$290,000</b>	<b>\$2,204</b>	<b>\$2,279</b>	<b>\$2,282</b>	<b>\$2,363</b>	<b>\$2,446</b>	<b>\$2,531</b>	<b>\$2,618</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

<sup>6</sup> The home price-to-income multiplier is based on a 30-year loan term, 95 percent LTV ratio, 35 percent DTI ratio, and property taxes and insurance of 4 percent.

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

Mortgage Interest Rate	Home Price-to-Income Multiplier
3%	3.84
<b>3.48%</b>	<b>3.71</b>
3.5%	3.71
4%	3.58
4.5%	3.46
5%	3.34
5.5%	3.23

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%	<b>3.48%</b>	3.5%	4%	4.5%	5%	5.5%
1Q2011	\$83,000	\$21,625	<b>\$22,361</b>	\$22,392	\$23,184	\$23,998	\$24,835	\$25,694
1Q2012	\$90,900	\$23,684	<b>\$24,489</b>	\$24,524	\$25,390	\$26,282	\$27,199	\$28,140
1Q2013	\$104,900	\$27,331	<b>\$28,261</b>	\$28,301	\$29,301	\$30,330	\$31,388	\$32,474
1Q2014	\$119,000	\$31,005	<b>\$32,060</b>	\$32,105	\$33,239	\$34,407	\$35,608	\$36,839
1Q2015	\$132,000	\$34,392	<b>\$35,562</b>	\$35,612	\$36,870	\$38,166	\$39,497	\$40,863
1Q2016	\$145,000	\$37,779	<b>\$39,065</b>	\$39,119	\$40,501	\$41,925	\$43,387	\$44,887
1Q2017	\$166,000	\$43,251	<b>\$44,722</b>	\$44,785	\$46,367	\$47,997	\$49,671	\$51,388
1Q2018	\$184,900	\$48,175	<b>\$49,814</b>	\$49,884	\$51,646	\$53,461	\$55,326	\$57,239
1Q2019	\$190,425	\$49,614	<b>\$51,303</b>	\$51,374	\$53,190	\$55,059	\$56,979	\$58,949
1Q2020	\$206,999	\$53,933	<b>\$55,768</b>	\$55,846	\$57,819	\$59,851	\$61,939	\$64,080
1Q2021	\$236,000	\$61,489	<b>\$63,581</b>	\$63,670	\$65,920	\$68,236	\$70,617	\$73,058
<b>1Q2022</b>	<b>\$290,000</b>	<b>\$75,558</b>	<b>\$78,129</b>	<b>\$78,238</b>	<b>\$81,003</b>	<b>\$83,849</b>	<b>\$86,775</b>	<b>\$89,775</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%	<b>3.48%</b>	3.5%	4%	4.5%	5%	5.5%
1Q2011	\$83,000	71.8%	<b>70.6%</b>	70.5%	69.3%	68.0%	66.7%	65.4%
1Q2012	\$90,900	68.7%	<b>67.4%</b>	67.4%	66.1%	64.7%	63.3%	61.9%
1Q2013	\$104,900	63.8%	<b>62.4%</b>	62.3%	60.9%	59.4%	57.8%	56.2%
1Q2014	\$119,000	59.3%	<b>57.8%</b>	57.7%	56.1%	54.4%	52.9%	51.5%
1Q2015	\$132,000	55.5%	<b>54.0%</b>	54.0%	52.6%	51.1%	49.6%	48.1%
1Q2016	\$145,000	53.3%	<b>51.9%</b>	51.8%	50.3%	48.7%	47.1%	45.5%
1Q2017	\$166,000	49.8%	<b>48.2%</b>	48.1%	46.4%	44.6%	42.7%	41.3%
1Q2018	\$184,900	47.1%	<b>45.3%</b>	45.2%	43.7%	42.3%	40.8%	39.2%
1Q2019	\$190,425	48.1%	<b>46.6%</b>	46.6%	45.1%	43.6%	42.0%	40.4%
1Q2020	\$206,999	46.7%	<b>45.2%</b>	45.1%	43.5%	41.8%	40.0%	38.2%
1Q2021	\$236,000	42.4%	<b>40.6%</b>	40.6%	38.7%	36.7%	34.7%	32.6%
<b>1Q2022</b>	<b>\$290,000</b>	<b>32.4%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>29.5%</b>	<b>28.0%</b>	<b>26.4%</b>	<b>24.8%</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 \$2,279 for the first-quartile sales price in 1Q2022, nearly three times the total monthly mortgage payment for the same home in 1Q2011.

