Economic Briefing

The Stock-Market Wealth Effect: Rules of Thumb, Today's Spending and the Downside

A few cents of spending per dollar of stock wealth, unstable over time; U.S. spending is not running ahead of the old wealth relationship, and a market fall alone is a growth hit unless the MPC is at the top of its range

---

Economic Briefing · October 30, 2026 · by Claude, may contain mistakes

Economic Briefing, by Claude, may contain mistakes. Built from the research literature, public commentary, and original data work with the exact data saved. Care: Normal. Checked: every number traced to its saved source and back, claims judged against

the sources they cite, an independent critic, and a check against current outside sources. Made by Briefwright · run bw-9b4d2521-5e26-4980-bb4d-1b52bcd3fc39.

Bottom line

A dollar of stock-market wealth moves annual U.S. consumer spending by a few cents, less than a dollar of housing wealth. In our pre-pandemic dynamic model most of the response arrives within a year, though the literature describes a slower build-up. The best-identified estimate comes from Chodorow-Reich, Nenov and Simsek (2021). In a model with consumption wealth effects and geographic heterogeneity, these responses imply a marginal propensity to consume out of a dollar of stock wealth of 3.2 cents per year. Aggregate time-series estimates run lower and have drifted down over time. Our own regressions confirm the drift: Estimated on 1960Q1-2019Q4, the stock-wealth coefficient is 2.2 cents per dollar. Across 1960Q1-2026Q3, each extra dollar of household stock-market wealth is associated with 0.3 cents more annual consumer outlays (saving-rate regression, wealth at the start of the quarter). Our tests detect no difference between fast and gradual run-ups, but they could miss a large one. Spending is not running ahead of the wealth relationship. Households are saving more than the pre-pandemic model predicts: Over the latest four quarters (2025Q4-2026Q3) the actual saving rate averages 5.2pp above the 1960-2019 model's prediction. That model is stretched far past the wealth levels it was fit on. A model fit on all the data matches today's saving rate. So a fall in stocks would hit spending from a starting point where much of the gain was never spent. A 20 percent stock fall removes about $14.3 trillion of household wealth. A 20 percent fall with a 3 cent MPC cuts annual spending by about $428 billion. A 20 percent fall with an MPC of 3 cents subtracts 1.30% of GDP from spending once phased in. Spread over a year or two, that is a slowdown. It becomes a recession risk at the top of the MPC range. So does a fall that comes with a credit squeeze, a housing decline or job losses, as in the financial crisis. The time series cannot pin down the stock MPC, so the scenario range is wide.

Confidence	Medium: the direction of every answer is well supported, but the size of the stock MPC is uncertain by a factor of several and has shifted over time.
Strongest evidence	The pre-pandemic wealth model, run forward on actual wealth, predicts a saving rate of -0.5% for the latest four quarters against an actual 4.7%; a model fit on all the data sits within 0.3pp of the actual. BEA's annual update at the end of September supplied 19% of the pre-pandemic model's gap.
Strongest objection	Wealth concentration and the record equity share may make the old MPCs a poor guide in both directions. A crash that hits the households at the top could cut spending by more than the aggregate regressions imply, and whether losses bite harder than gains is untested here.
What would change this	A rise in the saving rate as stocks fall would show the cushion is thinner than it looks. A drawdown that spreads from AI stocks to the broad market and to credit, or a weakening labor market, would turn a growth hit into a recession risk.

Key judgments

Question	Bottom line	Confidence	Strongest objection	What would change this
What is a good rule of thumb for the stock-market wealth effect?	A few cents a year per dollar of stock wealth: our pre-pandemic estimate is 2.2 cents, close to the identified literature, while aggregate estimates that include recent years are lower and unstable. Housing wealth moves spending more.	Medium	Recent Fed work finds a much lower equity MPC, and household studies of moderate stockholders find far more; the right number depends on who owns the stock.	A new identified estimate on data since the pandemic, or a stable stock coefficient in the aggregate data, would narrow the range.
How fast does the effect arrive?	Mostly within a year in our dynamic model, with a slow tail; the literature describes a build-up over several quarters.	Medium	Carroll, Otsuka and Slacalek (2011), which separates immediate from eventual effects, finds the eventual housing effect several times the next-quarter one.	Estimates on household data covering the latest run-up.
Is a rapid run-up spent differently from a gradual one?	No difference was detected; if anything the fast part of stock wealth has the larger point estimate.	Low	The test has wide confidence intervals and could miss a difference of the size the hypothesis implies.	A longer sample of fast run-ups, or household data that separate expected from surprise gains.
How does current consumption compare with standard wealth effects?	Not above them: saving is above the pre-pandemic model's prediction, though that model is stretched past its range, and on the fit of a model that lets the stock MPC fall toward zero.	Medium	Saving is low by long history, and spending has recently outpaced income.	A quick fall in the saving rate toward the pre-pandemic model's prediction.
How vulnerable is spending to a stock-market fall?	Exposure is a record relative to income, so a fall removes more wealth than in past crashes; at mid-range MPCs it is a growth hit, and a recession risk only at the top of the range or with amplifiers.	Medium	Losses could cut spending more than gains raised it (the literature finds this for housing; it was not tested for stocks here), and Fed district reports say affluent households, who own most of the stock, are still spending while others cut back.	Contagion from the AI megacaps to the broad index, to credit or to hiring.

Rules of thumb for the wealth effect

Rules of thumb to carry

Stocks. A few cents of annual spending per dollar of stock wealth. Our own pre-pandemic estimate is 2.2 cents. The identified benchmark (Chodorow-Reich, Nenov and Simsek 2021) is a little higher, and Fed staff put the recent equity MPC lower (Beach, Gamber and Moran 2025). **Housing.** More per dollar than stocks in every source here: our full-sample estimate for owners' equity is 4.9 cents, and the literature puts housing above stocks without exception. **Timing.** In our pre-pandemic model the four-quarter response is 84% of the long-run one; the literature describes a slower build. **Speed of the run-up.** Our tests detect no difference, but could miss a large one. **Losses versus gains.** Not measured here; the drawdown episodes are too few and too confounded to say. **Current exposure.** Household stock wealth is 2.89 years of disposable income, so any given percentage decline removes far more wealth relative to income than in earlier crashes.

The table collects the numbers behind these rules. Every literature number here comes from a paper's abstract or summary page, not its full text.

Rule	Our estimate (U.S. quarterly data)	What the literature says
Stock MPC, pre-pandemic data (cents per dollar a year)	2.2	A little higher in the identified estimate (Chodorow-Reich, Nenov and Simsek 2021)
Stock MPC, full sample (cents per dollar a year)	0.3	Also low in recent Fed staff work (Beach, Gamber and Moran 2025)
Housing-equity MPC, full sample (cents per dollar a year)	4.9	Larger than the stock MPC in every study here
Share of the long-run stock response reached within four quarters	84%	Starts quickly and builds for several quarters (Dynan and Maki 2001)
p-value for equal response to fast and slow stock gains	0.326	Transitory wealth swings barely move spending (Lettau and Ludvigson 2004)
Stock wealth, years of disposable income	2.89	The role of wealth in U.S. spending has grown (Bigot and Espic 2026)

Background from the literature

The literature agrees on the sign and disagrees on the size. Poterba (2000) set the early benchmark from aggregate data and the distribution of stock ownership.[1] It concludes that in the year after a change in stock market values, consumer spending is likely to rise by between one and two cents for each dollar increase in the value of corporate stock. Lettau and Ludvigson (2004) then argued that most swings in wealth do not show up in spending at all.[2] In their words, "This paper provides evidence that a surprisingly small fraction of the variation in household net worth is related to variation in aggregate consumer spending." In their decomposition, transitory wealth shocks dominate the wealth data while permanent ones dominate consumption.

The best-identified U.S. estimate comes from regional data. Chodorow-Reich, Nenov and Simsek (2021) compare counties with more and less stock wealth as the market moves.[3] Their abstract reports that local stock wealth gains raise employment and payroll in nontradable industries, with no effect in tradable ones. In a model with consumption wealth effects and geographic heterogeneity, these responses imply a marginal propensity to consume out of a dollar of stock wealth of 3.2 cents per year. They also put a macro number on it: A 20% increase in stock valuations, unless countered by monetary policy, increases the aggregate labor bill by at least 1.7% and aggregate hours by at least 0.75% two years after the shock.

Household-level studies of the dot-com era find larger responses among people who actually hold stock. Dynan and Maki (2001) use the Consumer Expenditure Survey.[4] They report: "We also estimate that an additional dollar of wealth leads households with moderate securities holdings to increase consumption between 5 cents and 15 cents, with the most likely gain in the lower part of this range." They also report that the effect comes directly through household budgets, not through stocks signaling future income. Juster, Lupton, Smith and Stafford (2006) go further on the saving side.[5] The results suggest that the decline in the personal saving rate since 1984 is largely due to the significant capital gains in corporate equities experienced over this period. Over 5-year periods, the effect of capital gains in corporate equities on saving is substantially larger than the effect of capital gains in housing or other assets.

The most recent Fed work points the other way. Beach, Gamber and Moran (2025) split wealth by asset and by income group using the Distributional Financial Accounts.[6] Their summary reports: "We find that the trend break is statistically significant and implies that the MPC out of wealth has declined from 3.3 cents on the dollar before 2012, to 2.7 cents on the dollar post 2012, a decline of roughly 20 percent." For stocks, "In contrast, the MPC out of equity wealth is only slightly above 1.0 cent on the dollar." For housing, "We estimate an MPC out of housing wealth of just over 5.0 cents on the dollar, which is consistent with previous estimates." They attribute the decline to wealth concentrating among high-income households, who spend less of each dollar. Swedish administrative data make the same point about who owns the gains. Di Maggio, Kermani and Majlesi (2020) find a much higher MPC at the bottom of the wealth distribution than at the top.[7] Unrealized capital gains lead to a marginal propensity to

consume (MPC) of 23% for the bottom 50% of the wealth distribution and about 3% for the top 30% of the wealth distribution.

Housing is the larger channel in every study that measures both. Case, Quigley and Shiller (2013) find a large housing-wealth effect in a panel of U.S. states.[8] This effect is consistently larger than the effect of stock market wealth upon consumption. A decrease in real housing wealth comparable to the crash which took place between 2005 and 2009 would lead to a drop of about 3.5%. Carroll, Otsuka and Slacalek (2011) reach the same ranking from a different method.[9] Their abstract states: "In U.S. data, we estimate that the immediate (next-quarter) marginal propensity to consume from a change in housing wealth is about 2 cents, with a final eventual effect around 9 cents, substantially larger than the effect of shocks to financial wealth."

When good sources disagree on the stock MPC

The three main estimates span roughly an order of magnitude, and the spread is mostly about whose wealth is being measured. Beach, Gamber and Moran put the aggregate equity MPC lowest. Chodorow-Reich, Nenov and Simsek sit in the middle. Dynan and Maki find a much larger response for households with moderate holdings.

The drivers are definitional. Poterba and Beach and coauthors divide spending by all stock wealth, including the holdings of the very rich. Dynan and Maki measure only moderate stockholders, who spend more of each dollar. Chodorow-Reich and coauthors identify the effect from regional variation, capturing spending by everyone in the region. For an aggregate forecast, the aggregate estimates are the right unit; for a distributional question, the household numbers are. The low-to-high MPC range in the scenario table later in this briefing brackets the identified estimate and most aggregate work. The Fed staff estimate sits below that range and is a live possibility.

