Committee on the Judiciary, U.S. Senate

Subcommittee on Competition Policy, Antitrust, and Consumer Rights

Hearing on “Examining Competition and Consumer Rights in Housing Markets”

Testimony of E.J. Antoni

Public Finance Economist, The Heritage Foundation

Room 226 Dirksen Senate Office Building

October 24, 2023

Chair Klobuchar, Ranking Member Lee, members of the subcommittee: thank you for the invitation to discuss with you today the impact of public policy, private actors, and advanced technological changes on both the American consumer and competition within various aspects of our economy, particularly the housing market. I am a public finance economist at the Heritage Foundation, where I research fiscal and monetary policy with a particular focus on the Federal Reserve. I am also a senior fellow at the Committee to Unleash Prosperity.

The typical American consumer today faces historic difficulties in becoming a homeowner. This is due to a confluence of effects, some of which originated decades ago. A circuitous but clear chain of events has created record low homeownership affordability and perhaps even a perpetual renting class in this country. Simultaneously, the same factors which created such disfunction in the housing market are now preventing that same market from adjusting to the economic forces of supply and demand. The exogenous imposition of manipulated interest rates, excessive borrowing by the Department of the Treasury, and a failure to return inflation to pre-pandemic rates continue to impose considerable burdens upon both potential buyers and potential sellers within the housing market.

Unaffordability of Housing and Homeownership in Particular

In 2006, the Federal Reserve Bank of Atlanta began publishing a Home Ownership Affordability Monitor (HOAM) Index.[1] A reading of 100.0 indicates average homeownership affordability with the median household income being sufficient to pay for a median price home. When the index is at 100.0 or higher, 30 percent or less of the median household income will pay for the median monthly housing payment including principal and interest charges of the mortgage, taxes, insurance, and private mortgage insurance until the homeowner has sufficient equity. The HOAM Index utilizes the prevailing interest rate in its calculations.

In January 2006, the index registered 73.3, indicating general unaffordability in the housing market. At that time, 40.9 percent of the median household income was needed to buy the median price home. By early 2011, incomes had risen while both home prices and interest rates had fallen. The index breached 100.0 and remained above that level until mid-2013, after which point it fluctuated around the affordability threshold until 2019, at which point homeownership became markedly more affordable, even during the pandemic. After January 2021, however, the index dropped quickly and set a new record for rate of decline.

At the time of this testimony, the latest reading of the HOAM Index is July 2023 which registered a new series low of 68.4, indicating that it takes a record 43.8 percent of the median household income to afford a median price home. From January 2021 to July 2023, the index has fallen more than 36 percent. The six lowest readings in the index's history have all occurred since June 2022.

It should be noted that the situation today, October 24, 2023, is even worse than the index indicates for several reasons. Since July, home prices are roughly flat while interest rates have risen from 6.8 percent in the HOAM Index calculation to 7.63 percent[2], the highest mortgage rate since December 2000. Meanwhile, earnings[3] rose slower than prices[4] in August and September, leaving households with larger paychecks but less available to allocate towards housing. Additionally, the HOAM Index assumes a 10

[1] Home Ownership Affordability Monitor - Federal Reserve Bank of Atlanta (atlantafed.org)
[2] 30-Year Fixed Rate Mortgage Average in the United States (MORTGAGE30US) | FRED | St. Louis Fed (stlouisfed.org)
[3] Average Weekly Earnings of All Employees, Total Private (CES0500000011) | FRED | St. Louis Fed (stlouisfed.org)
[4] Consumer Price Index for All Urban Consumers: All Items in U.S. City Average (CPIAUCSL) | FRED | St. Louis Fed (stlouisfed.org)

percent down payment before calculating the monthly principal and interest, but most households today can only afford a 3 percent[5] down payment because savings have fallen so much since January 2021. If the median prospective home buyer were to use all his available savings, not just what was saved for the down payment, it would still only be 8 percent of the median home price, not the 10 percent assumed by the HOAM Index calculations. Having a down payment 70 percent smaller means a noticeable increase in the monthly payment on a median price home today. Furthermore, the HOAM Index uses gross, or before-tax, income. Net, or after-tax, income is lower and thus the true percentage of a household's take-home pay needed to be devoted to housing is higher.

