RESEARCH REPORT

The Homeowner Affordability Squeeze

Rising Costs, Locked-In Rates, and the Mounting Burden on U.S. Homeowners

Skylar Olsen, PhD

ReimagineEconomics • Prepared for Unlock Technologies

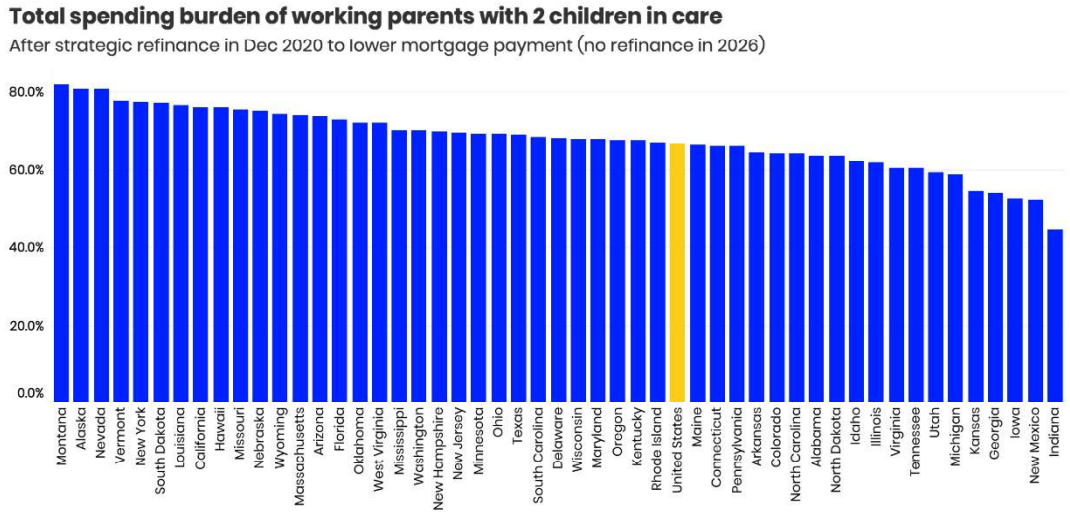
April 2026

Executive Summary

U.S. homeowners have accumulated extraordinary wealth over the past six years. Home prices have risen nearly 47% since January 2020, giving the typical strategic homeowner (one who took advantage of low mortgage rates in 2020 and refinanced their primary mortgage) more than $274,000 in home equity.[1],[2]

But that wealth is largely inaccessible without sacrificing the historically low mortgage rates that most homeowners locked in during 2020–2021. A cash-out refinance today—at 30-year rates above 6%—would more than double the monthly mortgage payment for the majority of current mortgage holders. Meanwhile, the cost of everyday essentials has surged.

This white paper quantifies the full breadth of the affordability squeeze facing U.S. homeowners today:



Total spending burden (share of income spent) on housing costs, healthcare, gas, food, childcare (assuming 2 children in care) and federal income taxes (April 2026).

[1]According to the Zillow Home Value Index (ZHVI), the U.S. median home value was $368,200 in April 2026, up 46.9% from January 2020. Source: Zillow.com/data.

[2]The median year of purchase for U.S. homeowners was 2012 (2024 ACS 1-year). In January 2012, the U.S. median home value was approximately $162,000 (Zillow ZHVI) and the average 30-year fixed mortgage rate was 3.67% (Freddie Mac PMMS). Assuming 20% down, the original loan was $129,600 and the initial monthly payment was $594. Amortizing to December 2020 yields a remaining balance of approximately $104,700. Refinancing into a new 30-year mortgage at 2.68% (the December 2020 PMMS average) and rolling in 3% in closing fees gives a new balance of $107,841 and a new monthly payment of $436. Amortizing to April 2026 yields a remaining balance of approximately $94,400. With the April 2026 median home value of $368,200, home equity is $368,200 minus $94,400, or roughly $274,000.

The analysis draws on a comprehensive set of public data sources—the Zillow Home Value Index, BLS Consumer Price Indices, USDA Food Expenditure Series, CMS State Health Expenditure Accounts, FHWA fuel-tax reports, National Database of Childcare Prices, and U.S. Census microdata—to construct monthly state-level cost estimates for each spending category, forecast to April 2026.

1. The Macro Backdrop: Wealth, Rates, and Inflation

The past six years have produced a deeply contradictory environment for American homeowners. The COVID-19 pandemic triggered a housing boom unlike anything in modern history, yet it also set in motion an inflationary wave that has eroded the purchasing power of the income gains homeowners did receive.

1.1: Home Equity Gains

The Zillow Home Value Index (ZHVI) places the U.S. median home value at $368,200 in April 2026—up 46.9% from $250,500 in January 2020. For the typical homeowner who purchased in 2012—the median year of purchase for U.S. homeowners according to the 2024 ACS—and who took the opportunity to refinance at the December 2020 rate trough, the combination of price appreciation and accelerated paydown has yielded over $274,000 in home equity.

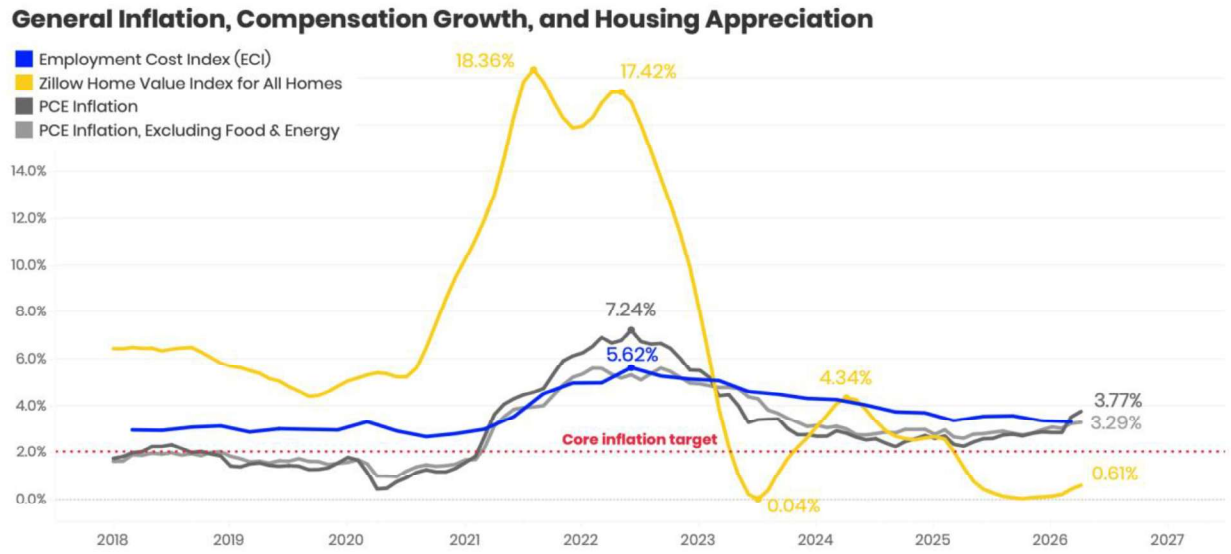
This is an enviable financial position—on paper. But the liquidity challenge is real: that equity is locked inside the home, and accessing it today through a traditional cash-out refinance means surrendering the mortgage rate that defines many households' monthly budgets.

1.2: The Rate Lock Trap

At the end of 2020, the 30-year fixed mortgage rate averaged 2.68%—the lowest on record. As of April 2026, it stands at 6.33% (Freddie Mac PMMS). Analysis of FHFA loan records indicates that approximately 57% of mortgaged homeowners currently hold rates below 4%. [3] A cash-out refinance at today's rates would reset those borrowers to market rates—effectively imposing a steep liquidity tax.

[3]Analysis of Federal Housing Finance Agency (FHFA) loan-level mortgage data performed by Realtor.com Research. As of Q1 2026, approximately 57% of mortgaged homeowners hold rates below 4%.

The resulting payment shock is substantial. For the median U.S. homeowner who refinanced at the 2020 trough, the post-refi monthly payment is approximately $436—representing just 5.9% of monthly household income. Taking out $50,000 in cash at April 2026 rates would raise that payment to approximately $913, adding $477 per month and pushing the mortgage burden to 12.3% of income.[4]



General Inflation, Compensation Growth, and Housing Appreciation (2018–2027)

1.3: Inflation Outpacing Wages

While national compensation growth has returned near its pre-pandemic pace—the Q1 2026 Employment Cost Index shows private-sector wages growing at approximately 3.3% year-over-year [5]—headline PCE inflation continues to run more than twice as high as its historic pace. [6] Sticky services inflation and the renewed surge in energy prices (discussed in Section 3) have kept real purchasing power under pressure even as nominal incomes have recovered from their post-pandemic low.

[4]Cash-out refinance simulation: Starting from the December 2020 refinanced balance (step 2 in footnote 13), a second refinance is simulated in April 2026 at the prevailing PMMS rate of 6.33%, adding $50,000 in cash-out and rolling in 3% in new closing costs. The resulting new monthly payment of approximately $913 is $477 more per month than the post-2020-refi payment of $436—an increase of more than 100%—and represents 12.4% of monthly median household income, versus the prior 5.9%.

