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Arizona Housing Affordability Update

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About the Author

Glenn Farley is CSI Arizona's Director of Policy & Research. Before joining CSI in 2022, Glenn worked in the Office of the Arizona Governor, most recently as Gov. Doug Ducey's Chief Economist and a policy advisor. In that role he advised on issues of tax, fiscal, and regulatory policy, and was one of the Governor's lead architects of his two major tax reforms – including the 2021 income tax omnibus which phased in a 2.50% flat tax (the lowest in the country). Glenn also led the budget team that produced the Executive revenue forecasts and caseload spending numbers that have helped ensure the longest run of structurally balanced budgets in State history. Glenn has a Master's Degree in Economics from Arizona State University's WP Carey College of Business, as well as a B.S. from Arizona State University. He was born and raised in Arizona where he now lives with his wife and two daughters.

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Introduction

While the U.S. and Arizona homebuying markets are 12 months into their first market correction since the Great Recession, this event looks little like the prior. Despite a comparatively more rapid increase in prices and mortgage rates before the correction, the subsequent downturn has been much more modest than in 2008, and homebuying conditions remain ahistorically expensive.

Prices for the current cycle peaked in June 2022 and have fallen 10% through May. Persistently high interest rates have limited how much of this price relief has passed through to home buyers – the 'Misery Index' is down just 6% from its all-time peak. And in recent months local prices (particularly in the Phoenix metro area) have shown signs of leveling out.

Key Findings

- Both home prices and borrowing costs remain at or near all-time highs in Arizona. CSI's 'Homebuyer Misery Index' increased 0.3% in May as prices and interest rates in the Phoenix metro area stabilized. **Homebuying costs remain about double their long-run average and about 50% above the 2006 peak.**
- Arizona home prices have fallen nearly 5% from their peak in mid-2022. These statewide price declines were led by the Phoenix market, which has fallen 10% and since stabilized. CSI expects statewide home prices to fall another 1%-2% gradually over the next 12 months.
- After slowing in late 2022, homebuilding activity has accelerated again – permit activity in Arizona roughly doubled between January and May 2023, and the state is on track to issue 51,000 residential building permits this year. Still, this is below the 62,000-unit average since 2020.
- Arizona's housing shortfall is growing again. A two-year building boom reduced CSI's estimated shortfall from 100,000 units (in 2020) to 74,000 units (in 2022). The Institute now projects that shortfall to grow to 85,000 units by 2024 (+14%). Nearly all that increase is driven by Maricopa County and the Phoenix market area.

Arizona's housing market continues to exhibit unusual behavior – especially in the Phoenix metro area. The combination of rapid price increases and rapid increases in borrowing costs should have induced a dramatic slowdown, and by mid-2022, this appeared to be happening. However, by mid-2023, the market appears to have stabilized again even though borrowing costs and prices remain high.

While this is a relief to the millions of Arizona homeowners worried about the long-term value of their assets, it makes it difficult for homebuyers (and especially first-time homebuyers), who are now facing a world of potentially permanently higher homebuying costs.

Homebuilding Activity Was Especially Volatile in 2022

After the 2008 'Great Recession', homebuilding activity in the United States plunged and never fully recovered. This phenomenon was particularly stark in Arizona, where permit activity fell from a 2005 peak of nearly 90,000 new-unit authorizations to just 12,600 in 2010 (-90%). By 2019 Arizona was authorizing just 45,000 new units a year – about half its pre-Recession level.

