Budget Committee, U.S. Senate

Hearing on “Riskier Business: How Climate Is Already Challenging Insurance Markets”

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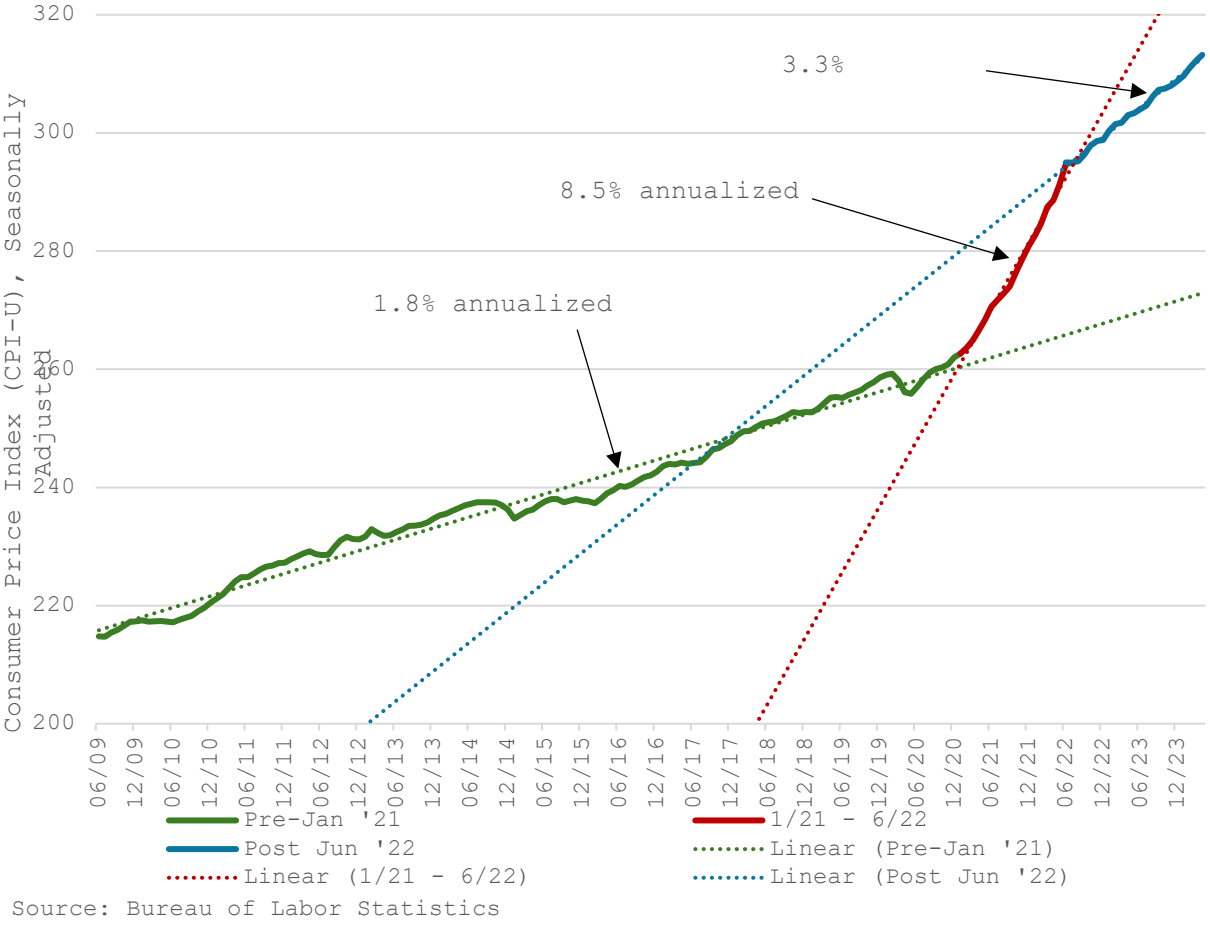
Chairmen Whitehouse, Ranking Member Grassley, members of the committee: thank you for the invitation to discuss with you today challenges in the insurance market and the impact of public policy on this marketplace, along with allegations surrounding climate change. I am a public finance economist and the Richard F. Aster fellow 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.