[5]Employment Cost Index (ECI) for private industry wages and salaries, Bureau of Labor Statistics. The Q1 2026 four-quarter change of approximately 3.3% is near the pre-pandemic pace of 2.5%–3.0%.

[6]Personal Consumption Expenditures (PCE) price index, U.S. Bureau of Economic Analysis, April 2026. Headline PCE inflation was approximately 3.8% year-over-year in April 2026; core PCE (excluding food and energy) ran at approximately 3.3%, well above the Federal Reserve's 2% target.

The net result is a homeowner that looks wealthy on the asset side of the balance sheet but is experiencing mounting cash-flow pressure on the liability and expenditure side. Understanding the full scope of that pressure is the purpose of this analysis.

2. Data Sources and Methodological Framework

This analysis constructs a monthly, state-level panel of household spending across six major cost categories—homeownership costs (mortgage, property tax, insurance, maintenance), gasoline, food, healthcare, childcare, and federal income taxes—and expresses each as a share of median household income. All series are estimated or forecast through April 2026.

The methodological approach is consistent across spending categories: anchor to the most granular, authoritative public data available; forecast or backcast with exogenous regressors or Holt-Winters smoothing where appropriate; and interpolate annual data to monthly frequency using interpolation to preserve monotonicity.

The following subsections document the data sources and estimation approach for each component of the analysis.

2.1: Household Income

Household income is the denominator for all affordability ratios and must be estimated at both state and national levels on a monthly basis. The approach combines two layers:

- State-level annual median household income is pulled from U.S. Census / FRED's Median Household Income series for each state. Annual values are anchored to June 1 (the mid-point) of their reference year and interpolated to monthly frequency using interpolation.
- The series is extended forward beyond the most recent FRED observation using the Employment Cost Index (ECI) for private industry wages and salaries by census division. ECI is quarterly; it is interpolated to monthly frequency using interpolation and applied month-over-month as a growth rate. The national ECI is used for the U.S. aggregate.

The resulting monthly income series for all 50 states and the national aggregate (the top 100 metros is also available) – the denominator used across all affordability

calculations in this analysis apart from childcare, which leverages IPUMS ACS data to create income levels specific to households with children present.

2.2: Home Prices

Home prices are the foundation of the homeownership cost calculations. We use the Zillow Home Value Index (ZHVI) for the middle tier (33rd–67th percentile) of all homes—single-family residences and condos—at the state level.

The ZHVI is a smoothed, seasonally adjusted repeat-valuation index, and can roughly be interpreted as the median home value. For regions with missing early-period data, leading NAs are filled by chaining backward from the first observed value using national median log growth rates. Interior gaps (if any) are filled with linear interpolation. This produces a complete price history for every region from the earliest available national date.

2.3: Property Taxes

Property tax burdens vary substantially across states, driven by differences in statutory rates, assessment ratios, and exemption policies. Rather than relying on nominal rates, we compute the *effective tax rate*—the ratio of aggregate taxes paid to aggregate home value—from two ACS tables: B25090 (aggregate real estate taxes paid by mortgage status) and B25082 (aggregate home value by mortgage status). Both are pulled annually via the Census API for all 50 states and the U.S. aggregate for years 2010–2024, excluding 2020 due to ACS sampling disruptions in that year.[7]

The 2020 gap is filled by linear interpolation. Rates are backcasted to 2000 and forecasted to 2026 using Holt-Winters exponential smoothing. The resulting annual effective rate series is interpolated to monthly frequency using a natural cubic spline anchored to June of each reference year. Monthly property tax cost is computed as the effective rate multiplied by the current month's ZHVI, divided by 12.

2.4: Homeowner's Insurance

State-level homeowner's insurance premiums are sourced from Bankrate's published state average annual premium estimates for May 2026. These recent

[7]Effective property tax rates (aggregate taxes paid divided by aggregate home value) by state and nationally for 2010–2024 (excluding 2020, which had ACS sampling issues) are derived from ACS tables B25090 (aggregate taxes paid) and B25082 (aggregate home value), pulled via the Census API for all years available. Rates are backcasted to 2000 and forecasted to 2026 using Holt-Winters exponential smoothing, then interpolated to monthly frequency using a natural cubic spline anchored to June 30 of each reference year. Monthly property tax cost is the effective rate multiplied by the current month's Zillow Home Value Index, divided by 12.

benchmarks are chained backward through time using the Producer Price Index for Homeowner's Insurance (BLS / FRED), scaled proportionally month-by-month. [8] A short ARIMA model is used to project the PPI three months forward to cover the gap between the latest PPI release and the end of the analysis window, April 2026. Monthly insurance cost is the annual premium divided by 12.

The use of the PPI for Homeowner's Insurance as the chaining index ensures that the historical trajectory reflects actual price dynamics in the insurance industry—including the sharp acceleration in premiums that accompanied rising natural disaster losses beginning around 2020—rather than a broader inflation index.

2.5: Maintenance Costs

Annual maintenance and repair costs vary significantly with housing age. Older homes generally require more upkeep, though there is non-monotonic variation by decade of construction (1960s homes tend to maintain better than 1970s builds). We apply NAHB-derived maintenance rate assumptions by decade of construction: pre-1940s and 1940s homes at 0.8% of home value per year; 1950s at 0.6%; 1960s at 0.7%; 1970s at 0.5%; 1980s–1990s at 0.4%; 2000s at 0.2%; 2010s at 0.1%.[9]

ACS table B25034 (year structure built) provides the housing stock distribution by decade of construction for each region. A housing unit-weighted average of the decade-specific rates gives a region-specific, age-adjusted annual maintenance rate by state. Monthly maintenance cost is this rate applied to the current month's ZHVI, divided by 12.

2.6: Mortgage and Refinance Simulations

The mortgage simulation is the analytical core of the homeownership cost component. Rather than reporting current market mortgage costs (which would reflect new-purchase conditions irrelevant to existing homeowners), we simulate the actual payment trajectory for the typical homeowner in each region under four

[8]State-level homeowner's insurance premiums are sourced from Bankrate's published state average annual premium estimates for May 2026. Premiums are chained backward through time using the Producer Price Index for Homeowner's Insurance (FRED: PCU9241269241262), scaled proportionally month-by-month. Forward projections use a short ARIMA model. Monthly insurance cost is the annual premium divided by 12.

[9]Annual maintenance rates are derived from NAHB (National Association of Home Builders) estimates of typical maintenance and repair costs as a share of home value, segmented by decade of construction: pre-1940s homes (0.8%), 1940s (0.8%), 1950s (0.6%), 1960s (0.7%), 1970s (0.5%), 1980s (0.4%), 1990s (0.4%), 2000s (0.2%), 2010s (0.1%). ACS table B25034 (year structure built) provides the housing stock distribution by decade for each region. The weighted average across the housing stock gives a region-specific age-adjusted maintenance rate; monthly cost is this rate applied to the current home value divided by 12.

refinancing scenarios. This approach captures the reality that most homeowners are locked into historical rate decisions and cannot costlessly access market rates.

Simulation Setup

The purchase year for each region is taken as the median year the householder moved in, derived from 2024 ACS 1-year microdata (IPUMS).[10]

The assumed purchase price is the ZHVI for the median move-in month in each region. The down payment is assumed to be 20%, and the original loan is a 30-year fixed-rate mortgage at the prevailing Freddie Mac PMMS rate for that month. The Freddie Mac PMMS weekly series (pulled from FRED) is interpolated from weekly to daily frequency and then aggregated to monthly averages.

For each region, the simulation proceeds through four scenarios:

- No refinance since purchase: The homeowner carries the original loan from purchase date to the present, with standard amortization at the original rate.
- Refinance once—December 2020: The homeowner refinances at the December 2020 PMMS average (2.68%), the historical rate trough. The existing loan balance at that date (computed via standard amortization) is rolled into a new 30-year loan, with a $50,000 cash-out and 3% in closing costs financed into the new balance. Amortization continues on the new loan.
- Refinance once—2026: The homeowner refinances in April 2026 (6.33%). The existing loan balance at that date (computed via standard amortization) is rolled into a new 30-year loan, with a $50,000 cash-out and 3% in closing costs financed into the new balance. (Results for an April 2025 cash-out refinance are also available in the Tableau interactive for comparison.)
- Refinance twice: The homeowner executes both refinances—the 2020 rate trough to lower monthly mortgage payments and a cash-out refinance in 2026.

Balance and Payment Computation

For each scenario, the following quantities are computed at each monthly step:

- Remaining mortgage balance using the standard amortization formula: $B(t) = L \times [(1+c)^n - (1+c)^t] / [(1+c)^n - 1]$, where L is the initial loan amount, c is the

[10]Analysis of 2024 1-year American Community Survey (ACS) microdata using IPUMS USA, University of Minnesota, www.ipums.org. The variable MOVEDINYEAR captures the year the householder moved into the current residence; the median across all owner-occupied units is 2012.

monthly interest rate (annual rate / 12), n is the total number of payments (360 for a 30-year loan), and t is the number of payments made.

- Monthly payment M = L × c(1+c)^n / [(1+c)^n - 1].
- At each refinance event, the new loan balance is the sum of the remaining balance on the old loan, the $50,000 cash-out (for 2026), and the closing fee (3% of the new loan amount). The new monthly payment is recomputed using the new balance, the prevailing 30-year PMMS rate at the refinance date, and a new 360-month term.

