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"The Great Retirement Boom": The Pandemic-Era Surge in Retirements and Implications for Future Labor Force Participation

Joshua Montes, Christopher Smith, and Juliana Dajon

Abstract: As of October 2022, the retired share of the U.S. population was nearly 1½ percentage points above its pre-pandemic level (after adjusting for updated population controls to the Current Population Survey), accounting for nearly all of the shortfall in the labor force participation rate. In this paper, we analyze the pandemic-era rise in retirements using a model that accounts for pre-pandemic trends in retirement, the cyclicality of retirement, and other factors. We show that: more than half of the increase in the retired share are "excess retirements" that would likely not have occurred in the absence of the pandemic; excess retirements have been concentrated among cohorts age 65 and older at the start of the pandemic; excess retirements have been largest among the college-educated and whites; and excess retirements reflect in part that worker transitions from the labor force to retirement remain elevated. We also show that failing to account for updated population controls to the Current Population Survey leads to an underestimate of the rise in the retired share over the last few years. We use a cohort-based framework to argue that looking forward, unless the pandemic has permanently affected retirement behavior, excess retirements should eventually fade as those who retired early during the pandemic reach ages when they would have normally retired. Even as excess retirements fade, the retired share will remain well above its pre-pandemic level, reflecting population aging.

I. Introduction

Despite some improvement in the labor force participation rate (LFPR) for the working-age population (age 16 and over) since the early stages of the pandemic, the LFPR in October 2022 remained nearly 1½ percentage points below its pre-pandemic, February 2020 level (after making adjustments for changes in population weights introduced from the 2020 Census).[1] The importance of retirements in accounting for this shortfall is illustrated in Figure 1, which shows the percent of the working-age population that is not in the labor force for different reasons (black line) relative to February 2020, based on responses to the Current Population Survey.[2] While earlier in the pandemic factors other than retirements were an important contributor to elevated non-participation (such as non-participation while caregiving, the orange line), the percent of the population that was not in the labor force and retired (the "retired share") has steadily increased and in October 2022 was almost 1½ percentage points above its pre-pandemic level, representing an increase of more than 3½ million retirees and accounting for essentially all of the total shortfall in the LFPR. Thus, understanding why the LFPR remains well below its pre-pandemic level requires a deeper understanding of the increase in the retired share. Crucially, one of the main insights of our analysis is that more than half of this increase in the number of retirees appears to be a direct result of the pandemic.

Even in the absence of the pandemic, the retired share would likely have risen, albeit more gradually, due to shifts in the age distribution of the population toward ages traditionally associated with higher retired shares (primarily, the movement of the Baby Boomer cohort into older ages). As one illustration of the importance of population aging, Figure 2 plots the retired share (solid line) alongside a counterfactual trend (dashed line). This trend is an estimate of how the retired share would have evolved in the absence of the pandemic and is derived by assuming the continuation of pre-pandemic, age-specific trends in retired shares, assuming the state of the business cycle remained similar to pre-pandemic levels, and accounting for the actual changes in the age distribution over this period (in section III, we discuss in more detail the calculation of this and other counterfactual retired shares). Over the five years prior to the pandemic, the retired share increased about 0.2 percentage point per year, and plausibly would have continued increasing at a similar pace in the absence of the pandemic.

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[1] This estimate and all calculations and analysis in this paper crucially makes adjustments to historical data for the updated population controls that the Bureau of Labor Statistics (BLS) introduced with the January 2022 Employment Report, as described in Bureau of Labor Statistics (2022a). These population controls showed that over the past decade the working-age population was both larger and younger, and that the share of the population age 65 and older was smaller, than what the Census Bureau had previously estimated. Without making an adjustment for these new population controls, the LFPR would show a 0.3 percentage point increase from December 2021 to January 2022, and the shortfall in the LFPR relative to its February 2020 level would appear 0.3 percentage point smaller. Similarly, the retired share of the population (the share of the population reporting as being currently retired), would show a misleading 0.3 percentage point decline from December 2021 to January 2022 without a proper adjustment. We discuss our adjustment for the updated population controls and its implications in more detail in Section II.

[2] Specifically, we use the CPS variable PEMLR ("monthly labor force recode") to define whether an individual is not in the labor force and retired. Among those not in the labor force and not retired, we use the variable "NLFACT" to measure the primary activity of nonparticipants. NLFACT reports responses to the question, asked of all respondents who report not being in the labor force, "What best describes your current situation at this time? For example, are you disabled, ill, in school, taking care of house or family, or something else?"

As of October 2022, the retired share remained 0.6 percentage point above the pre-pandemic expected trend, or about 1.6 million people (Figure 2). This gap between the actual and expected lines is an estimate of "excess retirements," and the excess retirements gap remains sizeable. In fact, the retired share was slightly below trend just prior to the pandemic (about 0.2 percentage point), implying that excess retirements as a share of the population have increased by about 0.8 percentage point since February 2020, or about 2.1 million people. That increase in excess retirements explains a little more than half of the 1.4 percentage point increase the total retired share since February 2020, whereas the increasing expected retired share explains the rest (see Figure 3). Thus, less than half of the increase in the retired share to date would likely have occurred even in the absence of the pandemic, suggesting that more than half of the current LFPR shortfall is a direct result of the pandemic on retirement.

The purpose of this paper is to quantify and characterize expected and excess retirements—in the aggregate and across demographic groups—and to use this characterization to discuss how retirements might evolve over the next few years. We estimate models of the retired share for detailed demographic groups, accounting for multi-decade trends in retired shares and other factors that appear to affect retired shares (such as the state of the business cycle and the changing parameters governing Social Security payout amounts of old age insurance). We use this model to estimate counterfactuals for what group-level retired shares would likely have been in the absence of the pandemic and would be over the next few years. Using actual and expected group population shares, we analyze how retired shares have evolved relative to the model counterfactual at both the aggregate and group level. The model fits the aggregate and group-level historical data extremely well.

The model yields several important insights. First, as discussed above, more than half of the increase in the retired share relative to February 2020 is due to an increase that would have been expected in the absence of the pandemic. Second, about two-thirds of the total increase in the excess retired share is attributable to those who were age 65 and older at the start of the pandemic, with a particularly sharp increase in excess retirements among those age 70 and older. The remaining one-third of the increase in the excess retired share is attributable to those age 55 to 64 when the pandemic began. Third, there is also substantial heterogeneity across education, race, and ethnic groups, with retired shares for those age 65 and older increasing more than expected for Whites relative to Blacks and Hispanics, and for those with a college education relative to those without.

Although we primarily focus our analysis on changes in the retired share, we also examine the how the flows between being in the labor force and being retired have evolved over the course of the pandemic. Examining year-over-year transitions between being in the labor force and being retired show that the initial runup in the retired share was due to both an increase in the percent of the population that transitioned from being in the labor force to being retired ("retirement rate") and from a decrease in the share of the retired that transitioned into the labor force ("unretirement rate"). Since then, much of the still elevated retired share is attributable to a retirement rate that is still well above its pre-pandemic level. Indeed, the retirement rate has resumed *increasing* in recent months, whereas the unretirement rate has returned to its pre-pandemic level and remains well below the level it would need to reach to meaningfully lower the retired share (holding other flows constant).

We conclude from our analysis that, because the retired share has remained significantly elevated since increasing substantially at the start of the pandemic and has shown little sign of converging towards its ex-pandemic counterfactual, it may take some years for retirement behavior to normalize relative to pre-pandemic norms and for the retired share of the population to converge toward what it would be in the absence of pandemic-related influences. We view it as unlikely, however, that the retired share will fall substantially towards its pre-pandemic trend and that those who retired early will return to the labor force in large numbers, since most of the excess retirements are concentrated among people who are 65 and older who (given their age) would likely be retiring in greater numbers anyway over the next few years. That assessment is supported by the stabilization of the unretirement rate at its pre-pandemic level, well below the level it would need to reach for the retired share to fall substantially.

Eventually though, current early retirees will reach the ages when they would have retired anyways, and at that point, they will switch from being counted as "excess retirements" and instead be counted as normal retirements. Assuming that the pandemic has not permanently changed the timing of future retirement decisions among younger cohorts of workers, at some point over the next few years the retired share of the population should likely stabilize and converge to what it would be expected to be in the absence of pandemic-related influences.

In addition to this paper, other analyses of the pandemic-era labor market have also focused on aspects of increasing retirements. For example, some research on the evolution of the aggregate labor market during the pandemic has highlighted the importance of retirements in explaining the shortfall in employment and labor force participation (e.g. Forsythe et. al. 2022). Other retirement-specific research has focused on quantifying the size of excess retirements (e.g. Faria-e-Castro 2021), analyzing flows between the labor force and retirement (for example, Nie and Yang 2021 and Davis and Radpour 2021 provide a discussion of the relative importance of transitions to and from retirement), describing variation in retirement behavior by demographic characteristics (e.g. Davis 2021; Quinby, Rutledge, and Wettstein 2021; and Garcia Luna and Chinander 2022), and describing the relationship between local labor market and COVID-19 conditions and retirement transitions (Coile and Zhang 2022 and Coile 2022). Other research has noted that applications for Old-Age Social Security benefits have not risen concurrently with self-reported retirements (Quinby, Rutledge, and Wettstein 2021) with some evidence that income support from other pandemic-era policies may have allowed some retirees to delay claiming benefits (Goda et. al. 2022). Our paper complements these studies by rigorously characterizing excess retirements in the aggregate and across demographic groups and providing a cohort-based framework for understanding how the retired share may evolve going forward.

This paper also relates to a broader literature about how retirement behavior responds to the business cycle and other macroeconomic variables. For example, McEntarfer (2022) shows that retirement transitions generally increase during recessions, Coile and Levine (2006) provide estimates on how retirements tend to increase when the unemployment rate rises, and Coile and Levine (2009) find only limited evidence that retirement behavior responds to stock market fluctuations (except perhaps for college-educated workers at retirement age). While earlier papers describing the relationship between retirements and the macroeconomy are useful for benchmarking the possible counterfactual behavior of retirements in the absence of the pandemic, factors unique to the pandemic (including COVID-related health concerns, which are more significant for older individuals) likely help explain the unusually large increase in the retired share, and our analysis provides a framework for quantifying how atypical recent retirement behavior has been.

Our paper proceeds as follows. In the next section, we provide additional descriptive details on how the retired share typically varies across ages, how it trended prior to the recession, trends in the age distribution of the population, and our adjustments for population controls introduced from the 2020 Census, the latter of which notably affects the assessment of retirements. In Section III, we describe the model we use for estimating the group-level and aggregate counterfactuals, illustrate some model diagnostics, and show the model's estimate for trend and counterfactual retired shares across demographic groups. Using this, we show how excess retirements during the pandemic appear to have been concentrated among those initially age 65 and older at the start of the pandemic, and especially among Whites and the college-educated. In Section IV we turn to an analysis of transitions in and out of retirement and illustrate how the retired share might evolve under different scenarios for labor force and retirement transitions. In Section V, we discuss reasons why the retired share may be so elevated, and in Section VI we conclude by using the insights from our model to discuss how the retired share may evolve over the next few years.

