

Dr. Clare LoseyAssistant Research Economist

Dr. Harold D. Hunt Research Economist Reece Neathery Research Intern





Texas Housing Affordability Outlook 2Q2022

About this Report

Texas Real Estate Research Center economists continuously monitor many facets of both state and local housing markets. *Texas Housing Affordability Outlook* summarizes significant housing activity and trends as related to affordability in Texas. 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.

Dr. Clare Losey, Dr. Harold D. Hunt, and Reece Neathery

Purchase Affordability

The second quarter saw an uptick in both the median and first-quartile sales prices for Texas (Figure 1).¹ The year-over-year (YOY) growth in the state's median and first-quartile sales prices measured a robust 16.4 and 13.6 percent, respectively (Table 1). However, while still significantly higher than average YOY growth, YOY growth for 2Q2022 measured lower than that of 2Q2021. The median sales price measured \$355,000; the first-quartile sales price, \$250,000.

Meanwhile, following years of generally sluggish growth, family income increased considerably. From 2021 to 2022, median family income in Texas increased 13.6 percent (Table 2). However, as long as the rise in home prices continues to outpace the increase in income, purchase affordability, or the ability of a household to buy a home, will continue to diminish.

At the same time, mortgage interest rates ticked upward, averaging 5.27 percent in 2Q2022 (Figure 2). All other things being equal, lower (higher) mortgage interest rates translate into lower (higher) monthly mortgage payments and ease (diminish) purchase affordability. The Federal Reserve is widely anticipated to continue to raise interest rates 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 3 percentage points in the first half of 2022. For more information on the effect of mortgage interest rates on purchase affordability, 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 in Texas

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

¹ 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.



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Table 1. Median Sales Price, First-Quartile Sales Price by Quarter

| Year | Median Sales Price | YOY Change | First-Quartile Sales Price | YOY Change |
|--------|-----------------------|------------|-------------------------------|------------|
| 2Q2011 | \$142,500 | | \$90,000 | |
| 2Q2012 | \$154,000 | 8.1% | \$100,000 | 11.1% |
| 2Q2013 | \$169,900 | 10.3% | \$116,000 | 16.0% |
| 2Q2014 | \$178,000 | 4.8% | \$125,000 | 7.8% |
| 2Q2015 | \$193,000 | 8.4% | \$135,000 | 8.0% |
| 2Q2016 | \$205,000 | 6.2% | \$145,000 | 7.4% |
| 2Q2017 | \$220,000 | 7.3% | \$155,000 | 6.9% |
| 2Q2018 | \$230,000 | 4.5% | \$164,800 | 6.3% |
| 2Q2019 | \$237,500 | 3.3% | \$174,900 | 6.1% |
| 2Q2020 | \$245,000 | 3.2% | \$180,000 | 2.9% |
| 2Q2021 | \$305,000 | 24.5% | \$220,000 | 22.2% |
| 2Q2022 | \$355,000 | 16.4% | \$250,000 | 13.6% |

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% |

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

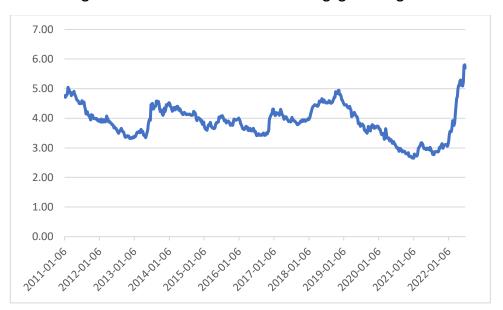


Figure 2. U.S. 30-Year Fixed Rate Mortgage Average

Sources: Federal Reserve Economic Data and Freddie Mac

Repeat Homebuyer

Purchase affordability declined YOY as the gap between median sales price and family income continued to rise. For households earning the median family income for Texas in 2022 (\$85,300), the median sales price for 2Q2022 was not affordable unless the home price-to-income multiplier exceeded 4 (Table 3). Only 26.3 percent of homes sold during that quarter 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 upward of \$118,000 annually to be able to afford the median sales price (\$355,000) 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 Purch | nasing Power | | | |
|------------|------------------|-----------|-----------|-----------|------------|--------------|-----------|-----------|-----------|
| | Family Income | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 |
| Median | | | | | | | | | |
| Family | \$85,300 | \$170,600 | \$213,250 | \$255,900 | \$298,550 | \$341,200 | \$383,850 | \$426,500 | \$469,150 |
| Income | | | | | | | | | |
| | \$90,000 | \$180,000 | \$225,000 | \$270,000 | \$315,000 | \$360,000 | \$405,000 | \$450,000 | \$495,000 |
| | \$95,000 | \$190,000 | \$237,500 | \$285,000 | \$332,500 | \$380,000 | \$427,500 | \$475,000 | \$522,500 |
| | \$100,000 | \$200,000 | \$250,000 | \$300,000 | \$350,000 | \$400,000 | \$450,000 | \$500,000 | \$550,000 |
| Workforce | | | | | | | | | |
| Households | \$102,400 | \$204,800 | \$256,000 | \$307,200 | \$358,400 | \$409,600 | \$460,800 | \$512,000 | \$563,200 |
| (120%) | | | | | | | | | |
| | \$105,000 | \$210,000 | \$262,500 | \$315,000 | \$367,500 | \$420,000 | \$472,500 | \$525,000 | \$577,500 |
| | \$110,000 | \$220,000 | \$275,000 | \$330,000 | \$385,000 | \$440,000 | \$495,000 | \$550,000 | \$605,000 |
| | \$115,000 | \$230,000 | \$287,500 | \$345,000 | \$402,500 | \$460,000 | \$517,500 | \$575,000 | \$632,500 |
| | \$120,000 | \$240,000 | \$300,000 | \$360,000 | \$420,000 | \$480,000 | \$540,000 | \$600,000 | \$660,000 |
| | \$125,000 | \$250,000 | \$312,500 | \$375,000 | \$437,500 | \$500,000 | \$562,500 | \$625,000 | \$687,500 |
| | \$130,000 | \$260,000 | \$325,000 | \$390,000 | \$455,000 | \$520,000 | \$585,000 | \$650,000 | \$715,000 |
| | \$135,000 | \$270,000 | \$337,500 | \$405,000 | \$472,500 | \$540,000 | \$607,500 | \$675,000 | \$742,500 |
| | \$140,000 | \$280,000 | \$350,000 | \$420,000 | \$490,000 | \$560,000 | \$630,000 | \$700,000 | \$770,000 |
| | \$145,000 | \$290,000 | \$362,500 | \$435,000 | \$507,500 | \$580,000 | \$652,500 | \$725,000 | \$797,500 |
| | \$150,000 | \$300,000 | \$375,000 | \$450,000 | \$525,000 | \$600,000 | \$675,000 | \$750,000 | \$825,000 |
| | \$155,000 | \$310,000 | \$387,500 | \$465,000 | \$542,500 | \$620,000 | \$697,500 | \$775,000 | \$852,500 |

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

Table 4. Percentage of Homes Sold in 4Q2021 Affordable by Family Income and Home Price-to-Income Multiplier

| | | | | Н | ome Purch | asing Pow | er | | |
|-----------------------------------|------------------|-------|-------|-------|-----------|-----------|-------|-------|-------|
| | Family Income | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 |
| Median Family Income | \$85,300 | 9.6% | 16.4% | 26.3% | 36.2% | 46.9% | 55.6% | 63.5% | 69.4% |
| | \$90,000 | 11.2% | 19.1% | 29.9% | 40.8% | 51.3% | 60.0% | 67.4% | 72.6% |
| | \$95,000 | 12.8% | 21.6% | 33.6% | 44.8% | 55.3% | 63.6% | 70.5% | 75.2% |
| | \$100,000 | 14.6% | 25.2% | 37.5% | 49.2% | 59.3% | 67.4% | 73.4% | 78.1% |
| Workforce Households (120%) | \$102,400 | 14.9% | 26.3% | 38.7% | 50.5% | 60.3% | 68.7% | 74.4% | 78.9% |
| | \$105,000 | 16.2% | 27.8% | 40.8% | 52.5% | 62.5% | 69.9% | 75.7% | 80.1% |
| | \$110,000 | 18.1% | 31.2% | 44.6% | 56.3% | 65.7% | 72.6% | 78.1% | 82.0% |
| | \$115,000 | 20.3% | 33.9% | 47.7% | 59.5% | 68.6% | 74.8% | 80.0% | 83.7% |
| | \$120,000 | 22.6% | 37.5% | 51.3% | 62.5% | 71.1% | 77.1% | 81.8% | 85.4% |
| | \$125,000 | 25.2% | 40.0% | 54.4% | 65.1% | 73.4% | 78.9% | 83.3% | 86.6% |
| | \$130,000 | 27.5% | 43.3% | 57.2% | 67.9% | 75.2% | 80.7% | 84.9% | 87.9% |
| | \$135,000 | 29.9% | 45.9% | 60.0% | 69.9% | 77.1% | 82.1% | 86.2% | 89.0% |
| | \$140,000 | 32.4% | 49.2% | 62.5% | 72.1% | 78.8% | 83.6% | 87.4% | 90.0% |
| | \$145,000 | 34.9% | 51.6% | 64.9% | 73.9% | 80.3% | 85.0% | 88.4% | 90.7% |
| | \$150,000 | 37.5% | 54.4% | 67.4% | 75.7% | 81.8% | 86.2% | 89.4% | 91.7% |
| | \$155,000 | 39.7% | 56.5% | 69.2% | 77.2% | 83.0% | 87.0% | 90.2% | 92.3% |