The simulation produces monthly series of mortgage balance, monthly payment, and principal and interest components for every region under all four refinancing scenarios. Projections for mortgage balance and interest paid are available to extend 10 years beyond the current date, the focus of a subsequent paper.

Home Equity Estimation

Current home equity is computed at each date as the current ZHVI minus the remaining mortgage balance for each refinancing scenario. This gives both a current snapshot and a projected trajectory of equity under each scenario.

2.7: Gasoline Expenditures

Household gasoline spending – both direct and indirect, together – is estimated by combining state-level consumption volumes with local price data, then converting to a per-household basis. Direct spending is that done by individual consumers. Indirect consumption of gas is that done by producers, and arguably passed on to consumers through the higher costs of goods and shipping.

- **State gasoline volumes** are scraped from the FHWA Highway Statistics publication, (gross gasoline volume in thousands of gallons by state, from state fuel-tax reports), for 2019–2023. State volumes are then forecast to 2026 using national Vehicle Miles Traveled (VMT; FRED) as the exogenous regressor.
- **Gas prices** are assigned to each state from the closest available BLS/FRED series: primarily major metro CBSA monthly series (e.g., the Boston-Cambridge-Newton series for Massachusetts), or census division series for states without a dedicated metro series (e.g., the East North Central division series for Wisconsin). The national aggregate uses the U.S. City Average regular unleaded price series (BLS / FRED). Prices are already monthly and require no interpolation.
- **Per-household gasoline spending** is computed by multiplying state annual volumes by the annual average state price, then dividing by the ACS-derived

number of households in that state (weighted count of household reference persons from IPUMS, 2008–2024, extended to 2026 via simple forecasting methods).

2.8: Food Expenditures

Food expenditure data come from the USDA Economic Research Service Food Expenditure Series, which provides annual state-level per-capita total food sales (food at home plus food away from home) in nominal dollars for 1997–2024.[11]

Per-capita figures are converted to a per-household basis by multiplying by employed persons per household. The ratio consistently runs near 1.18–1.23, dipping to 1.12 in 2020 during the pandemic employment shock. A one-year-ahead projection is made via a short and simple forecasting model where needed.

The use of the employed-persons-per-household ratio rather than total household size is intentional: household income reflects earnings, and the economically relevant denominator when benchmarking food costs against income is the number of income-earning members, not total household size.

Food expenditures are forecast to 2026 using the Consumer Price Index for Food in the U.S. City Average (BLS / FRED) as the exogenous regressor.

2.9: Healthcare Expenditures

Healthcare expenditure data come from the CMS State Health Expenditure Accounts by State of Residence, covering 1991–2020. Four payer files are used: total personal health care spending, Medicare spending, Medicaid spending, and private health insurance spending (PHI, covering 2001–2020).[12]

[11]Food expenditure data are drawn from the USDA Economic Research Service Food Expenditure Series, which provides annual state-level per-capita total food sales (food at home plus food away from home) in nominal dollars for 1997–2024. Per-capita figures are converted to a per-household basis by multiplying by the national employed-persons-per-household ratio (derived from BLS civilian employment, FRED: LNU02000000, and total households, FRED: TTLHH). Expenditures are forecast to 2026 using an ARIMAX model with Food CPI (FRED: CPIUFDSL) as a regressor, interpolated to monthly frequency, and expressed as a share of median household income.

[12]Healthcare spending data come from the CMS State Health Expenditure Accounts by State of Residence, covering 1991–2020. Four payer files are used: total personal health care (US_AGGREGATE20.CSV), Medicare (MEDICARE_AGGREGATE20.CSV), Medicaid (MEDICAID_AGGREGATE20.CSV), and private health insurance (PHI_AGGREGATE20.CSV, covering 2001–2020). The out-of-pocket (narrow) measure is Total minus Medicare, Medicaid, and PHI. Spending is forecast to 2026 using an ARIMAX model with the Producer Price Index for Health and Medical Insurance (FRED series WPS411103) as a regressor, estimated on the 2009–2020 overlap window. Spending is interpolated to monthly frequency, divided by ACS-derived household counts, and expressed as a share of median household income.

The analysis constructs two measures of household-facing healthcare costs. The narrow measure used as the primary affordability metric isolates true out-of-pocket costs—deductibles, co-pays, and services not covered by any insurance program—computed as: Total personal health care minus Medicare, minus Medicaid, minus all private health insurance (including the employer-paid share). This represents costs paid directly and visibly by households.

State-level out-of-pocket spending is forecast to 2026 using the Producer Price Index for Health and Medical Insurance (BLS / FRED) as the exogenous regressor, estimated on the 2009–2020 overlap window between the PPI series and the CMS data. Total spending is divided by ACS-derived state household counts to yield per-household monthly estimates, and expressed as a share of median household income.

2.10: Childcare Expenditures

Childcare price data come from the National Database of Childcare Prices (NDCP), published by the U.S. Department of Labor Women's Bureau. The NDCP provides annual state-level median weekly childcare prices by care type (center-based, home-based) and child age group (infant, toddler, preschool, school age) for 2008–2022.[13]

National estimates are not provided directly in the NDCP; we compute them as population-weighted means across states using the relevant age-group population as weights. States missing prices for a given age group are excluded from the national weighted mean for that group.

Prices are forecast from 2023 to 2026 using ARIMAX models, fitting one model per unique combination of state, care type, and age group (299 combinations in total after excluding series with too few observations). Two exogenous regressors are used:

[13]Childcare prices are drawn from the National Database of Childcare Prices (NDCP), published by the U.S. Department of Labor Women's Bureau, covering 2008–2022. The NDCP reports annual state-level median weekly prices by care type (center-based, home-based) and age group (infant, toddler, preschool, school age). National estimates are computed as population-weighted means across states using the relevant age-group population as weights. Prices are forecast to 2026 using ARIMAX models (one per state×care-type×age-group combination, 299 total) with national childcare CPI (FRED: CUSR0000SEEB) and median weekly earnings of childcare workers (FRED: LEU0254549700A) as regressors. Household incomes for households with children are derived from ACS microdata (IPUMS), computed as weighted median income among households with children of each age group, then forecast to 2026 using the Employment Cost Index by census division as a regressor.

- Consumer Price Index for Tuition, Other School Fees, and Childcare, All Urban Consumers (BLS / FRED). Monthly series; annualized as calendar-year means. The 2026 partial-year value uses the January–April mean.
- Median usual weekly earnings of childcare workers (BLS / FRED). Annual series through 2025; the 2026 value is projected using a separate ARIMA model fitted to the earnings series. In some state-level models, wages were dropped by automated order selection due to collinearity with the CPI regressor—an expected limitation of short annual panels.

Household income benchmarks for the childcare affordability ratio are specific to households with children of each age group, computed as survey-weighted median income from ACS microdata (IPUMS).

2.11: Federal Income Tax Estimation

Federal income taxes are estimated for the typical homeowner household using the married-filing-jointly (MFJ) bracket schedule and standard deduction for each year from 2010 through 2026.[14]

The income deduction used is the greater of: (a) the applicable standard deduction for the tax year, or (b) the sum of mortgage interest paid and property taxes paid (itemized deduction). Taxable income is then applied against the marginal bracket schedule to compute the total annual tax liability, which is divided by 12 to produce a monthly estimate.

3. The Cost of Staying Alive and Mobile: Food and Gasoline

Among all spending categories, food and gasoline are the most volatile and the most immediately felt by households. Both have risen sharply since 2020, driven by

[14]Federal income taxes are estimated using married-filing-jointly tax brackets and standard deductions for each year from 2010 through 2026. The deduction taken is the greater of (a) the applicable standard deduction or (b) mortgage interest plus property taxes paid (itemized deduction). Taxable income is applied against the bracket schedule to compute marginal tax liability, which is then divided by 12 to obtain a monthly estimate. Tax parameters through 2025 use actual IRS schedules; the 2026 schedule uses projected inflation adjustments consistent with current law.

supply chain disruptions, energy market shocks, and a renewed surge in global oil prices following the military conflict with Iran, begun February 2026.

3.1: Food Expenditures

Nationally, the average household spends $794 per month on food—representing 10.7% of pre-tax household income. Total household food spending is up 47% since 2020 and up 3% from a year ago and continues to track above the pre-pandemic pace, driven by elevated commodity costs, transportation expenses, and labor costs in the food service and retail sectors.

The USDA Economic Research Service food expenditure data, which covers food at home and food away from home, shows that the food expenditure burden has been remarkably persistent across states: unlike healthcare or childcare, where state variation is extreme, food spending as a share of income is fairly uniform nationally, because food price levels do not vary dramatically across states. The state variation that exists is driven primarily by income differences rather than price differences.