II. Pre-pandemic trends in retirement and population aging

A. Data and adjustment for Census 2020 population weights

Our estimates of retired shares and transitions to and from being retired are derived from the Current Population Survey (CPS) microdata. We define a CPS respondent as retired if they report not being in the labor force (not currently working nor actively seeking employment) and retired.[3] Respondents' age in the CPS is top coded, so in our analysis, any estimates shown for age 80 should be interpreted as age 80 and older.

To determine whether a person has transitioned to or from being retired over the last year, we match CPS respondents who are observed in sample months 1 through 4 to their responses one year later (sample months 5 through 8), as in Nekarda (2009). When we calculate aggregate transition rates (e.g. the percent of a group that has transitioned from the labor force to retirement over the course of a year), we implement an adjustment procedure to enforce consistency between changes in the stock of retired people and people in the labor force, and the flows between being retired and being in the labor force. Without any adjustment, inconsistencies can arise such that more respondents are included in estimates of stocks than can be used for estimates of the flows, for example due to attrition from the CPS sample and because transitions are not observed for respondents who are in their first month of the CPS.[4]

One complication in our analysis is that the Census Bureau and Bureau of Labor Statistics (BLS) introduced updated population controls into the January 2022 data that caused a discrete time-series

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[3] We use the PEMLR ("monthly labor force recode") CPS variable to construct our measure of retirement, which codes respondents as employed, unemployed, or out of the labor force. Respondents who are out of the labor force are coded as retired, disabled, or out of the labor force for other reasons.

[4] This procedure estimates "true" or "raked" transition probabilities using a weighted, restricted least squares adjustment method from Elsby, Hobijn, and Sahin (2014). The weighted least squares regression is subject to the constraint that the gross stocks are equal to the sum of estimated transition probabilities multiplied by lagged gross stocks. The procedure solves for the estimated "raked" transition probabilities, from which we derive raked flows consistent with gross stocks in each monthly period t.

break in the LFPR and retired share between December 2021 and January 2022.[5] More specifically, the Census Bureau adjusts the CPS population each January to reflect the latest information about population change and to incorporate any improvements in the estimation methodology. Following a Decennial Census, a new population base is introduced along with the adjustments, and the January 2022 population controls incorporated the new population base from the 2020 Decennial Census.

Those population controls showed that the working-age population was both larger and younger over the past decade than the Census Bureau had previously estimated, resulting in a lower share of the population aged 65 and older since 2010. In particular, the share of the population that is age 65 and older in the January 2022 data is about 0.6 percentage point lower than in the December 2021 data. Of course, the age distribution of the population did not suddenly shift between December 2021 and January 2022—that shift is entirely a consequence of the new population weights in January 2022, as the Census and BLS do not adjust the historical CPS data to reflect the information incorporated with the latest population controls. To correct for this break, we follow guidance from the BLS and adjust respondent weights to the CPS between 2010 and 2022 by linearly smoothing the group-level population controls over this period.[6]

The analysis in this paper uses data that adjusts for the discrete break due to the incorporation of the population controls, and Appendix Figure 1 shows the consequences of our adjustment for the aggregate retired share. Without adjusting for the population controls, the retired share appears to have declined considerably in early 2022, by about 0.3 percentage points and nearly returned to its pre-pandemic trend (see the solid and dashed gray lines in the figure). However, that decline is almost entirely an illusion due to not adjusting the historical data for the population controls. Once we adjust for the population controls, the discrete drop in the retired share in January 2022 is no longer present in the data, and the retired share remains elevated well above its pre-pandemic trend (see the solid and dashed black lines in the figure).[7]

The population controls also affect the year-over-year transitions between being in the labor force and being retired. Appendix Figures 2 and 3 show the percent of those 55 and older who transition from the labor force to being retired ("retirement rate," Appendix Figure 2) and from being retired into the labor force ("unretirement rate," Appendix Figure 3). Comparing the adjusted (black line) and unadjusted (light blue line) transition rates, adjustment for the new population weights have significant implications on the interpretation of the recent behavior of these flows. For example, while the unadjusted retirement rate is close to its pre-pandemic level, the adjusted rate remains quite elevated. Further, the unadjusted unretirement rate is somewhat above the adjusted unretirement rate.

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[5] See, for example, "Adjustments to Household Survey Population Estimates in January 2022," U.S. Bureau of Labor Statistics, Technical Documentation, February 2022: https://www.bls.gov/web/empsit/cps-pop-control-adjustments.pdf.

[6] For more information on the effects of the January 2022 population controls on the CPS data, see Robertson and Willis (2022).

[7] The introduction of the population controls into the published labor force data in January 2022 has a similar effect on the labor force participation rate of the 16 and older population, boosting it by 0.3 percentage point between December 2021 and January 2022. A proper assessment of the LFPR should also adjust for this break.

Finally, given apparent seasonality in retirement rates, for much of our analysis we seasonally adjust retirement rates and retirement/labor force transition rates at the sub-group level, using a standard X-13 seasonal adjustment procedure.

B. Pre-pandemic trends in retired shares

The retired share of the population gradually increased over the decade prior to the pandemic, from around 16 percent in 2008 to a bit more than 18 percent in 2019 (Figure 2). The increase over this period primarily reflects the aging of the baby boomers into their retirement years, which has shifted the age distribution of the population distribution towards ages with higher retired shares, pushing up the aggregate retired share.

The likelihood of being retired at a given age increases sharply beyond age 50. For example, the retired share jumps from around 0 percent at age 50 to about 20 percent by age 60, as shown for 3 selected years (1995, 2007, and 2019) in Figure 4. The retired share then jumps by roughly another 20 percentage points between ages 60 and 65—ages typically associated with early retirement—and then by about another 20 percentage points between ages 65 and 70—ages typically considered normal retirement ages. The retired share increases by another 10 to 15 percentage points between ages 70 and 75 before leveling off beyond age 75, when retired shares are about 80 percent.

Because retired shares increase so sharply at older ages, any shift in the population toward older ages mechanically raises the aggregate retired share, as has been the case with the aging of the baby boomers. Indeed, as shown in Figure 5, the percent of the population age 65 and older (the blue line) has been rising about 0.4 percentage point per year since about 2008. From 2008 to 2019, roughly 75 percent of the 65 and older population was retired, implying that population aging has been raising the retired share by about ¼ percentage point per year.

At the same time, as population aging has put upward pressure on the retired share, the likelihood that a person of any given age is retired has been falling. One way to see this is to compare the 1995, 2007, and 2019 retired shares for any given age in Figure 4. For most ages above 50, the percent of all people of a given age that are retired has declined over these years—in some cases by a significant amount. For example, from 1995 to 2019, the percent of those aged 65 who were retired declined by nearly 20 percentage points, from nearly 60 percent in 1995 to 40 percent in 2019.

More generally, retired shares for single-year ages and age groups above 55 had been showing a multi-decade declines right up until the start of the pandemic (see Figure 6). Those declines in group retired shares likely reflect, in part, increases in the normal Social Security retirement age, longer life expectancies, the changing nature of jobs (e.g. jobs requiring less physical exertion), and increases in the health capacity to work at older ages.[8]

Nevertheless, even with these sharp trend declines in retired shares among older age groups, the aggregate retired shared has been increasing consistently since 2011, as the upward pressure on the aggregate retired share from the aging of the baby boomers has more than offset the downward pressure from trend declines in retired shares within age groups.

[8] For a fuller discussion of declining age-specific retired shares in the years prior to COVID, see Baily and Harris (2019).

III. Using a model of the retired share to characterize expected and excess retirements since the start of the pandemic

A. Model description

The aim of our modeling exercise is to construct a counterfactual retired share that may have prevailed in the absence of the pandemic. With such an estimate, we can assess how much of the runup in the retired share is unusual, and how much would have been expected if pre-pandemic economic conditions would have continued.

Retirement behavior has varied significantly over time across ages and demographic groups. For example, for any given age, the retired share has generally been higher for Whites than for Blacks or Hispanics, and higher for those without a college degree than those with a college degree. For this reason, we estimate counterfactual retired shares at the age-sex-education-race/ethnicity subgroup level. With subgroup-level counterfactuals, we can then use actual population shares to estimate the counterfactual aggregate retired share for the full 16 and over population.

We estimate the model of the retired share by running OLS regressions for subgroups of the working-age population using annual data over the period from 1995 through 2019. To do this, we first calculate annual retired shares from the CPS microdata separately for 768 combinations of age, sex, educational attainment, and race/ethnicity: 65 age groups (ages 16 to 80, where 80 indicates age 80 or older); men and women; 2 educational attainment groups (Bachelor's degree or more and less than a Bachelor's degree); and 3 race/ethnicity groups (white and non-Hispanic; non-white and non-Hispanic; and Hispanic).[9] We then run a regression on the annual data for each subgroup, where the dependent variable is the retired share for that subgroup in a given year and the explanatory variables are:

1) <u>The CBO's estimate of the unemployment rate gap</u>, defined as the difference between the unemployment rate published by the BLS and the CBO's estimate of the natural rate of unemployment. This variable is included to capture any cyclical variation in the retired share for each subgroup, and a negative unemployment rate gap indicates a "slack" labor market as estimated by the CBO, whereas a positive unemployment rate gap indicated a "tight" labor market.[10]
2) <u>A linear time trend</u>. As discussed in Section II, retired shares for older age subgroups have been trending lower for decades. This term is included to capture any of those secular trends.[11]
3) <u>The Social Security primary insurance amount (PIA) ratio</u>, included in regressions for ages 62 to 70. This variable is defined as the fraction of a person's full retirement age benefit (the PIA) a person would receive, dependent on choosing to retire at any given age between ages 62 and 70 for every year of the analysis period. The PIA ratio takes a value of 1 for a given age in a given period if that age in that period is equal to the SSA's full retirement age, a value that is less than

[9] To calculate annual retired shares for each group, we first calculate monthly retired shares and then average across months for each year.
[10] We use the CBO's estimate of its unemployment rate gap based on their underlying natural rate of unemployment from their January 2020 release.
[11] While not shown in our paper, the retired share for many younger age subgroups had also been trending somewhat higher over the two decades prior to the pandemic.

1 (but greater than 0) if that age in that period is between 62 and the full retirement age, and a value that is greater than 1 if that age in that period is between the full retirement age and 70.[12]

We include the PIA ratio since a key determinant of retirement behavior at older ages is the structure of Social Security Old Age and Survivors Insurance (OASI) payments, of which the PIA ratio is an important component. How much a person can earn through OASI depends on their pre-retirement income and the age at which that person decides to file for benefits.

People choosing to retire at the full retirement age receive a full benefit (the primary insurance amount). A person's full retirement age depends on the year and month that person was born and has increased over time. For example, the full retirement age was 65 years for people born in 1937 or prior and then increased by two months with each subsequent cohort born between 1938 and 1942 before temporarily settling at age 66 for cohorts born between 1943-1954. It then increases by two-month increments again with each subsequent cohort, starting with the cohort born in 1955, until the full retirement age reaches 67 for cohort born in 1960 or later.[13] Research suggests that claiming responds strongly and immediately to increases in the full retirement age, although actual retirement behavior may respond more sluggishly (see, for example, Desphande, Fadlon, and Gray forthcoming). It is worth noting that, after having settled at age 66 for about a decade, the full retirement age began increasing again in 2021 with the 1955 cohort, just after the start of the pandemic.