What the U.S. time series says

We estimated the stock-wealth effect directly from the saving rate. The design regresses the personal saving rate on stock-market wealth, owners' equity in real estate and all other net worth, each measured relative to disposable income at the start of the quarter. Because the saving rate is one minus outlays over income, each coefficient converts directly to cents of annual outlays per dollar of that kind of wealth.

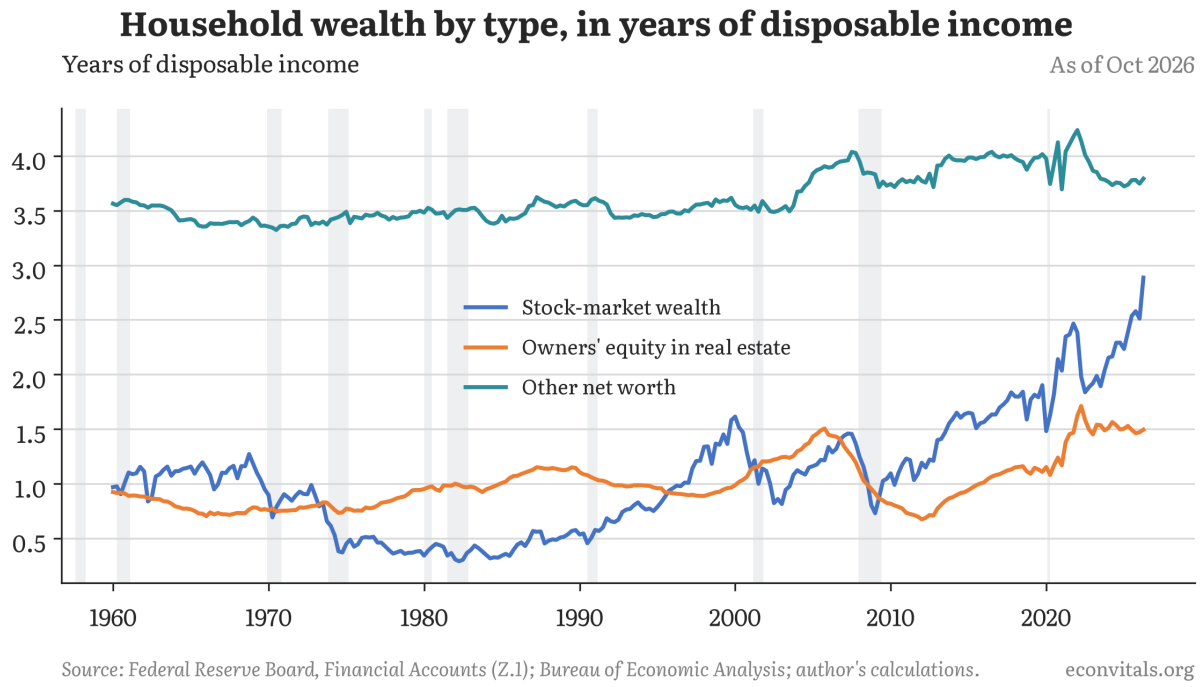
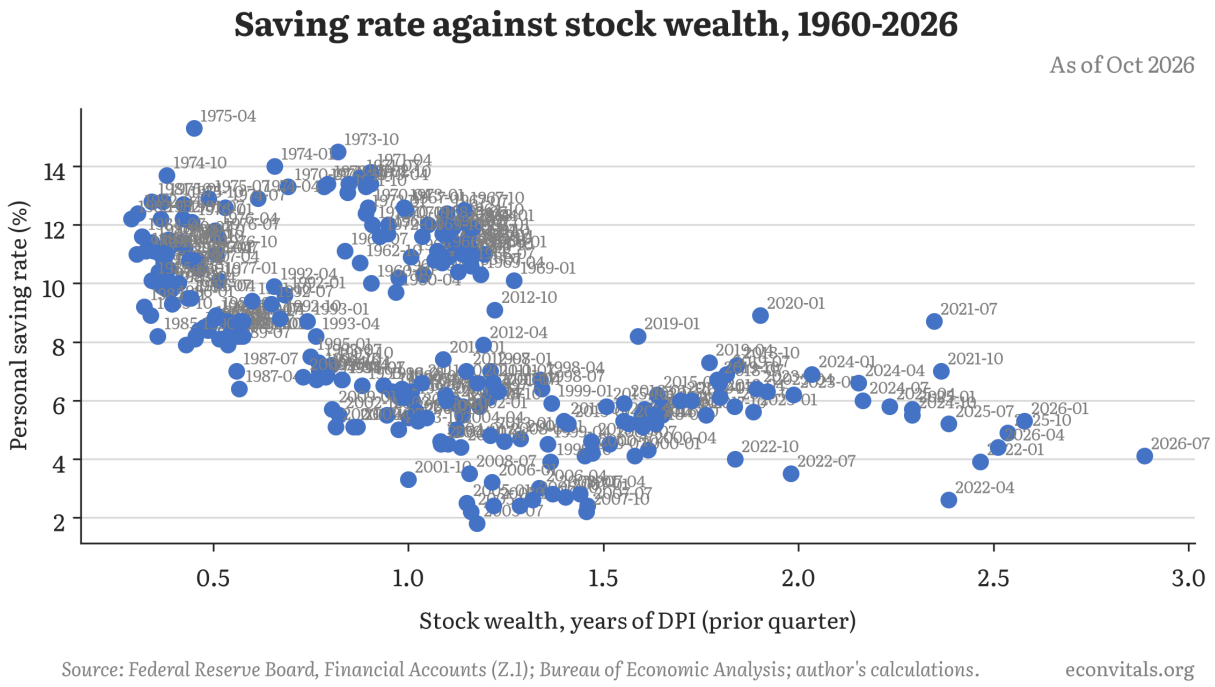


Figure 1. Stock-market wealth (corporate equities and non-money-market fund shares held by households and nonprofits), owners' equity in real estate and all other net worth, each divided by annual disposable personal income. Stock wealth relative to income is at a record in 2026Q2.

Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

The scatter of the saving rate against stock wealth relative to income shows the basic pattern: more stock wealth, less saving, with a lot of scatter. The full-sample saving-rate regression explains 0.65 of the variance of the saving rate.



Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations. econvitals.org

Figure 2. Each point is a quarter: stock-market wealth relative to income at the start of the quarter against the personal saving rate. Pandemic quarters 2020Q2-2021Q2 are omitted.

Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

The full-sample stock coefficient is small and imprecise. Across 1960Q1-2026Q3, each extra dollar of household stock-market wealth is associated with 0.3 cents more annual consumer outlays (saving-rate regression, wealth at the start of the quarter). Its confidence interval runs from -0.9 to 1.4 cents, so the full sample cannot distinguish a zero effect from an MPC of more than a cent. Housing equity and other net worth carry much larger coefficients. Each dollar of owners' equity in real estate is associated with 4.9 cents of annual outlays over 1960Q1-2026Q3. Each dollar of other net worth is associated with 6.9 cents of annual outlays over 1960Q1-2026Q3.

The stock coefficient is unstable across periods, and that instability is the main finding of the time series. Estimated on 1960Q1-1999Q4 alone, the stock-wealth coefficient is 4.0 cents per dollar. Estimated on 2000Q1-2019Q4 alone, the stock-wealth coefficient is -1.2 cents per dollar. Estimated on 2020Q1-2026Q3 alone (pandemic quarters dummied), the stock-wealth coefficient is 1.9 cents per dollar. A test that the stock coefficient is the same before 2000, in 2000-2019 and after 2020 has a p-value of 0.001. Before the dot-com peak, our estimate sits at the top of the literature's range, perhaps partly because taxes on realized gains depress measured saving in booms. From the dot-com bust to the pandemic, the coefficient has the wrong sign and no precision. The pre-pandemic sample as a whole gives 2.2 cents, close to the identified literature.

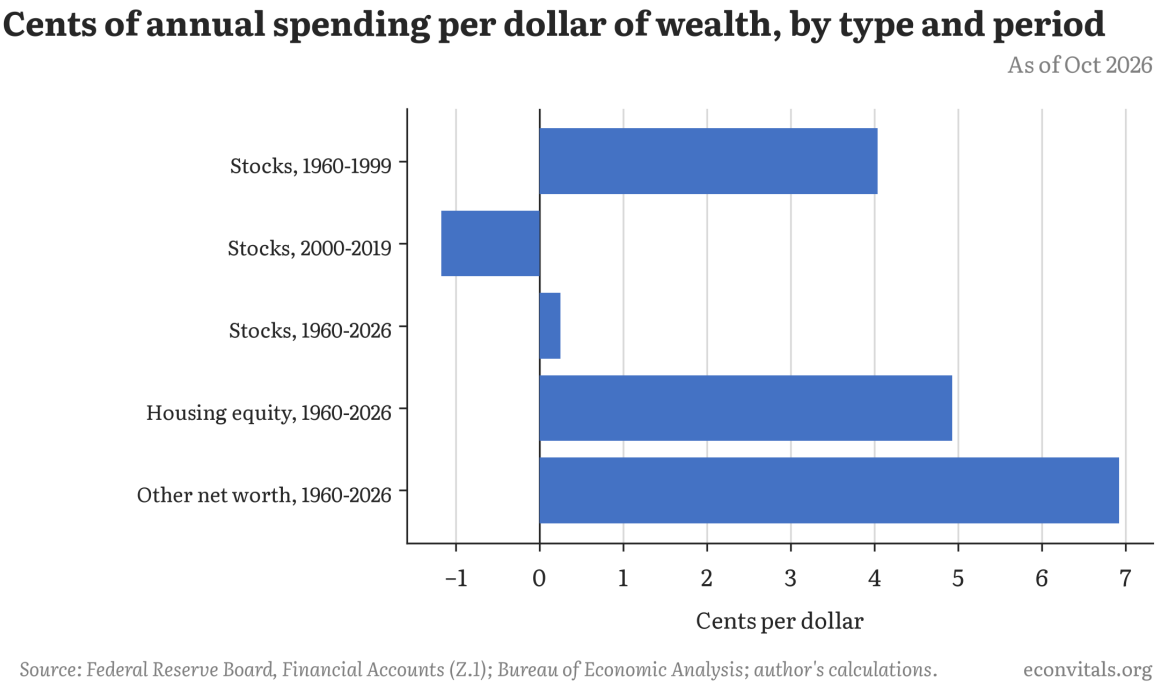


Figure 3. Coefficients from regressions of the personal saving rate on stock, housing-equity and other wealth relative to income (wealth at the start of the quarter), converted to cents of annual outlays per dollar. The stock coefficient is unstable across periods.

Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

Other specifications land lower. In the log specification (real PCE on real income and real wealth, 1960-2026), the stock-wealth elasticity converts to 0.6 cents per dollar at sample-average spending-to-wealth ratios. The same log specification gives 2.9 cents per dollar for owners' equity in real estate. Dynamic OLS with two leads and lags gives 1.2 cents per dollar of stock wealth. Adding the unemployment rate changes little: the full-sample coefficient becomes 0.4 cents.

The time series cannot pin down the level. It supports a stock MPC of a few cents in the pre-pandemic data and something near zero once the pandemic years are added. Where our full-sample number and the identified literature disagree, we lean on the literature for the level and on our own data for the direction of change. The full-sample estimate is pulled down by the years since the pandemic, when stock wealth soared and saving did not fall to match. Beach, Gamber and Moran attribute the same pattern to concentration.