3.2: Gasoline Expenditures

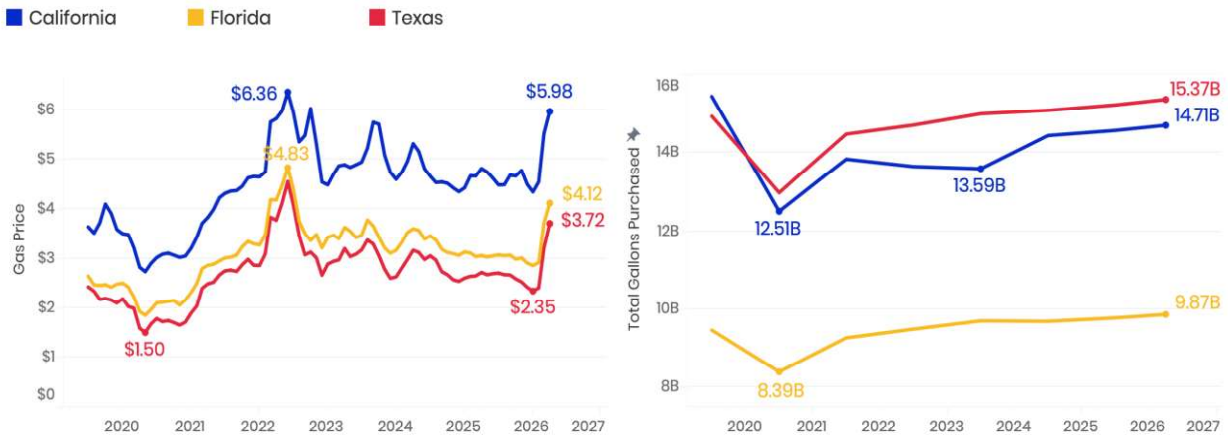
Gasoline spending has been the most volatile cost category, and—as of April 2026—is rising sharply again. The February 2026 military conflict with Iran, a major OPEC oil producer, triggered a significant spike in global crude oil prices that has passed through to retail gasoline prices in the United States.[15]

Nationally, household gasoline spending is up 103% since 2020—a period that started at an artificially low baseline due to pandemic-era mobility restrictions—and up dramatically – 28% from just one year ago. The year-over-year increase is the largest across all spending categories tracked in this analysis.

The three largest gasoline-spending states are Texas, Florida, and California, reflecting a combination of large populations, high vehicle miles traveled, and—in California's case—structurally elevated prices due to state fuel taxes and formulation requirements. California's gas price approached $6.00 per gallon by April 2026; Florida and Texas have seen significant increases as well.

[15]State gasoline volumes are scraped from the Federal Highway Administration (FHWA) Highway Statistics publication, Table MF-33GA (gross gasoline and gasohol volume in thousands of gallons by state, compiled from state fuel-tax reports), for 2019–2023. State volumes are forecast to 2026 using national Vehicle Miles Traveled (VMT, FRED series M12MTVUSM227NFWA) as an ARIMAX regressor. Gas prices are assigned to each state using the closest available BLS/FRED series—primarily major metro CBSA series or census division series where metro-level data is unavailable. National totals are constructed by summing state volumes and applying the U.S. City Average gas price (FRED series APU000074714). Pre-household spending is derived by dividing by ACS-derived household counts (IPUMS, 2008–2024, extended to 2026 via ARIMA).

Inelastic in its demand, total consumption (gallons) is relatively unaffected by gas prices. High coordination costs come with switching to alternatives such as public transportation.



Gasoline Spending: 3 Largest States

The geographic variation in gasoline burden reflects differences in both price levels and vehicle dependency. States in the South and Mountain West—where public transit is limited and commute distances are long—tend to see higher gasoline consumption volumes even when prices lift.

4. The Cost of Staying Healthy: Healthcare

Healthcare is one of the largest essential spending categories for U.S. households. On average, households spend approximately 8.5% of their pre-tax income on out-of-pocket healthcare costs—covering physician and hospital visits, prescription medications, durable medical equipment, and elder- and home-care services. This figure represents the narrow measure of healthcare spending: total personal health care expenditures minus Medicare, Medicaid, and all private health insurance (including the employer-paid portion of premiums).[16]

[16]Healthcare spending data come from the CMS State Health Expenditure Accounts by State of Residence, covering 1991–2020. Four payer files are used: total personal health care (US_AGGREGATE20.CSV), Medicare (MEDICARE_AGGREGATE20.CSV), Medicaid (MEDICAID_AGGREGATE20.CSV), and private health insurance (PHI_AGGREGATE20.CSV, covering 2001–2020). The out-of-pocket (narrow) measure is Total minus Medicare, Medicaid, and PHI. Spending is forecast to 2026 using an ARIMAX model with the Producer Price Index for Health and Medical Insurance (FRED series WPS411103) as a regressor, estimated on the 2009–2020 overlap window. Spending is

The CMS State Health Expenditure Accounts data—the most authoritative source for state-level healthcare spending—covers all payers through 2020. Because the PPI (our forecasting regressor) captures cost pressures on both health insurers and providers, it is an appropriate leading indicator for household-facing costs. The resulting forecasts reflect sustained above-trend healthcare inflation, driven by post-pandemic care demand catch-up, drug pricing pressures, and labor costs in healthcare services.

4.1: State-Level Variation

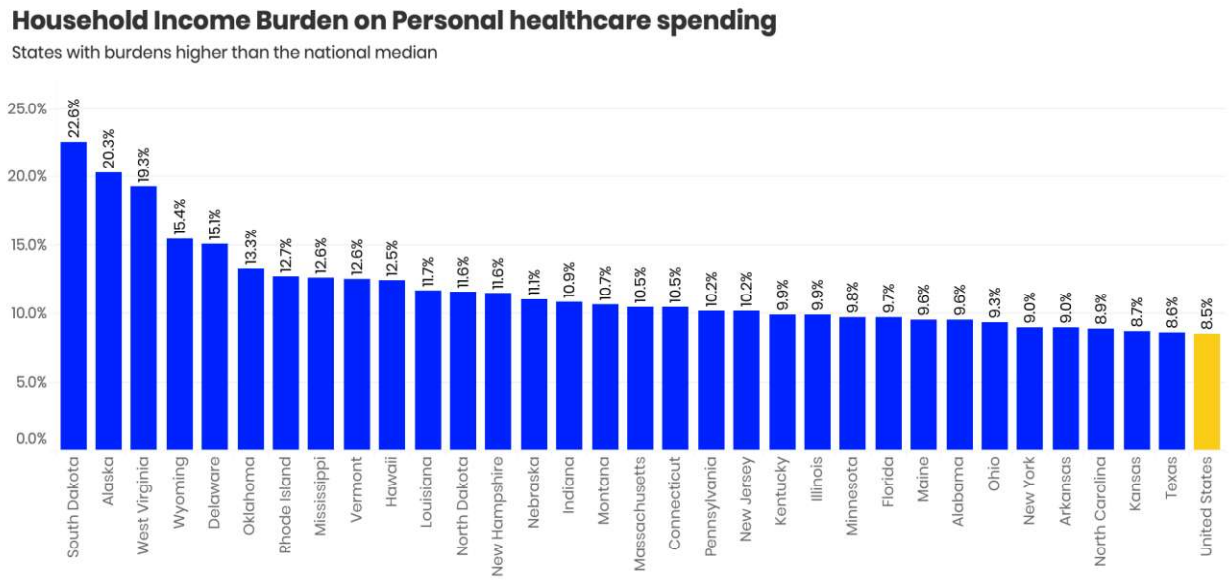
Healthcare burden varies substantially by state, driven by differences in the generosity of state Medicaid programs, employer insurance coverage rates, the share of self-insured versus fully-insured plans, and health price levels. States with smaller, older, or sicker populations tend to have higher out-of-pocket burdens because the pool of eligible cost-sharing is smaller relative to total spending.

The healthcare burden is highest in less populated states:

- South Dakota: 22.6% of household income
- Alaska: 20.3%
- West Virginia: 19.3%
- Wyoming: 15.4%

These states have small populations that spread fixed healthcare infrastructure costs over fewer households, limited employer coverage, and populations with above-average health needs. The national median is 8.5%—roughly half of all states have burdens above this level.

interpolated to monthly frequency, divided by ACS-derived household counts, and expressed as a share of median household income.



Household Income Burden: Personal Healthcare Spending (States Above National Median, April 2026)

5. The Cost of Raising Children: Childcare

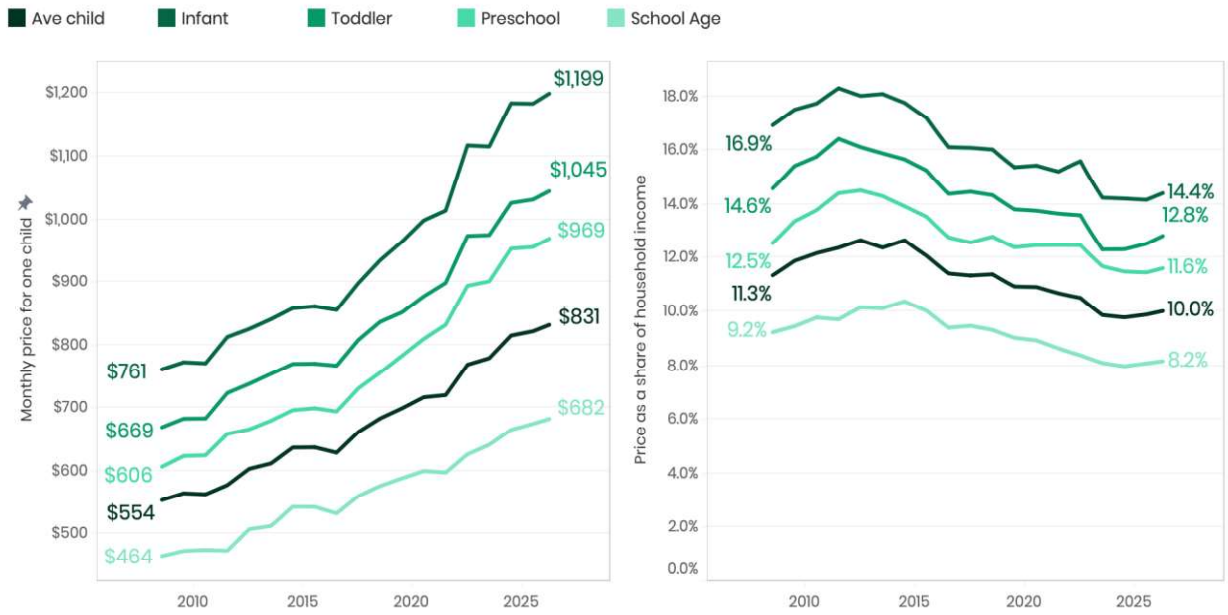
For households with young children, childcare is often the single largest spending category after housing. The National Database of Childcare Prices (NDCP) documents childcare costs comprehensively across care types and age groups, providing the most authoritative public benchmark for this expenditure.[17]