Comparing mortgage costs over time is informative in this context. Since January 2021, the principal and interest costs on a median price home have more than doubled, as seen in Figure 1, going from approximately $973 to $2,096. These higher monthly mortgage payments cost a household an additional $13,483 per year for the same house. Across a 30-year mortgage, that is a difference of over $404,000, which is more than five times the median household income.

Figure 1, Monthly Mortgage Payment Over Time

Sources: Freddie Mac, Redfin, Dr. EJ Antoni

In addition to a nationwide reading, the HOAM Index also provides metrics for major metropolitan areas, with many of the nation's most populous regions having much worse affordability than average. The cost of a median-price home is 50 percent of median household income in Boston, 55 percent in Miami, 63 percent in New York, 84 percent in San Fransisco, and 85 percent in Los Angeles. Like the nationwide figures, these percentages reference before-tax incomes. Consequently, allocating 100 percent of the

[5] Home Prices: From American Dream to American Nightmare | National Review

median household income is still not sufficient to pay for the median price home in places like San Francisco or Los Angeles. Only six metropolitan areas in the entire country meet the HOAM Index's affordability requirements (Figure 2). It should be noted that these calculations do not simply use the national median household income, but the local median household income. Thus, unaffordability in areas with higher-than-average income cannot be dismissed as a product of a local higher cost of living that does not consider the corresponding higher local income.

Figure 2, Selected Metropolitan Affordability Readings; Green Shading Indicates Affordability

Metropolitan Area	Annual Total Housing Payment, Share of Median Income
Los Angelos-Long Beach-Anaheim, CA	85.4%
San Francisco-Oakland-Hayward, CA	83.9%
San Jose-Sunnyvale-Santa Clara, CA	77.1%
San Diego-Carlsbad, CA	70.5%
Oxnard-Thousand Oaks-Ventura, CA	65.9%
New York-Newark-Jersey City, NY-NJ-PA	63.0%
Riverside-San Bernadino-Ontario, CA	55.7%
Miami-Fort Lauderdale-West Palm Beach, FL	55.4%
Sacramento-Roseville-Arden-Arcade, CA	52.2%
Urban Honolulu, HI	51.6%
Bridgeport-Stamford-Norwalk, CT	49.7%
Boston-Cambridge-Newton, MA-NH	49.7%
Salt Lake City, UT	47.6%
Minneapolis-St. Paul-Bloomington, MN-WI	33.7%
St. Louis, MO-IL	29.4%
Scranton-Wilkes Barre-Hazleton, PA	29.3%
Harrisburg-Carlisle, PA	29.3%
Youngstown-Warren-Boardman, OH-PA	29.2%
Des Moines-West Des Moines, IA	28.9%
Akron, OH	28.9%

In addition to the HOAM Index, other metrics point to record low levels of housing affordability. A report from ATTOM, an analytics company and provider of property and real estate data, indicates that the median price home is unaffordable for the average income earner in 99 percent of the 572 counties examined.[6] Similarly, a report from Redfin, a brokerage and mortgage origination company which publishes a variety of housing market data, indicates that a potential homebuyer needs an annual income of about $115,000 to afford a median price home, which is over 50 percent more than the median

---

[6] Real Estate Data - Analytics & Property Data Provider | ATTOM (attomdata.com)

household income, and a record high.[7] The report also calculates that the monthly mortgage payment for a typical homebuyer is now $2,866, nearly half of the median household income. In several major metropolitan areas, the income needed to afford a median price home has risen by 30 percent or more in just the last 12 months.

The rental market has seen similar price increases to the housing market with rents today also at record highs, as indicated by the Bureau of Labor Statistics' consumer price index.[8] Data from Redfin indicate the median rent is over $2,000 and near the record high.[9] Median rent in all four areas of the country (Midwest, Northeast, South, and West) is at or near its respective record high. While today's rental prices relative to incomes are indicative of unaffordability even in the rental market, rental prices relative to mortgage payments highlight the much greater unaffordability of owning a home. Data from Cadre, a real-estate technology platform, indicate that it is 70 percent more expensive to own than rent a home as of August 2023.[10] That is the largest spread between owning and renting in 23 years. These low rent prices (relative to mortgage payments, not incomes) are also indicative that there is no widespread collusion among landlords, since collusion yields higher prices relative to alternative goods and services, not relatively lower prices.