How fast the effect arrives

The common view is that the wealth effect builds over one to three years. Our dynamic model, estimated through the pre-pandemic period, puts most of the stock response in the first year. Outlays rise by 1.6 cents per dollar in the first quarter, 1.6 after four quarters, 1.7 after eight and 1.9 in the long run. Estimated through 2019Q4, the four-quarter response is 84% of the long-run response. The last part of the response comes slowly. Estimated through 2019Q4, the response reaches 90 percent of its long-run size after 12 quarters.

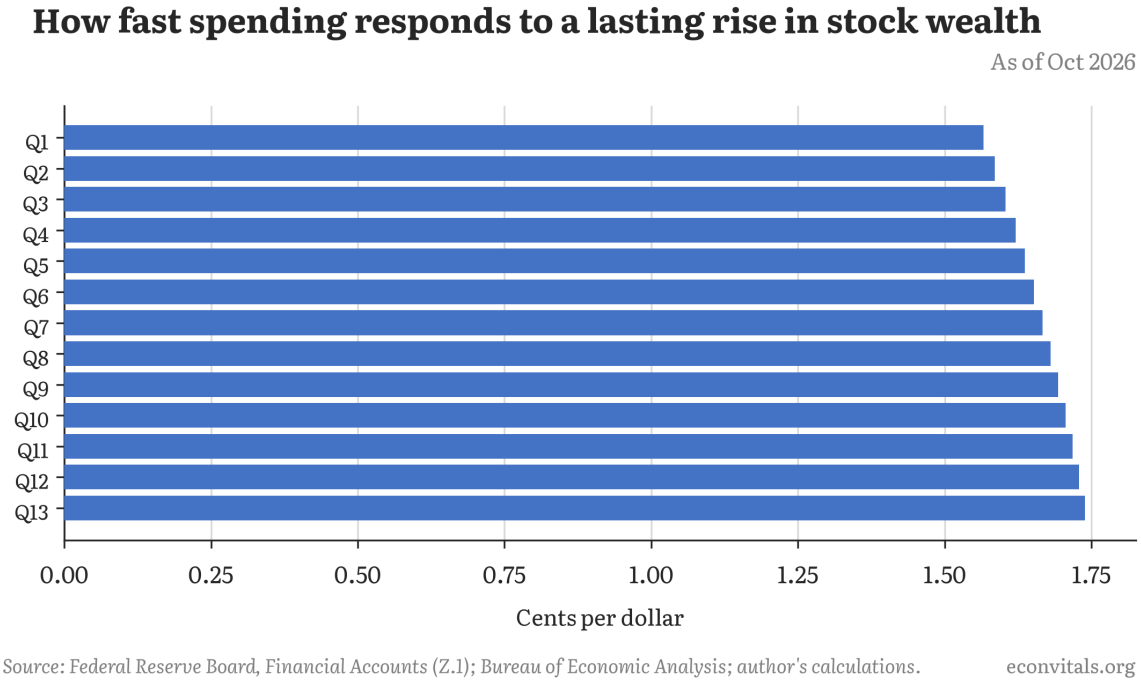


Figure 4. Cents of additional annual consumer outlays per dollar of a permanent rise in stock-market wealth, by quarter after the rise, from a dynamic (ADL) saving-rate model estimated 1960Q1-2019Q4.

Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

The full-sample dynamic model gives a smaller response that overshoots. Outlays rise by 1.5 cents per dollar in the first quarter, 1.4 after four quarters and 1.2 after eight, against a long-run response of 0.9. In the full-sample dynamic model the four-quarter response is 158% of the long-run response (an overshoot).

The literature reads timing differently. Carroll, Otsuka and Slacalek (2011) find the eventual effect of housing wealth several times the immediate one, and they reject the cointegration approach that older aggregate estimates rely on. Dynan and Maki find the effect starting quickly and building for several quarters. Carroll and coauthors' slow build is for housing, and our design measures outlays relative to income, which moves faster than the level of consumption. Taxes on realized gains may also speed the measured response. For forecasting a market fall, spreading the hit over two or three years is the safer rule.

Fast versus gradual run-ups

Households who see a sudden jump in their portfolios may treat it as fleeting and spend little of it; a steady climb looks permanent. Lettau and Ludvigson's work points the same way.[2] Having found that most swings in wealth are transitory, they add: "Although transitory innovations are found to have little influence on consumer spending, they have long-lasting effects on wealth , exhibiting a half-life of a little over two years."

We tested this two ways, and neither found the predicted pattern.

Splitting stock wealth into its slow and fast parts

The first test divides stock wealth relative to income into its trailing 12-quarter average and the gap between today's value and that average. If fast gains are spent less, the gap should carry the smaller coefficient. It carries the larger one. Spending moves 0.0 cents per dollar with the slow-moving part of stock wealth (its trailing 12-quarter average) and 2.0 cents per dollar with the fast part (the gap between current stock wealth and that average). The p-value for equal fast and slow responses is 0.326. The pre-pandemic sample shows the same ordering. Through 2019Q4, the slow-part response is 2.0 cents per dollar and the fast-part response is 3.9 cents per dollar. Through 2019Q4, the p-value for equal fast and slow responses is 0.328.

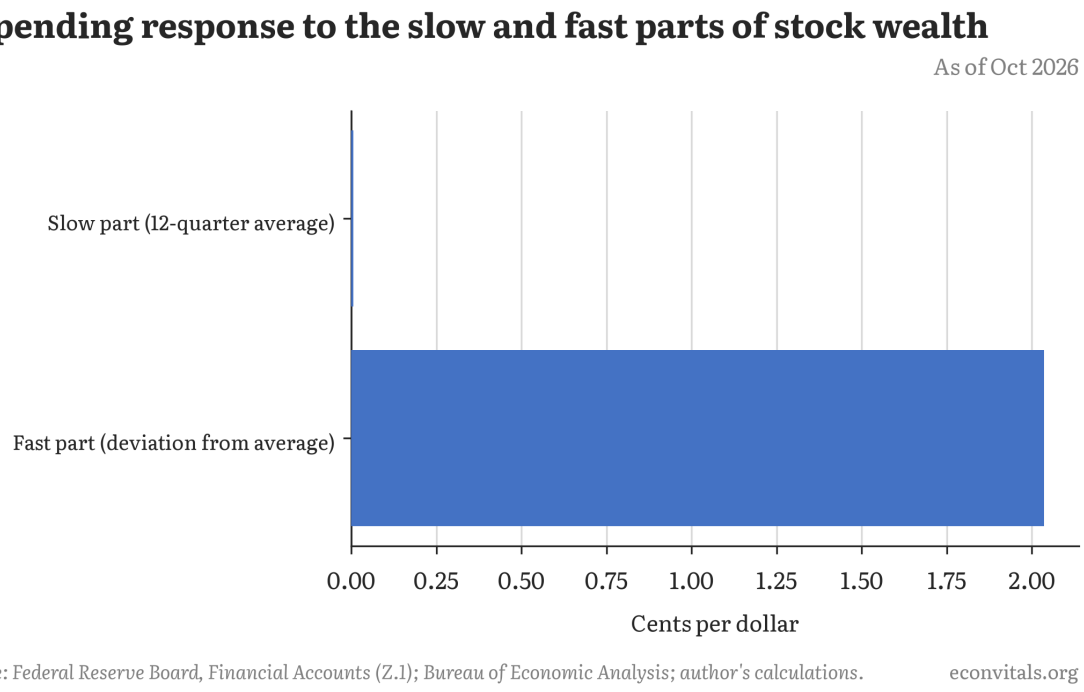


Figure 5. Stock wealth relative to income split into its trailing 12-quarter average and the deviation from that average, 1962Q1-2026Q3. The two responses are not statistically different, and the fast part does not have the smaller one.

Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

The second test lets the stock coefficient vary with realized market volatility. If volatile gains are discounted, high volatility should shrink the coefficient. It does the opposite, though not significantly. At average stock-market volatility, the stock-wealth coefficient is 0.4 cents per dollar and with volatility one standard deviation above average it is 1.0 cents per dollar. The p-value on the volatility interaction is 0.299.

These are null results with wide intervals: the aggregate data cannot detect a difference, and the point estimates lean against the hypothesis rather than toward it. A difference of the size the hypothesis implies, with fast gains spent at half the rate of slow ones, sits inside the intervals.

Four run-ups compared

The four big run-ups differ widely in speed, and the saving response shows no clear relation to it, though two of the four cannot be read cleanly.

Four stock-market run-ups and the saving rate

Episode	Quarters	Gain in stock wealth ($ trillion)	Gain (years of DPI)	Gain per year (years of DPI)	Change in saving rate (pp)	Change implied by T1 (pp)
1995Q1-2000Q1	21	7.59	0.86	0.16	-2.9	-0.22
2009Q1-2019Q4	44	22.34	1.1	0.1	1.1	-0.28
2020Q2-2021Q4	7	21.44	0.98	0.56	-1.9	-0.25
2023Q1-2026Q2	14	32.38	1	0.29	0.4	-0.25

Figure 6. Change in household stock wealth and in the personal saving rate over each run-up, against the change implied by the full-sample coefficient. The 2020Q2-2021Q4 episode starts at the pandemic saving peak.
Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

The dot-com boom was moderately fast and was spent. Over 1995Q1-2000Q1, household stock wealth rose by 0.86 years of disposable income. That is 0.16 years of income a year, and the saving rate changed by -2.9pp. That fall matches the standard rule closely. At 3 cents per dollar the gain over 1995Q1-2000Q1 implies a saving-rate change of -2.6pp.

The post-crisis expansion was the slowest run-up and produced no saving decline at all. Over 2009Q1-2019Q4, household stock wealth rose by 1.10 years of disposable income. That is 0.10 years of income a year, and the saving rate changed by 1.1pp. Balance-sheet repair after the housing bust swamps any stock effect.

The pandemic rebound was the fastest. Over 2020Q2-2021Q4, household stock wealth rose by 0.98 years of disposable income. That is 0.56 years of income a year, and the saving rate changed by -1.9pp. But that episode starts at the pandemic saving peak, so the saving decline reflects the end of lockdowns rather than stock gains.

The current run-up is the largest in dollars. Over 2023Q1-2026Q2, household stock wealth rose by $32.4 trillion. That is 1.00 years of income in total and 0.29 a year, and the saving rate changed by 0.4pp. A mid-range MPC says it should have pushed saving down sharply. At 3

cents per dollar the gain over 2023Q1-2026Q2 implies a saving-rate change of -3.0pp.

The two cleanest episodes, the dot-com boom and the current run-up, moved at similar speeds and produced opposite results. Two episodes cannot isolate speed; the starting point, the ownership of the gains and household finances also differ.

Today's consumption against the wealth effect

U.S. consumption is at or below what the wealth effect predicts, not above it.

The saving rate is above what the pre-pandemic model predicts

We fit the saving-rate model on the pre-pandemic data and ran it forward on actual wealth. On that model, the run-up in stock and housing wealth since the pandemic should have driven the saving rate close to zero. It did not.