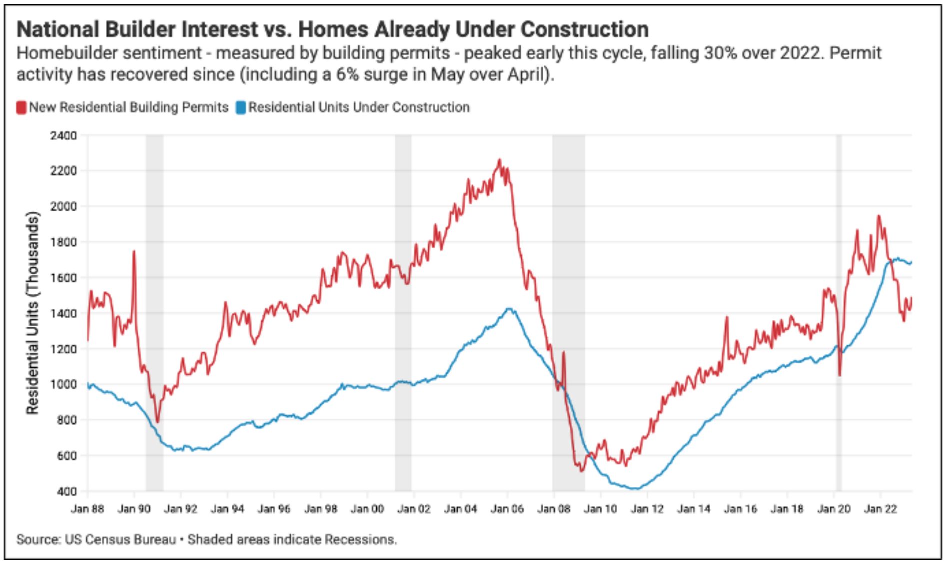

Figure 1

Finally, following the 2020 pandemic and related restrictions, Arizona and the U.S. appeared to be on the cusp of a building boom. Indeed, CSI Arizona's initial report on the Arizona housing market based on May data described relatively "rapid home construction", and subsequent reports described a "nascent construction boom". Activity surged to the equivalent of an annualized 73,000 units/year being authorized for construction in Arizona by early 2022.

After that, sentiment again collapsed – annualized permitting activity fell back to about 25,000 units by January 2023. However, supply and regulatory constraints (construction times have increased 25% since 2012[i]) have created a persistent disconnect between homes under construction and permit activity. **Homes under construction in the United States has remained flat since 2022, at roughly 1.7 million units, despite large swings in permits.** It may be that a lack of existing home supply has buoyed the new-home retail market despite the general market downturn; insufficient traditional housing market data exists to confirm this, but it is a common possibility raised by market observers[ii].

For its part, Arizona's homebuilders through May are on track to pull over 51,000 new-unit permits this year (up from 25,000 in January). The combination of the failure of meaningful zoning reform legislation to advance at the state Legislature this session and the announcement of a moratorium on new groundwater-only residential permitting in the greater Phoenix Active Management Area[iii] may put new pressure on these figures going forward.

Altogether, despite an increase in building activity after 2020, this state is likely to continue adding new residential units at a pace insufficient to keep pace with household demand – which will continue putting supply-side upward pressure on prices even as the demand-side cools.

Higher Interest Rates Continue to Depress Buying Conditions

In May, the Phoenix 'Misery Index' was 92.2 – an increase of +0.3% from April and a decline of -5.9% from the all-time peak value of 104.2 reached in mid-2022.

Phoenix area home prices over the same period have fallen about -10% (significantly more and faster than the 'Misery Index'). This is because rapidly rising interest rates are offsetting price declines. After reaching two-decade highs of nearly 7% at the end of 2022, 30-year mortgage rates remain elevated today (at about 6.4% in May).

As a reminder, the 'Misery Index' sums normalized and equally weighted home prices and 30-year mortgage rates to measure effective costs of homebuying relative to historical levels. The index is set to a long-run average value of 0. Conditions better than the long-run average are represented with negative numbers, and relatively more expensive conditions with positive values. Interestingly, excluding the two high-volatility periods of the 'housing market bubble' in the early 2000's and the current pandemic-period, the index is relatively flat – generally rising home prices over time have been offset by an almost equally fast decline in interest rates.

Both home prices and the Phoenix-area 'Misery Index' stabilized in (roughly) early 2023. Since then, some measures have shown continued but very slow prices declines, while other measures have shown prices increasing again in the Phoenix market. Similarly, mortgage rates have bounced up and down, but moved in a tight range of 6.25%-6.50%.

To return to a long-run average level would require dramatic and improbable declines in both prices and mortgage rates. It may be that the index is settling in to a longer-run 'new normal' of permanently higher home prices and borrowing costs that is without historical parallel.