Mortgage Interest Rate

Holding home price constant, the total monthly mortgage payment increases as the mortgage interest rate increases (Table 5). At a 4.28 percent rate, this payment was \$2,585 for the median-priced home in 2Q2022, more than twice the total monthly mortgage payment for the median-priced home in 2Q2011.

Table 6 shows the home price-to-income multiplier by mortgage interest rate. A 4.28 percent interest rate translates into a home price-to-income multiplier of 3.43², meaning a household could afford a maximum home price of 3.43 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 4.28 percent mortgage interest rate was \$103,417 for the median sales price in 2Q2022 (Table 7). An estimated 42.1 percent of Texas homeowners could afford the median sales price with a 4.28 percent interest rate (Table 8), a decline of nearly 28 percentage points from 2Q2011.

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

| | | | Mortgage Interest Rate | | | | | | | |
|--------|------------|---------|------------------------|---------|---------|---------|---------|---------|--|--|
| Year | Home Price | 3% | 4% | 4.28% | 4.5% | 5% | 5.5% | 6% | | |
| 2Q2011 | \$142,500 | \$956 | \$1,019 | \$1,038 | \$1,053 | \$1,087 | \$1,122 | \$1,158 | | |
| 2Q2012 | \$154,000 | \$1,033 | \$1,102 | \$1,122 | \$1,138 | \$1,175 | \$1,213 | \$1,252 | | |
| 2Q2013 | \$169,900 | \$1,139 | \$1,215 | \$1,237 | \$1,255 | \$1,296 | \$1,338 | \$1,381 | | |
| 2Q2014 | \$178,000 | \$1,194 | \$1,273 | \$1,296 | \$1,315 | \$1,358 | \$1,402 | \$1,447 | | |
| 2Q2015 | \$193,000 | \$1,294 | \$1,380 | \$1,406 | \$1,426 | \$1,472 | \$1,520 | \$1,569 | | |
| 2Q2016 | \$205,000 | \$1,375 | \$1,466 | \$1,493 | \$1,514 | \$1,564 | \$1,615 | \$1,667 | | |
| 2Q2017 | \$220,000 | \$1,475 | \$1,574 | \$1,602 | \$1,625 | \$1,678 | \$1,733 | \$1,789 | | |
| 2Q2018 | \$230,000 | \$1,542 | \$1,645 | \$1,675 | \$1,699 | \$1,754 | \$1,811 | \$1,870 | | |
| 2Q2019 | \$237,500 | \$1,593 | \$1,699 | \$1,730 | \$1,754 | \$1,812 | \$1,870 | \$1,931 | | |
| 2Q2020 | \$245,000 | \$1,643 | \$1,752 | \$1,784 | \$1,810 | \$1,869 | \$1,930 | \$1,992 | | |
| 2Q2021 | \$305,000 | \$2,045 | \$2,182 | \$2,221 | \$2,253 | \$2,327 | \$2,402 | \$2,480 | | |
| 2Q2022 | \$355,000 | \$2,381 | \$2,539 | \$2,585 | \$2,622 | \$2,708 | \$2,796 | \$2,886 | | |

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

² 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.



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

| | Home Price- |
|---------------|-------------|
| Mortgage | to-Income |
| Interest Rate | Multiplier |
| 3% | 3.73 |
| 4% | 3.50 |
| 4.28% | 3.43 |
| 4.5% | 3.38 |
| 5% | 3.28 |
| 5.5% | 3.17 |
| 6% | 3.08 |

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

| | | | | Mor | tgage Interes | st Rate | | |
|--------|---------------|----------|-----------|-----------|---------------|-----------|-----------|-----------|
| Year | Home Price | 3% | 4% | 4.28% | 4.5% | 5% | 5.5% | 6% |
| 2Q2011 | \$142,500 | \$38,225 | \$40,770 | \$41,513 | \$42,105 | \$43,479 | \$44,891 | \$46,340 |
| 2Q2012 | \$154,000 | \$41,310 | \$44,060 | \$44,863 | \$45,503 | \$46,988 | \$48,514 | \$50,079 |
| 2Q2013 | \$169,900 | \$45,575 | \$48,609 | \$49,495 | \$50,201 | \$51,839 | \$53,523 | \$55,250 |
| 2Q2014 | \$178,000 | \$47,748 | \$50,927 | \$51,854 | \$52,594 | \$54,311 | \$56,075 | \$57,884 |
| 2Q2015 | \$193,000 | \$51,772 | \$55,219 | \$56,224 | \$57,026 | \$58,887 | \$60,800 | \$62,762 |
| 2Q2016 | \$205,000 | \$54,991 | \$58,652 | \$59,720 | \$60,572 | \$62,549 | \$64,580 | \$66,664 |
| 2Q2017 | \$220,000 | \$59,014 | \$62,943 | \$64,090 | \$65,004 | \$67,126 | \$69,306 | \$71,542 |
| 2Q2018 | \$230,000 | \$61,697 | \$65,804 | \$67,003 | \$67,959 | \$70,177 | \$72,456 | \$74,794 |
| 2Q2019 | \$237,500 | \$63,709 | \$67,950 | \$69,188 | \$70,175 | \$72,465 | \$74,819 | \$77,233 |
| 2Q2020 | \$245,000 | \$65,720 | \$70,096 | \$71,373 | \$72,391 | \$74,753 | \$77,181 | \$79,671 |
| 2Q2021 | \$305,000 | \$81,815 | \$87,262 | \$88,852 | \$90,119 | \$93,060 | \$96,083 | \$99,183 |
| 2Q2022 | \$355,000 | \$95,228 | \$101,568 | \$103,417 | \$104,893 | \$108,316 | \$111,834 | \$115,442 |

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.

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

| | | | Mortgage Interest Rate | | | | | | | |
|---------|------------|-------|------------------------|-------|-------|-------|-------|-------|--|--|
| Year | Home Price | 3% | 4% | 4.28% | 4.5% | 5% | 5.5% | 6% | | |
| 2Q2011 | \$142,500 | 72.7% | 70.6% | 69.9% | 69.4% | 68.3% | 67.1% | 65.8% | | |
| 2Q2012 | \$154,000 | 70.4% | 68.1% | 67.4% | 66.8% | 65.6% | 64.3% | 63.0% | | |
| 2Q2013 | \$169,900 | 67.2% | 64.6% | 63.9% | 63.3% | 62.1% | 60.8% | 59.5% | | |
| 2Q2014 | \$178,000 | 65.8% | 63.2% | 62.6% | 62.0% | 60.7% | 59.4% | 58.1% | | |
| 2Q2015 | \$193,000 | 63.0% | 60.5% | 59.8% | 59.2% | 57.8% | 56.4% | 55.0% | | |
| 2Q2016 | \$205,000 | 61.9% | 59.3% | 58.5% | 57.9% | 56.4% | 54.9% | 53.4% | | |
| 2Q2017 | \$220,000 | 60.5% | 57.7% | 56.9% | 56.3% | 54.7% | 53.2% | 51.6% | | |
| 2Q2018 | \$230,000 | 60.3% | 57.4% | 56.6% | 55.9% | 54.4% | 52.8% | 51.2% | | |
| 2Q2019 | \$237,500 | 60.5% | 57.7% | 56.8% | 56.1% | 54.6% | 53.0% | 51.6% | | |
| 2Q2020 | \$245,000 | 60.4% | 57.5% | 56.6% | 55.9% | 54.4% | 53.0% | 51.6% | | |
| 2Q2021* | \$305,000 | 52.1% | 49.1% | 48.2% | 47.5% | 45.8% | 44.2% | 42.4% | | |
| 2Q2022* | \$355,000 | 46.1% | 42.9% | 42.1% | 41.5% | 40.1% | 38.7% | 37.2% | | |

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 \$2,585 for the median sales price in 2Q2022, more than twice the total monthly mortgage payment for the median-priced home in 2Q2011.