People choosing to retire either before or after their full retirement age receive either a fraction of or a premium over their full benefit amount. People can start collecting OASI at age 62, and a person choosing to retire and collect OASI before the full retirement age can do so by claiming a reduced, early retirement benefit amount, and that benefit amount is reduced further with each month before full retirement age at which a person chooses to retire and start collecting OASI. Conversely, people can delay retirement past the full retirement age and receive a delayed retirement credit that boosts the benefit amount available at the full retirement age; the delayed retirement credit increases with each month past the full retirement age, up until age 70, that a person delays collecting OASI benefits. A person cannot accumulate any additional delayed retirement credits by delaying OASI collection beyond age 70; thus, a person can receive her largest benefit by retiring at age 70.[14]

With 768 regressions, we do not report all of the regression results. However, generally all three terms are statistically significant. The estimated coefficients on the unemployment gap show a good deal of heterogeneity across subgroups. On net, though, when there is slack in the labor market, the aggregate predicted retired share is somewhat lower. The PIA variable generally has a positive coefficient, indicating that when the PIA is higher for a particular group (due to variation in the timing of Social Security over time for a particular age) the retired share is higher. And for nearly all groups above age

[12] CPS respondents report age rather than birth month. Thus, for a CPS respondent observed to be the same age as the full retirement age for that year, the respondent may not actually be at their full retirement age (since the full retirement age is defined as fractions of a month, and we cannot observe the respondent's birth month). Because we cannot observe birth month in the CPS, we assume that respondents of a given age have birth months that are uniformly distributed across the calendar months of the year, and we calculate PIA ratios for each birth month in every period. Then, we average person-level PIA ratios for each observed age. Thus, in any given period, the PIA ratio for a given age will be a weighted average of person-level PIA ratios of various birth months.

[13] For the complete, full retirement age schedule, please see https://www.ssa.gov/oact/progdata/nra.html.

[14] For specifics on how retirement benefits change based on early or delayed retirement relative to the full retirement age, please see https://www.ssa.gov/OACT/quickcalc/early_late.html.

50, we estimate a negative slope on the time trend, consistent with the sharp downward trends in retired shares at these older ages that we showed in Section II.

B. Model estimates of the expected and excess retired shares for the working-age population

To arrive at a counterfactual retired share for 2020 and thereafter for each of the 768 subgroups, we:

1) Fix the unemployment rate gap from 2020 and thereafter at the CBO's estimate of its 2019 level. (Hence, this counterfactual assumes no additional tightening or loosening in the economy relative to the level of tightness that prevailed just prior to the pandemic.)
2) Use the PIA values as currently legislated for current and future years.
3) Assume that the linear time trend would have continued at the pace of change that was estimated in pre-pandemic data.

To this point, the model and its counterfactuals are estimated at annual frequencies. To convert the annual estimates into monthly estimates, we simply linearly interpolate at the estimated group level.[15]

To generate aggregate counterfactual estimates (for the entire population, or for broader subgroups) we take the counterfactual retired share for all 768 subgroups and multiply those shares by their respective group's population share (from CPS data, adjusted for 2020 Census population weights as discussed in Section II). For the entire working-age population, the outcome of this exercise is shown by the dashed line in Figure 2 (observed and counterfactual retired share since 2000) and the left panel of Figure 7 (excess retirements since 2015). Over the 20 years prior to the pandemic, the model fits the aggregate data quite well. In particular, it captures the flatness of the retired share during the early 2000s and the rise after 2010.

For months prior to March 2020, the dashed line can be interpreted as the retired share that is predicted given the model's estimate of subgroup trends, the level of the unemployment gap at that point in time, age-group specific PIAs at that time, and actual population shares. For March 2020 and thereafter, the dashed line can be interpreted as the retired share that would have prevailed given PIA levels at that time, had the unemployment rate gap been at its 2019 level, and had the group-specific retired shares continued to evolve at their average pace over the 25 years prior to the pandemic. Hence, the difference between the solid and dashed lines—shown in the right panel of Figure 7—is the model's estimate of the deviation in actual retirements from what is predicted by the model, or a measure of excess retirements. As noted earlier, the model estimates that in October 2022 the retired share was about 0.6 percentage point above its expected level—that is, excess retirements are around 0.6 percent of the population, and equivalently, are depressing the labor force participation rate by the same amount.[16] Our finding that excess retirements account for half or more of the total rise in

[15] This interpolation assumes that counterfactual retirement shares evolve smoothly over a given year.
[16] As shown in the right panel of Figure 7, the retired share was a bit *below* its estimated trend just prior to the pandemic. Hence, the contribution of the *change* in excess retirements to the change in the LFPR since February 2020 is about 0.9 percentage point, a bit larger than the current magnitude of excess retirements.

retirements since 2019 is robust to a variety of other model specifications and excess retirement calculations.[17]

C. Model estimates by age and birth cohort

Next, we focus on the model's estimates of expected and excess retired shares by age and birth cohort. The left panel of Figure 8 shows actual and expected retired shares for various age groups, and the right panel shows excess retirements for the same groups. Of note, the expected retired share for each age group declines slightly over this period, as the model estimates that the retired share for each age would have declined slightly in the absence of the pandemic (reflecting gradual changes in rules governing the PIA as well as the model's estimate of the pre-pandemic linear trend). Using these estimates, Figure 9 shows excess retirements by age group as a percent of the 16 and older population. One important observation from these figures is that the initial runup in retirements in 2020 was concentrated among those age 65 and older, with a particularly large increase in excess retirements among those aged 70 to 74. Since then, excess retirements have remained elevated among ages 70 and older, while excess retirements among age 65 to 69 appear to have peaked in the middle of 2021. Starting in the second half of 2021, excess retirements have started growing among those age 60 to 64 as well. Despite this increase among younger ages, excess retirements among those age 65 and older still account for about two-thirds of total excess retirements, as indicated by the blue bars in Figure 9.

Since most excess retirements are concentrated among ages where retirement rates are typically increasing substantially from one year to the next, it seems plausible that, as the cohorts with excess retirements age, they will soon reach the point when they would have retired anyways without the pandemic. Hence, much of what we currently classify as excess retirements will eventually be reclassified as expected retirements over the next few years.

The idea that the current excess retirees are close to the age when they would have retired anyways becomes clearer in Figure 10, which shows actual and expected retired shares by birth cohort, where cohort is defined as a person's age in 2020.[18] The expected retired share for each cohort is shown

[17] For example, in versions of the model that estimate the group-specific retirement share trends starting in 2000, 2005, 2010, and 2015 through 2019, instead of 25 years as in the baseline model, all estimate that retirements are currently elevated by similar ranges. As an alternative calculation for excess retirements, if we use group-specific retirement shares in 2019 as the counterfactual, instead of the model's estimated counterfactual, then excess retirements were about 0.4 percentage point of the population in the third quarter of 2022, about 0.2 percentage point smaller than our baseline estimate but still significant. The difference relative to the baseline specification is that the model expects that group-specific retirement shares would have continued declining in absence of the pandemic, whereas this alternative estimate assumes that they would have remained steady at their 2019 value. We view the assumption that group-specific retired shares would have continued to decline in absence on the pandemic as reasonable given the sharp pre-pandemic declines in those shares and the continuing increase in the full retirement age for Social Security OASI.

[18] For each CPS respondent we define their birth year cohort as the current year minus their reported age. This is only an approximate of their birth year, however, and will misclassify some individuals who were born earlier in the year as in the birth cohort one year older than their actual birth cohort. To correct for this misclassification, the retired share shown in Figure 10 for a particular cohort at any point of time is a weighted average of the empirically observed retired share for that birth cohort and the birth cohort that is one year younger, where the weights are a function of the month of the year. Specifically, what we show in Figure 10 as the retired share R for cohort c in calendar month m is actually $(R_c*m)/12) + ((R_c -1)(12-m)/12)$. R_c is the estimated retirement share from CPS data for individuals we identify as in cohort c, and we define cohort as year minus reported age.

through the end of 2024 to illustrate how the current retired share for each cohort compares with how it would be expected to evolve over the next few years in the absence of the pandemic. For example, the green line shows the retired share among those age 65 to 69 at the start of the pandemic (who were born in 1951 to 1955 and who are currently age 67 to 71). Excess retirements have primarily been concentrated among birth cohorts that were age 65 and older at the start of the pandemic, although toward the end of 2021 excess retirements began expanding among the birth cohorts aged 60 to 64 at the start of the pandemic (62 to 66 currently).

Cohorts currently experiencing excess retirements are generally at ages where, based on our model estimates, the counterfactual retired share would have been expected to increase substantially over the next few years to a level at least as high as their current retired share. For example, the retired share among the cohort age 65 to 69 (the green line) at the start of the pandemic was 65.0 percent in October 2022—about the same retired share that would have been expected, in the absence of the pandemic, early in 2023. Hence, should excess retirements cease increasing among this cohort and the retired share remain flat at 65.0 percent, this cohort's current level of the retired share would converge to its expected retired share early next year. A similar insight applies to most birth cohorts where the retired share is currently elevated—if their retired share remains at its current level, it will converge to its expected level at some point over the next two years or so. (The convergence would occur sooner among younger cohorts that are at steeper points in their age-retirement profile.)

An important implication from this cohort-based analysis is that, *if retirements remain about flat among within cohort groups,* then excess retirements will gradually ease over the next few years as actual retired shares converge to expected retired shares. However, even as excess retirements ease in this scenario, the aggregate retired share does not decline, as the current excess retirees remain retired but shift to being expected retirees. Of course, excess retirements may ease less quickly, expand, or ease more quickly, depending on the state of the economy, wealth holdings among older people, and whether COVID-related health concerns ease further (or worsen). We return to a more detailed exploration of the possible future behavior of retirements, both at the cohort and aggregate level, in Section V.

D. Model estimates by sex, education, race, and ethnicity

The model is also useful for estimating expected retired shares for narrower demographic groups. The panels in Figure 11 show actual and expected retired shares, for the 65 and older population, separately for men and women, two education groups (college educated and non-college educated), and three race and ethnicity groups (White and non-Hispanic, non-White and non-Hispanic, and Hispanic).

For all groups other than non-white-non-Hispanics and Hispanics, the retired share jumped substantially at the start of the pandemic has remained well above its model-estimated counterfactual. For non-white-non-Hispanics and Hispanics (the orange and green lines in the middle panel), the modest increase in the retired share at the start of the pandemic brought it about in line with what was predicted by pre-pandemic trends.

The two groups with the most substantial excess retirements are the college-educated and White-non-Hispanics (blue lines in the top and middle panels). While COVID-related health concerns likely induced excess retirements among all groups, one explanation for why excess retirements have been larger among the college-educated and White-non-Hispanic population is that these group had higher pre-pandemic wealth holdings and hence a larger financial cushion, which supported greater early retirements. On the other hand, some factors that likely influence early retirement decisions were likely more important for less educated and minority workers. For example, less educated and minority workers likely experienced greater job displacement early in the pandemic, were more likely to be working in in-person services where health-related COVID concerns were greater and were less able to work remotely.

IV. Transitions between the labor force and retirement since the start of the pandemic

So far, we have focused on the *stock* of retirements as a percent of the population. Of course, any change in the total number of retirees is a function of flows into and out of retirement. The purpose of this section is to examine flows into and out of retirement to understand the relative importance of inflows and outflows in accounting for the elevated retired share.