Four Years of Cost Increases

Since January 2021, American families and businesses have faced sharp increases in prices, especially for necessities like housing. The consumer price index (CPI) published by the Bureau of Labor Statistics (BLS) has risen a cumulative 19.3 percent through April 2024 on a seasonally adjusted basis. That is an annualized rate of 5.6 percent, at which pace prices will double in less than 13 years. This is in stark contrast to the rate of increase in the CPI before January 2021. From the start of the previous economic expansion through December 2020, the CPI rose at an annualized rate of 1.8 percent, below the Federal Reserve's 2.0 percent target (figure 1). After January 2021, however, the CPI began increasing significantly faster and from that time through June 2022 rose at an annualized rate of 8.5 percent, more than 4.7 times the previous rate of increase. Since June 2022, the index has risen an annualized 3.3 percent, almost twice the rate before January 2021.

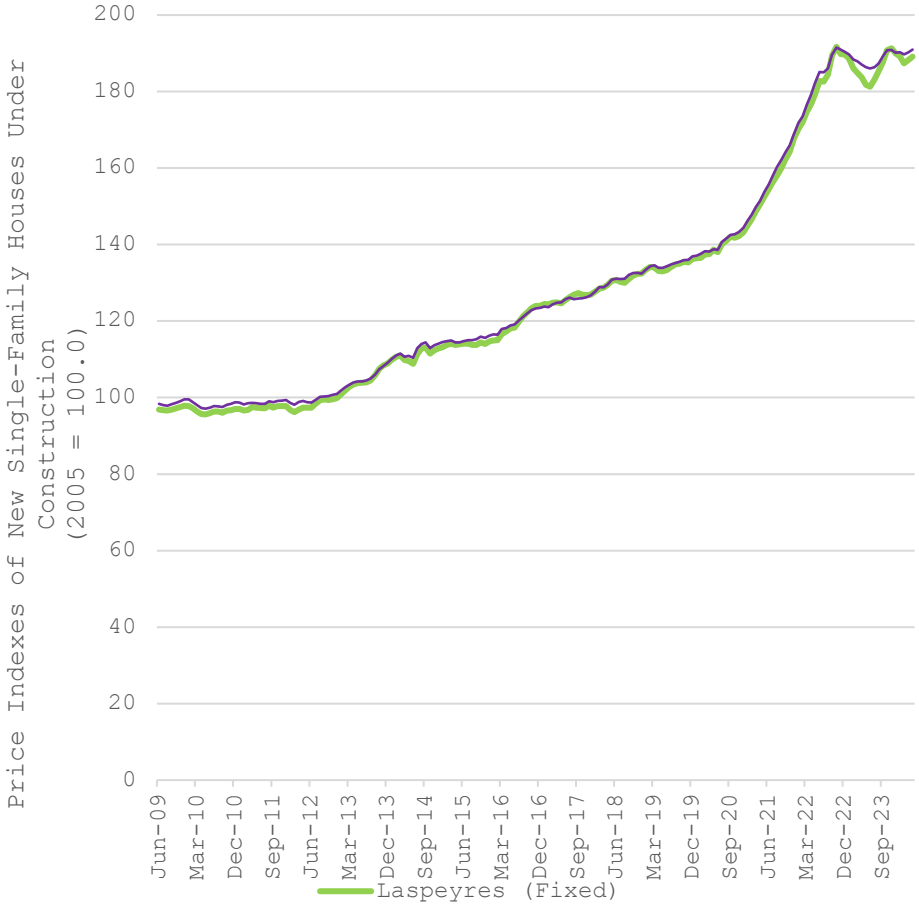
Figure 1



Source: Bureau of Labor Statistics

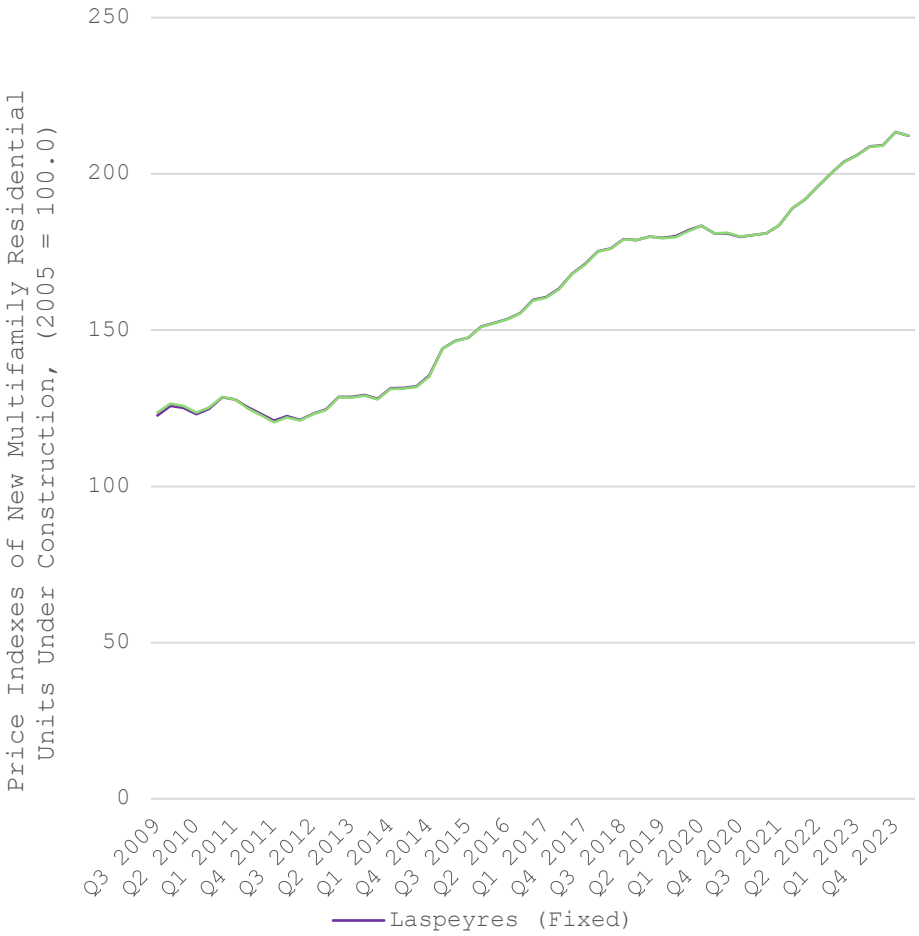
Price indexes for home construction have also increased sharply over the last four years. In January 2021, the annual inflation rate for the construction costs of a new single-family home began accelerating. Similarly, the price indexes for multifamily home construction also began increasing at a faster rate in the first half of 2021 (figure 2). The price indexes for single-family home construction have risen an average of 30.5 percent from January 2021 through April 2024. Costs for multifamily home construction rose at a slower pace than those for single-family homes, though much faster than the average rate of increase from 2017 through 2020 (figure 3). Since the end of 2020, the price indexes for multifamily home construction have increased by an average of 18.0 percent.