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 3.43³, meaning a household could afford a maximum home price of 3.43 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 \$103,417 for the median sales price in 2Q2022 (Table 11). An estimated 42.1 percent of Texas homeowners

³ The home price-to-income multiplier is based on a 30-year loan term, 4.28 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 LTV ratio of more than 80 percent.



^{*}Represents estimates using historical ACS data.

could afford the median sales price with an 80 percent LTV ratio (Table 12), a decline of nearly 28 percentage points from 2Q2011.

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

| | | LTV Ratio | | | | | |
|--------|------------|-----------|---------|---------|---------|---------|--|
| Year | Home Price | 80% | 85% | 90% | 95% | 100% | |
| 2Q2011 | \$142,500 | \$1,038 | \$1,109 | \$1,146 | \$1,184 | \$1,221 | |
| 2Q2012 | \$154,000 | \$1,122 | \$1,199 | \$1,239 | \$1,279 | \$1,319 | |
| 2Q2013 | \$169,900 | \$1,237 | \$1,322 | \$1,367 | \$1,411 | \$1,456 | |
| 2Q2014 | \$178,000 | \$1,296 | \$1,385 | \$1,432 | \$1,478 | \$1,525 | |
| 2Q2015 | \$193,000 | \$1,406 | \$1,502 | \$1,553 | \$1,603 | \$1,654 | |
| 2Q2016 | \$205,000 | \$1,493 | \$1,595 | \$1,649 | \$1,703 | \$1,756 | |
| 2Q2017 | \$220,000 | \$1,602 | \$1,712 | \$1,770 | \$1,827 | \$1,885 | |
| 2Q2018 | \$230,000 | \$1,675 | \$1,790 | \$1,850 | \$1,910 | \$1,971 | |
| 2Q2019 | \$237,500 | \$1,730 | \$1,848 | \$1,911 | \$1,973 | \$2,035 | |
| 2Q2020 | \$245,000 | \$1,784 | \$1,907 | \$1,971 | \$2,035 | \$2,099 | |
| 2Q2021 | \$305,000 | \$2,221 | \$2,374 | \$2,454 | \$2,533 | \$2,613 | |
| 2Q2022 | \$355,000 | \$2,585 | \$2,763 | \$2,856 | \$2,949 | \$3,042 | |

Note: Assumes a 30-year loan term, 4.28 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 more than 80 percent.

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

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

| | Home Price- | | |
|-----------|-------------|--|--|
| | to-Income | | |
| LTV Ratio | Multiplier | | |
| 80% | 3.43 | | |
| 85% | 3.21 | | |
| 90% | 3.11 | | |
| 95% | 3.01 | | |
| 100% | 2.92 | | |

Note: Assumes a 30-year loan term, 4.28 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 more than 80 percent.

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

| | | | | LTV Ratio | | |
|--------|------------|-----------|-----------|-----------|-----------|-----------|
| Year | Home Price | 80% | 85% | 90% | 95% | 100% |
| 2Q2011 | \$142,500 | \$41,513 | \$44,361 | \$45,853 | \$47,345 | \$48,837 |
| 2Q2012 | \$154,000 | \$44,863 | \$47,942 | \$49,554 | \$51,166 | \$52,778 |
| 2Q2013 | \$169,900 | \$49,495 | \$52,891 | \$54,670 | \$56,449 | \$58,227 |
| 2Q2014 | \$178,000 | \$51,854 | \$55,413 | \$57,276 | \$59,140 | \$61,003 |
| 2Q2015 | \$193,000 | \$56,224 | \$60,083 | \$62,103 | \$64,124 | \$66,144 |
| 2Q2016 | \$205,000 | \$59,720 | \$63,818 | \$65,964 | \$68,111 | \$70,257 |
| 2Q2017 | \$220,000 | \$64,090 | \$68,488 | \$70,791 | \$73,094 | \$75,398 |
| 2Q2018 | \$230,000 | \$67,003 | \$71,601 | \$74,009 | \$76,417 | \$78,825 |
| 2Q2019 | \$237,500 | \$69,188 | \$73,936 | \$76,422 | \$78,909 | \$81,395 |
| 2Q2020 | \$245,000 | \$71,373 | \$76,271 | \$78,836 | \$81,401 | \$83,965 |
| 2Q2021 | \$305,000 | \$88,852 | \$94,949 | \$98,142 | \$101,335 | \$104,528 |
| 2Q2022 | \$355,000 | \$103,417 | \$110,515 | \$114,231 | \$117,948 | \$121,664 |

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, 4.28 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 more than 80 percent

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

| | | Loan-to-Value Ratio | | | | | | |
|---------|------------|---------------------|-------|-------|-------|-------|--|--|
| Year | Home Price | 80% | 85% | 90% | 95% | 100% | | |
| 2Q2011 | \$142,500 | 69.9% | 67.5% | 66.2% | 65.0% | 63.7% | | |
| 2Q2012 | \$154,000 | 67.4% | 64.8% | 63.4% | 62.2% | 60.9% | | |
| 2Q2013 | \$169,900 | 63.9% | 61.3% | 59.9% | 58.6% | 57.3% | | |
| 2Q2014 | \$178,000 | 62.6% | 59.9% | 58.5% | 57.1% | 55.8% | | |
| 2Q2015 | \$193,000 | 59.8% | 56.9% | 55.4% | 54.0% | 52.5% | | |
| 2Q2016 | \$205,000 | 58.5% | 55.5% | 53.9% | 52.4% | 50.8% | | |
| 2Q2017 | \$220,000 | 56.9% | 53.8% | 52.1% | 50.5% | 48.9% | | |
| 2Q2018 | \$230,000 | 56.6% | 53.4% | 51.7% | 50.2% | 48.9% | | |
| 2Q2019 | \$237,500 | 56.8% | 53.6% | 52.1% | 50.7% | 49.3% | | |
| 2Q2020 | \$245,000 | 56.6% | 53.5% | 52.1% | 50.7% | 49.2% | | |
| 2Q2021* | \$305,000 | 48.2% | 44.8% | 43.0% | 41.5% | 40.2% | | |
| 2Q2022* | \$355,000 | 42.1% | 39.2% | 37.7% | 36.2% | 34.6% | | |

Note: Assumes a 30-year loan term, 4.28 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 more than 80 percent. 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



^{*}Represents estimates using historical ACS data.

DTI Ratio

A 30 percent DTI ratio translates into a home price-to-income multiplier of 3.43⁴ (Table 13), meaning a household could afford a maximum home price of 3.43 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 \$103,417 for the median sales price in 2Q2022 (Table 14). An estimated 42.1 percent of current homeowners in Texas could afford the median sales price with a 30 percent DTI ratio (Table 15), a decline of nearly 28 percentage points from 1Q2011.

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

| | Home Price- |
|-----------|-------------|
| | to-Income |
| DTI Ratio | Multiplier |
| 20% | 2.29 |
| 25% | 2.86 |
| 30% | 3.43 |
| 35% | 4.00 |
| 40% | 4.58 |
| 45% | 5.15 |
| 50% | 5.72 |

Note: Assumes a 30-year loan term, 4.28 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

⁴ The home price-to-income multiplier is based on a 30-year loan term, 4.28 percent mortgage interest rate, 80 percent LTV ratio, and property taxes and insurance of 4 percent.