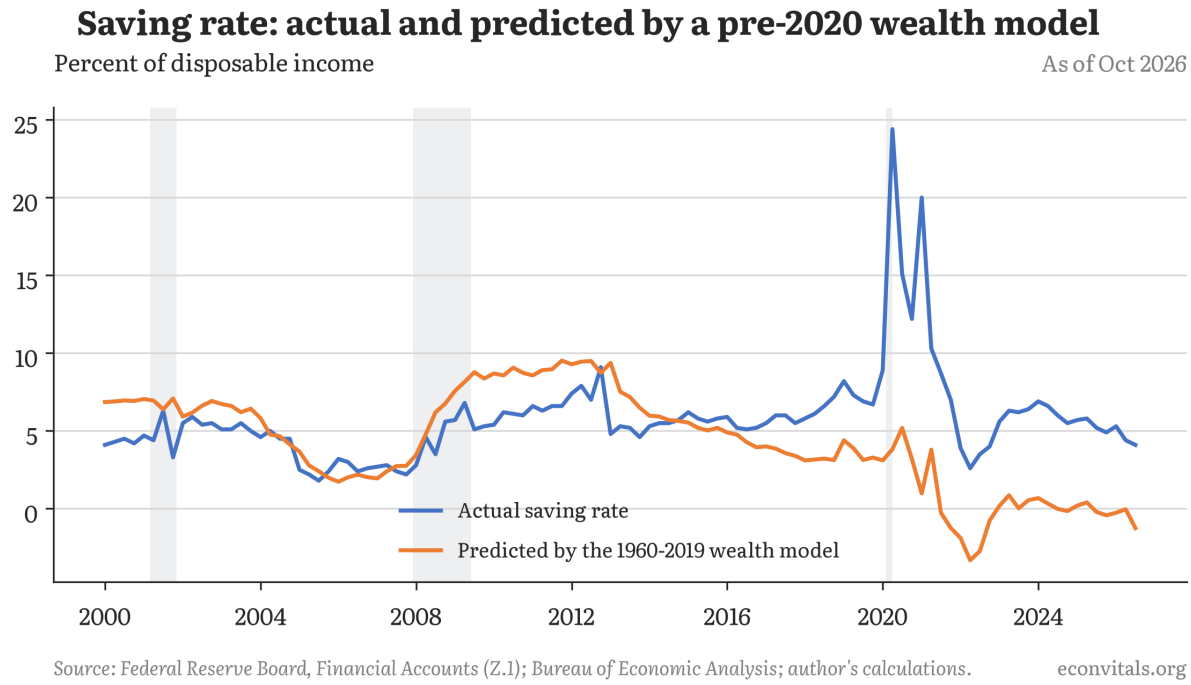


Figure 7. Actual personal saving rate against the fit of a regression of the saving rate on stock, housing and other wealth relative to income, estimated over 1960Q1-2019Q4 and projected forward on actual wealth. In recent years the saving rate has run well above what the pre-2020 relationship implies.

Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

The actual saving rate averaged 4.7% over 2025Q4-2026Q3. The 1960-2019 model predicts a saving rate averaging -0.5% over 2025Q4-2026Q3. Over the latest four quarters (2025Q4-2026Q3) the actual saving rate averages 5.2pp above the 1960-2019 model's prediction. The 1960-2019 saving-rate model's in-sample error (RMSE) is 1.77pp. The latest quarter shows the same gap. The personal saving rate was 4.1% in 2026Q3. The 1960-2019 model predicts -1.3% for 2026Q3. Read this with care. Stock wealth is 2.89 years of income against 1.90 at the end of the fitting

sample, and a predicted saving rate below zero says the linear model is stretched past its range.

Part of this gap is a month old. BEA's annual update revised personal saving up for recent years. The annual update raised the average saving rate over 2025Q4-2026Q3 by 1.3pp. On the saving rate as published before BEA's September 30, 2026 annual update, the latest four quarters sit 4.2pp above the 1960-2019 model's prediction. The annual update added 1.0pp to that four-quarter gap. The gap survives.

The gap did not open suddenly: the actual saving rate ran above the model's fit in the years just before the pandemic. That matches Beach, Gamber and Moran's finding of a break in the wealth MPC as wealth concentrated at the top.

The decomposition shows what the model expected. From 2019Q4 to 2026Q3 the 1960-2019 model's predicted saving rate changes by -4.5pp. Over the same span the actual saving rate changed by -2.6pp. Higher stock wealth accounts for -2.4pp of the predicted change since 2019Q4. Higher housing equity accounts for -3.1pp of the predicted change since 2019Q4. Other net worth accounts for 0.9pp of the predicted change since 2019Q4. Housing equity accounts for more of the expected decline than stocks, so the gap speaks to wealth effects in general more than to the stock MPC.

Two models, two readings of the same fact

A model fit on the full sample, including the years since the pandemic, tells a different story about the residual but the same story about the behavior. Using the full-sample fit instead, the actual saving rate averages 0.3pp above the fitted value over the latest four quarters. The full-sample fit's error (RMSE, pandemic quarters excluded) is 2.00pp. The full-sample model fits today's saving rate because it has learned from the recent data that stock wealth does little to spending. Both models agree that households have not spent their stock gains at the rate the pre-pandemic relationship implied. They disagree on whether to call that a residual or a lower MPC, and the full-sample reading, a stock MPC near zero, is the sturdier one.

A simple check gives the same answer without any model. From the end of 2022Q4 to the end of 2026Q2 household stock wealth rose 1.00 years of disposable income. At 2 cents per dollar that rise implies a saving-rate decline of 2.0pp. At 4 cents per dollar it implies a decline of 4.0pp. The actual saving rate changed by 0.1pp from 2022Q4 to 2026Q3.

Low by history, not low given wealth

The saving rate is low by long history. The monthly personal saving rate was 3.8% in September 2026. That rate is low by history: only 7% of months since 1960 were lower. The saving rate averaged 5.4% over the four quarters of 2025. Spending has also recently outrun income: Real PCE grew at a 3.8% annual rate from 2026Q1 to 2026Q3. Real disposable income grew at a 1.0% annual rate over the same two quarters. That dip was seen mostly on the pre-update data.

But low by history is not low given wealth. As an exploratory check, the latest quarter's saving rate sits 0.0pp above the full-sample model's fit and 5.4pp above the pre-pandemic model's. Wealth relative to income is so high that the old relationship would have the saving rate far lower still.

What the residual means

Three explanations fit the gap, and the evidence here supports the first two more than the third.

The first is higher interest rates. As an exploratory check, adding the 10-year Treasury yield to the pre-pandemic model shrinks the gap without closing it. Adding the 10-year Treasury yield to the 1960-2019 model leaves the actual saving rate 3.9pp above the prediction over the latest four quarters. Each percentage point on the 10-year yield goes with a saving rate 0.21pp higher in that model. With the yield included, the 1960-2019 stock coefficient is 1.1 cents per dollar.

The second is concentration. The gains have gone mostly to households that spend little of each extra dollar. The Distributional Financial Accounts show the wealthiest households holding the overwhelming share of stocks (next section). Beach, Gamber and Moran's lower recent MPC is this same mechanism measured directly.

The third is precautionary saving by households under strain. The Fed's district reports describe a split consumer. The Atlanta Fed's Beige Book summary describes a bifurcated consumer, with affluent households still spending and others cutting back.[10] The Cleveland Fed's Fourth District Beige Book reports consumer spending declining modestly for a fourth straight period as fuel and food prices strain budgets. Consumer confidence has fallen hard even as spending held up. PNC Economics reports the Conference Board consumer confidence index fell to 81.9 in September, the lowest since August 2013.[11] Bloomberg's account of the same release dates the previous low to 2014.[12] Strain at the bottom raises saving where incomes are tight. It does not explain why the stock gains at the top were not spent faster.

None of these explanations points to households over-relying on wealth. The IMF's Article IV, written before BEA's annual update, projected the saving rate rising.[13] The IMF projects the U.S. personal saving rate at 4.7% of disposable income in 2025. The IMF projects the U.S. personal saving rate rising to 5.5% of disposable income in 2026. The IMF projects the U.S. personal saving rate at 6.6% of disposable income in 2027.

Background from the literature

One recent paper reads the same period as wealth-led. Bigot and Espic (2026), at the Banque de France, fit an error-correction model of U.S. consumption with wealth split between the top and bottom of the income distribution.[14] Thus, in 2025, rising household wealth is estimated to have accounted for around half of consumption growth. The influence of wealth effects has increased since the beginning of the 1990s, reflecting greater asset price volatility as well as the financialisation of household assets (Gaudio 2025). Their finding and ours are compatible: wealth can account for much of recent consumption growth at a low MPC, because the gains were enormous. Our numbers give no sign that spending is running ahead of standard wealth effects. Applying a standard MPC to the current run-up, as in the episode comparison above, predicts a far lower saving rate than the one observed.

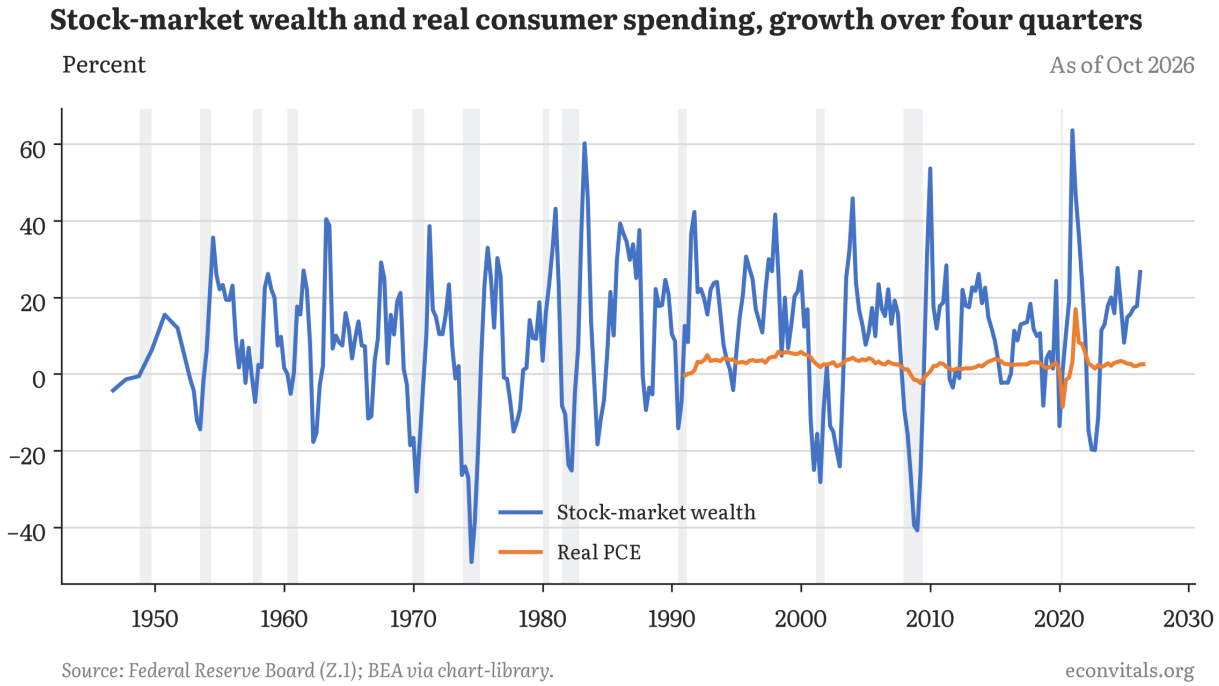


Figure 8. Four-quarter growth in household stock-market wealth (nominal) and in real personal consumption expenditures; the real PCE series in the store begins in the early 1990s. Swings in stock wealth are many times larger than swings in spending, which is why a wealth effect of a few cents on the dollar is hard to see quarter by quarter.