Factors Creating Record Unaffordability

Many public policies have contributed reduced housing affordability for decades. Some policies, like zoning laws and open space laws, and rent control policies, have restricted the supply of housing only in their respective areas of the country. Conversely, lending requirements and other regulations on mortgage originators and securities sales have prevented the housing market from delivering the optimal level and quality of housing to the market while also introducing additional risk. This has reduced the aggregate consumer and producer surplus in the housing market.

The more proximate causes of today's dysfunction within the housing market, and those arguably with the greatest impact, began in 2001, when the Federal Reserve artificially reduced interest rates as the "dot-com bubble" burst and economic growth more broadly slowed. By 2003, interest rates had fallen to the lowest levels in over 40 years. The predictable result was not only a devaluation of the dollar and inflation, but also a significant increase in borrowing by consumers, especially on durable goods. Economic sectors which disproportionately rely on consumer borrowing to finance purchases saw relatively large increases in sales despite also having relatively large increases in prices. What later became known as the "housing bubble" began inflating during this period.

As home prices steadily rose, borrowers and lenders alike took on additional risk by leveraging home loans beyond the current price of the home and beyond the homebuyer's maximum affordable monthly payment. Buyers took out loans exceeding the price of their home with no down payment, unwisely assuming that home prices would necessarily rise forever and that their new home could be sold in the future for a profit but leaving the buyer with negative equity at the start of the loan term. To increase leverage further, buyers increasingly chose variable rate mortgages whose payment would increase when interest rates rose but which started the loan term at a slightly lower interest rate. In a final fatuity, some borrowers chose reverse amortization loans whose monthly payments were less than the initial interest charged in the first month of the loan term. The principal balance would increase over time and the borrower would build negative equity unless home price growth exceeded the interest rate on the

[7] Redfin Reports That Homebuyers Must Earn $115,000 to Afford the Typical U.S. Home—About $40,000 More Than the Typical American Household Earns :: Redfin Corporation (RDFN)

[8] CPI Home : U.S. Bureau of Labor Statistics (bls.gov)

[9] Asking Rents Flatten in September Amid Growing Apartment Supply (redfin.com)

[10] Price gap between renting and buying at widest point since 2000, data show - MarketWatch

mortgage. As the Federal Reserve increased interest rates to simultaneously reduce inflation and tamp down what was considered a speculative "boom" in housing and equities, home prices stopped rising and the basic mechanics of the housing bubble ceased operating. The detritus was widespread and long lasting. Many borrowers and lenders who engaged in either side of speculative loans lost homes and their life savings, respectively. Loan nonperformance caused some Mortgage-Backed Securities (MBS) to fail. This set off a chain reaction of derivatives failures which caused millions of Americans to suffer losses on their savings and bankrupted several major Wall Street firms.

To put upward pressure on falling home prices in the wake of the housing bubble bursting, the Federal Reserve added MBS to its balance sheet and has maintained a portfolio of these assets since. It also reduced the federal funds rate to its lower nominal bound of zero and maintained this zero-interest rate policy (ZIRP) for years. These policies effectively reinflated the housing bubble, but at a more muted pace, artificially pushing up home prices. By the end of 2015, interest rates were raised by 0.25 percentage points. In December 2016, rates were raised again but this began a steady increasing of interest rates and the end of ZIRP. The Federal Reserve also began reducing its balance sheet as it shifted to tighter monetary policy. The end of ZIRP quickly began exposing the myriad of problems which the policy created over the better part of a decade. As was the case during the housing bubble, lenders and borrowers alike began assuming low interest rates would last indefinitely, or at least until their all their loans were repaid. Consumers and investors alike adapted to ZIRP, just as they had adapted to the lower interest rates in the early 2000s. When interest rates rose, many individuals suffered losses, or were at risk of doing so. By the summer of 2019, the Federal Reserve reversed course and began reducing interest rates while maintaining its pace of balance sheet reduction, seemingly counterproductive actions which together were an attempt to redirect capital flows.