Figure 2



Source: Census Bureau

Figure 3



Source: Census Bureau

Impact of Cost Increases

In a theoretical perfectly competitive insurance market with no economic profit, insurer costs limited to claims for losses from the insured, and a single loss event, the premium paid by the insured can be represented as:

$$P_i = \pi_i R_i \theta_i$$

where P_i is the premium paid by insured i, π_i is the known probability of an event of loss to the insured R_i, and θ_i is the amount of loss. Trivially,

$$\frac{dP}{d\pi}, \frac{dP}{d\theta} > 0$$

Thus, increasing the probability of a loss to the insured or increasing the amount of that loss will increase the premium charged to the insured.

Inflation has had a significant impact on the insurance market over the last several years. This is particularly true for homeowners' insurance because input cost inflation for homebuilders has been higher than the average wholesale inflation rate. Premiums for homeowners' insurance increased about 20 percent in 2022[i], then 23 percent in 2023 and have continued rising.[ii] By

increasing input costs for home construction and repair, the cost of claims has also increased significantly. In just four years, the median existing home price has increased 45.7 percent while the median new home sales price has increased 40.1 percent.[iii] Actuarial tables from 2019 or 2020 no longer represent accurate replacement or repair costs in today's insurance market. Furthermore, the higher construction price indexes for homes are inline with higher claim costs reported by major insurers.[iv]