Source: Federal Reserve Board (Z.1); BEA via chart-library.

How vulnerable is U.S. consumption to a fall in the stock market?

Exposure is at a record

Stock wealth has never been larger relative to household balance sheets or incomes. Stock-market wealth was 35.3% of household net worth in 2026Q2. It was 26.2% of net worth in 2000Q1. It was 21.6% of net worth in 2007Q3. Household stock-market wealth was $69.2 trillion in 2026Q2. Household and nonprofit net worth was $195.9 trillion in 2026Q2.

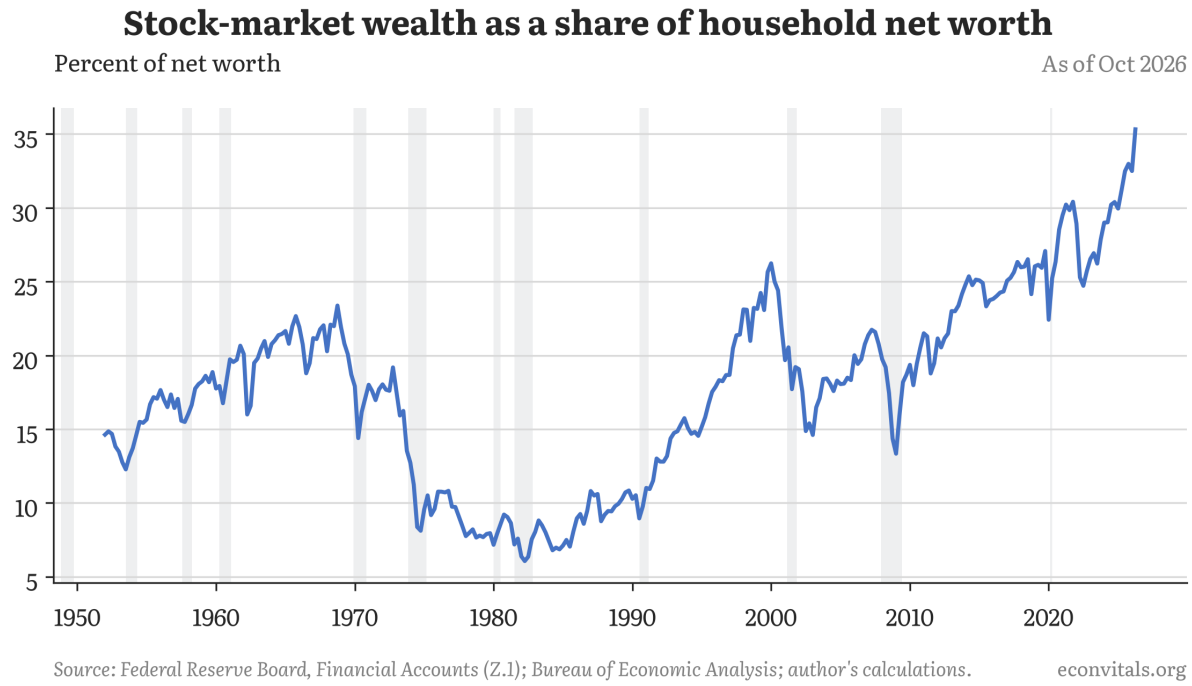


Figure 9. Corporate equities and non-money-market fund shares held by households and nonprofits, percent of their net worth, 1952Q1-2026Q2. The 2026Q2 reading is the postwar high, above the dot-com and pre-crisis peaks.

Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

Relative to income, the rise is even steeper. Household stock wealth was 2.89 years of disposable income in 2026Q2. It was 1.61 years of disposable income in 2000Q1. It was 1.46 years of disposable income in 2007Q3. It was 1.90 years of disposable income in 2019Q4. So a given percentage fall in stock prices removes nearly twice as much wealth relative to income as the same fall would have at the dot-com peak. Measured against total assets rather than net worth, the share is also a record. Stock-market wealth was 31.8% of household total assets in 2026Q2. The postwar high of stock wealth as a share of total assets is 31.8%. Both shares understate exposure, since our series excludes equity held through pension plans of every kind, including defined-contribution accounts, and life insurance.

Who owns the stocks

Ownership is highly concentrated, and more so in dollar terms than a quarter-century ago. The top 1 percent by wealth held 50.9% of household corporate equities and mutual fund shares (latest). The top 10 percent by wealth held 88.1% of household corporate equities and mutual fund shares (latest). The bottom 50 percent held 0.6% of household corporate equities and mutual fund shares (latest).

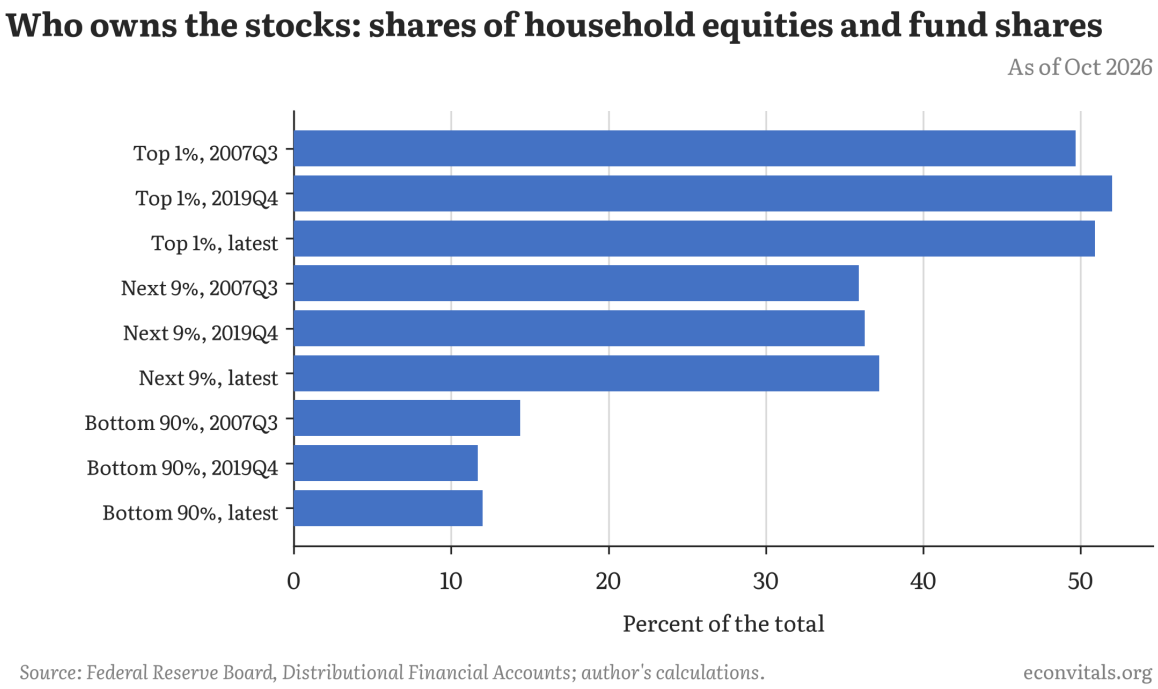


Figure 10. Share of household corporate equities and mutual fund shares held by wealth group, Distributional Financial Accounts. Pension-held equity is not included.

Source: Federal Reserve Board, Distributional Financial Accounts; author's calculations.

Households outside the top decile hold a smaller share of directly held stocks and funds now than at the dot-com peak. The bottom 90 percent held 18.1% of household corporate equities and mutual fund shares in 2000Q1. The bottom 90 percent held 12.0% of household corporate equities and mutual fund shares in 2026Q2. This measure leaves out pension entitlements, where retirement-account holdings sit. So it overstates concentration for middle-wealth households, and it cannot test the view that passive retirement investing has made ordinary savers more exposed.[15] Bloomberg Opinion argues that passive retirement investing has made ordinary savers AI investors, raising systemic tail risk if AI productivity hopes disappoint. Morelli (2026), at the New York Fed, describes the participation shift.[16] In the mid-1980s, fewer than 30 percent of households held equity. The post argues that, as stock exposure spread across more households, the wealth effect of a given price move weakened, and it adds a caution. The rise in participation coincided with other structural changes in the economy, so these findings should be interpreted with caution.

Concentration cuts two ways. It lowers the aggregate MPC: a fall lands on households that spent little of each dollar of gain. But Fed district reports say those households are still spending while others cut back. If their spending tracks portfolio values more tightly than the aggregate MPC implies, a crash would hit spending where it has been strongest.

The arithmetic of a fall

The arithmetic starts from current holdings. Households and nonprofits held $69.2 trillion of corporate equities and fund shares at the end of 2026Q2. Scaled to the October 2026 average S&P 500, those holdings come to roughly $71.3 trillion (a projection, not data). That projection equals 216% of annual GDP. The projection equals 2.94 years of disposable income. The table applies a range of MPCs to falls of different sizes.

Arithmetic of a stock-market fall: the direct consumption hit

Scenario	Wealth lost ($ trillion)	Annual spending cut ($ billion)	Spending cut (% of PCE)	Growth hit, 4-quarter phasing (pp)	Growth hit per year, 8-quarter phasing (pp)
10% fall, 2 cents	7.13	142.67	0.64	0.43	0.22
10% fall, 3 cents	7.13	214	0.96	0.65	0.32
10% fall, 5 cents	7.13	356.67	1.6	1.08	0.54
10% fall, this run's estimate	7.13	17.88	0.08	0.05	0.03
10% fall, 1960-2019 estimate	7.13	153.83	0.69	0.47	0.23
20% fall, 2 cents	14.27	285.34	1.28	0.86	0.43
20% fall, 3 cents	14.27	428.01	1.92	1.3	0.65
20% fall, 5 cents	14.27	713.35	3.2	2.16	1.08
20% fall, this run's estimate	14.27	35.76	0.16	0.11	0.05
20% fall, 1960-2019 estimate	14.27	307.66	1.38	0.93	0.47
30% fall, 2 cents	21.4	428.01	1.92	1.3	0.65
30% fall, 3 cents	21.4	642.01	2.88	1.94	0.97
30% fall, 5 cents	21.4	1,070.02	4.8	3.24	1.62
30% fall, this run's estimate	21.4	53.64	0.24	0.16	0.08
30% fall, 1960-2019 estimate	21.4	461.48	2.07	1.4	0.7

Figure 11. Household stock wealth (2026Q2 holdings scaled to the October 2026 S&P 500 average, a projection) times the fall times an assumed MPC. GDP hit equals the spending hit, with no multiplier and no import offset.
Source: Federal Reserve Board (Z.1); S&P Dow Jones Indices via FRED; Bureau of Economic Analysis; author's calculations.

A 20 percent stock fall removes about $14.3 trillion of household wealth. A 20 percent fall with a 3 cent MPC cuts annual spending by about $428 billion. That is 1.92% of PCE and 1.30% of GDP once phased in. The rest of this section uses this mid-range MPC. At the low MPC in the table the hit is 1.28% of PCE and 0.86% of GDP; at the high MPC it is 3.20% and 2.16%. Our pre-pandemic estimate gives 1.38% of PCE and 0.93% of GDP, and our full-sample estimate only 0.16% of PCE.