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

| | | | | | DTI Ratio | | | |
|--------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|
| | Home | | | | | | | |
| Year | Price | 20% | 25% | 30% | 35% | 40% | 45% | 50% |
| 2Q2011 | \$142,500 | \$62,269 | \$49,815 | \$41,513 | \$35,582 | \$31,134 | \$27,675 | \$24,908 |
| 2Q2012 | \$154,000 | \$67,294 | \$53,835 | \$44,863 | \$38,454 | \$33,647 | \$29,909 | \$26,918 |
| 2Q2013 | \$169,900 | \$74,242 | \$59,394 | \$49,495 | \$42,424 | \$37,121 | \$32,996 | \$29,697 |
| 2Q2014 | \$178,000 | \$77,782 | \$62,225 | \$51,854 | \$44,447 | \$38,891 | \$34,570 | \$31,113 |
| 2Q2015 | \$193,000 | \$84,336 | \$67,469 | \$56,224 | \$48,192 | \$42,168 | \$37,483 | \$33,734 |
| 2Q2016 | \$205,000 | \$89,580 | \$71,664 | \$59,720 | \$51,188 | \$44,790 | \$39,813 | \$35,832 |
| 2Q2017 | \$220,000 | \$96,134 | \$76,908 | \$64,090 | \$54,934 | \$48,067 | \$42,726 | \$38,454 |
| 2Q2018 | \$230,000 | \$100,504 | \$80,403 | \$67,003 | \$57,431 | \$50,252 | \$44,669 | \$40,202 |
| 2Q2019 | \$237,500 | \$103,782 | \$83,025 | \$69,188 | \$59,304 | \$51,891 | \$46,125 | \$41,513 |
| 2Q2020 | \$245,000 | \$107,059 | \$85,647 | \$71,373 | \$61,176 | \$53,529 | \$47,582 | \$42,824 |
| 2Q2021 | \$305,000 | \$133,277 | \$106,622 | \$88,852 | \$76,158 | \$66,639 | \$59,234 | \$53,311 |
| 2Q2022 | \$355,000 | \$155,126 | \$124,101 | \$103,417 | \$88,643 | \$77,563 | \$68,945 | \$62,050 |

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, 4.28 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

| | | | | | DTI Ratio | | | |
|---------|------------|-------|-------|-------|-----------|-------|-------|-------|
| Year | Home Price | 20% | 25% | 30% | 35% | 40% | 45% | 50% |
| 2Q2011 | \$142,500 | 53.2% | 62.9% | 69.9% | 75.0% | 78.9% | 81.9% | 84.4% |
| 2Q2012 | \$154,000 | 49.9% | 60.1% | 67.4% | 72.8% | 76.9% | 80.1% | 82.7% |
| 2Q2013 | \$169,900 | 45.2% | 56.4% | 63.9% | 69.8% | 74.2% | 77.7% | 80.5% |
| 2Q2014 | \$178,000 | 43.8% | 54.8% | 62.6% | 68.5% | 73.0% | 76.6% | 79.5% |
| 2Q2015 | \$193,000 | 40.8% | 51.5% | 59.8% | 65.8% | 70.7% | 74.5% | 77.6% |
| 2Q2016 | \$205,000 | 39.2% | 49.8% | 58.5% | 64.7% | 69.7% | 73.7% | 76.8% |
| 2Q2017 | \$220,000 | 37.4% | 48.0% | 56.9% | 63.5% | 68.5% | 72.6% | 75.8% |
| 2Q2018 | \$230,000 | 37.0% | 48.0% | 56.6% | 63.3% | 68.3% | 72.3% | 75.6% |
| 2Q2019 | \$237,500 | 37.5% | 48.4% | 56.8% | 63.5% | 68.6% | 72.6% | 75.8% |
| 2Q2020 | \$245,000 | 37.6% | 48.3% | 56.6% | 63.4% | 68.5% | 72.5% | 75.8% |
| 2Q2021* | \$305,000 | 28.7% | 39.3% | 48.2% | 55.2% | 61.3% | 66.1% | 69.9% |
| 2Q2022* | \$355,000 | 22.9% | 33.6% | 42.1% | 49.8% | 56.0% | 61.2% | 65.6% |

Note: Assumes a 30-year loan term, 4.28 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



^{*}Represents estimates using historical ACS data.

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 total cost of property taxes and insurance is 4 percent of the home price, the monthly mortgage payment was \$2,585 for the median sales price in 2Q2022, more than twice the total monthly mortgage payment for the median-priced home in 2Q2011.

Table 17 shows the home price-to-income multiplier⁵ by the costs of property taxes and insurance. At a 4 percent property tax and insurance rate, a household could afford a maximum home price of 3.43 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 \$103,417 for the median sales price in 2Q2022 (Table 18). An estimated 42.1 percent of current homeowners in Texas could afford the median sales price with property taxes and insurance at 4 percent of home price (Table 19), a decline of nearly 28 percentage points from 2Q2011.

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

| | | Property Taxes & Insurance | | | | | | |
|--------|------------|----------------------------|---------|---------|---------|---------|--|--|
| Year | Home Price | 2% | 3% | 4% | 5% | 6% | | |
| 2Q2011 | \$142,500 | \$800 | \$919 | \$1,038 | \$1,157 | \$1,275 | | |
| 2Q2012 | \$154,000 | \$865 | \$993 | \$1,122 | \$1,250 | \$1,378 | | |
| 2Q2013 | \$169,900 | \$954 | \$1,096 | \$1,237 | \$1,379 | \$1,521 | | |
| 2Q2014 | \$178,000 | \$1,000 | \$1,148 | \$1,296 | \$1,445 | \$1,593 | | |
| 2Q2015 | \$193,000 | \$1,084 | \$1,245 | \$1,406 | \$1,566 | \$1,727 | | |
| 2Q2016 | \$205,000 | \$1,151 | \$1,322 | \$1,493 | \$1,664 | \$1,835 | | |
| 2Q2017 | \$220,000 | \$1,236 | \$1,419 | \$1,602 | \$1,786 | \$1,969 | | |
| 2Q2018 | \$230,000 | \$1,292 | \$1,483 | \$1,675 | \$1,867 | \$2,058 | | |
| 2Q2019 | \$237,500 | \$1,334 | \$1,532 | \$1,730 | \$1,928 | \$2,126 | | |
| 2Q2020 | \$245,000 | \$1,376 | \$1,580 | \$1,784 | \$1,988 | \$2,193 | | |
| 2Q2021 | \$305,000 | \$1,713 | \$1,967 | \$2,221 | \$2,475 | \$2,730 | | |
| 2Q2022 | \$355,000 | \$1,994 | \$2,290 | \$2,585 | \$2,881 | \$3,177 | | |

Note: Assumes a 30-year loan term, 4.28 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio.

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

⁵ The home price-to-income multiplier is based on a 30-year loan term, 4.28 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio.



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

| Property | Home Price- |
|-----------|-------------|
| Taxes and | to-Income |
| Insurance | Multiplier |
| 2% | 4.45 |
| 3% | 3.88 |
| 4% | 3.43 |
| 5% | 3.08 |
| 6% | 2.79 |

Note: Assumes a 30-year loan term, 4.28 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

| | | | Propei | rty Taxes & Ins | urance | |
|--------|------------|----------|----------|-----------------|-------------------|-----------|
| Year | Home Price | 2% | 3% | 4% | 5% | 6% |
| 2Q2011 | \$142,500 | \$32,013 | \$36,763 | \$41,513 | \$46,263 | \$51,013 |
| 2Q2012 | \$154,000 | \$34,596 | \$39,729 | \$44,863 | \$49,996 | \$55,129 |
| 2Q2013 | \$169,900 | \$38,168 | \$43,831 | \$49,495 | \$55,158 | \$60,821 |
| 2Q2014 | \$178,000 | \$39,988 | \$45,921 | \$51,854 | \$57 <i>,</i> 788 | \$63,721 |
| 2Q2015 | \$193,000 | \$43,357 | \$49,791 | \$56,224 | \$62,657 | \$69,091 |
| 2Q2016 | \$205,000 | \$46,053 | \$52,887 | \$59,720 | \$66,553 | \$73,387 |
| 2Q2017 | \$220,000 | \$49,423 | \$56,756 | \$64,090 | \$71,423 | \$78,756 |
| 2Q2018 | \$230,000 | \$51,669 | \$59,336 | \$67,003 | \$74,669 | \$82,336 |
| 2Q2019 | \$237,500 | \$53,354 | \$61,271 | \$69,188 | \$77,104 | \$85,021 |
| 2Q2020 | \$245,000 | \$55,039 | \$63,206 | \$71,373 | \$79,539 | \$87,706 |
| 2Q2021 | \$305,000 | \$68,518 | \$78,685 | \$88,852 | \$99,018 | \$109,185 |
| 2Q2022 | \$355,000 | \$79,751 | \$91,584 | \$103,417 | \$115,251 | \$127,084 |

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, 4.28 percent mortgage interest rate, 80 percent LTV ratio, and 30 percent DTI ratio.