Ideally answering this question requires person-level, longitudinal data over the course of the pandemic. With such data, one could follow a respondent's labor market status since pre-pandemic and track their transitions in and out of the labor force and retirement. Although we are unaware of available longitudinal data of this type, the CPS can provide some insight, as CPS respondents can be matched over their first four months in the sample and last four months (with eight months separating their two in-sample stretches).[19] We therefore use the CPS to calculate the percent of the population who are observed to be in the labor force in one month and retired one year later, which we call the "retirement rate." We also calculate the percent of the population who are retired in one month and in the labor force one year later, which we call the "unretirement rate."[20] We focus on one-year transition rates, rather than month-to-month transition rates, because it is likely that some individuals who eventually retire first experience an unemployment spell or are out of the labor force for non-retirement reasons.

The panels in Figure 12 plot the retirement rate and the unretirement for everyone aged 55 and older. The dashed line is a simple counterfactual that holds age-specific transition rates at their 2018-2019 average.

During the first year of the pandemic, the retirement rate increased substantially and the unretirement rate declined—so both margins contributed to the initial runup in the retired share.[21] In early 2022, the

[19] Pandemic-era data from the Health and Retirement Study (HRS) will be useful for this purpose, but as of October 2022, the most recent publicly available HRS data ends in 2020.

[20] Also contributing to any change in the number of retirees is movement among being out of the labor force but not retired and being out of the labor force and retired (i.e. between different reasons for non-participation in the labor force). Movements on those margins have been negligible. We focus on the year-over-year transition rate rather than the monthly transition rate because many eventual transitions to retirement first transition through an intermediate labor market state. For example, some employed worker may lose their jobs, initially report as unemployed, and eventually—after not finding a job—decide to drop out of the labor force and report themselves as retired.

[21] Even with the dip in the unretirement rate early in the pandemic, a substantial number of retirees were still returning to the labor force at any time. For example, even though the unretirement rate fell to below 1½ percent of the 55 and older population by the middle of 2020, this still represented around 1½ million retirees returning to the labor force at that time.

unretirement rate increased gradually above its pre-pandemic level, but it has since fallen back about to its pre-pandemic level. Over this same period, though, the retirement rate has remained very elevated, and has shown little improvement on net over the last year. Hence, the retired share remains higher than its counterfactual level because workers are still retiring at an elevated rate, and because retirees are not returning to the labor force in sufficient numbers to offset the elevated retirement rate.

V. Reasons for the elevated retired share

What might account for this shift in retirement behavior? Given the timing of the rise in retirement, factors associated with the pandemic and 2020 recession seem like obvious causes. One factor is likely that, among those who contracted COVID-19, older individuals may be more likely to drop out of the labor force—either because the health consequences of having once gotten COVID-19 were more significant and persistent for older workers, or because older individuals who got COVID-19 were more likely to make adjustments to their behavior so as not to risk getting it again. As evidence supporting this channel, Goda and Soltras (2022) use CPS data to show that those 65 and older who report having a health-related absence from work during the pandemic were much more likely than younger workers to have dropped out of the labor force 9 to 14 months later. Also, among those who did not contract COVID-19, fear of contracting COVID-19 from the workplace likely limited labor force participation more for older workers than younger workers.

A second factor is that, given the more significant health consequences of exposure to COVID-19, older workers' participation decisions may be more responsive to current COVID-19 levels than are younger people's participation decisions. As suggestive evidence of this possibility, we compare, among older people, monthly changes in non-participation or retirement and the average percent of the group that is employed but absent due to illness over the previous three months. We view employed-absent due to illness as plausibly a better proxy for current COVID-19 levels than official estimates of daily COVID-19 cases, since reported daily cases have likely become a less reliable indication of COVID-19 levels as home testing capabilities have improved; also, the percent of any group that is employed-absent due to illness likely provides a more direct measure of how illness is directly affecting that group's ability to participate in the labor force. As shown in Figure 13A and 13B, when a higher percent of those age 65 and older has been absent due to illness, retirement and non-participation have increased by more. Meanwhile, among younger ages (Figure 13C), there is no discernable relationship between changes in non-participation and percent employed but absent from work.

In addition to health reasons, another factor is that the sharp increase in layoffs at the early stages of the pandemic may have had more permanent effects on the labor force participation of older workers who were closer to retirement age. Indeed, estimates from the January 2022 Displaced Worker Survey show that displaced workers aged 65 and over had markedly lower reemployment rates and markedly higher rates of labor force exit than did similarly aged, displaced workers in the years just prior to the pandemic (Bureau of Labor Statistics, 2022b).

Finally, the runup in asset and housing prices earlier in the pandemic also likely facilitated early retirement for some individuals. For example, Faria-e-Castro (2022) estimates that changes in wealth since the start of the pandemic could account for about nearly 1 percentage point the decline in the LFPR for those age 51 to 65 year olds. Consistent with findings from Coile and Levine (2011) on the greater responsiveness of retirement to asset prices among the better-educated, this finding may help explain why, among older people, excess retirements have been larger for those with college education.

VI. Summary and implications for the future path of the retired share

Our analysis suggests that the share of the working-age population that was retired jumped significantly higher than what would have been expected in the absence of the pandemic, given population and pre-pandemic trends in retirement, and that the retired share of the population in October 2022 was about 0.6 percentage point higher than expected under this ex-pandemic counterfactual. The increased retired share explains essentially all of the shortfall in the aggregate labor force participation rate compared to its level prior to the pandemic, with "excess retirements" accounting for more than half of that shortfall and "expected retirements" accounting for less than half. The runup in retirements reflects both a persistently elevated rate of transitions from the labor force to retirement, as well as a rate of unretirement (transitions from retirement to the labor force) that is not high enough to meaningfully reduce the retired share.

Although retirements appear elevated for most demographic groups, they appear especially elevated among those age 65 and older who are White and college-educated—which may owe in part to this group's greater financial cushion leading up to the pandemic. A more rigorous accounting of the factors responsible for the striking differences in retirement behavior across demographic groups remains an important open question for future research. Excess retirements have also largely been concentrated among older cohorts who are generally on the steeper portion of the age-retirement profile. One important implication of this finding is that excess retirements might naturally ease as these cohorts age and "excess retirements" become normal, usual retirements. That development would not mean that the retired share will *decline* for these cohorts, but instead that, as their counterfactual retired share increases, their actual and counterfactual retired shares converge—reducing the number of excess retirements while increasing the number of "normal" retirements.

When might the retired share return to its pre-pandemic trend, and what could that convergence look like? Figure 14 provides one illustrative benchmark. In particular, this scenario assumes that each cohort's actual retired share remains at their current levels, and that excess retirements ease as the cohorts age and expected retirements rise. For older cohorts, for whom excess retirements are especially large and who are on flatter portions of their normal age-retirement profile, excess retirements do not fully ease until sometime in 2024. Under this scenario, the aggregate contribution of excess retirements falls substantially by mid-2023 (reflecting the full easing by this time of excess retirements for cohorts less than 70 at the start of the pandemic) but do not fully fade until the end of 2024 (reflecting lingering excess retirements among older cohorts). Of course, this is just one illustrative example, and cohorts' excess retirements may ease more or less quickly than shown here. For example, the same exercise using mid-2021 instead of October 2022 as a starting point for the projection would have shown excess retirements for younger cohorts fully easing by mid-2022, while in actuality excess retirements have stayed roughly constant or contracted slightly (but not fully easing) for younger cohorts.

Another way to consider how retirements may evolve over the next few years is by considering the implications of hypothetical paths for transitions between retirement and the labor force: how would transitions between the labor force and retirement need to evolve in order for the retired share to return to its trend over various horizons? To illustrate this, figure 15A holds fixed at October 2022 levels all 12-month transitions other than transitions from the labor force to retirement and shows the path of labor force to retirement transitions needed to fully ease excess retirements by 12, 24, and 36 months.

Alternatively, figure 15B holds fixed all 12-month transitions other than transitions from retirement to the labor force and shows the path of retirement to labor force transitions needed to fully ease excess retirements over these horizons. One implication of the transition paths in those figures is that the stock of excess retirements is currently so large that it would take a substantial and sustained increase in unretirements or decrease in retirements to fully normalize the retirement share over three years. In actuality, of course, normalization of the retirement share is likely to come from some combination of decreases in the retirement rate and increases in unretirements.

More generally, the evolution of excess retirements will depend on many factors. First, if COVID-19 conditions do not improve much further, and many people expect transmission levels to remain persistently and uncomfortably high, younger cohorts may begin retiring at ages earlier than pre-pandemic norms and fewer early retirees may return to the labor force. Second, an improvement or deterioration in economic conditions might uphold or run down the savings cushion relied on by early retirees for financial support. Third, many early retirees have likely been out of the labor force for a significant length, losing their connection to previous employment and making it difficult to find suitable re-employment, thus limiting the scope of a further pick-up in unretirements. Lastly, the growing acceptance of telework arrangements in some industries might limit further increases in retirement and encourage labor force participation among some older workers who otherwise would be dissuaded from working outside their home.

The evolution of retirement behavior over the next few years will likely remain of keen interest among policymakers. The surge in retirements since the start of the pandemic accounts for essentially all of the shortfall in the LFPR; should the retired share reverse some of this increase, it would help alleviate the significant labor shortages that have developed in the U.S. labor market and boost the productive capacity of the economy. However, a turnaround in the retired share will require some combination of a slowdown in the pace of new retirements and a pickup in the pace that early retirees return to the labor force. Over the last year, excess retirements have not eased much (if at all), leading us to be skeptical that a rapid turnaround in retirements will soon develop. Looking farther ahead, unless the pandemic has induced a permanent change in retirement behavior, the retired share of the population should eventually settle back to what would have been expected given the continued movement of the Baby Boomer generation through their retirement years. Thus, even if pandemic-related disruptions to retirement behavior eventually fade, the retired share will likely remain substantially higher than it was prior to the pandemic.