5.1: Current Price Levels

Nationally, the average child in center-based childcare—weighted across all age groups in proportion to their population share—costs $831 per month (approximately $192 per week). This average blends:

[17]Childcare prices are drawn from the National Database of Childcare Prices (NDCP), published by the U.S. Department of Labor Women's Bureau, covering 2008–2022. The NDCP reports annual state-level median weekly prices by care type (center-based, home-based) and age group (infant, toddler, preschool, school age). National estimates are computed as population-weighted means across states using the relevant age-group population as weights. Prices are forecast to 2026 using ARIMAX models (one per state×care-type×age-group combination, 299 total) with national childcare CPI (FRED: CUSR0000SEEB) and median weekly earnings of childcare workers (FRED: LEU0254549700A) as regressors. Household incomes for households with children are derived from ACS microdata (IPUMS), computed as weighted median income among households with children of each age group, then forecast to 2026 using the Employment Cost Index by census division as a regressor.

- Infant care (under 12 months): $1,199 per month. Infants require the lowest adult-to-child ratios mandated by state licensing rules, making them the most expensive age group to care for.
- Toddler care (12–35 months): $1,045 per month.
- Preschool care (3–5 years): $969 per month.
- School-age afterschool care (6–12 years): $682 per month. School-age children are the least expensive category because they are in school for most of the day.



Pricing of Childcare Centers Nationally by Age Group (2009-2026)

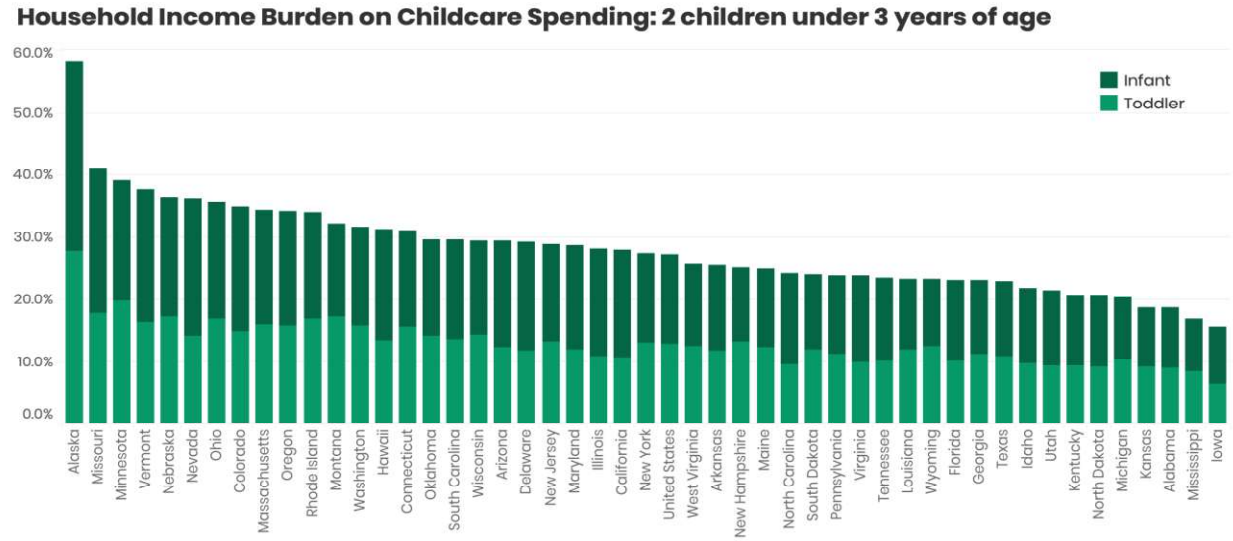
The 2023–2026 forecast period captures continued price escalation as the post-pandemic labor market for childcare workers remained tight and as provider costs continued to rise faster than general inflation.

5.2: The Multi-Child Burden

Many households with young children face simultaneous childcare costs for multiple children. The median gap between siblings is two years[18], meaning a household whose older child is an infant or toddler will likely have two children in care concurrently. A household with two children under age 3—one infant and one

[18]Analysis of 2024 1-year American Community Survey (ACS) microdata using IPUMS USA, University of Minnesota, www.ipums.org. The variable MOVEDINYEAR captures the year the householder moved into the current residence; the median across all owner-occupied units is 2012.

toddler—spends $2,245 per month on center-based childcare, representing nearly 30% of the median household income for families with children of this age.



Household Income Burden: Spending on Childcare for 2 Children Under 3 years old (April 2026)

6. The Costs of Homeownership

Beyond the mortgage payment itself, homeowners face a suite of recurring costs that scale with home value. Property taxes, homeowner's insurance, and maintenance together represent a significant and growing share of household income—and have risen substantially faster than home value growth or income growth since 2020.

6.1: Property Taxes

Property tax payments have grown substantially alongside the surge in home values: up 20.5% in April 2026 from 2020, tracking the home value appreciation of the same period. However, the year-over-year increase has slowed to just 0.8% (April 2026 vs. April 2025) as home value growth has moderated to near zero. The effective property tax rate has not changed materially—the dollar burden has risen because the taxable base (home value) rose sharply.[19]

[19]Effective property tax rates (aggregate taxes paid divided by aggregate home value) by state and nationally for 2010–2024 (excluding 2020, which had ACS sampling issues) are derived from ACS tables B25090 (aggregate taxes paid) and B25082 (aggregate home value), pulled via the Census API for all years available. Rates are backcasted to 2000 and forecasted to 2026 using Holt-Winters exponential smoothing, then interpolated to monthly frequency

State and local governments typically lag in updating assessments to reflect market values, meaning the effective burden often rises with a delay after a home price surge. This delay in assessment means that some portion of the 2020–2022 price appreciation may not yet be fully reflected in tax bills, suggesting continued upward pressure on property tax costs in some markets even as prices have plateaued.

6.2: Homeowner's Insurance

Property insurance costs have risen faster than any other homeownership cost component: up 74.8% since 2020, and continuing to grow at 6.2% over the past year—far above general inflation. The driver is well-documented: rising losses from natural disasters (wildfires, hurricanes, flooding) have pushed multiple major insurers into insolvency or withdrawal from high-risk markets, reducing competitive pressure on premiums and triggering state-level market interventions.[20]

The methodology chains Bankrate's May 2026 state-level premium benchmarks backward through time using the PPI for Homeowner's Insurance, which captures the cost trajectory experienced by insurers and passed on to policyholders. This produces historically consistent premium estimates that reflect the structural shift in insurance markets since 2020.

6.3: Maintenance

Regular maintenance and repair costs have risen conservatively by 35.1% since 2020, driven primarily by elevated construction materials costs and labor shortages in the skilled trades. Because maintenance costs are estimated as a fixed percentage of home value (with the rate varying by housing age), the dollar burden has risen mechanically with home values and is likely an under-estimate of the true costs of maintenance.[21]

---

using a natural cubic spline anchored to June 30 of each reference year. Monthly property tax cost is the effective rate multiplied by the current month's Zillow Home Value Index, divided by 12.