Today's higher insurance premiums reflect today's higher cost of claims being filed. If the cost to repair or replace a homeowner's roof doubles, then the homeowner's premium will also double, all else being equal and assuming away detail such as overhead costs to the insurer. As premiums have risen to prohibitively expensive levels for some homeowners, many of them have chosen less coverage to reduce their premiums or have opted to waive coverage entirely and assume the risk of loss. Approximately 12 percent of homeowners in America are uninsured today.[v]

Insurance is fundamentally a risk management strategy. Price shocks, such as those which the nation has experienced over the last four years, cause lags between initial price increases and response from market participants. Hence, cost increases accumulated for several years without a commensurate increase in premiums. When those premiums were finally adjusted, they were increased not only for the most recent increase in the cost of claims, but for multiple years of increases. Indeed, the market is still adjusting its premiums to return to an equilibrium. Conversely, during the period prior to 2021, inflation was at a low and relatively steady level. That provided predictability which greatly reduced the number of sharp increases to premiums.

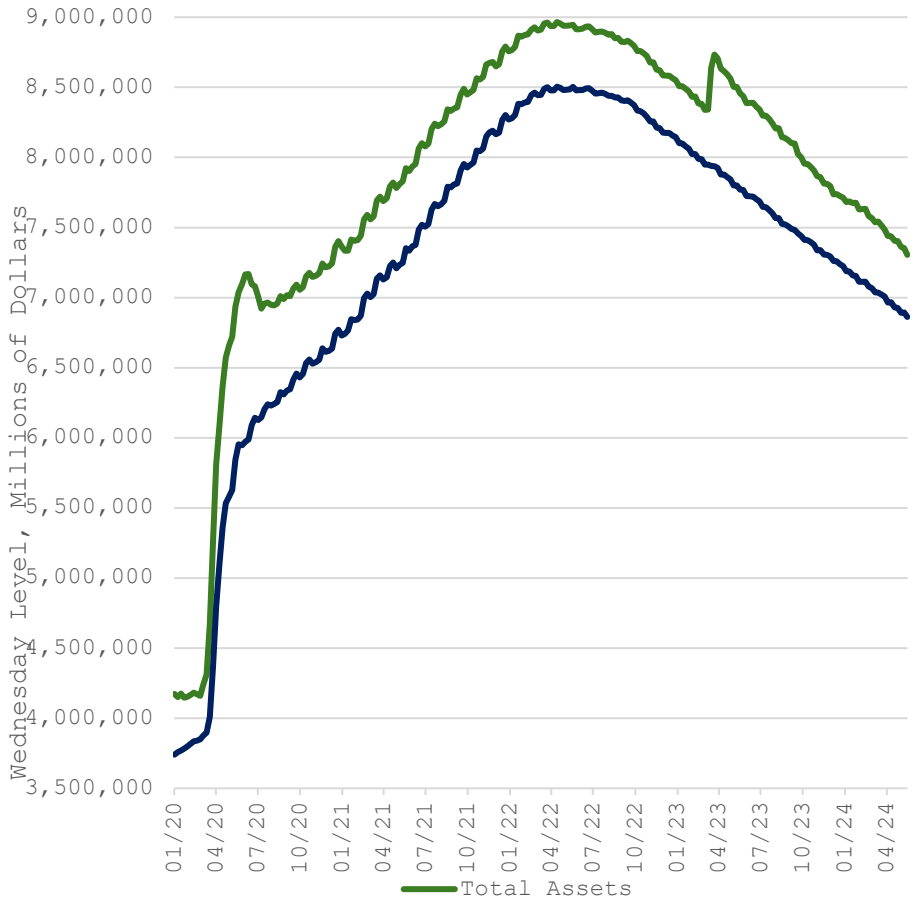
The insurance market is particularly susceptible to inflation shocks because it is backed by the reinsurance market. Losses to insurers above normal operating levels are effectively reimbursed by reinsurers. When costs are increased to the insured in the form of a higher-than-normal claim, the insurer pays that claim but does not initially know that this higher claim is the new normal. Thus, the insurer does not know to immediately increase premiums. After a period of losses, the insured is reimbursed by the reinsurer. Likewise, the reinsurer does not immediately know that these higher-than-normal outlays are the new normal. Thus, losses also accrue at the reinsurer until the new market conditions are determined to be permanent. At that point, the reinsurer increases the premiums charged to the insurer. The insurer, in term, increases the premiums charged to the insured in order to not only pay the new higher level of claims but also to pay the higher premiums charged by the reinsurer.