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 3.71<sup>7</sup>, meaning a household could afford a maximum home price of 3.71 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 \$78,129 for the first-quartile sales price in 1Q2022 (Table 28). An estimated 31 percent of renters in the Dallas-

<sup>7</sup> The home price-to-income multiplier is based on a 30-year loan term, 3.48 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 35 percent DTI ratio, and property taxes and insurance of 4 percent.

Fort Worth-Arlington MSA could afford the first-quartile sales price in 1Q2022 with a 95 percent LTV ratio (Table 29), a decline of nearly 40 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>\$652</b>	\$658	\$660	\$664	\$672
1Q2012	\$90,900	<b>\$714</b>	\$721	\$723	\$727	\$736
1Q2013	\$104,900	<b>\$824</b>	\$832	\$834	\$839	\$849
1Q2014	\$119,000	<b>\$935</b>	\$944	\$946	\$952	\$963
1Q2015	\$132,000	<b>\$1,037</b>	\$1,047	\$1,050	\$1,056	\$1,069
1Q2016	\$145,000	<b>\$1,139</b>	\$1,150	\$1,153	\$1,160	\$1,174
1Q2017	\$166,000	<b>\$1,304</b>	\$1,316	\$1,320	\$1,328	\$1,344
1Q2018	\$184,900	<b>\$1,453</b>	\$1,466	\$1,471	\$1,479	\$1,497
1Q2019	\$190,425	<b>\$1,496</b>	\$1,510	\$1,514	\$1,524	\$1,542
1Q2020	\$206,999	<b>\$1,627</b>	\$1,641	\$1,646	\$1,656	\$1,676
1Q2021	\$236,000	<b>\$1,854</b>	\$1,871	\$1,877	\$1,888	\$1,911
<b>1Q2022</b>	<b>\$290,000</b>	<b>\$2,279</b>	<b>\$2,299</b>	<b>\$2,306</b>	<b>\$2,320</b>	<b>\$2,348</b>

Note: Assumes a 30-year loan term, 3.48 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>3.71</b>
96.5%	3.68
97%	3.67
98%	3.65
100%	3.60

Note: Assumes a 30-year loan term, 3.48 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**

		LTV Ratio				
Year	Home Price	95%	96.5%	97%	98%	100%
1Q2011	\$83,000	<b>\$22,361</b>	\$22,564	\$22,632	\$22,768	\$23,039
1Q2012	\$90,900	<b>\$24,489</b>	\$24,712	\$24,786	\$24,935	\$25,232
1Q2013	\$104,900	<b>\$28,261</b>	\$28,518	\$28,604	\$28,775	\$29,118
1Q2014	\$119,000	<b>\$32,060</b>	\$32,351	\$32,449	\$32,643	\$33,032
1Q2015	\$132,000	<b>\$35,562</b>	\$35,886	\$35,993	\$36,209	\$36,640
1Q2016	\$145,000	<b>\$39,065</b>	\$39,420	\$39,538	\$39,775	\$40,249
1Q2017	\$166,000	<b>\$44,722</b>	\$45,129	\$45,264	\$45,535	\$46,078
1Q2018	\$184,900	<b>\$49,814</b>	\$50,267	\$50,418	\$50,720	\$51,324
1Q2019	\$190,425	<b>\$51,303</b>	\$51,769	\$51,925	\$52,235	\$52,857
1Q2020	\$206,999	<b>\$55,768</b>	\$56,275	\$56,444	\$56,782	\$57,458
1Q2021	\$236,000	<b>\$63,581</b>	\$64,159	\$64,352	\$64,737	\$65,508
<b>1Q2022</b>	<b>\$290,000</b>	<b>\$78,129</b>	<b>\$78,840</b>	<b>\$79,076</b>	<b>\$79,550</b>	<b>\$80,497</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, 3.48 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**