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

| | | Property Taxes & Insurance | | | | | | |
|---------|------------|----------------------------|-------|-------|-------|-------|--|--|
| Year | Home Price | 2% | 3% | 4% | 5% | 6% | | |
| 2Q2011 | \$142,500 | 78.1% | 74.0% | 69.9% | 65.9% | 61.9% | | |
| 2Q2012 | \$154,000 | 76.0% | 71.7% | 67.4% | 63.1% | 59.2% | | |
| 2Q2013 | \$169,900 | 73.3% | 68.6% | 63.9% | 59.6% | 55.3% | | |
| 2Q2014 | \$178,000 | 72.1% | 67.3% | 62.6% | 58.1% | 53.7% | | |
| 2Q2015 | \$193,000 | 69.7% | 64.5% | 59.8% | 55.0% | 50.3% | | |
| 2Q2016 | \$205,000 | 68.7% | 63.5% | 58.5% | 53.5% | 48.5% | | |
| 2Q2017 | \$220,000 | 67.4% | 62.2% | 56.9% | 51.7% | 47.0% | | |
| 2Q2018 | \$230,000 | 67.3% | 61.9% | 56.6% | 51.2% | 47.0% | | |
| 2Q2019 | \$237,500 | 67.6% | 62.2% | 56.8% | 51.7% | 47.3% | | |
| 2Q2020 | \$245,000 | 67.5% | 62.1% | 56.6% | 51.7% | 47.2% | | |
| 2Q2021* | \$305,000 | 60.1% | 53.8% | 48.2% | 42.5% | 38.3% | | |
| 2Q2022* | \$355,000 | 54.7% | 48.2% | 42.1% | 37.3% | 32.4% | | |

Note: Assumes a 30-year loan term, 4.28 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 in 2Q2022 for first-time Texas homebuyerss, particularly among the lowest-income cohorts. Combined with the rise in mortgage interest rates, the YOY 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 \$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. That range increases to between \$101,000 and \$168,000 with a home price-to-income multiplier of 4.

Depending on the home price-to-income multiplier, only households earning at least \$50,000 annually could afford the first-quartile sales price in 2Q2022. Homeownership is largely not feasible to households earning no more than 50 percent of 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

^{*}Represents estimates using historical ACS data.

14.6 percent of homes for sale in Texas were affordable to households earning no more than 80 percent of area median income in 2Q2022 (Table 21).

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

| | | | | Hoi | me Price-to-Ir | ncome Multip | lier | | |
|--|------------------|-----------|-----------|-----------|----------------|--------------|-----------|-----------|-----------|
| | Family Income | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 |
| | \$25,000 | \$50,000 | \$62,500 | \$75,000 | \$87,500 | \$100,000 | \$112,500 | \$125,000 | \$137,500 |
| Extremely Low-Income (30%) | \$25,250 | \$50,500 | \$63,125 | \$75,750 | \$88,375 | \$101,000 | \$113,625 | \$126,250 | \$138,875 |
| | \$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 |
| Very Low- Income Households (50%) | \$42,000 | \$84,000 | \$105,000 | \$126,000 | \$147,000 | \$168,000 | \$189,000 | \$210,000 | \$231,000 |
| | \$45,000 | \$90,000 | \$112,500 | \$135,000 | \$157,500 | \$180,000 | \$202,500 | \$225,000 | \$247,500 |
| | \$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 | \$302,500 |
| | \$60,000 | \$120,000 | \$150,000 | \$180,000 | \$210,000 | \$240,000 | \$270,000 | \$300,000 | \$330,000 |
| | \$65,000 | \$130,000 | \$162,500 | \$195,000 | \$227,500 | \$260,000 | \$292,500 | \$325,000 | \$357,500 |
| Low-Income Households (80%) | \$67,250 | \$134,500 | \$168,125 | \$201,750 | \$235,375 | \$269,000 | \$302,625 | \$336,250 | \$369,875 |
| | \$70,000 | \$140,000 | \$175,000 | \$210,000 | \$245,000 | \$280,000 | \$315,000 | \$350,000 | \$385,000 |
| | \$75,000 | \$150,000 | \$187,500 | \$225,000 | \$262,500 | \$300,000 | \$337,500 | \$375,000 | \$412,500 |
| | \$80,000 | \$160,000 | \$200,000 | \$240,000 | \$280,000 | \$320,000 | \$360,000 | \$400,000 | \$440,000 |
| | \$85,000 | \$170,000 | \$212,500 | \$255,000 | \$297,500 | \$340,000 | \$382,500 | \$425,000 | \$467,500 |

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

Table 21. Percentage of Homes Sold in 4Q2021 Affordable by Family Income and Home Price-to-Income Multiplier

| | | | | Home | Price-to-Ir | ncome Mul | tiplier | | |
|--|------------------|------|-------|-------|-------------|-----------|---------|-------|-------|
| | Family Income | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 |
| | \$25,000 | 0.6% | 1.0% | 1.5% | 2.1% | 2.8% | 3.4% | 4.4% | 5.4% |
| Extremely | | | | | | | | | |
| Low-Income | \$25,250 | 0.6% | 1.0% | 1.5% | 2.1% | 2.8% | 3.4% | 4.4% | 5.5% |
| (30%) | | | | | | | | | |
| | \$30,000 | 0.9% | 1.5% | 2.3% | 3.0% | 4.0% | 5.3% | 7.0% | 8.9% |
| | \$35,000 | 1.3% | 2.1% | 3.0% | 4.1% | 5.8% | 7.7% | 10.4% | 13.0% |
| | \$40,000 | 1.7% | 2.8% | 4.0% | 5.8% | 8.3% | 11.2% | 14.6% | 18.1% |
| Very Low- Income Households (50%) | \$42,000 | 1.8% | 3.0% | 4.4% | 6.4% | 9.2% | 12.3% | 16.2% | 20.4% |
| | \$45,000 | 2.3% | 3.4% | 5.3% | 7.7% | 11.2% | 14.7% | 19.1% | 24.0% |
| | \$50,000 | 2.8% | 4.4% | 7.0% | 10.4% | 14.6% | 19.1% | 25.2% | 31.2% |
| | \$55,000 | 3.3% | 5.4% | 8.9% | 13.0% | 18.1% | 24.0% | 31.2% | 37.7% |
| | \$60,000 | 4.0% | 7.0% | 11.2% | 16.2% | 22.6% | 29.9% | 37.5% | 44.6% |
| | \$65,000 | 4.9% | 8.4% | 13.5% | 19.4% | 27.5% | 35.1% | 43.3% | 50.4% |
| Low-Income Households (80%) | \$67,250 | 5.1% | 9.2% | 14.6% | 21.3% | 29.2% | 37.7% | 45.8% | 52.7% |
| | \$70,000 | 5.8% | 10.4% | 16.2% | 23.7% | 32.4% | 40.8% | 49.2% | 56.3% |
| | \$75,000 | 7.0% | 12.1% | 19.1% | 27.8% | 37.5% | 45.9% | 54.4% | 61.0% |
| | \$80,000 | 8.3% | 14.6% | 22.6% | 32.4% | 42.0% | 51.3% | 59.3% | 65.7% |
| | \$85,000 | 9.6% | 16.4% | 26.2% | 36.1% | 46.8% | 55.6% | 63.4% | 69.3% |

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 4.28 percent rate brought the mortgage payment to \$2,077 for the first-quartile sales price in 2Q2022, nearly three times the total monthly mortgage payment for the same home in 2Q2011.

Table 23 shows the home price-to-income multiplier by mortgage interest rate. A 4.28 percent interest rate translates into a home price-to-income multiplier of 3.51⁶, meaning a

⁶ 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.



household could afford a maximum home price of 3.51 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 4.28 percent mortgage interest rate was \$71,196 for the first-quartile sales price in 2Q2022 (Table 24). An estimated 30 percent of renters in Texas could afford the first-quartile sales price with a 4.28 percent interest rate (Table 25), a decline of nearly 30 percentage points from 2Q2011.