September 2019 was illustrative of the impossibility of ending ZIRP without disruptions to financial markets. Among other consequences, the actions of the Federal Reserve eliminated arbitrage opportunities which threatened to cause another chain reaction of collapses among financial firms, as was seen during the Global Financial Crisis. The Federal Reserve's intervention to provide $500 billion of liquidity was a continuation of the first such intervention which occurred during the collapse of Long-Term Capital Management, following another abrupt end of arbitrage opportunities when interest rates rose to counter the inflation which artificially low interest rates caused. The Federal Reserve's injection of liquidity in Autumn 2019 meant an end to its balance sheet reduction, and interest rates remained steady until March 2020.

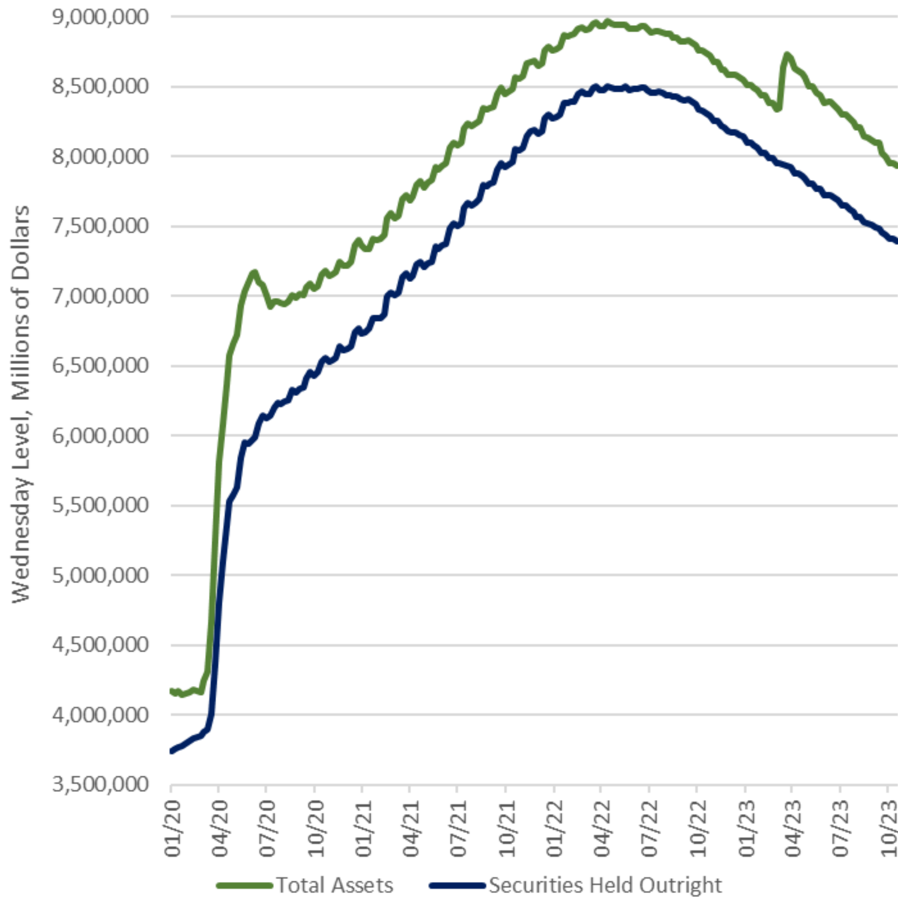
The period of artificially low interest preceding the housing bubble as well as the years of ZIRP following it are informative for explaining the unaffordability of housing following the pandemic. By depressing interest rates, the Federal Reserve reduced the value of savings and encouraged borrowing. Home prices that would correspond with prohibitively expensive monthly payments became affordable because financing charges were relatively low. Since less savings were required to purchase a home at a given price, demand increased in the housing market and prices rose, as intended. The new equilibrium that resulted saw monthly mortgage payments similar to where they were before interest rates were artificially reduced.