		LTV Ratio				
Year	Home Price	95%	96.5%	97%	98%	100%
1Q2011	\$83,000	<b>70.6%</b>	70.3%	70.2%	70.0%	69.5%
1Q2012	\$90,900	<b>67.4%</b>	67.1%	67.0%	66.7%	66.3%
1Q2013	\$104,900	<b>62.4%</b>	62.0%	61.9%	61.7%	61.1%
1Q2014	\$119,000	<b>57.8%</b>	57.4%	57.2%	56.9%	56.4%
1Q2015	\$132,000	<b>54.0%</b>	53.7%	53.5%	53.3%	52.8%
1Q2016	\$145,000	<b>51.9%</b>	51.5%	51.4%	51.1%	50.6%
1Q2017	\$166,000	<b>48.2%</b>	47.7%	47.6%	47.3%	46.7%
1Q2018	\$184,900	<b>45.3%</b>	44.8%	44.7%	44.5%	44.0%
1Q2019	\$190,425	<b>46.6%</b>	46.2%	46.1%	45.9%	45.4%
1Q2020	\$206,999	<b>45.2%</b>	44.7%	44.6%	44.3%	43.8%
1Q2021	\$236,000	<b>40.6%</b>	40.2%	40.0%	39.7%	39.0%
<b>1Q2022</b>	<b>\$290,000</b>	<b>31.0%</b>	<b>30.6%</b>	<b>30.5%</b>	<b>30.3%</b>	<b>29.8%</b>

Note: Assumes a 30-year loan term, 3.48 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 3.71<sup>8</sup> (Table 30), meaning a household could afford a maximum home price of 3.71 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 \$78,129 for the first-quartile sales price in 1Q2022 (Table 31). An estimated 31 percent of renters in the Dallas-Fort Worth-Arlington MSA could afford the first-quartile sales price in 1Q2022 with a 35 percent DTI ratio (Table 32), a decline of nearly 40 percentage points from 1Q2011.

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

DTI Ratio	Home Price-to-Income Multiplier
20%	2.12
25%	2.65
30%	3.18
<b>35%</b>	<b>3.71</b>
40%	4.24
45%	4.77
50%	5.30

Note: Assumes a 30-year loan term, 3.48 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

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<sup>8</sup> The home price-to-income multiplier is based on a 30-year loan term, 3.48 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and property taxes and insurance of 4 percent.