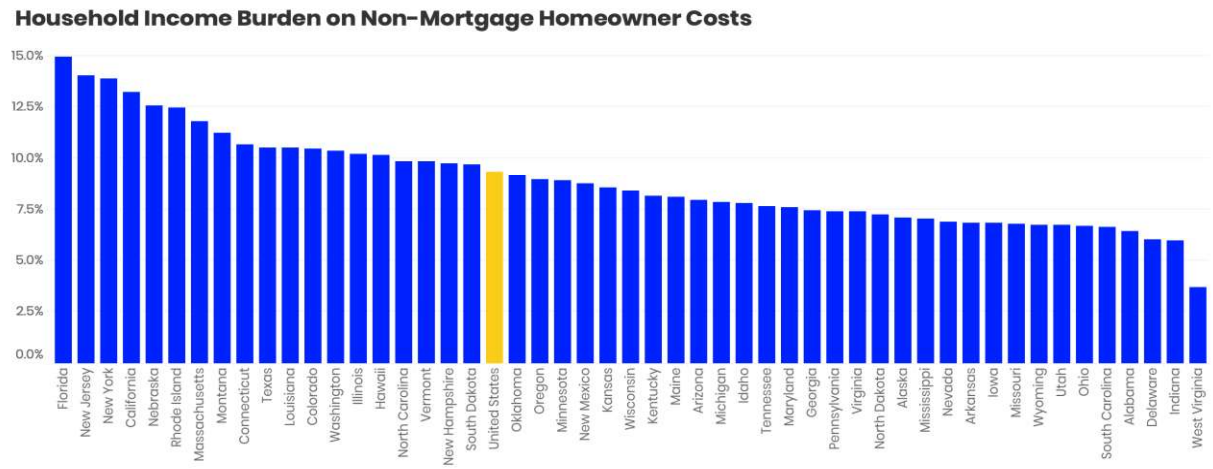
[20]State-level homeowner's insurance premiums are sourced from Bankrate's published state average annual premium estimates for May 2026. Premiums are chained backward through time using the Producer Price Index for Homeowner's Insurance (FRED: PCU9241269241262), scaled proportionally month-by-month. Forward projections use a short ARIMA model. Monthly insurance cost is the annual premium divided by 12.

[21]Annual maintenance rates are derived from NAHB (National Association of Home Builders) estimates of typical maintenance and repair costs as a share of home value, segmented by decade of construction: pre-1940s homes (0.8%), 1940s (0.8%), 1950s (0.6%), 1960s (0.7%), 1970s (0.5%), 1980s (0.4%), 1990s (0.4%), 2000s (0.2%), 2010s (0.1%). ACS table B25034 (year structure built) provides the housing stock distribution by decade for each region. The weighted average across the housing stock gives a region-specific age-adjusted maintenance rate; monthly cost is this rate applied to the current home value divided by 12.

6.4: Non-mortgage Homeownership Cost Summary

Taken together, non-mortgage homeownership costs—property tax, insurance, and maintenance—now claim 9.4% of median household income nationally. This burden is borne disproportionately in states facing elevated natural disaster risk:

- Florida: 14.9% (hurricane and flood exposure; most expensive non-mortgage homeownership market nationally)
- New Jersey: 14.0% (high property taxes and elevated insurance costs)
- New York: 13.9% (high property taxes in suburban markets)
- California: 13.2% (wildfire exposure in inland and hillside markets)



Non-Mortgage Homeowner Cost Burden by State (April 2026)

7. The Mortgage Rate Lock and the Refinancing Trap

The mortgage payment is the centerpiece of the homeowner affordability analysis—and the dimension where the policy and business context is most acute. The trajectory of mortgage rates since 2020 has created a profound bifurcation in the homeowner population: those who locked in sub-3% rates are protected from current market conditions, while those who purchased or need to refinance at higher rates face dramatically elevated monthly costs.

7.1: The Strategic Homeowner

The median U.S. homeowner purchased their home in 2012, when home values were at their post-financial-crisis low. A homeowner who took the opportunity to refinance in December 2020—when 30-year rates averaged 2.68%—now carries a monthly payment of approximately $436, representing just 5.9% of current monthly median household income.[22] That is an extraordinary level of payment security—and it is the central reason why so many homeowners are reluctant to refinance today.

7.2: The Cost of a Cash-out Refinance Today

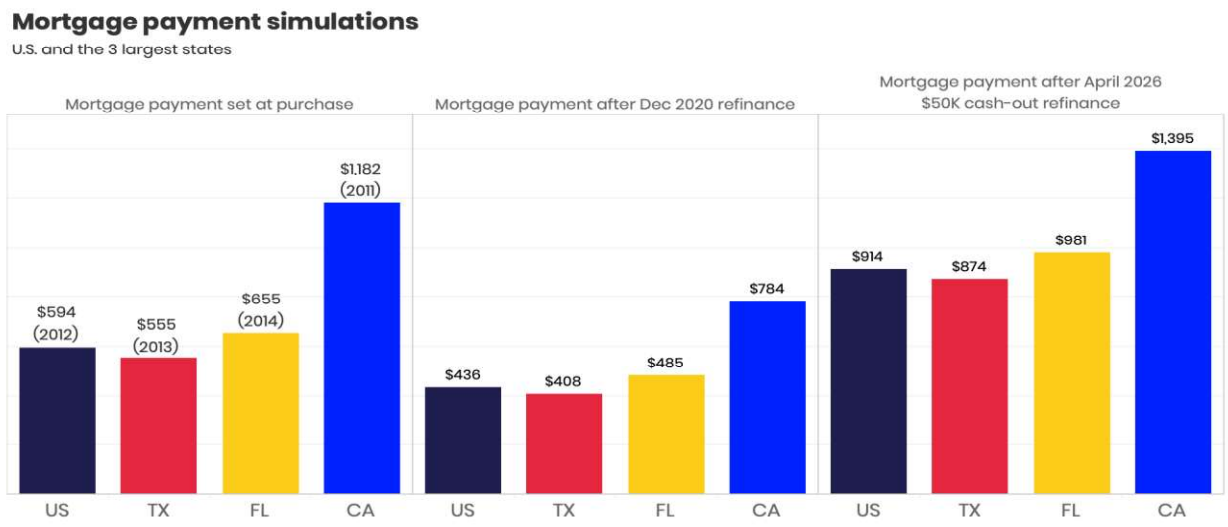
Pulling $50,000 in cash from home equity today requires refinancing the existing loan at 6.33% (the April 2026 PMMS rate). For the typical homeowner who refinanced in December 2020 and holds a remaining balance of approximately $94,400, adding $50,000 cash-out plus 3% in closing costs gives a new loan of approximately $149,100. At 6.33% over 30 years, the new monthly payment is approximately $913—$477 more per month than the current payment of $436.[23]

This increase represents:

- Near-doubling for the 30% of mortgage holders with rates between 3% and 4%.
- More than doubling for the 20% of mortgaged homeowners with rates below 3%.
- A mortgage payment increased from $436 to $913, nationally – an additional 6.4 percentage points of household income dedicated to the mortgage—at a time when the affordability of all other essential categories is already under pressure.

[22]Simulation assumes: (1) Purchase in January 2012 at the median home value of $162,000 (Zillow ZHVI) with 20% down and a 30-year fixed rate of 3.67% (Freddie Mac PMMS); (2) Refinance in December 2020 into a new 30-year loan at 2.68% (the December 2020 PMMS average), rolling in 3% in closing costs; (3) No further refinance. The resulting monthly payment of approximately $436 represents 5.9% of monthly median household income ($7,390/month, or $88,700 annually, based on the 2024 ACS 1-year estimate extended to April 2026 using the Employment Cost Index).

[23]Cash-out refinance simulation: Starting from the December 2020 refinanced balance (step 2 in footnote 13), a second refinance is simulated in April 2026 at the prevailing PMMS rate of 6.33%, adding $50,000 in cash-out and rolling in 3% in new closing costs. The resulting new monthly payment of approximately $913 is $477 more per month than the post-2020-refi payment of $436—an increase of more than 100%—and represents 12.4% of monthly median household income, versus the prior 5.9%.



Mortgage Payment Simulations: U.S. and the Three Largest States

7.3: Regional Variation in the Refinance Penalty

The refinancing penalty is most severe in markets where the typical homeowner purchased later and home prices were greatest, because higher home values and less time to have paid off the original balance produce larger remaining balances and therefore larger new loan amounts. The simulation computes mortgage payment trajectories at the state level, accounting for regional differences in: median home value (ZHVI), median year of purchase (from ACS). Prevailing mortgage rates at purchase and refinance dates are shared nationally.

For all four locations shown in the mortgage simulation charts—the U.S. aggregate, Texas, Florida, and California—the pattern is consistent: the 2020 refinance dramatically reduced monthly payments, and today's refinancing at 6.33% with a cash-out would more than double those reduced payments.