In 2020, these effects were amplified to a greater extent than before as the federal government engaged in unprecedented fiscal and monetary action by spending, borrowing, and creating trillions of dollars. From the end of February 2020 to mid-April 2022, the assets of the Federal Reserve grew by $4.8 trillion, or 116 percent (Figure 3).[11] While the Federal Reserve succeeded in reducing the borrowing costs to the Treasury Department in the short term, it also set off the highest inflation in decades, created systemic

[11] Federal Reserve Balance Sheet: Factors Affecting Reserve Balances - H.4.1

interest rate risk, encouraged consumers and businesses alike to take on excessive debt loads, and set the stage for substantial interest rate increases in the near future. As in the previous two episodes of artificially low interest rates, households were encouraged to take on significantly larger mortgages, but the size of the monetary stimulus in the approximately two years from early 2020 into 2022 meant that even institutional investors were encouraged to finance real estate purchases through borrowing.

Figure 3



Source: Board of Governors of the Federal Reserve System

The inflation that is the devaluation of the dollar caused home prices to rise, but the sizeable shift in consumer preferences from saving to borrowing also increased home prices. Likewise, the Federal Reserve made borrowing so inexpensive that institutional investors were able to purchase swaths of housing for the purpose of renting which would have been prohibitively expensive at normal interest rates. This increased demand is indicative of the volume of liquidity which the Federal Reserve made available to financial markets. Similarly, very well capitalized corporations with already highly liquid balance sheets borrowed during this period to finance stock buybacks because the interest rate on this debt was a lower yield than the dividends on the shares of stock.

As happened previously, however, this increased demand for housing was only possible because of the lower interest rates that caused it. When interest rates rose, the ability of potential homebuyers to afford homes evaporated. Ordinarily, this would put downward pressure on prices and mortgage payments would remain relatively constant. Instead, prices have continued rising even as interest rates have risen at the fastest pace in four decades.

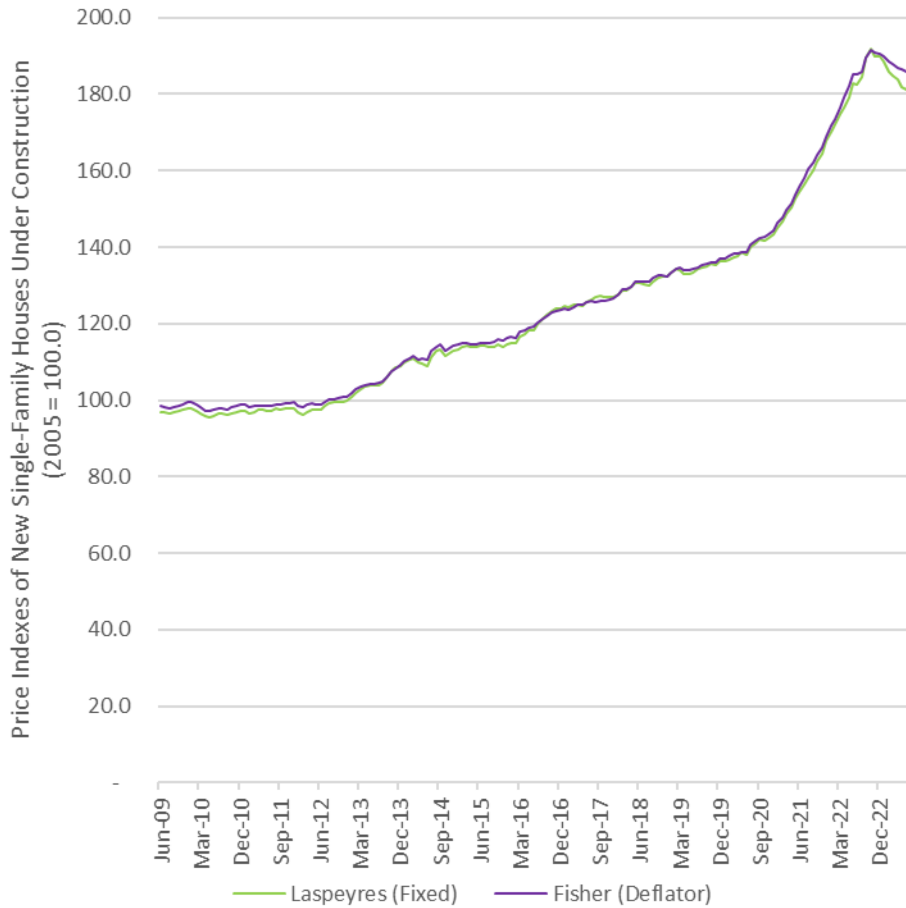
During 2021, the Federal Reserve forecasted that interest rates would remain at zero for years to come and inflation was "transitory." Both claims were incorrect and had implications for the housing market. Borrowers who had taken on excessive debt loads were faced with an inability to sell their home, because doing so would necessitate losing their low-interest rate mortgage. A new loan would carry a rate two to four times as high, meaning the borrower could afford a much smaller loan, sometimes half the size or less than their current loan. Referred to as "golden handcuffs," this situation made it prohibitively expensive for millions of Americans to sell their homes except at prices far higher (sometimes higher by 50 percent or more) than that for which they purchased them. Meanwhile, lenders now had a portfolio of low-interest-rate assets coupled with liabilities whose interest rates were increasing. This mismatch of interest rates first came to a head in March 2023 as several banks collapsed and the Federal Reserve created a new lending facility to temporarily provide liquidity for financial institutions on the wrong side of the interest rate trade. To counter the existing low-interest-rate assets on their balance sheets, distressed lenders must make loans at today's higher interest rates. Even for lenders who are in otherwise healthy financial positions, private borrowers must compete against the Federal Reserve's interest on reserve policy and reverse repurchase operations, both of which offer lenders a risk-free rate of return and currently occupy about $5 trillion of the market.[12] The result has been a drastic reduction in the supply of existing homes which has buoyed prices even as interest rates have risen from zero to the highest level in decades. The effect on existing homes prices has become so large that the price premium on new homes is virtually zero.