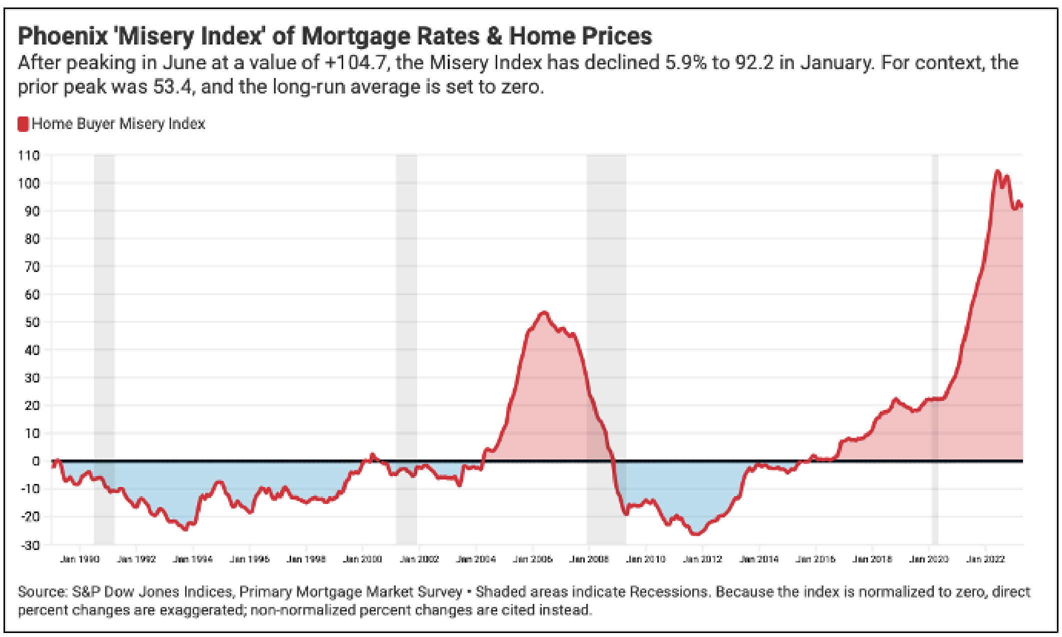

Figure 2

Market Behavior in the Phoenix Metro Area Suggests Moderate, Ongoing Statewide Declines

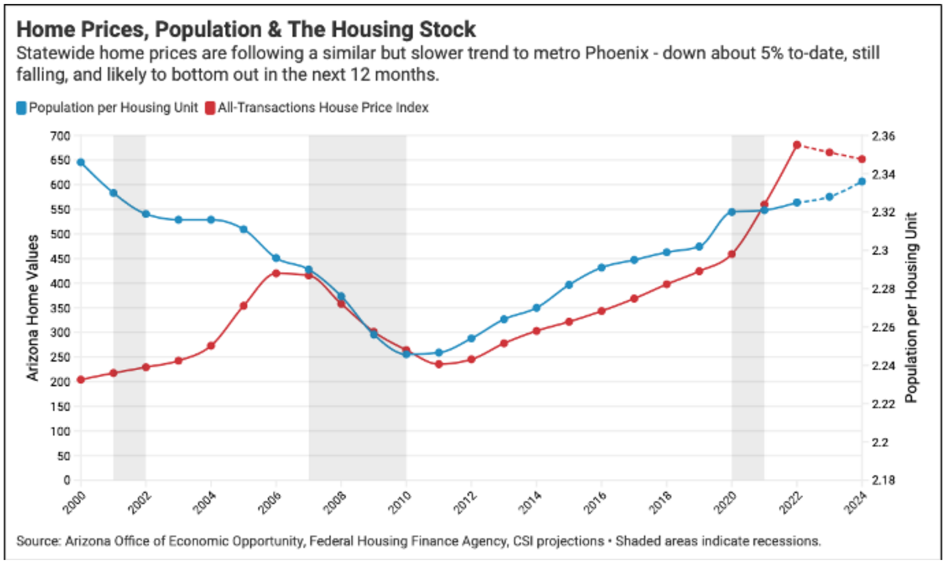

Figure 3

Historically, housing price changes have shown a strong relationship with both population – especially relative to available housing supply – and mortgage rates, or the costs of borrowing. Specifically, about half the variability in Arizona home price changes since 2000 can be explained by changes in the ratio of population to housing units, and the average interest rate on a new 30-year mortgage. When the population per housing unit ratio is high, or mortgage rates are low, prices tend to increase; when the reverse is true prices tend to fall. Over the observed 22-year window, in fact, there were only two periods that experienced marked deviation from this expected trend: 2005 and 2006, and 2021 through the first half of 2022. During both events, prices increased much more quickly than this simple model of supply and demand would have predicted. Also of interest, prices fell during the Great Recession much more quickly than a simple model of market fundamentals would have predicted, while price declines during this cycle have been *slower and smaller* than we might have expected. Statewide home prices have fallen almost 5% since peaking in mid-2022, and Arizona's average home values should continue to moderate over the next 12 months (declining another 1%-2%). Drivers of those declines are likely to be outside the Phoenix area (which has already fallen faster and further than statewide averages).