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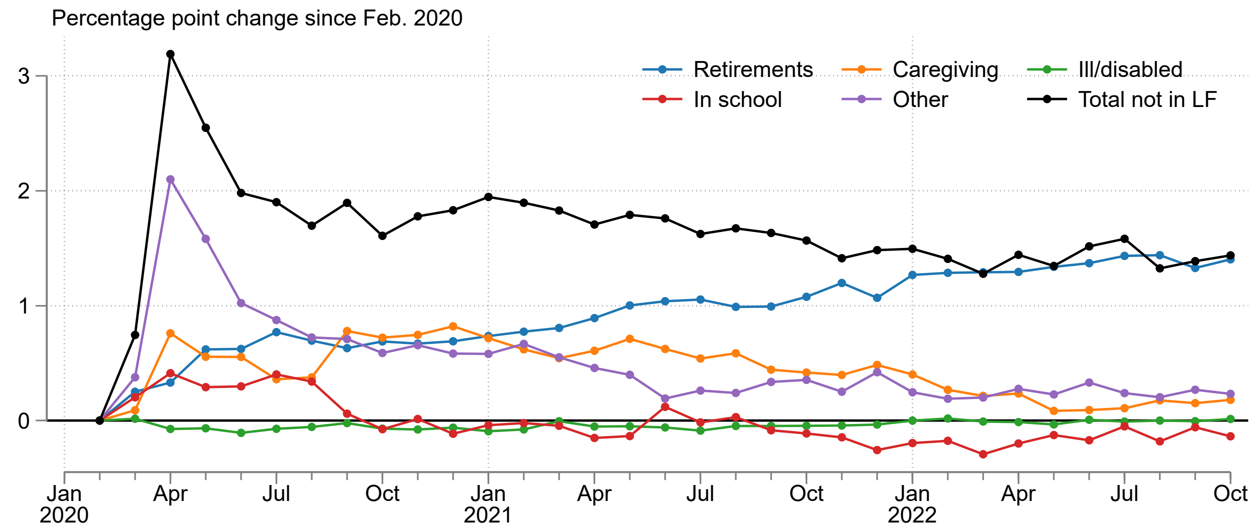
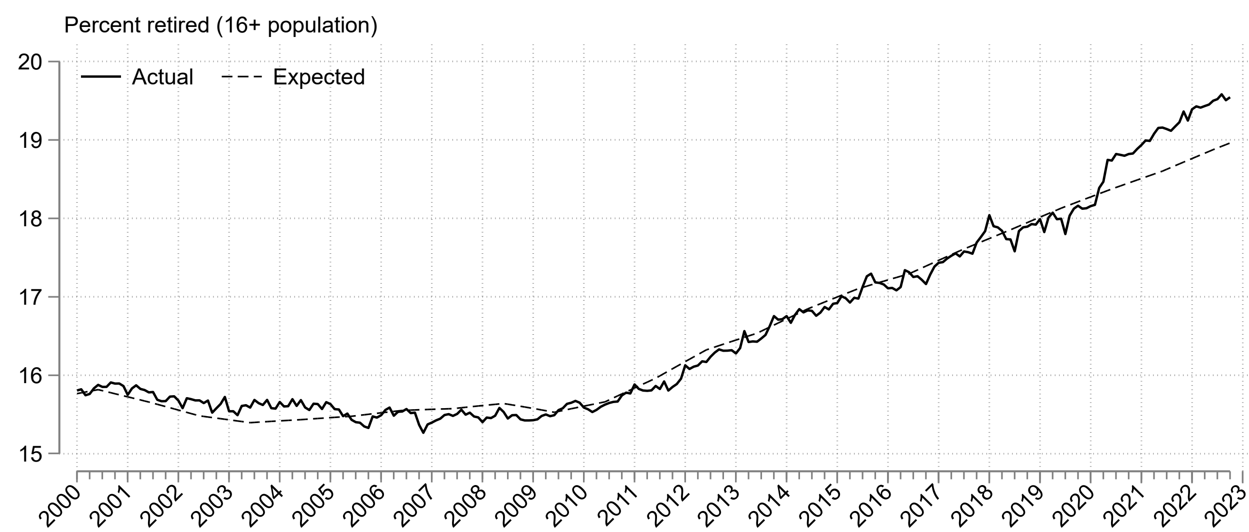
Figure 1. Change in non-participation in the labor force as a percent of the population age 16 and older, aggregate and by reason, relative to February 2020



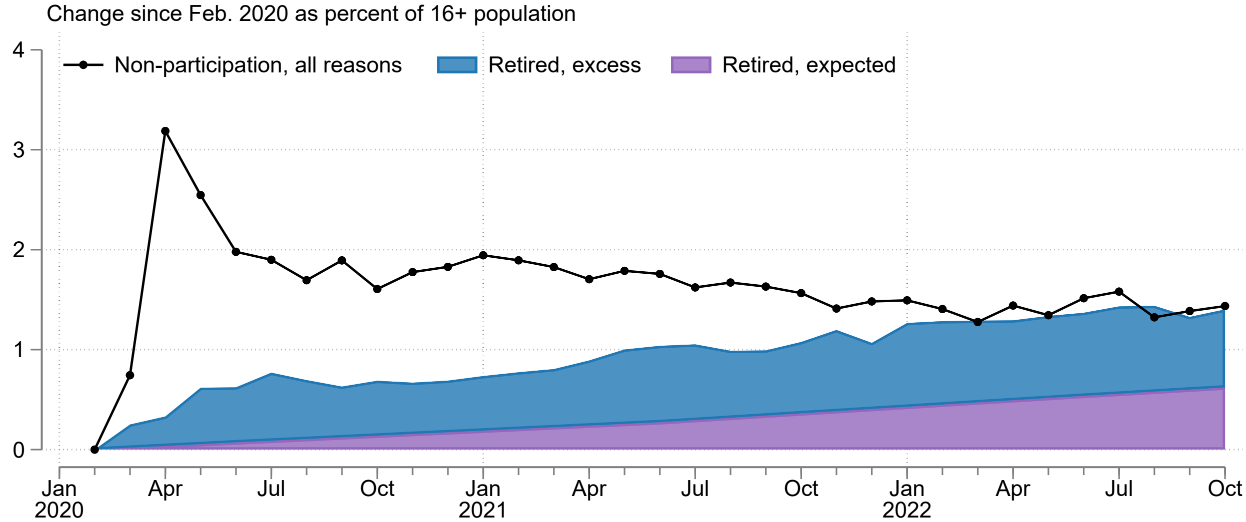
Note. Figure shows the change in the percent of the population not in the labor force (black) and not in the labor force for given reasons (as described in the text) since February 2020. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Last observation is October 2022.

Figure 2. Not in the labor force and retired (age 16+), actual and expected



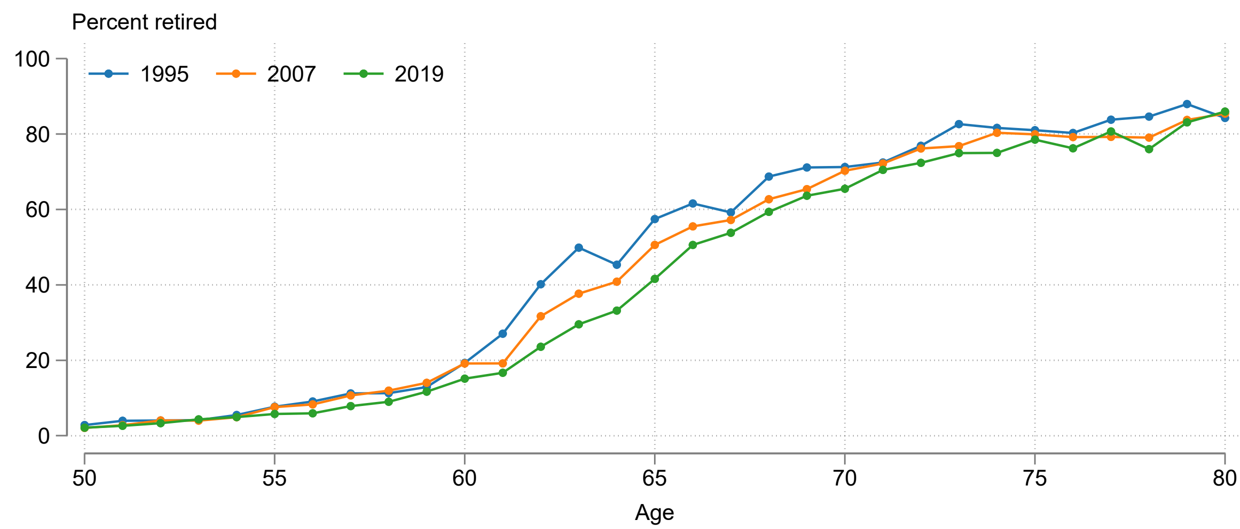
Note. Figure shows the actual retired share of the population (solid line) and retired share that would be expected given the population age distribution, age-specific retirement rates, and other factors (dashed line) as described in the text. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Last observation is October 2022.

Figure 3. The change in actual, expected, and excess retirements as a percent of the 16 and older population, relative to February 2020



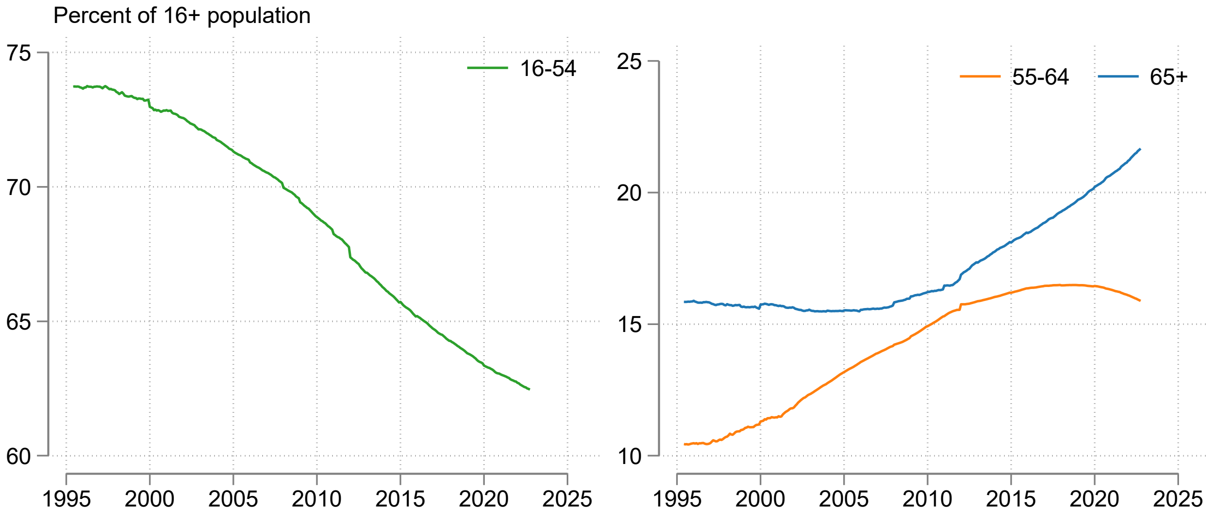
Note. Figure shows the change in the percent of the population not in the labor force (black), change in excess retirements (blue region) and change in expected retirements (purple region) since February 2020. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Last observation is October 2022.

Figure 4. The percent of the population retired at each age, for selected years



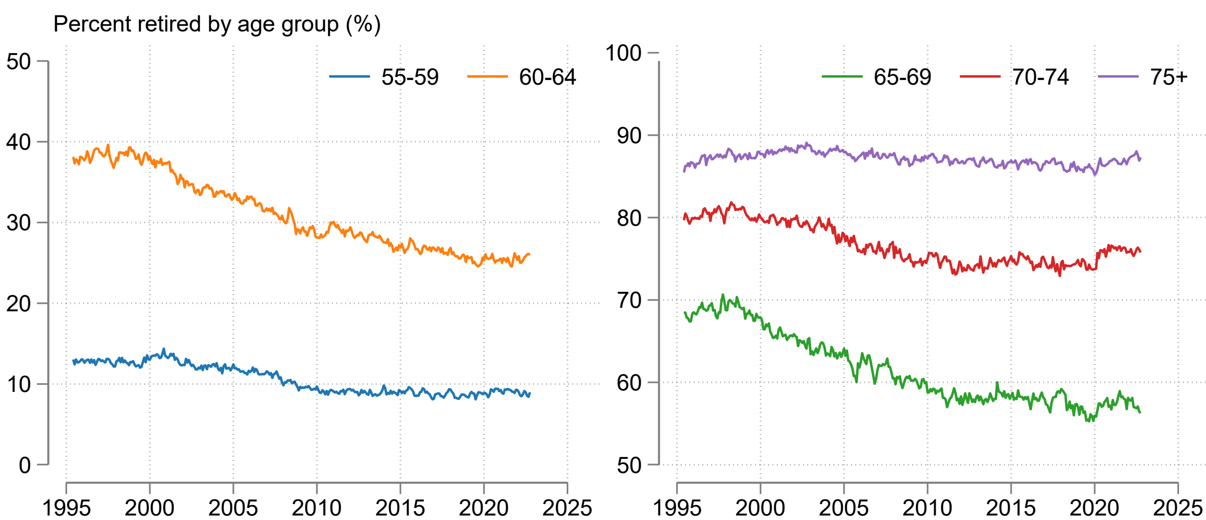
Note. Figure shows the percent of the population that is retired for ages 50 and older, for 1995, 2007, and 2019.