Sources of Cost Increases

The primary source of cost increases over the last four years for the insurance industry, and therefore also the primary source of higher premiums, has been inflation. Over the last four years, the federal government has run unprecedented budget deficits, resulting in equally unprecedented Treasury net debt issuances and an increase in the federal debt of $6.9 trillion since the end of 2020, and even more since the end of 2019. These debt issuances have largely been financed by the Federal Reserve's purchase of almost $5 trillion of Treasury securities since the start of 2020, along with manipulations of interest rates and capital markets to steer liquidity away from the private sector and towards the public sector (figure 4). Since purchases by the Federal Reserve are made from the right to issue fiat currency, they inherently increase the supply of money. Since the real economy has grown much slower than the money supply over the last several years, the value of the federal reserve note relative to goods and

services has declined. This phenomenon is often referred to as “too much money chasing too few goods” and it is observed as an increase in the general level of prices.

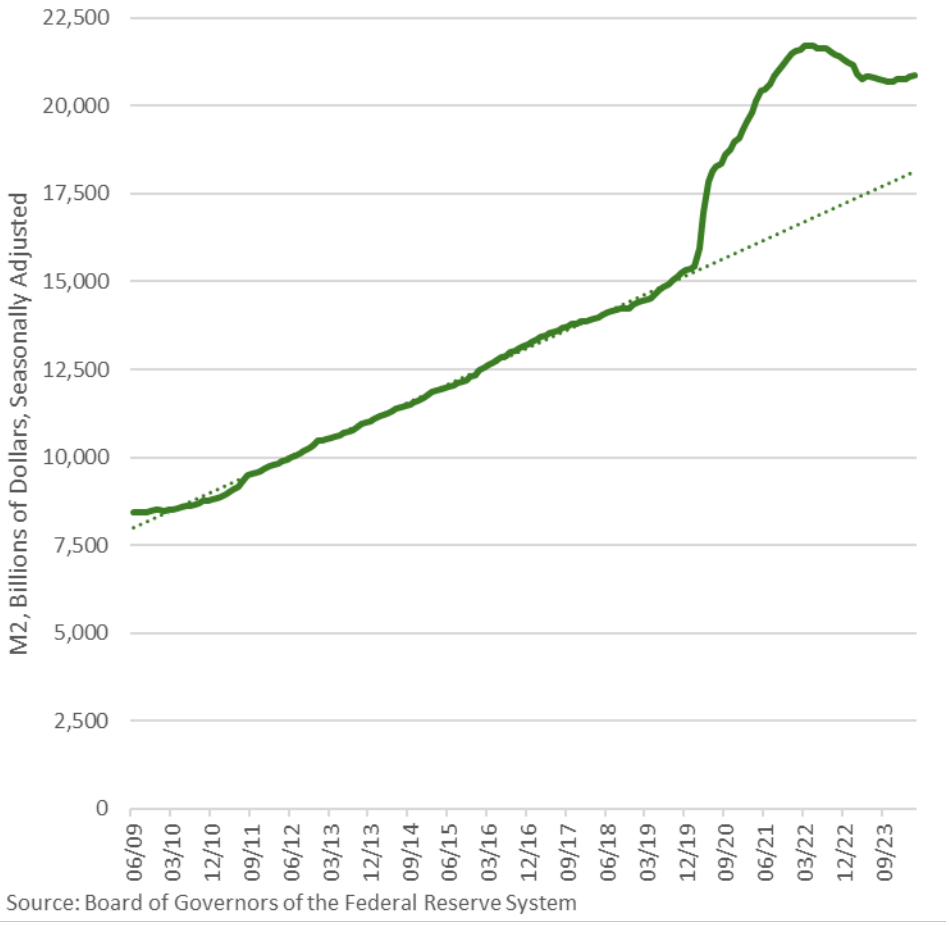
Figure 4



Source: Board of Governors of the Federal Reserve System

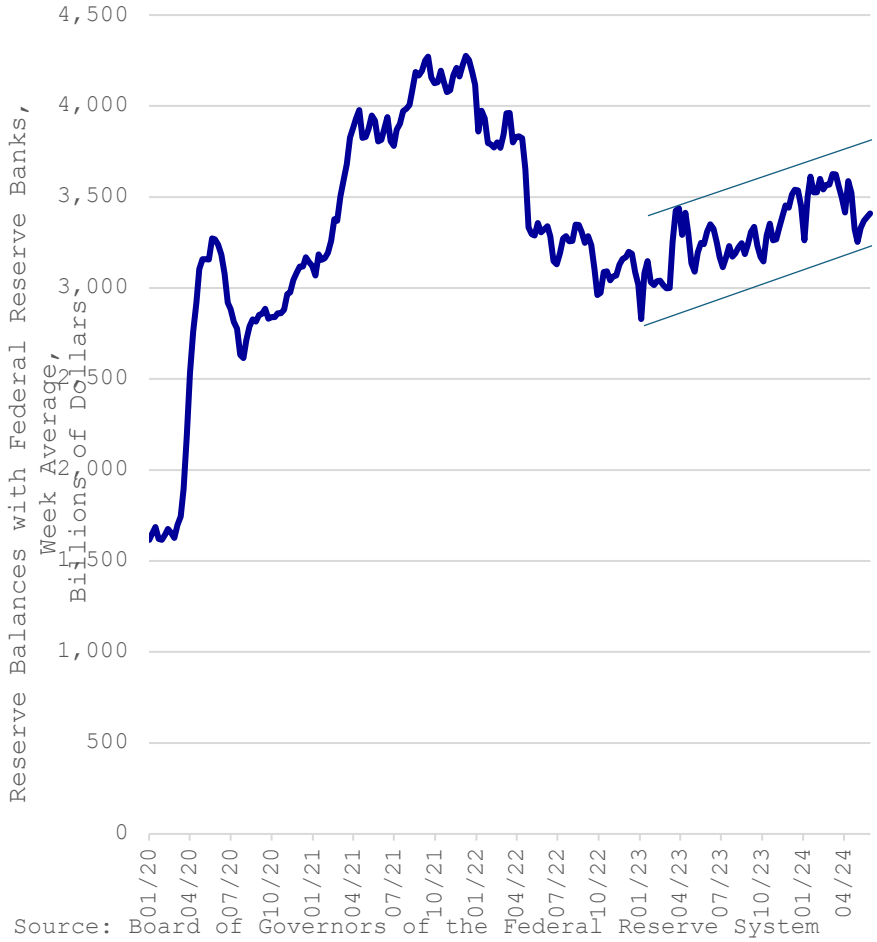
The quantity of money referred to as M2 grew over $6 trillion from early 2020 to the middle of 2022 (figure 5). After about a year of declines, M2 then remained relatively steady and has now begun growing again. It remains about $3 trillion above its pre-pandemic trend and is only down 3.9 percent from its peak as of April 2024, the latest data available at the time of this writing.