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

| | | | | Mortga | age Intere | st Rate | | |
|--------|------------|---------|---------|---------|------------|---------|---------|---------|
| Year | Home Price | 3% | 4% | 4.28% | 4.5% | 5% | 5.5% | 6% |
| 2Q2011 | \$90,000 | \$684 | \$733 | \$748 | \$759 | \$785 | \$813 | \$840 |
| 2Q2012 | \$100,000 | \$760 | \$815 | \$831 | \$843 | \$873 | \$903 | \$934 |
| 2Q2013 | \$116,000 | \$882 | \$945 | \$964 | \$978 | \$1,012 | \$1,047 | \$1,083 |
| 2Q2014 | \$125,000 | \$950 | \$1,018 | \$1,038 | \$1,054 | \$1,091 | \$1,129 | \$1,167 |
| 2Q2015 | \$135,000 | \$1,026 | \$1,100 | \$1,121 | \$1,138 | \$1,178 | \$1,219 | \$1,261 |
| 2Q2016 | \$145,000 | \$1,102 | \$1,181 | \$1,204 | \$1,223 | \$1,265 | \$1,309 | \$1,354 |
| 2Q2017 | \$155,000 | \$1,178 | \$1,263 | \$1,287 | \$1,307 | \$1,353 | \$1,400 | \$1,447 |
| 2Q2018 | \$164,800 | \$1,252 | \$1,343 | \$1,369 | \$1,390 | \$1,438 | \$1,488 | \$1,539 |
| 2Q2019 | \$174,900 | \$1,329 | \$1,425 | \$1,453 | \$1,475 | \$1,526 | \$1,579 | \$1,633 |
| 2Q2020 | \$180,000 | \$1,368 | \$1,466 | \$1,495 | \$1,518 | \$1,571 | \$1,625 | \$1,681 |
| 2Q2021 | \$220,000 | \$1,672 | \$1,792 | \$1,827 | \$1,855 | \$1,920 | \$1,986 | \$2,054 |
| 2Q2022 | \$250,000 | \$1,900 | \$2,037 | \$2,077 | \$2,108 | \$2,182 | \$2,257 | \$2,334 |

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 | Home Price- | | | |
|----------|-------------|--|--|--|
| Interest | to-Income | | | |
| Rate | Multiplier | | | |
| 3% | 3.84 | | | |
| 4% | 3.58 | | | |
| 4.28% | 3.51 | | | |
| 4.5% | 3.46 | | | |
| 5% | 3.34 | | | |
| 5.5% | 3.23 | | | |
| 6% | 3.12 | | | |

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.



Table 24. Required Qualifying Income by Mortgage Interest Rate

| | | | Mortgage Interest Rate | | | | | | |
|--------|------------|----------|------------------------|----------|----------|----------|----------|----------|--|
| Year | Home Price | 3% | 4% | 4.28% | 4.5% | 5% | 5.5% | 6% | |
| 2Q2011 | \$90,000 | \$23,449 | \$25,139 | \$25,630 | \$26,022 | \$26,930 | \$27,861 | \$28,814 | |
| 2Q2012 | \$100,000 | \$26,055 | \$27,932 | \$28,478 | \$28,914 | \$29,922 | \$30,957 | \$32,016 | |
| 2Q2013 | \$116,000 | \$30,223 | \$32,401 | \$33,035 | \$33,540 | \$34,710 | \$35,910 | \$37,138 | |
| 2Q2014 | \$125,000 | \$32,568 | \$34,915 | \$35,598 | \$36,142 | \$37,403 | \$38,696 | \$40,020 | |
| 2Q2015 | \$135,000 | \$35,174 | \$37,708 | \$38,446 | \$39,033 | \$40,395 | \$41,792 | \$43,222 | |
| 2Q2016 | \$145,000 | \$37,779 | \$40,501 | \$41,294 | \$41,925 | \$43,387 | \$44,887 | \$46,423 | |
| 2Q2017 | \$155,000 | \$40,385 | \$43,295 | \$44,141 | \$44,816 | \$46,380 | \$47,983 | \$49,625 | |
| 2Q2018 | \$164,800 | \$42,938 | \$46,032 | \$46,932 | \$47,650 | \$49,312 | \$51,017 | \$52,762 | |
| 2Q2019 | \$174,900 | \$45,569 | \$48,853 | \$49,809 | \$50,570 | \$52,334 | \$54,143 | \$55,996 | |
| 2Q2020 | \$180,000 | \$46,898 | \$50,278 | \$51,261 | \$52,045 | \$53,860 | \$55,722 | \$57,629 | |
| 2Q2021 | \$220,000 | \$57,320 | \$61,450 | \$62,652 | \$63,610 | \$65,829 | \$68,105 | \$70,435 | |
| 2Q2022 | \$250,000 | \$65,136 | \$69,830 | \$71,196 | \$72,284 | \$74,806 | \$77,392 | \$80,040 | |

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

| | | | Mortgage Interest Rate | | | | | | | |
|---------|---------------|-------|------------------------|-------|-------|-------|-------|-------|--|--|
| Year | Home Price | 3% | 4% | 4.28% | 4.5% | 5% | 5.5% | 6% | | |
| 2Q2011 | \$90,000 | 63.2% | 60.5% | 59.8% | 59.2% | 57.8% | 56.4% | 55.0% | | |
| 2Q2012 | \$100,000 | 59.8% | 57.0% | 56.2% | 55.6% | 54.1% | 52.6% | 51.1% | | |
| 2Q2013 | \$116,000 | 54.6% | 51.5% | 50.6% | 49.8% | 48.2% | 46.8% | 45.5% | | |
| 2Q2014 | \$125,000 | 52.3% | 49.0% | 48.2% | 47.6% | 46.3% | 44.9% | 43.5% | | |
| 2Q2015 | \$135,000 | 49.9% | 47.2% | 46.4% | 45.8% | 44.3% | 42.9% | 41.3% | | |
| 2Q2016 | \$145,000 | 48.8% | 45.9% | 45.0% | 44.4% | 42.8% | 41.2% | 39.6% | | |
| 2Q2017 | \$155,000 | 48.1% | 45.0% | 44.1% | 43.3% | 41.7% | 40.0% | 38.2% | | |
| 2Q2018 | \$164,800 | 47.4% | 44.1% | 43.2% | 42.4% | 40.7% | 39.2% | 37.9% | | |
| 2Q2019 | \$174,900 | 46.5% | 43.1% | 42.1% | 41.4% | 40.1% | 38.8% | 37.4% | | |
| 2Q2020 | \$180,000 | 46.7% | 43.3% | 42.5% | 41.9% | 40.5% | 39.1% | 37.7% | | |
| 2Q2021* | \$220,000 | 39.5% | 36.3% | 35.3% | 34.6% | 32.9% | 31.1% | 29.3% | | |
| 2Q2022* | \$250,000 | 34.8% | 31.1% | 30.0% | 29.1% | 27.1% | 25.9% | 24.7% | | |

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



^{*}Represents estimates using historical ACS data.

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 \$2,077 for the first-quartile sales price in 2Q2022, nearly three times the payment for the same home in 2Q2011.

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 3.51⁷, meaning a household could afford a maximum home price of 3.51 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 \$71,196 for the first-quartile sales price in 2Q2022 (Table 28). An estimated 30 percent of renters in Texas could afford the first-quartile sales price with a 95 percent LTV ratio (Table 29), a decline of nearly 30 percentage points from 2Q2011.

Table 26. Total Monthly Mortgage Payment by LTV Ratio

| | | | | LTV Ratio | | |
|--------|------------|---------|---------|-----------|---------|---------|
| Year | Home Price | 95% | 96.5% | 97% | 98% | 100% |
| 2Q2011 | \$90,000 | \$748 | \$755 | \$757 | \$762 | \$771 |
| 2Q2012 | \$100,000 | \$831 | \$838 | \$841 | \$846 | \$857 |
| 2Q2013 | \$116,000 | \$964 | \$973 | \$976 | \$982 | \$994 |
| 2Q2014 | \$125,000 | \$1,038 | \$1,048 | \$1,051 | \$1,058 | \$1,071 |
| 2Q2015 | \$135,000 | \$1,121 | \$1,132 | \$1,135 | \$1,143 | \$1,157 |
| 2Q2016 | \$145,000 | \$1,204 | \$1,216 | \$1,220 | \$1,227 | \$1,242 |
| 2Q2017 | \$155,000 | \$1,287 | \$1,300 | \$1,304 | \$1,312 | \$1,328 |
| 2Q2018 | \$164,800 | \$1,369 | \$1,382 | \$1,386 | \$1,395 | \$1,412 |
| 2Q2019 | \$174,900 | \$1,453 | \$1,466 | \$1,471 | \$1,480 | \$1,499 |
| 2Q2020 | \$180,000 | \$1,495 | \$1,509 | \$1,514 | \$1,523 | \$1,542 |
| 2Q2021 | \$220,000 | \$1,827 | \$1,845 | \$1,850 | \$1,862 | \$1,885 |
| 2Q2022 | \$250,000 | \$2,077 | \$2,096 | \$2,103 | \$2,116 | \$2,142 |

Note: Assumes a 30-year loan term, 4.28 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.