Figure 5. Age distribution of the population age 16 and older



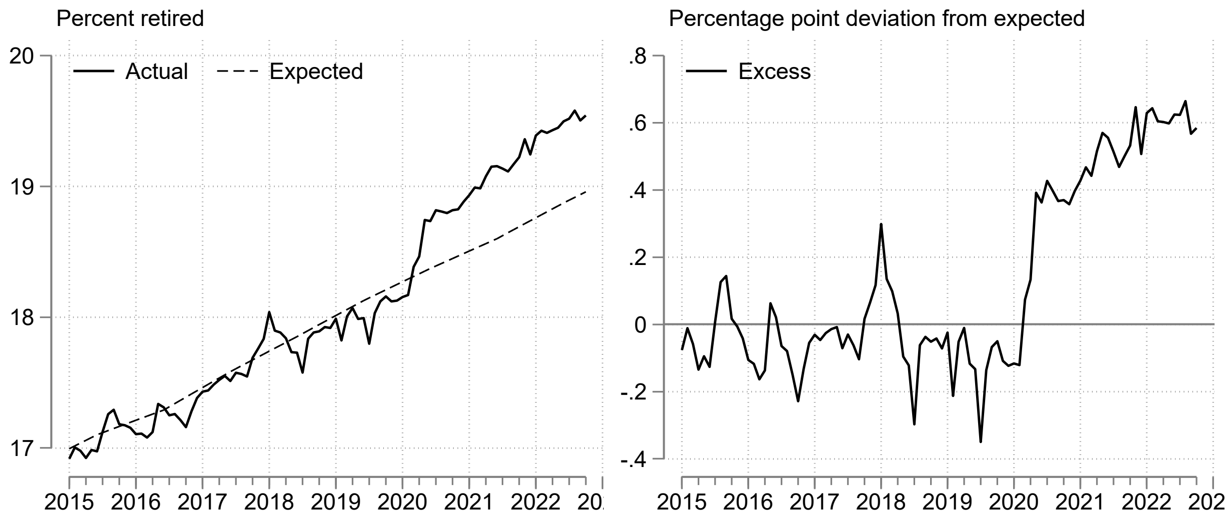
Note: Figure shows the percent of the 16+ population that is in each of three age groups.

Figure 6. Percent retired, for select ages



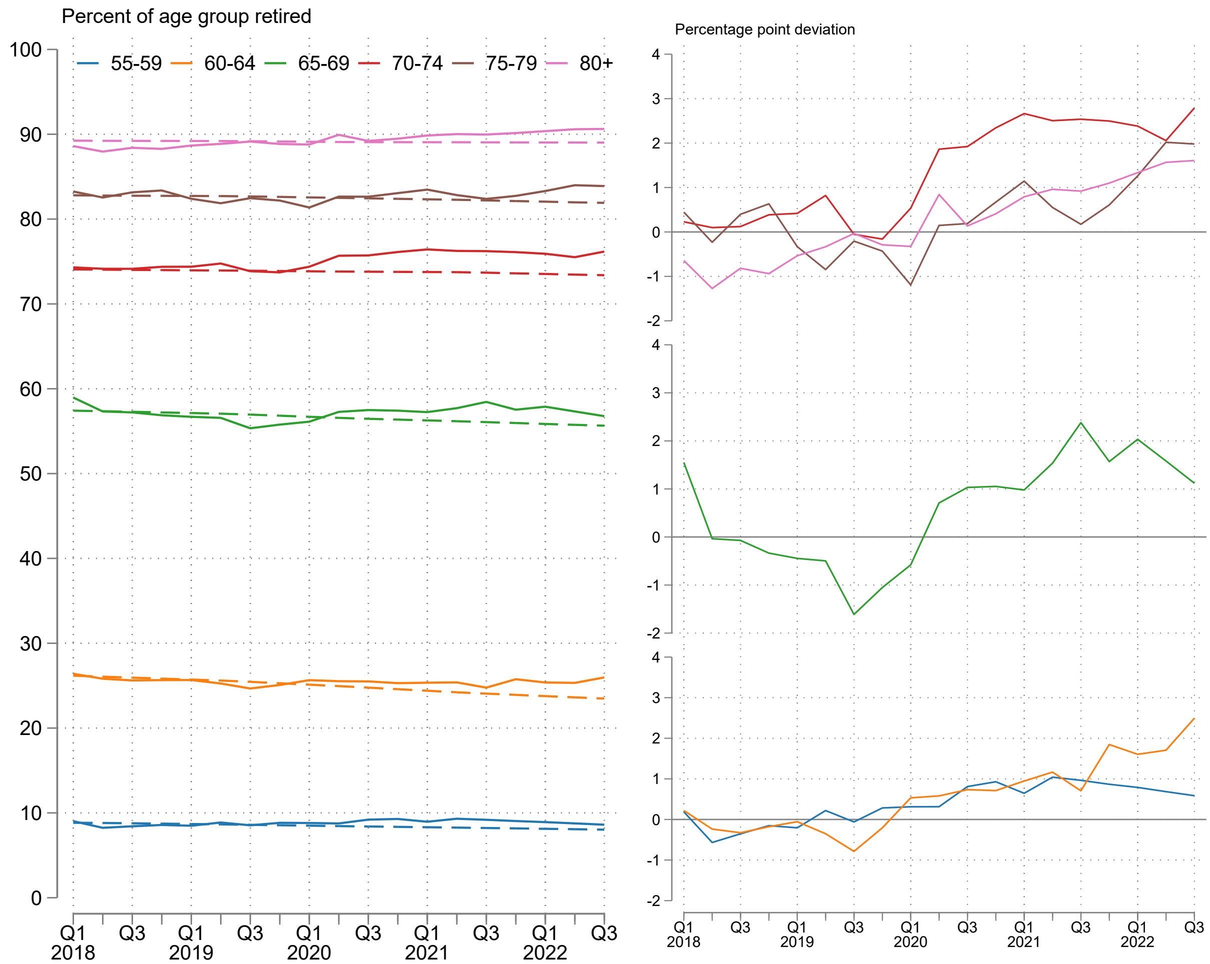
Note. Figure shows the percent of each age group that is retired. Latest observation is October 2022. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey.

Figure 7. The percent of the 16+ population retired compared to the expected percent retired, and excess retirements as a percent of the population



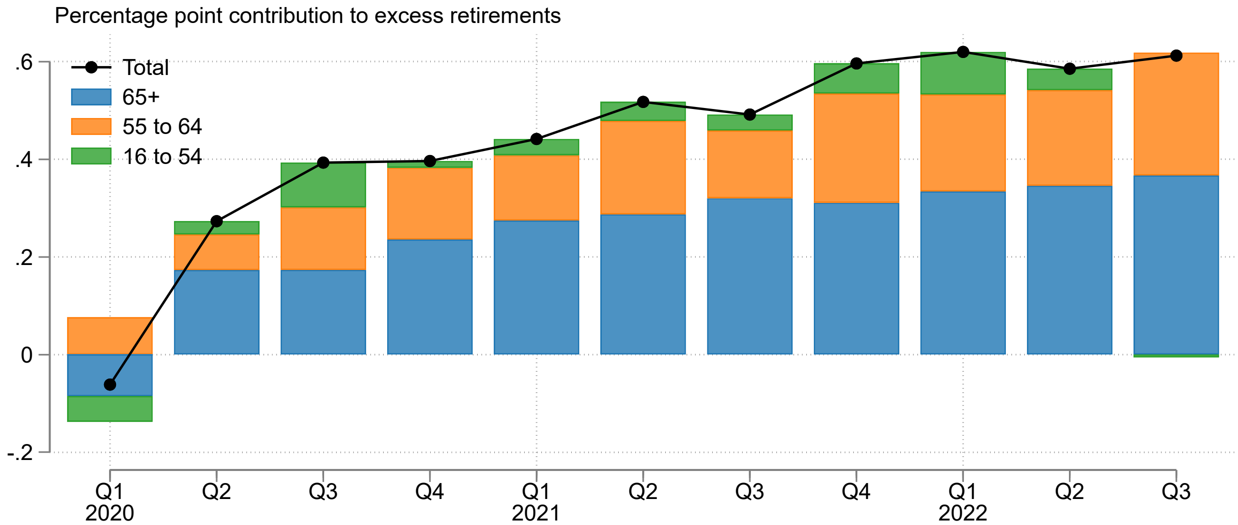
Note. Figure shows the actual retired share of the population (solid line) and retired share that would be expected given the population age distribution, age-specific retirement rates, and other factors (dashed line) as described in the text. Excess retirements are the difference between actual and expected retirements, as a percent of the population. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Last observation is October 2022.