Figure 5



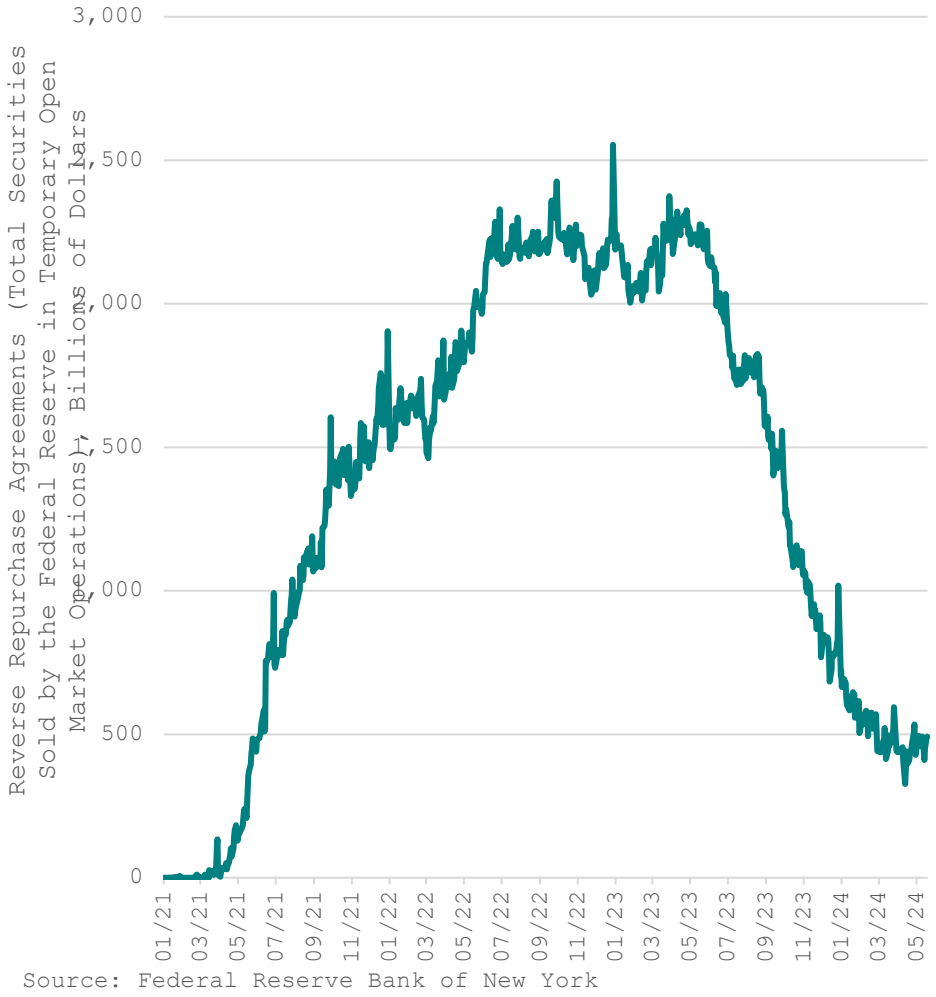
Similarly, bank reserves reached a trough at the beginning of 2023 and have trended up since then, rising 20.5 percent as of May 29, 2024 (figure 6). As this portion of the monetary base increases, loans to individuals, businesses, and the Treasury can increase, and each loan expands the total money supply. Thus, despite the Federal Reserve's reduction in its balance sheet, the increase in bank reserves has continued to expand the money supply and maintain an inflationary impulse in the economy.

Figure 6



This is largely the result of continued net debt issuance by the Treasury which is expected to increase to nearly $900 billion in the third quarter of this year. As financial institutions cease lending to the Federal Reserve's reverse repurchase agreement (RRP) facility and instead lend to the Treasury, money is moving out of sterilization and is working its way through the banking system. Whereas the money in the RRP facility cannot be used as the basis for loans and therefore can enlarge the money supply, any money lent to the Treasury is spent and therefore can enlarge the money supply upon reentry into the banking system. Beginning in 2021, the RRP facility absorbed excess liquidity that had been created by the Federal Reserve from its purchase of Treasury securities (figure 7). That reduced the initial inflationary impact from government deficit spending in 2021 and 2022 but only by delaying that inflation. As the RRP facility drains, the economy is finally feeling the effects of the government deficit spending that began in 2021.

Figure 7



The elevated levels of government spending which have made 40-year-high inflation possible today stem directly from Congressional action. Congress, including the Senate budget committee, hasn't passed an actual budget in years. Instead, they have been funding the government with stopgap measures, record-setting omnibus packages, and emergency legislation, which is made public only shortly before members vote, thus ensuring the public is unable to examine what their representatives are actually voting until after the spending legislation has already passed.

Three other factors from the last four years have contributed to stress within the insurance industry beyond the general rise in the level of prices. First were the widespread riots in 2020, led by groups like Black Lives Matter and Antifa. These riots are estimated to have caused over $100 billion in damage, which created significant losses in the reinsurance market. Those losses caused liquidity concerns and had to be recouped with higher premiums to insurers, and then ultimately higher premiums to the insured.

Likewise, an increase in general lawlessness since 2020 has added to costs and financial stress in the insurance industry. The failure to prosecute retail theft and the failure of law enforcement to even respond to many reports of criminal activity in certain areas has added significant costs

to insurers. Many insurance firms are refusing to even quote policies in America's inner cities today because the level of crime has so increased the risk of loss that the insurer cannot offer a risk mitigation that the would-be insured could ever afford to subscribe.