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

Year	Home Price	DTI Ratio						
		20%	25%	30%	35%	40%	45%	50%
1Q2011	\$83,000	\$39,132	\$31,306	\$26,088	<b>\$22,361</b>	\$19,566	\$17,392	\$15,653
1Q2012	\$90,900	\$42,857	\$34,285	\$28,571	<b>\$24,489</b>	\$21,428	\$19,047	\$17,143
1Q2013	\$104,900	\$49,457	\$39,566	\$32,971	<b>\$28,261</b>	\$24,729	\$21,981	\$19,783
1Q2014	\$119,000	\$56,105	\$44,884	\$37,403	<b>\$32,060</b>	\$28,052	\$24,936	\$22,442
1Q2015	\$132,000	\$62,234	\$49,787	\$41,489	<b>\$35,562</b>	\$31,117	\$27,660	\$24,894
1Q2016	\$145,000	\$68,363	\$54,691	\$45,575	<b>\$39,065</b>	\$34,182	\$30,384	\$27,345
1Q2017	\$166,000	\$78,264	\$62,611	\$52,176	<b>\$44,722</b>	\$39,132	\$34,784	\$31,306
1Q2018	\$184,900	\$87,175	\$69,740	\$58,117	<b>\$49,814</b>	\$43,587	\$38,744	\$34,870
1Q2019	\$190,425	\$89,780	\$71,824	\$59,853	<b>\$51,303</b>	\$44,890	\$39,902	\$35,912
1Q2020	\$206,999	\$97,594	\$78,075	\$65,063	<b>\$55,768</b>	\$48,797	\$43,375	\$39,038
1Q2021	\$236,000	\$111,267	\$89,014	\$74,178	<b>\$63,581</b>	\$55,633	\$49,452	\$44,507
<b>1Q2022</b>	<b>\$290,000</b>	<b>\$136,726</b>	<b>\$109,381</b>	<b>\$91,151</b>	<b>\$78,129</b>	<b>\$68,363</b>	<b>\$60,767</b>	<b>\$54,691</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, 3.48 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	46.3%	56.8%	64.8%	<b>70.6%</b>	75.0%	78.3%	81.0%
1Q2012	\$90,900	42.6%	52.8%	61.3%	<b>67.4%</b>	72.2%	75.9%	78.7%
1Q2013	\$104,900	36.1%	47.3%	55.5%	<b>62.4%</b>	67.6%	71.8%	75.1%
1Q2014	\$119,000	32.2%	42.4%	50.9%	<b>57.8%</b>	63.5%	67.9%	71.6%
1Q2015	\$132,000	28.8%	38.1%	47.4%	<b>54.0%</b>	60.1%	64.9%	68.7%
1Q2016	\$145,000	26.0%	36.3%	44.7%	<b>51.9%</b>	57.5%	62.7%	66.8%
1Q2017	\$166,000	21.4%	32.5%	40.6%	<b>48.2%</b>	54.3%	59.2%	63.7%
1Q2018	\$184,900	19.6%	29.2%	38.5%	<b>45.3%</b>	52.1%	57.4%	61.6%
1Q2019	\$190,425	20.3%	29.9%	39.7%	<b>46.6%</b>	53.3%	58.7%	63.0%
1Q2020	\$206,999	18.0%	27.6%	37.4%	<b>45.2%</b>	51.3%	57.2%	61.9%
1Q2021	\$236,000	15.3%	23.7%	31.6%	<b>40.6%</b>	47.4%	52.8%	58.1%
<b>1Q2022</b>	<b>\$290,000</b>	<b>9.7%</b>	<b>16.8%</b>	<b>24.0%</b>	<b>31.0%</b>	<b>38.4%</b>	<b>45.0%</b>	<b>50.3%</b>

Note: Assumes a 30-year loan term, 3.48 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 and 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 \$2,279 for the first-quartile sales price in 1Q2022, nearly 3.5 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 3.71<sup>9</sup>, meaning a household could afford a maximum home price 3.71 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 \$78,129 for the first-quartile sales price in 1Q2022 (Table 35). An estimated 31 percent of renter-occupied households in the Dallas-Fort Worth-Arlington MSA could afford the first-quartile sales price in 1Q2022 with property taxes and insurance at 4 percent of home price (Table 36), a decline of nearly 40 percentage points from 1Q2011.

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

		Property Taxes & Insurance				
Year	Home Price	2%	3%	4%	5%	6%
1Q2011	\$83,000	\$514	\$583	<b>\$652</b>	\$721	\$791
1Q2012	\$90,900	\$563	\$639	<b>\$714</b>	\$790	\$866
1Q2013	\$104,900	\$649	\$737	<b>\$824</b>	\$912	\$999
1Q2014	\$119,000	\$737	\$836	<b>\$935</b>	\$1,034	\$1,133
1Q2015	\$132,000	\$817	\$927	<b>\$1,037</b>	\$1,147	\$1,257
1Q2016	\$145,000	\$898	\$1,019	<b>\$1,139</b>	\$1,260	\$1,381
1Q2017	\$166,000	\$1,028	\$1,166	<b>\$1,304</b>	\$1,443	\$1,581
1Q2018	\$184,900	\$1,145	\$1,299	<b>\$1,453</b>	\$1,607	\$1,761
1Q2019	\$190,425	\$1,179	\$1,338	<b>\$1,496</b>	\$1,655	\$1,814
1Q2020	\$206,999	\$1,282	\$1,454	<b>\$1,627</b>	\$1,799	\$1,972
1Q2021	\$236,000	\$1,461	\$1,658	<b>\$1,854</b>	\$2,051	\$2,248
<b>1Q2022</b>	<b>\$290,000</b>	<b>\$1,795</b>	<b>\$2,037</b>	<b>\$2,279</b>	<b>\$2,520</b>	<b>\$2,762</b>

Note: Assumes a 30-year loan term, 3.48 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

<sup>9</sup> The home price-to-income multiplier is based on a 30-year loan term, 3.48 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and 35 percent DTI ratio.