Figure 8. The percent of the population retired compared to the expected percent retired, and excess retirements as a percent of the population, *by age at time of survey*



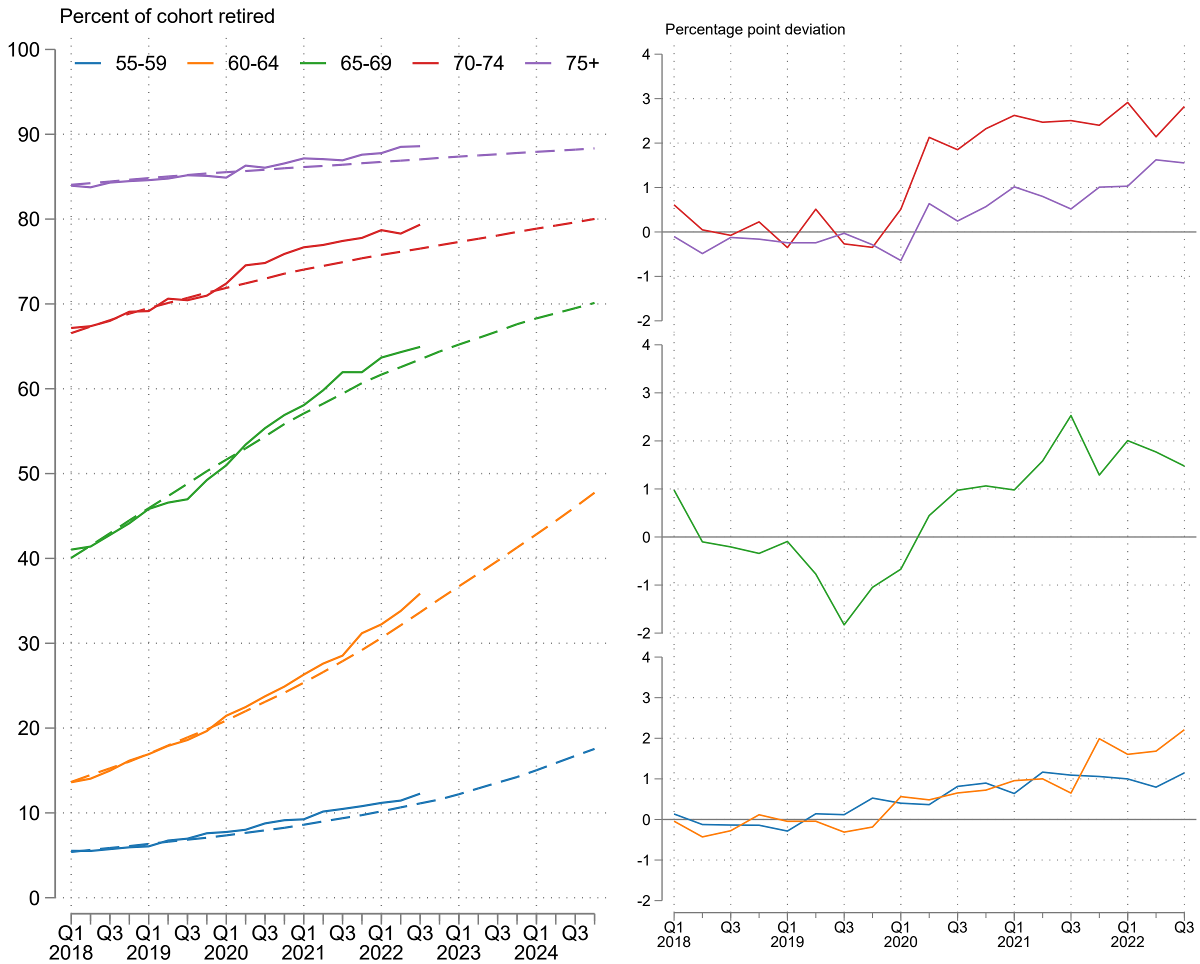
Note: Figure plots actual, expected, and excess retirements by quarter, for the age groups listed (defined as age at time of CPS survey). Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Quarterly values are averages of monthly values for the quarter. The last observation for actual and excess retirements is 2022:Q3.

Figure 9. Contribution to excess retirements for 16+ population, by age group



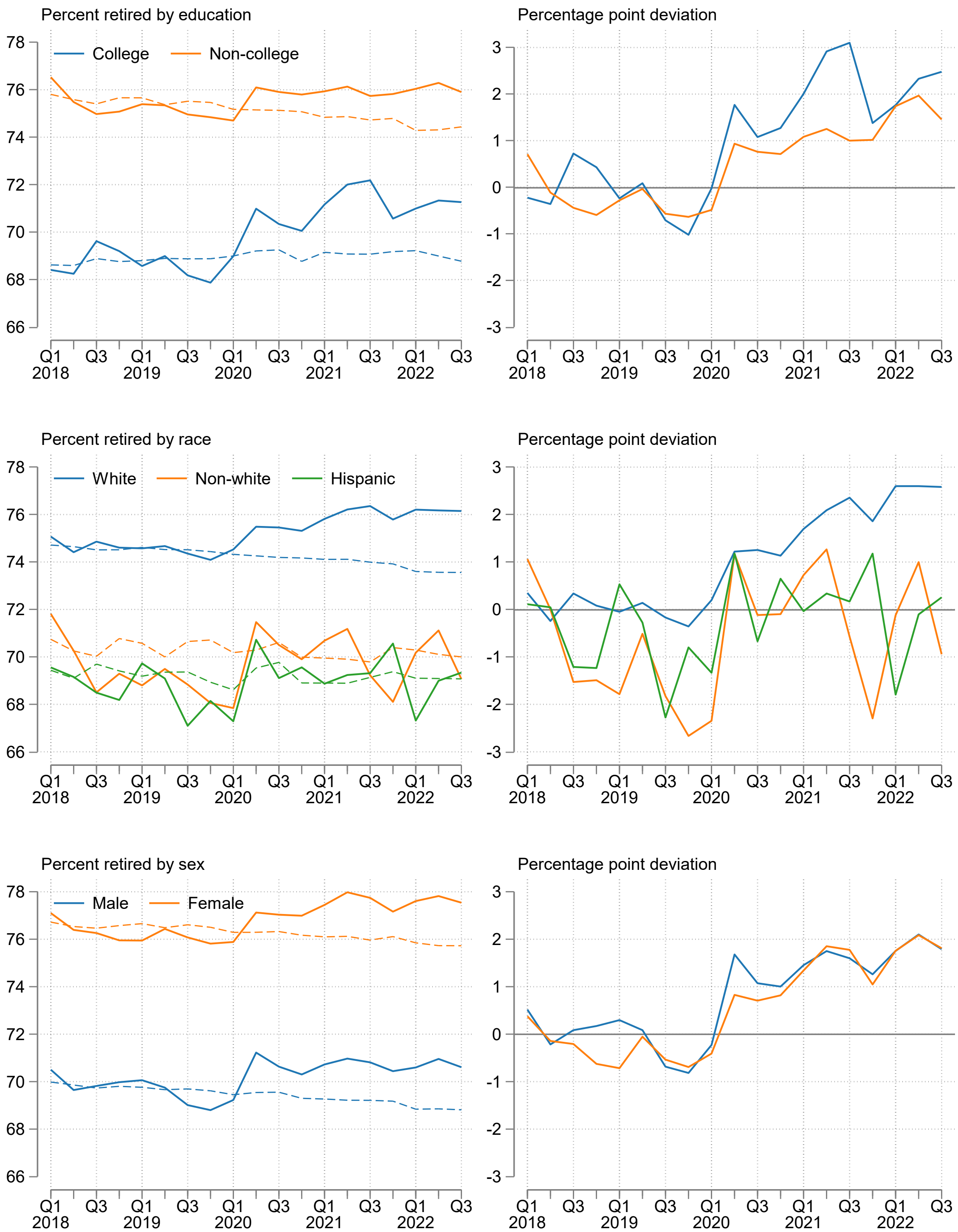
Note. Figure shows excess retirements as a percent of the 16+ population (solid line) and the contribution of excess retirements from each of three age groups, as a percent of the population. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey.

Figure 10. The percent of the population retired compared to the expected percent retired, and excess retirements as a percent of the population, *by birth cohort* (defined as age as of 2020)



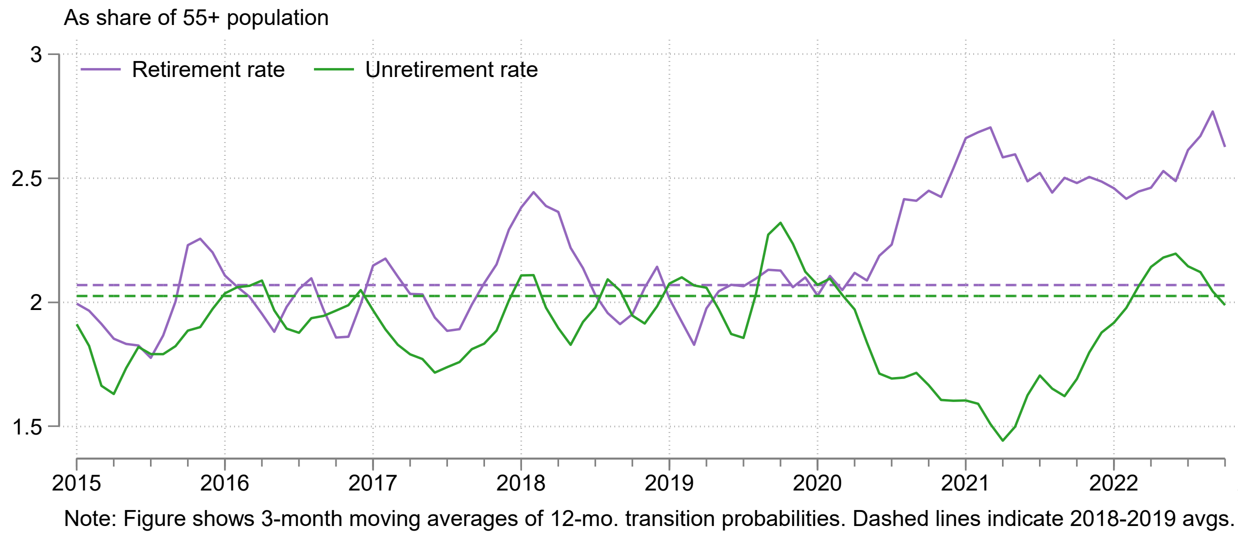
Note: Figure plots actual, expected, and excess retirements by quarter, for birth cohorts (defined as age in 2020). Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Quarterly values are averages of monthly values for the quarter. The last observation for actual and excess retirements is 2022:Q3.

Figure 11. The percent of the population retired compared to the expected percent retired, and excess retirements as a percent of the population, for select groups age 65 and older



Note: Figure plots actual, expected, and excess retirements by quarter. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Quarterly values are averages of monthly values for the quarter. The last observation for actual and excess retirements is 2022:Q3.

Figure 12. Retirement and unretirement rates, as percent of 55+ population



Note. Figure shows the 3-month moving averages of percent of the population moving from the labor force to retirement (purple) and retirement to labor force (green) over 12 months. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Dashed lines indicate 2018-2019 averages.