The disruptive change from inflationary low interest rates to higher interest rates and elevated prices has had a similar effect on homebuilders. The cost to build a new home remains near the record high set last year (Figure 4) and homebuilders are unable to profitably produce a greater quantity of homes at a lower price. Due to wholesale inflation, which has outpaced consumer price increases since January 2021[13], construction prices for new single-family homes remain over 20 percent above their pre-January 2021 trend. This has reduced the supply of new homes that producers can sell at a given price, irrespective of interest rates. Thus, the supply of new homes has also been reduced and prices remain elevated.

[12] Federal Reserve Balance Sheet: Factors Affecting Reserve Balances - H.4.1

[13] Producer Price Index Home : U.S. Bureau of Labor Statistics (bls.gov)

Figure 4



Source: Census Bureau

With downward pressure on the supplies of new and existing homes, prices for both remain elevated and the alternative for consumers is renting. The resultant and dramatic shift in demand towards renting has elevated rent prices as well. The same increase of construction prices for single-family homes has been observed for multi-family units too, and these higher costs are passed on in the form of higher rents. Thus, while higher rent prices would ordinarily be a signal to developers to bring additional supply to the market, the significant increase in prices from wholesale inflation means higher rents are necessary just to cover higher costs, let alone create economic profits. However, two factors have prevented the cost of renting from rising as quickly as the cost of owning a home. First, institutional investors who purchased many homes around the country are renting out those dwellings, which reduced the supply of homes for sale but increased the supply of homes for rent. In the second case, the reader must return to the aforementioned example of a homeowner with golden handcuffs, whose mortgage originated at an interest rate between 2 and 3 percent. Given current inflation and interest rates, if this homeowner needs to move, the optimal choice is often not to sell but to rent the current house while purchasing another elsewhere at the new destination. Once again, the result is to remove a unit from the supply of existing homes while adding a unit to the supply of rental homes.