The dynamic model spreads the hit over time. On its path, the middle scenario lowers PCE by 0.88% after four quarters and 0.80% after eight. Most of the hit lands in the first year.

A larger fall scales up roughly in proportion. A 30 percent stock fall removes about $21.4 trillion of household wealth. At the mid-range MPC that is 2.88% of PCE and 1.94% of GDP. The independent commentator Robin Brooks sizes a burst of the AI bubble larger still. Robin Brooks treats a market correction of about 40% as the scenario if the AI bubble bursts, and expects QE to be deployed again in response.[17] The arithmetic for that case is exploratory. A 40 percent stock fall removes about $28.5 trillion of household wealth. A 40 percent fall at 3 cents per dollar cuts annual spending by 3.84% of PCE once phased in.

These numbers are a direct hit only, with no multiplier, no import offset and no monetary response. The general-equilibrium effect could be larger: A 20% increase in stock valuations, unless countered by monetary policy, increases the aggregate labor bill by at least 1.7% and aggregate hours by at least 0.75% two years after the shock. An active Fed would cushion the blow.

What past drawdowns show

The three big drawdowns of the past quarter-century do not follow the rule cleanly.

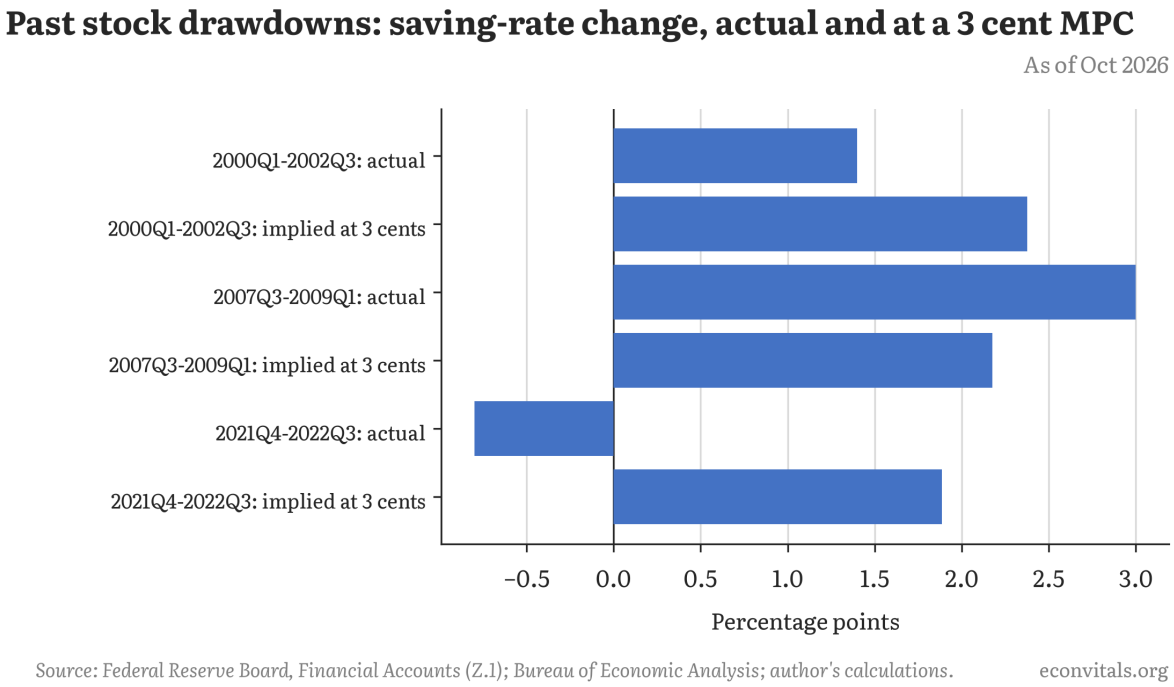


Figure 12. Change in the personal saving rate from the start of each drawdown to four quarters after the trough, against the change implied by a 3 cent MPC on the stock wealth lost. The financial-crisis drawdown also had a housing and credit bust; the post-pandemic one came as pandemic savings were spent.
Source: Federal Reserve Board, Financial Accounts (Z.1); Bureau of Economic Analysis; author's calculations.

The dot-com bust raised saving by less than the mid-range MPC implies. Household stock wealth fell 42% over 2000Q1-2002Q3. The loss was 0.79 years of income, and four quarters after the trough the saving rate was up 1.4pp. At 3 cents per dollar the loss over 2000Q1-2002Q3 implies a rise in the saving rate of 2.4pp.

The financial crisis raised saving by more than stocks alone imply. Household stock wealth fell 48% over 2007Q3-2009Q1. The loss was 0.73 years of income, and four quarters after the trough the saving rate was up 3.0pp. At 3 cents per dollar the loss over 2007Q3-2009Q1 implies a rise in the saving rate of 2.2pp. That episode also had a housing collapse, a credit crunch and mass layoffs, which is the point: the extra saving came from the amplifiers, not from stocks.

The post-pandemic bear market went the wrong way entirely. Household stock wealth fell 23% over 2021Q4-2022Q3. The loss was 0.63 years of income, yet four quarters after the trough the saving rate had changed by -0.8pp. At 3 cents per dollar the loss over 2021Q4-2022Q3 implies a rise in the saving rate of 1.9pp. Households were spending down pandemic savings, which overwhelmed the wealth loss.

The record suggests a stock fall on its own produces a saving response at or below the mid-range MPC. Only when stocks fall alongside housing, credit and jobs does the response exceed it. Whether losses bite harder than gains could not be measured here; three episodes, two of them confounded, cannot settle it.

Background from the literature

The newest work on the downside frames the risk more starkly than our arithmetic. Mitra and Rapach (2026), at the Atlanta Fed, build scenarios from household wealth, equity exposure and the MPC.[18] Their summary says: “We then apply this framework to scenarios in which the S&P 500 falls by 25, 35, and 50 percent.” It concludes: “We project substantive declines in US real aggregate consumption in response to the hypothetical market declines, which have important business-cycle implications.” It gives no consumption numbers to compare with ours.

The official record is qualitative. The IMF’s Article IV judges U.S. equity valuations stretched. The IMF’s 2026 Article IV cites the October 2025 GFSR finding that the S&P 500 forward price-to-earnings ratio was at the 95 percentileth percentile of its historic distribution. The IMF’s 2026 Article IV cites an overvaluation of U.S. equities of about 13% relative to fair value models. IMF staff judge U.S. equity valuations stretched, with gains concentrated in large technology firms that account for around 0.33 share of market capitalization, raising the risk of an abrupt correction. IMF staff rate a ‘Disorderly AI Correction’ — a sharp market correction and wealth loss that suppress demand — as high likelihood, which the matrix defines as 30% to 50 percent. It names consumption through wealth effects as a channel but gives no size. It also notes balance sheets are healthy. IMF staff note U.S. household debt-to-GDP at 20-year lows, at 68.55% in the latest year of its financial soundness table. The OECD made the same point earlier. The OECD named a sudden unwinding of equity positions

as an ongoing risk to the U.S. outlook.[19]

What commentators are saying

Official. IMF / International Monetary Fund: The IMF's October Global Financial Stability Report warns that AI-related market corrections could trigger market turmoil amplified by financial vulnerabilities.[20] **Market structure.** PNC Economics says AI-related stocks are now near half of S&P 500 market capitalization.[21] The October sell-off so far has been narrow. Edward Conard's roundup, citing Robin Brooks, reports that the October equity decline was concentrated in hyperscalers, semiconductors and data-center industrials, while almost three-quarters of S&P 500 stocks were up since October 5.[22] **Quantified views.** PNC Economics estimates that AI-related capex and wealth effects together are adding about 65bp to annual real GDP growth.[23] None of them states the MPC it assumes.

Is a stock-market fall, by itself, a recession risk?

At the mid-range MPC, a fall the size of the middle scenario is a growth hit, not a recession. It subtracts 1.30% of GDP from spending once phased in. That is a large bite out of the 2.1% growth the IMF's Article IV expected for next year, but not enough by itself to push growth below zero. At an MPC near the Fed staff estimate, the hit would be a fraction of that. At the high MPC it would subtract 2.16% of GDP, most of a year's growth, and could tip a slowing economy into recession.

Three things would have to go wrong for a stock fall to become a recession. The fall would have to spread from the AI megacaps to the broad market, rather than stay narrow as it has so far. It would have to hit credit, especially the borrowing behind AI investment. Noah Smith argues hyperscalers' heavy borrowing to sustain AI spending raises the stakes of any slowdown in AI revenue.[24] And it would have to reach the labor market, which Kansas City Fed researchers see as more fragile than it looks. Kansas City Fed researchers argue the low-hire, low-fire labor market is more vulnerable to a downturn than its calm headline numbers suggest.[25] The financial crisis had all three. A fall that stays in stock prices is the case the arithmetic describes.

A second risk: a stock fall that ends the AI investment boom would hit GDP directly, separately from any wealth effect. This analysis does not size it, so the scenario numbers understate the total hit.

Methods and limits

What was pre-specified and what was exploratory

The pre-specified analysis covered five tests: the saving-rate regression with subsamples and a stability test; a dynamic (ADL) model; the fast-versus-slow split and the volatility interaction; the pre-pandemic model projected forward; and the exposure and scenario arithmetic. The exploratory checks came later: the monthly saving-rate comparisons, the model with the 10-year yield, the share outside the top decile, the larger-fall scenario and the commentary reconciliation. The text labels exploratory results where they appear.

How the measures are built

Stock-market wealth is corporate equities and non-money-market fund shares held by households and nonprofits, from the Financial Accounts. It excludes equity held through pension plans and life insurance, so it understates total exposure. Housing wealth is owners' equity in real estate; other net worth is the remainder. By construction the three pieces sum to household net worth. Each is divided by annual disposable personal income at the start of the quarter. The saving rate is BEA's personal saving rate, which equals one minus personal outlays over disposable income. The pandemic quarters are dummied or omitted where noted.

The scenario base is a projection. The latest Financial Accounts quarter predates the October market, so holdings are scaled by the October average of the S&P 500. The GDP hit equals the spending hit with no multiplier, no import offset and no monetary response.

What the analysis cannot determine

These are descriptive regressions, not causal estimates. Stock wealth and spending both respond to news about future income, so the coefficients mix the wealth effect with that signal; the identified literature handles this and our regressions do not. Taxes on realized capital gains lower measured disposable income while the gains never enter it, so measured saving falls in booms even if spending does not; that biases our coefficients up. The stock coefficient is unstable, so any single estimate is a summary of a moving relationship. The fast-versus-slow and volatility tests are nulls with wide intervals, and they could miss a difference of meaningful size. Asymmetry between gains and losses was not tested and the drawdown episodes cannot settle it. The decomposition of the residual among interest rates, concentration and precaution is suggestive, not a test. The latest household wealth data end before the October sell-off, and pension-held equity is missing. No institutional estimate of the consumption hit from a U.S. equity fall was available: the IMF and OECD discuss the risk without numbers.

What to monitor

The saving rate against the model. A rise in saving as stocks fall would say households are cutting back on losses faster than they spent the gains.

Breadth of the sell-off. The October decline was concentrated in AI-linked stocks. A move from the cap-weighted index into the equal-weighted index and small caps would turn a narrow repricing into a broad wealth loss.

The next Financial Accounts release. It will show how much stock wealth the October sell-off removed.