8. Total Burden: Working Parents with Two Kids in Care

The full affordability picture emerges when all essential spending categories are combined:

- Mortgage payment
- Property tax, homeowner's insurance, and maintenance

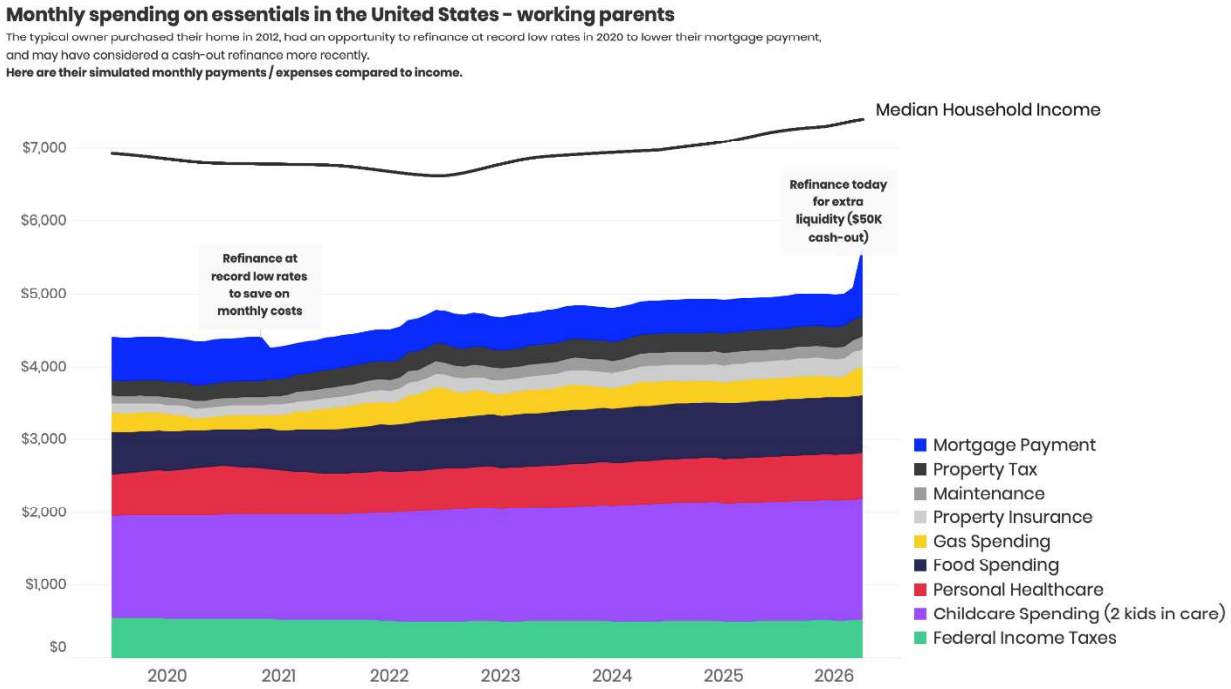
- Gasoline expenditures
- Food expenditures
- Out-of-pocket personal healthcare costs
- Center-based childcare for two children
- Federal income taxes

The most constrained household type is working parents with two children in childcare.

8.1: National Summary

Before housing costs, non-housing essentials—gas, food, and healthcare—consumed 20% (1 in 5 dollars) of household income in 2020. By April 2026, that share had risen to 25% (1 in 4 dollars). For the household with two children under 3 in childcare, adding childcare costs brings the total non-mortgage essential spending to more than 55% of household income.

When the mortgage payment (5.9% of income; 12.3% under 2026 refinance scenario), non-mortgage homeownership costs (9.4%), and federal income taxes are added, total essential spending approaches or exceeds 73% of median household income nationally for this household type, leaving almost no room for retirement savings, emergency funds, or discretionary spending.



Monthly Spending on Essentials in the United States – Working Parents (2019–2026)

9. State-level Variation in the Total Burden

The national averages documented in this analysis conceal substantial geographic variation. A household's total essential spending burden—the share of income consumed by housing costs, food, gasoline, healthcare, childcare, and federal income taxes—ranges from roughly half of income in the most affordable states to nearly 90% in the most burdened. That variation is driven by differences in childcare prices, healthcare costs, housing markets, income levels, and, for homeowners who take out a cash-out refinance, the size of the resulting payment increase relative to local incomes.

The following analysis presents the full-burden picture for a representative working-parent household with two average-age children in center-based childcare, under two scenarios: one in which the homeowner does not take a cash-out refinance in 2026 (mortgage payment unchanged from the 2020 refinance), and one in which the household accesses $50,000 in equity through a cash-out refinance at April 2026 rates.

9.1: The Burden Ranking Without a 2026 Cash-out Refinance

For a working-parent household that does not refinance in 2026, the national aggregate total burden stands at 66.8% of household income in April 2026—up 3.5 percentage points from 2020 and up 1.1 percentage point from one year ago. The year-over-year increase largely reflects continued growth in food and gasoline prices, ongoing property insurance escalation, and rising childcare costs, not any change in the mortgage payment (which is locked in from the 2020 refinance).

The geographic spread is wide. Six states see burdens above 80% of income without any new refinancing:

- Montana: 82.1% — the highest no-refi burden nationally, driven by elevated healthcare costs (a legacy of thin insurance markets) and childcare prices relative to local incomes.
- Alaska: 80.9% — structurally high healthcare and food costs in a high cost-of-living state with limited provider competition.
- Nevada: 80.8% — high housing costs relative to incomes combined with above-average childcare prices.

- Vermont: 77.7% — high childcare and healthcare costs despite moderate housing.
- New York: 77.6% — high housing and childcare costs; the modest year-over-year burden change (-0.4 pp) reflects income growth keeping pace.
- South Dakota: 77.2% — healthcare costs are the primary driver, consistent with the state's 22.6% healthcare burden documented in Section 4.

At the other end of the distribution, Indiana (44.5%), Iowa (52.7%), and New Mexico (52.2%) have the lowest total burdens — a combination of more affordable housing relative to incomes and lower childcare market prices.

The since-2020 change is arguably more striking than the level. Even without a new refinance, Montana (+6.6 pp), South Dakota (+11.1 pp), Missouri (+12.1 pp), and Nebraska (+9.6 pp) have seen their total essential-spending burdens rise by double-digit percentage points since 2020. These increases are driven not by mortgage costs but by the compounding of food, gasoline, insurance, and childcare inflation in states where income growth has not kept pace.

Importantly, Florida stands out on the no-refi side as the only state to show a negative one-year change (-0.5 pp), suggesting that income growth there briefly outpaced the continued rise in insurance and other costs—though its burden of 73.2% remains among the highest nationally.

9.2: The Additional Impact of a 2026 Cash-Out Refinance

For a household that chooses to access $50,000 in equity through a cash-out refinance at current rates (6.33% in April 2026), the total burden rises to 73.3% nationally—a 6.4 percentage point increase over the no-refi scenario and a 10.0 percentage point increase since 2020. The one-year change of 7.5 percentage points under the refi scenario dramatically exceeds the 1.1 pp seen without refinancing, because the mortgage payment jump registers as a sudden, large, single-year increase.

The cash-out refinance pushes six states above the 85% threshold:

- Montana: 89.0% of household income (highest nationally), up from 82.1% without refinancing.
- Nevada: 88.5%, up from 80.8%.
- Alaska: 88.0%, up from 80.9%.

- Louisiana: 85.6%, up from 76.8%. Louisiana households face a particularly acute combination of high healthcare costs, elevated gasoline prices, and the full force of the cash-out payment increase.
- New York: 85.3%, up from 77.6%.
- Hawaii: 85.1%, up from 76.2%.

The "cash-out penalty"—the additional burden from refinancing versus not—is not uniform across states. It ranges from roughly 5.3 percentage points (New Hampshire) to 8.9 percentage points (Hawaii) and 8.8 percentage points (Louisiana). The variation reflects differences in home values and remaining mortgage balances: states with higher home values have larger outstanding balances and therefore more principal to refinance, making the payment increase on the $50,000 cash-out smaller relative to the total loan. Conversely, lower-value states with small remaining balances see the $50,000 cash-out represent a larger share of the new loan, driving a proportionally bigger payment jump.

The since-2020 change under the refi scenario highlights different geographies than the level. Missouri (+18.4 pp), South Dakota (+17.9 pp), Wyoming (+16.7 pp), New Mexico (+15.8 pp), and Nebraska (+15.4 pp) have seen the largest total increases since 2020 under the refi scenario—not because they had the highest initial burdens, but because their incomes have lagged the national pace and their non-mortgage costs have also escalated sharply.

The one-year change leaders under the refi scenario are Arizona (+11.0 pp), Mississippi (+10.7 pp), Louisiana (+10.3 pp), and New Mexico (+10.1 pp)—all states with fast-rising gasoline and food costs on top of the mortgage payment shock.

Taken together, the two scenarios—no refinance and cash-out refinance—bracket the range of outcomes facing a typical working-parent homeowner today. In either case, essential spending consumes the majority of household income in most states. The decision to access equity through a cash-out refinance at current rates converts a manageable liquidity constraint into an acute affordability crisis for households already operating with little margin.

9.3: The Equity Trap

This analysis documents a fundamental structural tension facing a growing share of U.S. homeowners: they have accumulated substantial wealth in home equity, but that wealth is illiquid, and the traditional mechanism for unlocking it—cash-out refinancing—has become prohibitively expensive.

Homeowners who are locked in sub-3% or sub-4% mortgage rates are effectively facing a rate-lock tax: accessing their equity through a cash-out refi requires refinancing the entire existing balance at market rates, not just the cash-out portion. For a homeowner whose existing payment is $436/month, adding $50,000 in liquidity at a cost of $477/month in additional payment—more than the existing payment itself—is a prohibitive price for most households already stretched thin by rising essential costs.

The constraints documented throughout this paper compound: households with the highest childcare and healthcare burdens are also the ones most likely to need liquidity, yet face the steepest penalty for accessing it. The result is a cohort of homeowners who are asset-rich but cash-poor, with few low-cost avenues for relief.

10. Conclusion

The American homeowner in 2026 occupies a contradictory position: wealthy on paper, constrained in practice. Home prices are up nearly 47% since 2020, and the strategic homeowner who refinanced at the 2020 rate trough holds over $274,000 in equity on a mortgage payment that consumes only 6% of monthly income. But accessing that equity through a traditional cash-out refinance would more than double that payment—at precisely the moment when almost every other major spending category is rising.