⁷ The home price-to-income multiplier is based on a 30-year loan term, 4.28 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 35 percent DTI ratio, and property taxes and insurance of 4 percent.



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

| | Home- |
|-----------|------------|
| | Purchasing |
| LTV Ratio | Power |
| 95% | 3.51 |
| 96.5% | 3.48 |
| 97% | 3.47 |
| 98% | 3.45 |
| 100% | 3.40 |

Note: Assumes a 30-year loan term, 4.28 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

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Table 28. Required Qualifying Income by LTV Ratio

| | | | | LTV Ratio | | |
|--------|------------|----------|----------|-----------|----------|----------|
| Year | Home Price | 95% | 96.5% | 97% | 98% | 100% |
| 2Q2011 | \$90,000 | \$25,630 | \$25,873 | \$25,954 | \$26,115 | \$26,438 |
| 2Q2012 | \$100,000 | \$28,478 | \$28,748 | \$28,837 | \$29,017 | \$29,376 |
| 2Q2013 | \$116,000 | \$33,035 | \$33,347 | \$33,451 | \$33,659 | \$34,076 |
| 2Q2014 | \$125,000 | \$35,598 | \$35,934 | \$36,047 | \$36,271 | \$36,720 |
| 2Q2015 | \$135,000 | \$38,446 | \$38,809 | \$38,930 | \$39,173 | \$39,657 |
| 2Q2016 | \$145,000 | \$41,294 | \$41,684 | \$41,814 | \$42,074 | \$42,595 |
| 2Q2017 | \$155,000 | \$44,141 | \$44,559 | \$44,698 | \$44,976 | \$45,532 |
| 2Q2018 | \$164,800 | \$46,932 | \$47,376 | \$47,524 | \$47,820 | \$48,411 |
| 2Q2019 | \$174,900 | \$49,809 | \$50,279 | \$50,436 | \$50,750 | \$51,378 |
| 2Q2020 | \$180,000 | \$51,261 | \$51,746 | \$51,907 | \$52,230 | \$52,876 |
| 2Q2021 | \$220,000 | \$62,652 | \$63,245 | \$63,442 | \$63,837 | \$64,626 |
| 2Q2022 | \$250,000 | \$71,196 | \$71,869 | \$72,093 | \$72,542 | \$73,439 |

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, 4.28 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.

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% |
| 2Q2011 | \$90,000 | 59.8% | 59.4% | 59.3% | 59.0% | 58.6% |
| 2Q2012 | \$100,000 | 56.2% | 55.8% | 55.7% | 55.4% | 54.9% |
| 2Q2013 | \$116,000 | 50.6% | 50.1% | 50.0% | 49.7% | 49.1% |
| 2Q2014 | \$125,000 | 48.2% | 47.9% | 47.7% | 47.5% | 47.0% |
| 2Q2015 | \$135,000 | 46.4% | 46.0% | 45.9% | 45.6% | 45.1% |
| 2Q2016 | \$145,000 | 45.0% | 44.6% | 44.5% | 44.2% | 43.7% |
| 2Q2017 | \$155,000 | 44.1% | 43.6% | 43.5% | 43.2% | 42.6% |
| 2Q2018 | \$164,800 | 43.2% | 42.7% | 42.5% | 42.2% | 41.6% |
| 2Q2019 | \$174,900 | 42.1% | 41.7% | 41.5% | 41.3% | 40.8% |
| 2Q2020 | \$180,000 | 42.5% | 42.1% | 42.0% | 41.8% | 41.3% |
| 2Q2021* | \$220,000 | 35.3% | 34.9% | 34.7% | 34.4% | 33.8% |
| 2Q2022* | \$250,000 | 30.0% | 29.5% | 29.3% | 28.9% | 28.2% |

Note: Assumes a 30-year loan term, 4.28 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 3.51⁸ (Table 30), meaning a household could afford a maximum home price of 3.51 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 \$71,196 for the first-quartile sales price in 2Q2022 (Table 31). An estimated 30 percent of renters in Texas could afford the first-quartile sales price with a 35 percent DTI ratio (Table 32), a decline of nearly 30 percentage points from 2Q2022.

⁸ The home price-to-income multiplier is based on a 30-year loan term, 4.28 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and property taxes and insurance of 4 percent.



^{*}Represents estimates using historical ACS data.

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

| | Home Price- |
|-----------|-------------|
| | to-Income |
| DTI Ratio | Multiplier |
| 20% | 2.01 |
| 25% | 2.51 |
| 30% | 3.01 |
| 35% | 3.51 |
| 40% | 4.01 |
| 45% | 4.51 |
| 50% | 5.02 |

Note: Assumes a 30-year loan term, 4.28 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

| | | | | | DTI Ratio | | | |
|--------|---------------|-----------|----------|----------|-----------|----------|----------|----------|
| Year | Home Price | 20% | 25% | 30% | 35% | 40% | 45% | 50% |
| 2Q2011 | \$90,000 | \$44,853 | \$35,883 | \$29,902 | \$25,630 | \$22,427 | \$19,935 | \$17,941 |
| 2Q2012 | \$100,000 | \$49,837 | \$39,870 | \$33,225 | \$28,478 | \$24,919 | \$22,150 | \$19,935 |
| 2Q2013 | \$116,000 | \$57,811 | \$46,249 | \$38,541 | \$33,035 | \$28,905 | \$25,694 | \$23,124 |
| 2Q2014 | \$125,000 | \$62,296 | \$49,837 | \$41,531 | \$35,598 | \$31,148 | \$27,687 | \$24,919 |
| 2Q2015 | \$135,000 | \$67,280 | \$53,824 | \$44,853 | \$38,446 | \$33,640 | \$29,902 | \$26,912 |
| 2Q2016 | \$145,000 | \$72,264 | \$57,811 | \$48,176 | \$41,294 | \$36,132 | \$32,117 | \$28,905 |
| 2Q2017 | \$155,000 | \$77,247 | \$61,798 | \$51,498 | \$44,141 | \$38,624 | \$34,332 | \$30,899 |
| 2Q2018 | \$164,800 | \$82,131 | \$65,705 | \$54,754 | \$46,932 | \$41,066 | \$36,503 | \$32,853 |
| 2Q2019 | \$174,900 | \$87,165 | \$69,732 | \$58,110 | \$49,809 | \$43,583 | \$38,740 | \$34,866 |
| 2Q2020 | \$180,000 | \$89,707 | \$71,765 | \$59,804 | \$51,261 | \$44,853 | \$39,870 | \$35,883 |
| 2Q2021 | \$220,000 | \$109,642 | \$87,713 | \$73,094 | \$62,652 | \$54,821 | \$48,730 | \$43,857 |
| 2Q2022 | \$250,000 | \$124,593 | \$99,674 | \$83,062 | \$71,196 | \$62,296 | \$55,375 | \$49,837 |

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, 4.28 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.

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

| | | DTI Ratio | | | | | | | |
|---------|------------|-----------|-------|-------|-------|-------|-------|-------|--|
| Year | Home Price | 20% | 25% | 30% | 35% | 40% | 45% | 50% | |
| 2Q2011 | \$90,000 | 35.0% | 44.8% | 53.4% | 59.8% | 64.9% | 68.9% | 72.3% | |
| 2Q2012 | \$100,000 | 30.8% | 41.5% | 49.3% | 56.2% | 61.4% | 65.9% | 69.5% | |
| 2Q2013 | \$116,000 | 26.6% | 35.7% | 43.9% | 50.6% | 56.5% | 61.1% | 65.0% | |
| 2Q2014 | \$125,000 | 24.8% | 33.0% | 41.9% | 48.2% | 54.2% | 59.1% | 63.0% | |
| 2Q2015 | \$135,000 | 22.5% | 31.5% | 39.6% | 46.4% | 52.0% | 57.1% | 61.3% | |
| 2Q2016 | \$145,000 | 20.4% | 30.4% | 37.7% | 45.0% | 50.5% | 55.7% | 60.0% | |
| 2Q2017 | \$155,000 | 19.1% | 29.4% | 36.7% | 44.1% | 49.9% | 54.7% | 59.2% | |
| 2Q2018 | \$164,800 | 18.9% | 28.4% | 36.5% | 43.2% | 49.3% | 54.1% | 58.5% | |
| 2Q2019 | \$174,900 | 18.3% | 27.2% | 35.8% | 42.1% | 48.6% | 53.7% | 57.8% | |
| 2Q2020 | \$180,000 | 18.3% | 26.9% | 36.0% | 42.5% | 48.9% | 54.1% | 58.2% | |
| 2Q2021* | \$220,000 | 13.0% | 20.2% | 27.2% | 35.3% | 41.4% | 46.5% | 51.6% | |
| 2Q2022* | \$250,000 | 10.7% | 15.9% | 23.4% | 30.0% | 37.1% | 42.6% | 47.0% | |

Note: Assumes a 30-year loan term, 4.28 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 \$2,077 for the first-quartile sales price in 2Q2022, nearly three times the total monthly mortgage payment for the same home in 2Q2011.