Credit tied to the AI build-out. Stress in the debt financing data centers and hyperscalers is the channel most likely to turn a stock fall into a credit event.

Hiring and layoffs. A stock fall plus job losses is the combination that produced the large saving response in the financial crisis.

Spending by high-income households. Card data and the Fed's district reports on high-end spending will show first whether the households that own the stocks are pulling back.

Appendix

The tables below record every series and estimate the analysis computed. Row labels describe the sample in words; the sentences under each table carry the exact dates.

A1. Saving-rate regressions: cents of annual outlays per dollar of wealth

Specification	Stock wealth	Housing equity	Other net worth
Full sample, levels	0.3	4.9	6.9
Full sample, confidence interval on stock	-0.9 to 1.4		
Full sample, with unemployment rate	0.4		
Pre-pandemic sample	2.2		
Early period, to the dot-com peak	4.0		
Middle period, dot-com peak to pandemic	-1.2		
Pandemic and after	1.9		
Log specification, converted	0.6	2.9	
Dynamic OLS	1.2		
Pre-pandemic, with 10-year yield (exploratory)	1.1		

Across 1960Q1-2026Q3, each extra dollar of household stock-market wealth is associated with 0.3 cents more annual consumer outlays (saving-rate regression, wealth at the start of the quarter). Estimated on 1960Q1-1999Q4 alone, the stock-wealth coefficient is 4.0 cents per dollar. Estimated on 2000Q1-2019Q4 alone, the stock-wealth coefficient is -1.2 cents per dollar. Estimated on 2020Q1-2026Q3 alone (pandemic quarters dummied), the stock-wealth coefficient is 1.9 cents per dollar. Estimated on 1960Q1-2019Q4, the stock-wealth coefficient is 2.2 cents per dollar. A test that the stock coefficient is the same before 2000, in 2000-2019 and after 2020 has a p-value of 0.001. The full-sample saving-rate regression explains 0.65 of the variance of the saving rate. Each percentage point on the 10-year yield goes with a saving rate 0.21pp higher in that model.

A2. Dynamic response to a lasting rise in stock wealth, cents per dollar

Horizon	Full sample	Pre-pandemic sample
First quarter	1.5	1.6
Four quarters	1.4	1.6
Eight quarters	1.2	1.7
Long run	0.9	1.9
Four-quarter share of long run	158%	84%
Half-life of adjustment, quarters	9.6	12.4
Housing equity, long run	7.3	

Estimated through 2019Q4, the response reaches 90 percent of its long-run size after 12 quarters.

A3. Fast versus slow stock wealth and volatility

Test	Slow part or average volatility	Fast part or high volatility	p-value
Split, full sample	0.0	2.0	0.326
Split, pre-pandemic sample	2.0	3.9	0.328
Volatility interaction	0.4	1.0	0.299

A4. Stock-market run-ups

Episode	Gain in stock wealth	Gain, years of income	Per year	Saving-rate change	Implied, full-sample coefficient	Implied, mid-range MPC
Dot-com boom	$7.6 trillion	0.86	0.16	-2.9pp	-0.2pp	-2.6pp
Post-crisis expansion	$22.3 trillion	1.10	0.10	1.1pp	-0.3pp	
Pandemic rebound	$21.4 trillion	0.98	0.56	-1.9pp	-0.2pp	
Current run-up	$32.4 trillion	1.00	0.29	0.4pp	-0.3pp	-3.0pp

Over 1995Q1-2000Q1, household stock wealth rose by $7.6 trillion. Over 2009Q1-2019Q4, household stock wealth rose by $22.3 trillion. Over 2020Q2-2021Q4, household stock wealth rose by $21.4 trillion. Over 2023Q1-2026Q2, household stock wealth rose by $32.4 trillion.

A5. The current saving rate against the models

Measure	Value
Actual saving rate, latest four quarters	4.7%
Pre-pandemic model prediction, latest four quarters	-0.5%
Gap, latest four quarters	5.2pp
Pre-pandemic model error (RMSE)	1.77pp
Gap as a multiple of model error	2.9
Actual saving rate, latest quarter	4.1%
Pre-pandemic model prediction, latest quarter	-1.3%
Gap over full-sample fit, latest four quarters	0.3pp
Full-sample model error (RMSE)	2.00pp
Predicted change since the pandemic began	-4.5pp
Actual change over the same span	-2.6pp
Of which stock wealth	-2.4pp
Of which housing equity	-3.1pp
Of which other net worth	0.9pp

Measure	Value
Gap with 10-year yield added (exploratory)	3.9pp
Error of that model (exploratory)	1.74pp
Monthly saving rate, latest (exploratory)	3.8%
Share of months in the postwar record that were lower (exploratory)	7%
Average saving rate over the four quarters of last year (exploratory)	5.4%
Gap over full-sample fit, latest quarter (exploratory)	0.0pp
Gap over pre-pandemic fit, latest quarter (exploratory)	5.4pp

From 2019Q4 to 2026Q3 the 1960-2019 model's predicted saving rate changes by -4.5pp. From the end of 2022Q4 to the end of 2026Q2 household stock wealth rose 1.00 years of disposable income. At 2 cents per dollar that rise implies a saving-rate decline of 2.0pp. At 4 cents per dollar it implies a decline of 4.0pp. The actual saving rate changed by 0.1pp from 2022Q4 to 2026Q3. Real PCE grew at a 3.8% annual rate from 2026Q1 to 2026Q3. Real disposable income grew at a 1.0% annual rate over the same two quarters. Commentary put the September 2026 saving rate at 3.8 percent; BEA's monthly figure is 3.8%.

A6. Household exposure to stocks

Measure	Latest	Dot-com peak	Pre-crisis peak	Eve of pandemic
Stock wealth, share of net worth	35.3%	26.2%	21.6%	
Stock wealth, years of disposable income	2.89	1.61	1.46	1.90
Top percentile, share of household equities and fund shares	50.9%		49.7%	52.0%
Top decile, share	88.1%		85.6%	88.3%
Bottom half, share	0.6%		1.0%	0.6%
Outside the top decile, share (exploratory)	12.0%	18.1%		

The postwar high of the stock share of net worth is 35.3%. Stock-market wealth was 31.8% of household total assets in 2026Q2. The postwar high of stock wealth as a share of total assets is 31.8%. Household and nonprofit net worth was $195.9 trillion in 2026Q2. Household stock-market wealth was $69.2 trillion in 2026Q2. Household and nonprofit net worth stands at $195.9 trillion, 17% above a widely cited older figure; net worth was last near that figure when it stood at $167.9 trillion.

A7. Scenario grid: spending and GDP hit once phased in

Fall	Wealth lost	MPC low (PCE)	MPC low (GDP)	MPC mid (PCE)	MPC mid (GDP)	MPC high (PCE)	MPC high (GDP)	Pre-pandemic estimate (PCE)	Pre-pandemic estimate (GDP)	Full-sample estimate (PCE)	Full-sample estimate (GDP)
Small	$7.1 trillion	0.64%	0.43%	0.96%	0.65%	1.60%	1.08%	0.69%	0.47%	0.08%	0.05%
Middle	$14.3 trillion	1.28%	0.86%	1.92%	1.30%	3.20%	2.16%	1.38%	0.93%	0.16%	0.11%
Large	$21.4 trillion	1.92%	1.30%	2.88%	1.94%	4.80%	3.24%	2.07%	1.40%	0.24%	0.16%

A 10 percent stock fall removes about $7.1 trillion of household wealth. A 20 percent stock fall removes about $14.3 trillion of household wealth. A 30 percent stock fall removes about $21.4 trillion of household wealth. A 10 percent fall with an MPC of 3 cents cuts annual spending by 0.96% of PCE once fully phased in. A 10 percent fall with a 3 cent MPC cuts annual spending by about $214 billion. A 20 percent fall with a 3 cent MPC cuts annual spending by about $428 billion. A 30 percent fall with a 3 cent MPC cuts annual spending by about $642 billion. A 10 percent fall with an MPC of 5 cents cuts annual spending by 1.60% of PCE once fully phased in. A 10 percent fall with an MPC of 2 cents cuts annual spending by 0.64% of PCE once fully phased in. A 40 percent stock fall removes about $28.5 trillion of household wealth. A 40 percent fall at 3 cents per dollar cuts annual spending by 3.84% of PCE once phased in.

A8. Dynamic path of PCE after a fall

Fall	After four quarters	After eight quarters
Small	0.44%	0.40%
Middle	0.88%	0.80%
Large	1.32%	1.20%

On the dynamic model's path, a 10 percent fall lowers PCE by 0.44% after four quarters. On the dynamic model's path, a 20 percent fall lowers PCE by 0.88% after four quarters. On the dynamic model's path, a 30 percent fall lowers PCE by 1.32% after four quarters.

A9. Past drawdowns

Drawdown	Fall in stock wealth	Loss, years of income	Saving-rate change four quarters after trough	Implied, full-sample coefficient	Implied, mid-range MPC
Dot-com bust	42%	0.79	1.4pp	0.2pp	2.4pp
Financial crisis	48%	0.73	3.0pp	0.2pp	2.2pp
Post-pandemic bear market	23%	0.63	-0.8pp	0.2pp	1.9pp

Notes

1. Poterba, James M. (2000). Stock Market Wealth and Consumption. Journal of Economic Perspectives 14(2): 99-118. https://www.aeaweb.org/articles?id=10.1257/jep.14.2.99
2. Lettau, Martin, and Sydney Ludvigson (2004). Understanding Trend and Cycle in Asset Values: Reevaluating the Wealth Effect on Consumption. American Economic Review 94(1): 276-299 (NBER Working Paper 9848). https://www.nber.org/papers/w9848
3. Chodorow-Reich, Gabriel, Plamen Nenov and Alp Simsek (2021). Stock Market Wealth and the Real Economy: A Local Labor Market Approach. American Economic Review 111(5): 1613-57 (NBER Working Paper 25959). https://www.nber.org/papers/w25959 and https://www.aeaweb.org/articles?id=10.1257/aer.20200208
4. Dynan, Karen E., and Dean M. Maki (2001). Does Stock Market Wealth Matter for Consumption? Federal Reserve Board, Finance and Economics Discussion Series 2001-23. https://www.federalreserve.gov/econres/feds/does-stock-market-wealth-matter-for-consumption.htm
5. Juster, F. Thomas, Joseph P. Lupton, James P. Smith and Frank Stafford (2006). The Decline in Household Saving and the Wealth Effect. Review of Economics and Statistics 88(1): 20-27. https://ideas.repec.org/a/tpr/restat/v88y2006i1p20-27.html
6. Beach, Brennan, Edward Gamber and Kevin Moran (2025). Wealth Heterogeneity and Consumer Spending. Board of Governors of the Federal Reserve System, FEDS Notes. https://www.federalreserve.gov/econres/notes/feds-notes/wealth-heterogeneity-and-consumer-spending-20250805.html
7. Di Maggio, Marco, Amir Kermani and Kaveh Majlesi (2020). Stock Market Returns and Consumption. Journal of Finance 75(6): 3175-3219 (NBER Working Paper 24262). https://www.nber.org/papers/w24262
8. Case, Karl E., John M. Quigley and Robert J. Shiller (2013). Wealth Effects Revisited: 1975-2012. Critical Finance Review 2(1): 101-128 (NBER Working Paper 18667). https://www.nber.org/papers/w18667
9. Carroll, Christopher D., Misuzu Otsuka and Jiri Slacalek (2011). How Large Are Housing and Financial Wealth Effects? A New Approach. Journal of Money, Credit and Banking 43(1): 55-79. https://ideas.repec.org/a/mcb/jmoncb/v43y2011i1p55-79.html
10. Federal Reserve Banks of Atlanta and Cleveland, Beige Book district summaries, September 2, 2026.
11. PNC Economics, note on U.S. consumer confidence, September 29, 2026.
12. Bloomberg, report on the Conference Board consumer confidence index, September 29, 2026.
13. International Monetary Fund (2026). United States: Article IV Consultation. https://www.imf.org/en/Countries/USA
14. Bigot and Espic (2026). Are Stock Market Valuations Fuelling US Consumption? Banque de France, Eco Notepad no. 454. https://www.banque-france.fr/en/publications-and-statistics/publications/are-stock-market-valuations-fuelling-us-consumption