According to the All-Transactions House Price Index for Arizona[iv], home prices in 2021 were 22% higher than the year prior, and over the first six months of 2022 prices rose another 24% - for a cumulative increase of over 50% in just 18 months. Many of these gains can be explained by relatively rapid in-migration-driven population growth during the pandemic period, historically low interest rates, and a general shift in consumer demand for housing. Correspondingly, rising interest rates and lower housing demand generally as the Covid-uncertainty came to an end are driving current price declines.

Given these trends in interest rates, homebuilding, and population growth, **CSI anticipates that (statewide) home prices will fall approximately 5.5% from their mid-2022 peak by mid-2024.** To-date, statewide home prices have fallen roughly 4.5% and prices in the metro-Phoenix area have fallen about 10%. For context, between mid-2020 and their cyclical peak prices *rose* over 50%, and during the 20 months of the Great Recession home prices in Arizona *fell* 33%.

Mortgage Affordability Has Been Increasing Since Late 2022

While the housing market in Arizona and nationally turned over in mid-2022 (home prices peaked around June), mortgage costs continued rising with interest rates until much later in the calendar year. In October 2022, a new 30-year mortgage on an average Arizona home would cost the borrower over $2,300/month or more than 75 hours of work every month at then-prevailing wage rates.

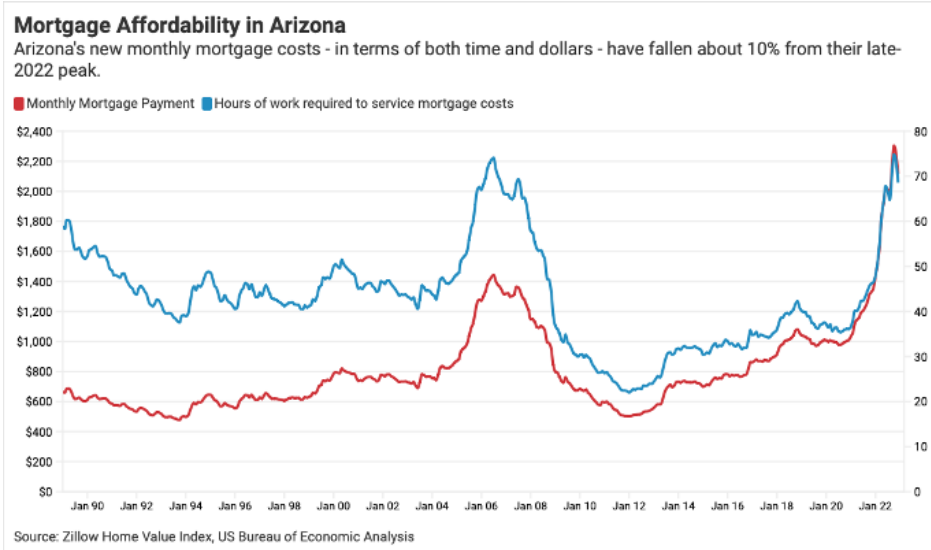

Figure 4

In May and at prevailing Arizona wages, a typical household would need to work 65.8 hours (+2.8% month-over-month, -12.1% from October 2022) to service a mortgage at current prices and interest rates. Despite improvements, in terms of household time these are the highest homebuying costs since early 2007 and nearly double the 35 hours of work required in mid-2020.

Since 1989, a household has needed to work on average about 44 hours/month to meet current mortgage service costs, and in practice an average household cannot sustain more than about 72 hours/month at average interest rates and home prices while still meeting lender expectations that no more than 28% of monthly income go to mortgage costs. If prices fall ~5% from peak while mortgage rates remain at 6.5% household work-time requirements would still be in the 65-70 hour range depending upon wage growth – much higher than levels over the past decade and likely inconsistent with consumer expectations.

This is again indicative that housing costs are settling at a new and elevated level relative to their prior 40-year trends.

Arizona Home Prices, Mortgage Payments, and Work Requirements

Date	Average Home Price	30-Year Mortage Rate	Mortage Payment	Average Wage Rate	Hours of Work Required	Year-Over-Year % Change
12/2015	$205,829	3.96	$782.72	$23.23	33.69	7.18%
12/2016	$220,304	4.20	$861.66	$24.07	35.80	6.24%
12/2017	$237,319	3.95	$900.93	$25.42	35.44	-0.99%
12/2018	$256,762	4.64	$1,057.63	$25.86	40.90	15.4%
12/2019	$273,831	3.72	$1,010.80	$26.92	37.55	-8.19%
12/2020	$311,810	2.68	$1,009.65	$27.92	36.16	-3.69%
12/2021	$396,665	3.10	$1,354.71	$29.16	46.46	28.47%
12/2022	$425,000	6.36	$2,117.83	$30.84	68.67	47.81%

Source: Bureau of Labor Statistics, Freddie Mac, Zillow Data

Figure 5

Arizona's Housing Supply Isn't Keeping Pace with Demand

In 2022 and in response to rising borrowing costs and falling housing demand, Arizona's housing deficit decreased significantly to 74,236 units from over 98,000 units in 2021 (-24.4%) after the pandemic and massive in-migration. Given projected population growth and household formation rates, closing that gap in five years would require the state add over 63,000 new housing units annually – a feat it is not expected to meet.