Outside of public policy, algorithmic rent setting has come under scrutiny for allegedly contributing to increasing rent prices.[14] It is worth distinguishing between the use of large data sets with algorithm-driven

[14] RealPage rent price software draws scrutiny from U.S. senators (realtrends.com)

optimization strategies and collusion, which can occur with or without the latest pricing aids. In the former case, landlords utilize software to set their asking rents so as to achieve an optimal occupancy rate and maximize profit. Landlords are unlikely to use such a pricing aid if they are already implementing an optimum pricing strategy. Landlords are more likely to use such pricing aids if their occupancy is below an optimal level. Algorithmic rent setting in these instances can recommend where to reduce prices based on competing landlords' asking rents, and for which applicants, to achieve a more optimal allocation. Note that the only way to increase the number of renters is to reduce rent prices. Increasing rent prices, whether on the recommendation of software or on a whim, will reduce occupancy. Conversely, if landlords are colluding to set rents, that violates existing laws irrespective of whether algorithmic rent setting is utilized. As in other cartel arrangements, collusion to set prices above a market clearing equilibrium reduces the supply, either in quantity, quality, or both, while prices rise, reducing consumer surplus in a market. There is no empirical evidence as of the time of this testimony's composition that algorithmic rent setting in a competitive market has contributed to higher rent prices. Instead, dynamic pricing models which consider rent prices being asked by competitor landlords actually enhance competition and would tend to lower rent prices for the marginal renter by efficiently incorporating on a massive scale the data from transparent rent prices already available online to renters and landlords alike.

Policy Recommendation to Increase Home Ownership Affordability

The instability of interest rates and prices has created a volatile environment in which most Americans today may never be able to own their own home. The business cycle in the housing market has convulsed for over 20 years because of the Federal Reserve's attempts to finance federal deficits, rescue failed investments, and inflate falling home values. The solution is not to treat the symptoms of these mistakes, but to prevent the failed policies themselves. The Federal Reserve should be tasked exclusively with price stability. It should set a primary credit interest rate at a penalty above the market rate, but it should not target an interest rate on federal funds. Instead, the Federal Reserve should conduct open market operations to maintain stable prices. The Federal Reserve should also cease attempts to manipulate individual markets, like housing. To that end, the central bank should allow its portfolio of MBS to roll off and not be replenished. The rest of the balance sheet should also be reduced until reverse repurchase operations return to near zero. The reserve ratio requirement, eliminated in March 2020, should also be reinstated and the interest on reserve policy ended. All these measures will, over time, allow market participants to set prices and respond appropriately to those signals, resulting in a more optimal quantity of housing in the market and more stable prices. Capital would also be returned from the public market to the private, again resulting in a more efficient allocation of resources. In the long run, the Federal Reserve's monopoly rights should be reexamined, including by this subcommittee. The central bank's anti-competitive control of the currency is possible only through government sanction and the institution's track record clearly does not warrant such concentration of power.

Simultaneously, the political incentive for the Federal Reserve to manipulate interest rates and inflate prices would be greatly reduced by lowering the federal deficit, and thus borrowing by the Treasury. Without the need to finance government spending, the Federal Reserve is more likely to focus exclusively on price stability.

Lastly, the competitive use of algorithmic rent setting should be permitted to continue since it benefits both landlords and renters by reducing pricing asymmetry and transaction costs. As noted in the previous section, however, these benefits are observed in the context of a competitive free market.

****

The Heritage Foundation is a public policy, research, and educational organization recognized as exempt under section 501(c)(3) of the Internal Revenue Code. It is privately supported and receives no funds from any government at any level, nor does it perform any government or other contract work.

The Heritage Foundation is the most broadly supported think tank in the United States. During 2022, it had hundreds of thousands of individual, foundation, and corporate supporters representing every state in the U.S. Its 2022 operating income came from the following sources:

Individuals 78%

Foundations 17%

Corporations 2%

Program revenue and other income 3%

The top five corporate givers provided The Heritage Foundation with 1% of its 2022 income. The Heritage Foundation's books are audited annually by the national accounting firm of RSM US, LLP.

Members of The Heritage Foundation staff testify as individuals discussing their own independent research. The views expressed are their own and do not reflect an institutional position of The Heritage Foundation or its board of trustees.