Third, overregulation by government authorities has created significantly more expensive replacement and repair costs, all of which are passed on to the insured, either in the form of higher premiums or direct payment when the insured cannot find affordable coverage. Regulatory analysis often makes unrealistic assumptions, such as overestimating the average life of a home or a vehicle. The empirical analysis for evaluating these regulations needs to consider the reduced average life of an object when that life is cut short because of an unpredictable loss, not just when the object wears out.

The last point of consideration is what are not the sources of cost increases which are putting pressure on the insurance industry. Attributing any significant impact on the insurance industry from climate change is not based on empirical evidence.[vi] It is not that weather related events like hurricanes and tornados are becoming more frequent or more intense, but rather that humans are building more structures (and more expensive structures) in the path of these low-pressure phenomena.[vii] The population of Florida, for example, has increased 15.6 percent in just the last decade, meaning more people are voluntarily moving to a hurricane-prone state.[viii] If a hurricane strikes an area where no one lives and no insured buildings are located, then there will be no insurance claims. If that same hurricane strikes that same area after hundreds of homes have been built, there will be hundreds of millions of dollars in claims. The same storm in different circumstances can result in completely different outcomes for the insurance industry. Similarly, forest fires from lightning strikes are not becoming more common in areas that practice adequate forest management practices, such as controlled burns. Areas which have adequate electrical grid maintenance are also less likely to have forest fires.

Analyses of the extent to which changes in the climate impact the insurance industry typically do not factor in the cost of adaptation, which is significantly less than the cost of direct mitigation or prevention. In other words, the most cost-effective strategy when dealing with climate or changes to the climate is almost always to adapt to it, instead of engaging in attempts at planetary engineering. This strategy has proven so cost-effective that climate related deaths have fallen 98 percent over the last century while energy use has trended upward, and energy prices have trended downward. Instead of trying to prevent hurricanes or stop building anywhere a hurricane might make landfall, the optimal choice has often been to build hurricane-proof homes which can withstand much or all the effects of such a storm.

While a theoretical insurance model incorporates known probabilities that are typically discrete and not continuous, this is not reflective of the real world. Rather, such a structure is devised to illustrate the concept of risk mitigation in an insurance framework. When an insurer is pricing a premium in the real world then, he or she must rely on actuarial science to examine the frequency of past events and predict the likelihood of those or similar events repeating. This is true for both known unknowns, such as the number of hurricanes that will make landfall at a particular location in a year, and unknown unknowns. Actuarial science is used not only to determine the likelihood of an event but also the likelihood of outliers. Thus, both insurers and reinsurers rely on such analysis for pricing their respective premiums.

There is an intersection between climate science and actuarial science which, at first blush, would imply that the former will impact the latter. For example, if a climate model predicts that

there will be more hurricanes in a particular geographical region, then an insurer will need to alter the actuarial tables used to price premiums in that area. Although some people assert that climate models predict such results, the fact is that all of these models have a confidence interval which includes zero. This is due to the lack of sufficient input data used in regression analysis which can only be overcome by the modeler(s) using human-derived assumptions as opposed to strictly empirical inputs. Thus, these models are not only subjective in terms of their structure, but also their inputs. As such, they are of extremely limited use as predictors in actuarial tables and cannot help insurers when pricing premiums.

If the Senate Budget Committee is seeking to relieve the current stress in the insurance industry, it should start by passing a budget which reduces government spending. That would begin reducing the primary inflationary pressure in the economy, thereby also alleviating the greatest source of cost increases with the insurance industry. Reducing inflation to a much lower level that approximates stable prices should be the number one priority of this committee if the aim is truly to bring the insurance market back into equilibrium, and this is especially true for homeowners' insurance.

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[i] https://www.wsj.com/personal-finance/americans-are-bailing-on-their-home-insurance-e3395515
[ii] https://www.cnbc.com/select/homeowners-insurance-skyrocketing-how-to-lower-premium/
[iii] https://www.census.gov/construction/nrs/index.html
[iv] https://www.mercuryinsurance.com/resources/home/whats-driving-homeowners-insurance-rate-increases.html
[v] https://www.iii.org/sites/default/files/docs/pdf/2023_q2_ho_perception_of_weather_risks.pdf
[vi] https://www.sciencedirect.com/science/article/pii/S0040162520304157
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[viii] https://www.census.gov/programs-surveys/popest.html