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

Property Taxes & Insurance	Home Price-to-Income Multiplier
2%	4.71
3%	4.15
<b>4%</b>	<b>3.71</b>
5%	3.36
6%	3.06

Note: Assumes a 30-year loan term, 3.48 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	\$17,618	\$19,990	<b>\$22,361</b>	\$24,733	\$27,104
1Q2012	\$90,900	\$19,295	\$21,892	<b>\$24,489</b>	\$27,087	\$29,684
1Q2013	\$104,900	\$22,267	\$25,264	<b>\$28,261</b>	\$31,258	\$34,256
1Q2014	\$119,000	\$25,260	\$28,660	<b>\$32,060</b>	\$35,460	\$38,860
1Q2015	\$132,000	\$28,019	\$31,791	<b>\$35,562</b>	\$39,334	\$43,105
1Q2016	\$145,000	\$30,779	\$34,922	<b>\$39,065</b>	\$43,208	\$47,350
1Q2017	\$166,000	\$35,237	\$39,979	<b>\$44,722</b>	\$49,465	\$54,208
1Q2018	\$184,900	\$39,248	\$44,531	<b>\$49,814</b>	\$55,097	\$60,380
1Q2019	\$190,425	\$40,421	\$45,862	<b>\$51,303</b>	\$56,743	\$62,184
1Q2020	\$206,999	\$43,939	\$49,854	<b>\$55,768</b>	\$61,682	\$67,596
1Q2021	\$236,000	\$50,095	\$56,838	<b>\$63,581</b>	\$70,324	\$77,067
<b>1Q2022</b>	<b>\$290,000</b>	<b>\$61,558</b>	<b>\$69,844</b>	<b>\$78,129</b>	<b>\$86,415</b>	<b>\$94,701</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, 3.48 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	78.0%	74.3%	<b>70.6%</b>	66.9%	63.2%
1Q2012	\$90,900	75.5%	71.5%	<b>67.4%</b>	63.5%	59.6%
1Q2013	\$104,900	71.4%	66.8%	<b>62.4%</b>	58.0%	53.6%
1Q2014	\$119,000	67.4%	62.6%	<b>57.8%</b>	53.1%	49.2%
1Q2015	\$132,000	64.4%	59.1%	<b>54.0%</b>	49.8%	45.6%
1Q2016	\$145,000	62.1%	56.5%	<b>51.9%</b>	47.3%	42.7%
1Q2017	\$166,000	58.6%	53.4%	<b>48.2%</b>	42.9%	39.1%
1Q2018	\$184,900	56.8%	51.0%	<b>45.3%</b>	41.0%	36.7%
1Q2019	\$190,425	58.1%	52.2%	<b>46.6%</b>	42.2%	37.8%
1Q2020	\$206,999	56.5%	50.1%	<b>45.2%</b>	40.2%	35.3%
1Q2021	\$236,000	52.1%	46.4%	<b>40.6%</b>	34.9%	29.9%
<b>1Q2022</b>	<b>\$290,000</b>	<b>44.3%</b>	<b>37.2%</b>	<b>31.0%</b>	<b>26.6%</b>	<b>22.1%</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, 3.48 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>10</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 homebuyers, regardless of whether a household already owns a home, repayment affordability solely involves current homeowners (i.e., only owner-occupied households).

<sup>10</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.

## 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, LTV ratio, and credit score.<sup>11</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>11</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 DTI 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 3 for the repeat homebuyer, and between 3 and 4 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 (3.39 percent in 1Q2022)<sup>12</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 (3.48 percent in 1Q2022), 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>12</sup> The source for the prevailing mortgage interest rate is CoreLogic.





TEXAS A&M UNIVERSITY

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