15. Bloomberg Opinion, on passive retirement investing and AI exposure, September 21, 2026.
16. Morelli (2026). Has Broader Stock Market Participation Changed How Interest Rates Affect the Economy? Federal Reserve Bank of New York, Liberty Street Economics. https://libertystreeteconomics.newyorkfed.org/2026/08/has-broader-stock-market-participation-changed-how-interest-rates-affect-the-economy/
17. Robin Brooks, Shadow Price Macro, October 26, 2026.
18. Mitra and Rapach (2026). Downside Risk to the Stock Market and Consumption. Federal Reserve Bank of Atlanta, Policy Hub 2026-6. https://www.atlantafed.org/research-and-data/publications/policy-hub-papers/2026/09/02/06-downside-risk-to-stock-market-and-consumption
19. OECD (2024). OECD Economic Surveys: United States. https://www.oecd.org/en/publications/oecd-economic-surveys_16097513.html
20. International Monetary Fund, Global Financial Stability Report, October 2026, as summarized October 13, 2026.
21. PNC Economics, note on AI and the S&P 500, October 8, 2026.
22. Edward Conard, weekly roundup, October 23, 2026.
23. PNC Economics, note on U.S. consumer and growth, September 30, 2026.
24. Noah Smith, Noahpinion, October 15, 2026.
25. Kansas City Fed researchers (Molly E. Hirner and Yusuf Mercan), September 30, 2026.

Principal sources

Principal sources behind this briefing, drawn from the evidence it cites. Public sources carry their publication and link; commentary is named by source and date.

- United States: Article IV Consultation, International Monetary Fund, 2026. https://www.imf.org/en/Countries/USA
- United States: OECD Economic Survey, OECD, 2024. https://www.oecd.org/en/publications/oecd-economic-surveys_16097513.html
- Stock Market Wealth and Consumption, Poterba, Journal of Economic Perspectives 14(2): 99-118, 2000. https://www.aeaweb.org/articles?id=10.1257/jep.14.2.99
- Understanding Trend and Cycle in Asset Values: Reevaluating the Wealth Effect on Consumption, Lettau and Ludvigson, American Economic Review 94(1): 276-299 (NBER Working Paper 9848), 2004. https://www.nber.org/papers/w9848
- Wealth Effects Revisited 1975-2012, Case, Quigley and Shiller, Critical Finance Review 2(1): 101-128 (NBER Working Paper 18667), 2013. https://nowpublishers.com/article/Details/CFR-009
- Does Stock Market Wealth Matter for Consumption?, Dynan and Maki, Federal Reserve Board, Finance and Economics Discussion Series 2001-23, 2001. https://www.federalreserve.gov/pubs/feds/2001/200123/200123abs.html
- The Decline in Household Saving and the Wealth Effect, Juster, Lupton, Smith and Stafford, Review of Economics and Statistics 88(1): 20-27, 2006. https://ideas.repec.org/a/tpr/restat/v88y2006i1p20-27.html
- Stock Market Wealth and the Real Economy: A Local Labor Market Approach, Chodorow-Reich, Nenov and Simsek, American Economic Review 111(5): 1613-57 (NBER Working Paper 25959), 2021. https://www.nber.org/papers/w25959
- How Large Are Housing and Financial Wealth Effects? A New Approach, Carroll, Otsuka and Slacalek, Journal of Money, Credit and Banking 43(1): 55-79, 2011. https://ideas.repec.org/a/mcb/jmoncb/v43y2011i1p55-79.html
- Wealth Heterogeneity and Consumer Spending, Beach, Gamber and Moran, Board of Governors of the Federal Reserve System, FEDS Notes, 2025. https://www.federalreserve.gov/econres/notes/feds-notes/wealth-heterogeneity-and-consumer-spending-20250805.html
- Downside Risk to the Stock Market and Consumption, Mitra and Rapach, Federal Reserve Bank of Atlanta, Policy Hub 2026-6, 2026. https://www.atlantafed.org/research-and-data/publications/policy-hub-papers/2026/09/02/06-downside-risk-to-stock-market-and-consumption
- Does Stock Market Wealth Matter for Consumption?, Dynan and Maki, Federal Reserve Board, Finance and Economics Discussion Series 2001-23, 2001. https://www.federalreserve.gov/econres/feds/does-stock-market-wealth-matter-for-consumption.htm
- Stock Market Wealth and the Real Economy: A Local Labor Market Approach, Chodorow-Reich, Nenov and Simsek, American Economic Review 111(5): 1613–57, 2021. https://www.aeaweb.org/articles?id=10.1257/aer.20200208
- Stock Market Returns and Consumption, Di Maggio, Kermani and Majlesi, Journal of Finance 75(6): 3175–3219 (NBER Working Paper 24262), 2020. https://www.nber.org/papers/w24262
- Wealth Effects Revisited: 1975–2012, Case, Quigley and Shiller, Critical Finance Review 2(1): 101–128 (NBER Working Paper 18667), 2013. https://www.nber.org/papers/w18667
- Are Stock Market Valuations Fuelling US Consumption? (Eco Notepad 454), Bigot and Espic, Banque de France, Eco Notepad (blog post no. 454), 2026. https://www.banque-france.fr/en/publications-and-statistics/publications/are-stock-market-valuations-fuelling-us-consumption

- Has Broader Stock Market Participation Changed How Interest Rates Affect the Economy?, Morelli, Federal Reserve Bank of New York, Liberty Street Economics, 2026. https://libertystreeteconomics.newyorkfed.org/2026/08/has-broader-stock-market-participation-changed-how-interest-rates-affect-the-economy/
- Personal saving rate, Bureau of Economic Analysis, Bureau of Economic Analysis, 2026-07
- Disposable personal income, nominal (NIPA 2.1, quarterly), $m SAAR, Bureau of Economic Analysis, Bureau of Economic Analysis, 2026-07
- Personal consumption expenditures, nominal (NIPA 2.1, quarterly), $m SAAR, Bureau of Economic Analysis, Bureau of Economic Analysis, 2026-07
- Personal saving rate, Bureau of Economic Analysis, FRED (Federal Reserve Bank of St. Louis), 2026-09
- Real PCE (GDP table, quarterly), Bureau of Economic Analysis, FRED (Federal Reserve Bank of St. Louis), 2026-07
- Real disposable personal income (quarterly, NIPA Table 1.17.6), Bureau of Economic Analysis, FRED (Federal Reserve Bank of St. Louis), 2026-07
- Personal consumption expenditures (implicit price deflator), FRED (Federal Reserve Bank of St. Louis), FRED (Federal Reserve Bank of St. Louis), 2026-07
- Nominal GDP, current dollars (quarterly SAAR), Bureau of Economic Analysis, FRED (Federal Reserve Bank of St. Louis), 2026-07
- Household and nonprofit net worth (Z.1), $m, NSA, Federal Reserve Board, frb, 2026-04
- Household and nonprofit corporate equities and non-MMF investment fund shares (Z.1), $m, Federal Reserve Board, frb, 2026-04
- Households' owners' equity in real estate (Z.1), $m, NSA, Federal Reserve Board, frb, 2026-04
- frb:Z1/FL152000005.Q, frb, frb, 2026-04
- S&P 500 index, daily close, S&P Dow Jones Indices, FRED (Federal Reserve Bank of St. Louis), 2026-10
- dfa:networth-shares/Top1/Corporate equities and mutual fund shares, dfa, dfa, 2026-04
- dfa:networth-shares/Next9/Corporate equities and mutual fund shares, dfa, dfa, 2026-04
- dfa:networth-shares/Next40/Corporate equities and mutual fund shares, dfa, dfa, 2026-04
- dfa:networth-shares/Bottom50/Corporate equities and mutual fund shares, dfa, dfa, 2026-04
- CRSP value-weighted market return incl. dividends, daily (crsp.dsi vwretd), Center for Research in Security Prices, CRSP via WRDS, 2024-12
- Market Yield on U.S. Treasury Securities at 10-Year Constant Maturity, Quoted on an Investment Basis, FRED (Federal Reserve Bank of St. Louis), FRED (Federal Reserve Bank of St. Louis), 2026-09
- Personal saving rate, quarterly — vintage of 2026-09-29 (before the annual update), Bureau of Economic Analysis, ALFRED (Federal Reserve Bank of St. Louis), real-time vintage, 2026-04. https://alfred.stlouisfed.org/series?seid=A072RC1Q156SBEA
- Disposable personal income, nominal, $bn SAAR — vintage of 2026-09-29, Bureau of Economic Analysis, ALFRED (Federal Reserve Bank of St. Louis), real-time vintage, 2026-04. https://alfred.stlouisfed.org/series?seid=DPI
- Personal saving rate, monthly — vintage of 2026-09-29 (latest month July 2026), Bureau of Economic Analysis, ALFRED (Federal Reserve Bank of St. Louis), real-time vintage, 2026-07. https://alfred.stlouisfed.org/series?seid=PSAVERT
- Bloomberg; Paul Krugman, 2026-09-01
- Federal Reserve (Beige Book); Boston Fed; Bloomberg, 2026-09-02

- Federal Reserve Bank of Atlanta; Federal Reserve Bank of Cleveland, 2026-09-02
- Federal Reserve Bank of San Francisco, 2026-09-04
- Front Harbor / Gerard MacDonell, 2026-09-15
- Bloomberg, 2026-09-21
- Bloomberg, 2026-09-23
- PNC Economics, 2026-09-28
- PNC Economics, 2026-09-29
- Bloomberg, 2026-09-29
- PNC Economics, 2026-09-30
- Federal Reserve Bank of Kansas City, 2026-09-30
- Federal Reserve Bank of St. Louis; Bloomberg, 2026-10-02
- Front Harbor / Gerard MacDonell, 2026-10-06
- Bloomberg, 2026-10-06
- PNC Economics, 2026-10-08
- Robin Brooks / Shadow Price Macro, 2026-10-13
- IMF / International Monetary Fund, 2026-10-13
- Noahpinion / Noah Smith, 2026-10-15
- MarketWatch; Bloomberg, 2026-10-15
- Bloomberg, 2026-10-19
- Edward Conard, 2026-10-20
- Bloomberg, 2026-10-22
- Edward Conard, 2026-10-23
- Robin Brooks / Shadow Price Macro, 2026-10-26
- Robin Brooks / Shadow Price Macro, 2026-10-27
- Front Harbor / Gerard MacDonell, 2026-10-29
- Bloomberg, 2026-10-29
- CF40 / CF40 Newsletter, 2026-10-30