Non-housing essentials have risen from 20 cents on every income dollar in 2020 to 25 cents today. Property insurance has surged 75% since 2020 and continues to compound. Childcare for two young children consumes nearly 30% of household income on its own. Gasoline spending—amplified by the February 2026 Iran conflict—has roughly doubled since 2020.

For working parents with two children in childcare, the confluence of these pressures is acute: more than half of household income goes to non-housing essentials before accounting for homeownership costs or federal income taxes. After all essential spending, there is little left for savings, retirement, or discretionary consumption.

The data make clear that a significant and growing segment of the U.S. homeowner population is equity-rich but cash-constrained. Traditional liquidity mechanisms no longer serve this population—not because the equity isn't there, but because the cost of accessing it has risen sharply. Understanding the full scope of this affordability squeeze—across all essential spending categories, at the state and metro level, over

time—is the first step toward developing solutions that match the reality households are living.

APPENDIX

Data Sources and Technical Notes

A.1 Primary Data Sources

- Zillow Home Value Index (ZHVI): Middle-tier all-homes series. Zillow.com/data. Downloaded May 2026.
- FRED (Federal Reserve Economic Data): Freddie Mac PMMS (MORTGAGE30US); state Real Median Household Income (SA series); Employment Cost Index by census division (CIU02 family); U.S. City Average gas price (APU000074714); VMT (M12MTVUSM227NFWA); Food CPI (CPIUFDSL); childcare CPI (CUSR0000SEEB); childcare worker wages (LEU0254549700A); PPI Homeowner's Insurance (PCU9241269241262); PPI Health and Medical Insurance (WPS411103); PCE (PCE); civilian employment (LNU02000000); total households (TTLHH).
- U.S. Census Bureau American Community Survey (ACS): Tables B25090, B25082 (property tax and home value); B25034 (year structure built); B25003, B19013 (occupancy and income for metros via Census API). 1-year and 5-year ACS. Accessed via tidycensus R package.
- IPUMS USA: ACS microdata for 2008–2024 (excluding 2020). University of Minnesota, www.ipums.org. Used to derive household counts by state and metro, median year of purchase, and income benchmarks by household type.
- CMS State Health Expenditure Accounts by State of Residence: Total personal health care, Medicare, Medicaid, and private health insurance aggregate files, 1991–2020. Centers for Medicare & Medicaid Services.
- USDA Economic Research Service Food Expenditure Series: Annual state-level per-capita food sales (food at home + food away from home), 1997–2024. ERS.USDA.gov.
- FHWA Highway Statistics, Table MF-33GA: Annual gross gasoline and gasohol volume by state, 2019–2023. Federal Highway Administration.
- National Database of Childcare Prices (NDCP): Annual state-level median weekly childcare prices by care type and age group, 2008–2022. U.S. Department of Labor Women's Bureau.

- Bankrate: State-level annual homeowner's insurance premium estimates, May 2026. Bankrate.com.

A.2 Software and Packages

All analysis was conducted in R. Key packages include:

- tidycensus, ipumsr: Census and ACS data access
- fredr: FRED API access
- fable, tsibble, fabletools: Time series modeling and forecasting (ARIMA, ARIMAX, ETS)
- imputeTS: Stineman and linear interpolation (na_interpolation)
- lubridate, dplyr, tidyr, purrr: Data wrangling
- ggplot2: Visualization
- rvest: Web scraping (FHWA gasoline volume tables)

A.3 Forecast Methodology Notes

ARIMAX models are used for all forward projections. Automatic ARIMA order selection is performed via the fable package's ARIMA() function, which uses AIC/AICc criteria. Where a series is too short to support ARIMA estimation, a simpler ETS (exponential smoothing) or Holt-Winters model is substituted. All forecasts are produced for a horizon of 4 years (2023–2026) beyond the last observed data point.

Annual series are interpolated to monthly frequency using a July 1 anchor: the annual observation is assigned to the midpoint of the reference year, and Stineman interpolation (via the na_interpolation function with option = 'stine') is used to fill monthly gaps. This preserves the monotonic character of income and price series better than linear interpolation.

All spending shares are winsorized at 100% of income (i.e., capped at 1.0) to prevent implausible ratios from small-denominator observations. Income floors of $1,000 are applied before computing burden shares.

A.4 Mortgage Simulation Technical Detail

The standard amortization formulas used throughout are:

- Monthly payment: $M = L \times c(1+c)^n / [(1+c)^n - 1]$
- Balance after t payments: $B(t) = L \times [(1+c)^n - (1+c)^t] / [(1+c)^n - 1]$
- Monthly interest paid: $I(t) = B(t-1) \times c$

where L is the initial loan amount, c is the monthly interest rate (annual rate / 12), and n = 360 for a 30-year mortgage.

At each refinance event: new loan balance = remaining balance + cash-out amount + (closing fee rate × new loan balance). Closing fees are financed into the new loan. The new monthly payment is computed using the new balance, prevailing PMMS rate at the refinance date, and a fresh 360-month term.

Closing fees for all simulations: 3% of the new loan amount.

Cash-out amount: $50,000 at each refinance event.

Refinance dates: December 2020 for the first refinance (historical rate trough); April 2026 as the primary second refinance date (with April 2025 as an alternative for sensitivity analysis.

Disclaimer

IMPORTANT LEGAL DISCLAIMER AND NOTICE TO RECIPIENTS DRAFT DOCUMENT — NOT FOR FINAL RELIANCE. This document is a working draft prepared by Unlock Technologies, Inc. (Unlock) and is being shared with recipients in draft form only, with the express understanding that it is incomplete, subject to revision, and does not represent a final or definitive statement of Unlock's views, data, analysis, or conclusions. Recipients should not treat this document as final in any respect.

OPINIONS AND DISCUSSION PURPOSES ONLY. All statements, conclusions, projections, estimates, and forward-looking statements contained herein represent solely the subjective opinions and views of Unlock Technologies as of the date hereof, based on Unlock's own interpretation of available data. Nothing in this document constitutes a statement of fact, and recipients should not rely on any content herein as factual, objective, or independently verified. This document is intended solely as a discussion piece and is provided for informational purposes only.

NO REPRESENTATION AS TO ACCURACY, COMPLETENESS, OR RELIABILITY. Unlock Technologies makes no representation, warranty, or guarantee of any kind, express or implied, as to the accuracy, completeness, timeliness, reliability, suitability, or fitness for any particular purpose of any information, data, analysis, conclusion, projection, or statement contained in this document. The data presented herein is derived primarily from Unlock's internal origination tape and other internal systems and records that have not been independently audited, verified, or confirmed by any third party. All CPR figures, settlement rates, prepayment projections, and related metrics are calculated using Unlock's own methodologies and internal data systems, and may differ materially from figures calculated by any third party using different methodologies, data sources, assumptions, or time periods. Recipients are strongly encouraged to independently verify all data, claims, and conclusions before placing any reliance on this document.

DATA MAY CONTAIN ERRORS. The data, figures, statistics, and analysis contained in this document may contain errors, inaccuracies, or omissions arising from system errors, data processing errors, analytical errors, human error, software limitations, data extraction issues, or other sources of error. Unlock does not represent that any data point, figure, calculation, or conclusion in this document is free from error. No investment decision, credit decision, rating action, valuation, or other consequential action should be made or taken in reliance on any data, figure, or analysis contained herein without independent verification and analysis by the recipient and its own advisors.

NOT AN OFFER OR SOLICITATION. This document does not constitute, and shall not be construed as, an offer to sell or a solicitation of an offer to purchase or subscribe for any security, financial instrument, investment product, or any interest in any fund or investment vehicle. Nothing herein constitutes investment advice, legal advice, tax advice, accounting advice, or any other form of professional advice. Recipients should consult their own legal, financial, tax, and other professional advisors before making any investment decision.

FORWARD-LOOKING STATEMENTS AND PROJECTIONS. This document contains forward-looking statements, projections, estimates, and scenario analyses, including but not limited to CPR projections, prepayment speed estimates, maturity acceleration models, HPA assumptions, rate scenarios, and WAL estimates. These forward-looking statements are based on assumptions, models, and judgments that may prove incorrect and involve known and unknown risks, uncertainties, and other factors entirely beyond Unlock's control. Actual prepayment behavior, CPR outcomes, portfolio performance, and all other outcomes may differ materially — including significantly and adversely — from any projection, estimate, or forward-looking statement in this document.

RECIPIENT INDEPENDENT ANALYSIS REQUIRED. This document is intended as a starting point for discussion and is not a substitute for recipients' own independent due diligence, data analysis, and professional judgment. Unlock strongly encourages each recipient to conduct its own independent analysis before placing any reliance on this document. The views expressed herein are those of Unlock Technologies alone and are subject to change at any time without notice.

LIMITATION OF LIABILITY AND DISCLAIMER OF WARRANTIES. To the fullest extent permitted by applicable law, the Unlock Parties expressly disclaim and shall have no liability whatsoever for any loss, damage, cost, liability, claim, or expense of any nature or kind arising directly or indirectly from use of or reliance on this document.

CONFIDENTIALITY. This document is confidential and is intended solely for the named recipient and its authorized representatives. Unauthorized reproduction or distribution of this document is strictly prohibited.

GOVERNING LAW. This disclaimer and any disputes relating to this document shall be governed by the laws of the State of New York.