Table 34 shows the home price-to-income multiplier⁹ by the costs of property taxes and insurance. At a 4 percent property tax and insurance rate, a household could afford a maximum home price of 3.51 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 \$71,196 for the first-quartile sales price in 2Q2022 (Table 35). An estimated 30

⁹ The home price-to-income multiplier is based on a 30-year loan term, 3.47 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and 35 percent DTI ratio.



^{*}Represents estimates using historical ACS data.

percent of Texas households could afford the first-quartile sales price with property taxes and insurance at 4 percent (Table 36), a decline of nearly 30 percentage points from 2Q2022.

Table 33. Total Monthly Mortgage Payment by Additional Homeownership Costs

| | | Property Taxes & Insurance | | | | | |
|--------|------------|----------------------------|---------|---------|---------|---------|--|
| Year | Home Price | 2% | 3% | 4% | 5% | 6% | |
| 2Q2011 | \$90,000 | \$598 | \$673 | \$748 | \$823 | \$898 | |
| 2Q2012 | \$100,000 | \$664 | \$747 | \$831 | \$914 | \$997 | |
| 2Q2013 | \$116,000 | \$770 | \$867 | \$964 | \$1,060 | \$1,157 | |
| 2Q2014 | \$125,000 | \$830 | \$934 | \$1,038 | \$1,142 | \$1,247 | |
| 2Q2015 | \$135,000 | \$896 | \$1,009 | \$1,121 | \$1,234 | \$1,346 | |
| 2Q2016 | \$145,000 | \$963 | \$1,084 | \$1,204 | \$1,325 | \$1,446 | |
| 2Q2017 | \$155,000 | \$1,029 | \$1,158 | \$1,287 | \$1,417 | \$1,546 | |
| 2Q2018 | \$164,800 | \$1,094 | \$1,232 | \$1,369 | \$1,506 | \$1,644 | |
| 2Q2019 | \$174,900 | \$1,161 | \$1,307 | \$1,453 | \$1,599 | \$1,744 | |
| 2Q2020 | \$180,000 | \$1,195 | \$1,345 | \$1,495 | \$1,645 | \$1,795 | |
| 2Q2021 | \$220,000 | \$1,461 | \$1,644 | \$1,827 | \$2,011 | \$2,194 | |
| 2Q2022 | \$250,000 | \$1,660 | \$1,868 | \$2,077 | \$2,285 | \$2,493 | |

Note: Assumes a 30-year loan term, 4.28 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 | Home Price-to- |
|----------------|-------------------|
| & Insurance | Income Multiplier |
| 2% | 4.39 |
| 3% | 3.90 |
| 4% | 3.51 |
| 5% | 3.19 |
| 6% | 2.92 |

Note: Assumes a 30-year loan term, 4.28 percent mortgage interest rate, 0.5 percent mortgage insurance premium, 95 percent LTV ratio, and 35 percent DTI ratio.

Table 35. Required Qualifying Income by Additional Homeownership Costs

| | | Property Taxes & Insurance | | | | | |
|--------|------------|----------------------------|----------|----------|----------|----------|--|
| Year | Home Price | 2% | 3% | 4% | 5% | 6% | |
| 2Q2011 | \$90,000 | \$20,488 | \$23,059 | \$25,630 | \$28,202 | \$30,773 | |
| 2Q2012 | \$100,000 | \$22,764 | \$25,621 | \$28,478 | \$31,335 | \$34,193 | |
| 2Q2013 | \$116,000 | \$26,406 | \$29,721 | \$33,035 | \$36,349 | \$39,663 | |
| 2Q2014 | \$125,000 | \$28,455 | \$32,026 | \$35,598 | \$39,169 | \$42,741 | |
| 2Q2015 | \$135,000 | \$30,731 | \$34,589 | \$38,446 | \$42,303 | \$46,160 | |
| 2Q2016 | \$145,000 | \$33,008 | \$37,151 | \$41,294 | \$45,436 | \$49,579 | |
| 2Q2017 | \$155,000 | \$35,284 | \$39,713 | \$44,141 | \$48,570 | \$52,999 | |
| 2Q2018 | \$164,800 | \$37,515 | \$42,224 | \$46,932 | \$51,641 | \$56,349 | |
| 2Q2019 | \$174,900 | \$39,814 | \$44,811 | \$49,809 | \$54,806 | \$59,803 | |
| 2Q2020 | \$180,000 | \$40,975 | \$46,118 | \$51,261 | \$56,404 | \$61,547 | |
| 2Q2021 | \$220,000 | \$50,081 | \$56,367 | \$62,652 | \$68,938 | \$75,224 | |
| 2Q2022 | \$250,000 | \$56,910 | \$64,053 | \$71,196 | \$78,339 | \$85,482 | |

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, 4.28 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

| | | Property Taxes & Insurance | | | | | |
|---------|------------|----------------------------|-------|-------|-------|-------|--|
| Year | Home Price | 2% | 3% | 4% | 5% | 6% | |
| 2Q2011 | \$90,000 | 68.0% | 63.8% | 59.8% | 55.9% | 52.1% | |
| 2Q2012 | \$100,000 | 64.9% | 60.4% | 56.2% | 52.1% | 47.9% | |
| 2Q2013 | \$116,000 | 60.0% | 55.3% | 50.6% | 46.3% | 42.7% | |
| 2Q2014 | \$125,000 | 58.0% | 53.0% | 48.2% | 44.4% | 40.6% | |
| 2Q2015 | \$135,000 | 56.0% | 50.7% | 46.4% | 42.3% | 38.2% | |
| 2Q2016 | \$145,000 | 54.5% | 49.5% | 45.0% | 40.6% | 36.2% | |
| 2Q2017 | \$155,000 | 53.5% | 48.8% | 44.1% | 39.3% | 35.7% | |
| 2Q2018 | \$164,800 | 53.1% | 48.1% | 43.2% | 38.7% | 35.3% | |
| 2Q2019 | \$174,900 | 52.6% | 47.3% | 42.1% | 38.3% | 34.6% | |
| 2Q2020 | \$180,000 | 52.9% | 47.5% | 42.5% | 38.6% | 34.7% | |
| 2Q2021* | \$220,000 | 45.1% | 40.2% | 35.3% | 30.4% | 25.6% | |
| 2Q2022* | \$250,000 | 41.3% | 35.7% | 30.0% | 25.5% | 22.3% | |

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, 4.28 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



^{*}Represents estimates using historical ACS data.

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. ¹⁰ 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).

Measuring Purchase Affordability

The vast majority of homebuyers—according to the National Association of Realtors, 87 percent in 2021—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. ¹¹

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

¹¹ 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.



¹⁰ 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.

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.

Table 37. How Loan, Applicant Characteristics Affect Purchase Affordability

| Loan or Applicant Characteristics | Effect on Purchase Affordability |
|---|---|
| Mortgage interest rate | An increase in the mortgage interest rate |
| | diminishes purchase affordability |
| Loan term | An increase in the loan term increases |
| | purchase affordability |
| LTV ratio | An increase in the loan-to-value ratio |
| | diminishes purchase affordability |
| DTI ratio | An increase in the DTI ratio increases |
| | purchase affordability |
| Additional costs of homeownership (property | An increase in the additional costs of |
| taxes and insurance) | homeownership diminishes purchase |
| | affordability |
| Additional costs of borrowing mortgage | An increase in the additional costs of |
| capital (such as the mortgage insurance | borrowing mortgage capital diminishes |
| premium) | 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 (4.28 percent in 2Q222)¹², 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

¹² The source for the prevailing mortgage interest rate is CoreLogic.



for first-time homebuyers reflect the prevailing mortgage interest rate (4.28 percent in 2Q2022), 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.



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Texas A&M University 2115 TAMU College Station, TX 77843-2115 http://recenter.tamu.edu 979-845-2031

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