During 2022 Arizona home builders received permits to build over 60,000 new units, which CSI projects will lead to 53,000 new housing units added to the state's supply by the end of calendar year 2023. As of May, Arizona is on pace to permit another 51,000 new units for construction this year, which will result in approximately 42,000 more units added during 2024. Expected population and household growth over the same period will offset these unit gains, increasing rather than decreasing the shortfall and increasing pressure on prices even as demand remains soft due to higher borrowing costs.

Arizona's Housing Shortage, By County, Since 2020

The decline in the 2022 statewide shortfalls is attributable to both increased homebuilding and reduced housing demand.

County	2020 Deficit	2021 Deficit	2022 Deficit	Shortfall as % of Existing	5-year Construction Needed	2023 Deficit Est.	2024 Deficit Est.
Apache County	-957	-1,092	-895	3.85%	125	-1,118	-1,212
Cochise County	-2,193	-1,424	-1,020	2.47%	540	-1,479	-1,497
Coconino County	-2,467	-1,538	-1,055	2.27%	910	-1,605	-1,290
Gila County	-967	-1,172	-949	2.80%	224	-918	-1,087
Graham County	-272	-404	-310	1.80%	109	-255	-265
Greenlee County	-63	-111	-81	1.24%	-41	-55	-38
La Paz County	-243	-379	-284	1.61%	-32	-221	-272
Maricopa County	-60,514	-59,186	-43,894	2.88%	42,251	-54,147	-55,117
Mohave County	-3,652	-4,756	-3,964	4.11%	2,734	-4,969	-5,096
Navajo County	-922	-2,229	-1,852	3.99%	667	-2,296	-1,960
Pima County	-14,796	-13,324	-10,099	0.45%	5,144	-2,164	-639
Pinal County	-6,767	-5,311	-4,201	3.11%	5,820	-5,773	-6,572
Santa Cruz County	-537	-666	-539	2.72%	242	-521	-313
Yavapai County	-5,226	-5,125	-4,340	4.27%	3,184	-5,388	-5,505
Yuma County	-1,817	-3,347	-2,738	3.64%	1,567	-3,478	-4,353
Arizona Shortage	-104,087	-98,192	-74,236	2.60%	63,703	-81,663	-84,554

Source: US Census Bureau, CSI calculations

Figure 6

For context, recent permit activity peaked in 2021 (over 65,000 residential building permits issued) and new housing units added to supply peaked in 2022 (over 53,000 new units added).

CSI Arizona's projected housing supply deficit exploits the historical correlation observed between the change in home prices and the effective housing vacancy rate (weighted across both the rental and owner-occupied housing stock). Since 1986 the average effective vacancy rate for Arizona housing has been 5.00%. In 2009 – at the peak of the Great Recession and during a period of rapid home price depreciation – the vacancy rate reached its contemporary peak of 8.41%. In 2019, heading into the pandemic and the current period of unusually volatile home prices, vacancy rates were already relatively low at 2.88%. As of 2021 the rate had fallen to just 2.20% - the lowest Arizona vacancy rate on record and suggesting an extremely tight state housing market.

To estimate the housing deficit implied by deviations of county-by-county and statewide vacancy rates from their long-run average, CSI determined how many new housing units would need to be added to the existing stock to bring (assuming these new units immediately became available for purchase or rent) the local vacancy rate back up to 5.0%.

The core presumption is that at an effective average vacancy rate of 5.0% across the states housing markets, there is sufficient housing liquidity to give buyers necessary choice, but not so much as to prevent sellers from completing a timely sale. Home price appreciation during these times should be reasonable and constrained by prevailing inflation. When the vacancy rate is below this figure, we assume there is insufficient supply of willing home sellers relative to buyers, and prices will rise more quickly than general inflation. Conversely, when the reverse is true, we assume inflation-adjusted prices will fall. The intuition here is like the information revealed by unemployment rates in the labor market: generally, periods of low unemployment are marked by rapid wage increases, and the converse is associated with falling wages.

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