Figure 13A. Relationship bw. emp. absent due to illness and change in retirement, ages 65 and older

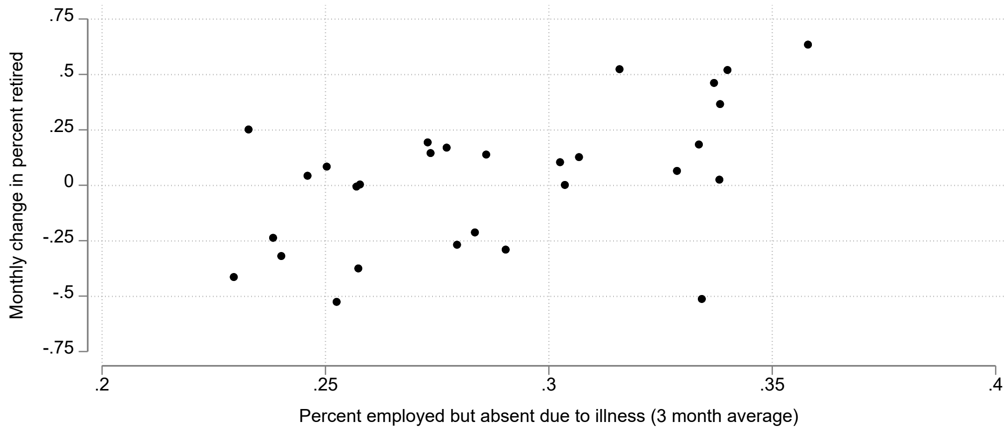


Figure 13B. Relationship bw. emp. absent due to illness and change in non-particip., ages 65 and older

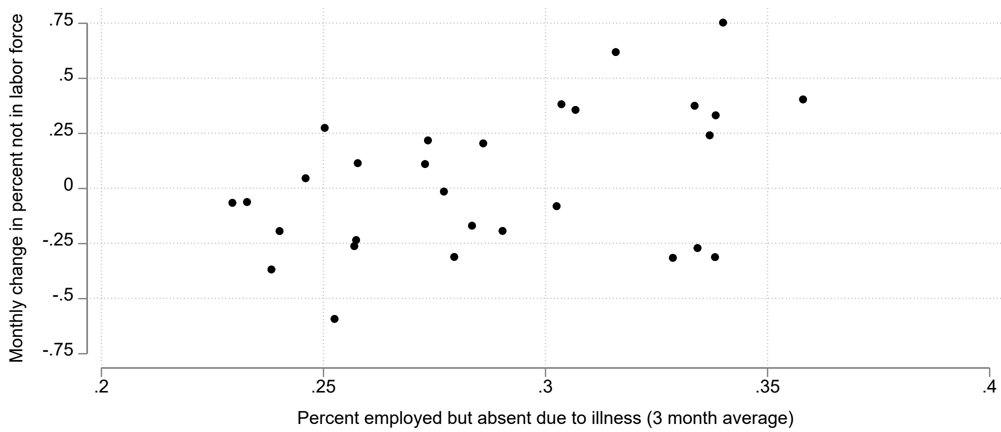
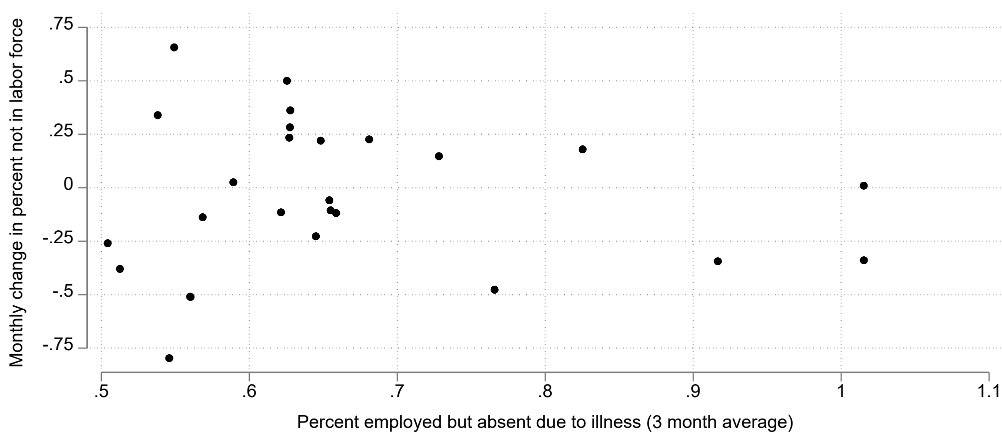
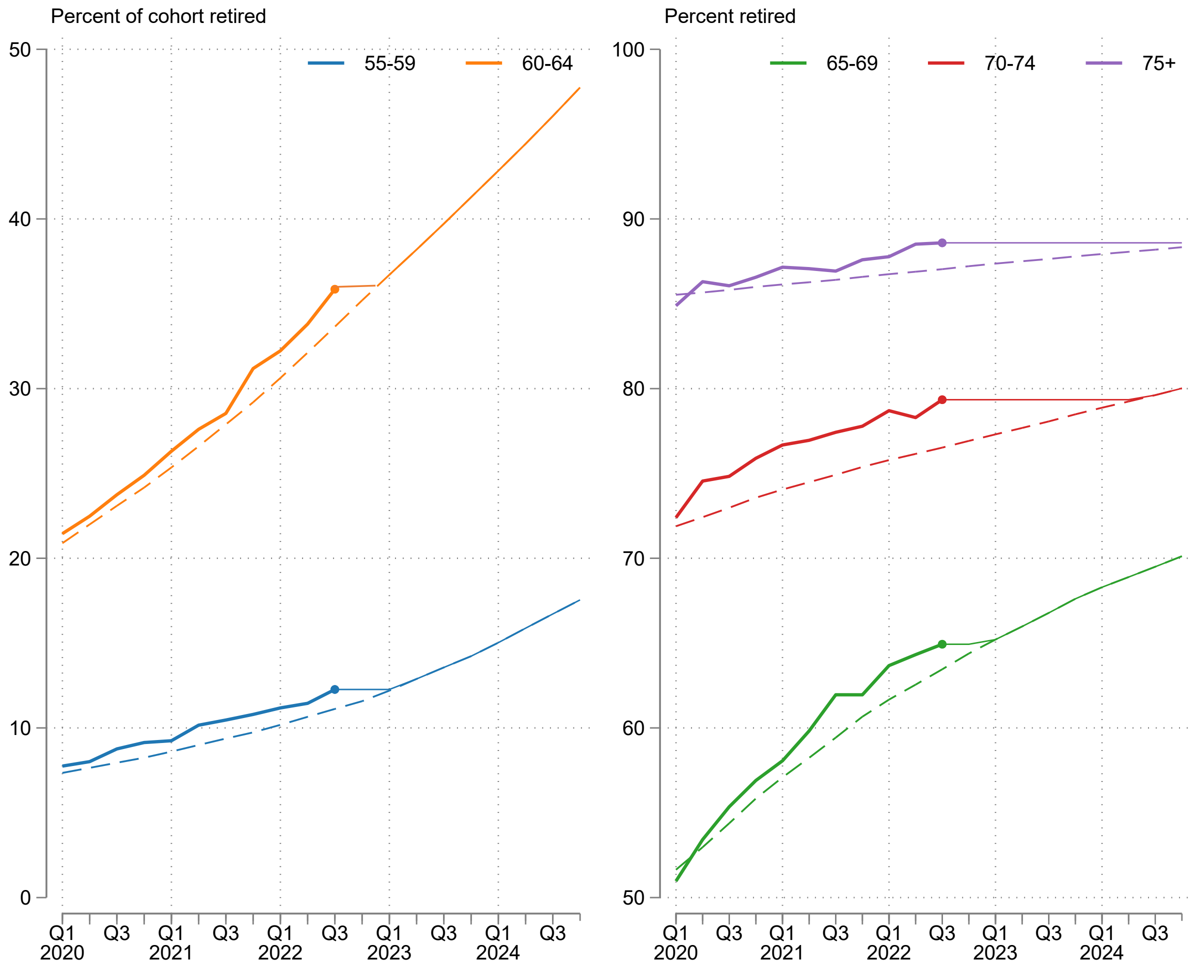


Figure 13C. Rel. bw. emp. absent due to illness and change in non-particip., ages 64 and younger



Note: Figure uses microdata from the Current Population Survey to plot the monthly change in the population (65+ or less than 65) not in the labor force against the percent of the three-month moving average of the percent of the group employed but absent due to illness. Figures A and B use data from April 2020 to October 2022; figure C uses data from August 2020 to October 2022 (excluding April to July 2020 because they are outliers).

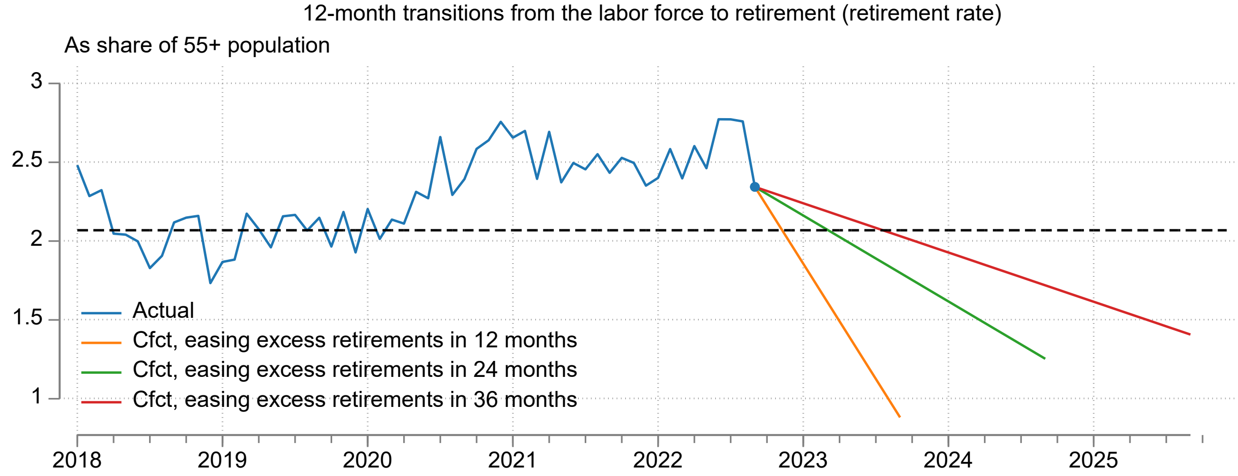
Figure 14. Hypothetical projection for retired share, by cohort



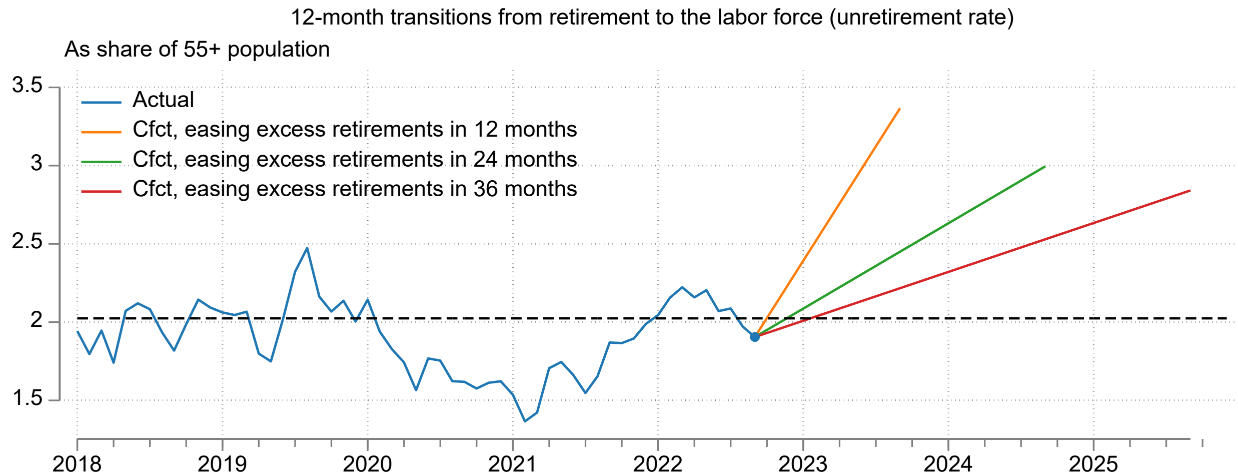
Note: Figure plots actual and expected retirements by quarter. Solid dot indicates 2022:Q3. Thin line after 2022:Q3 illustrates a hypothetical scenario for each cohort, as described in the text. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey.

Figure 15. Hypothetical paths for 12-month retirement and unretirement transitions needed to fully ease excess retirements by 12, 24, and 36 months

A. Hypothetical retirement transitions (from labor force to retirement)

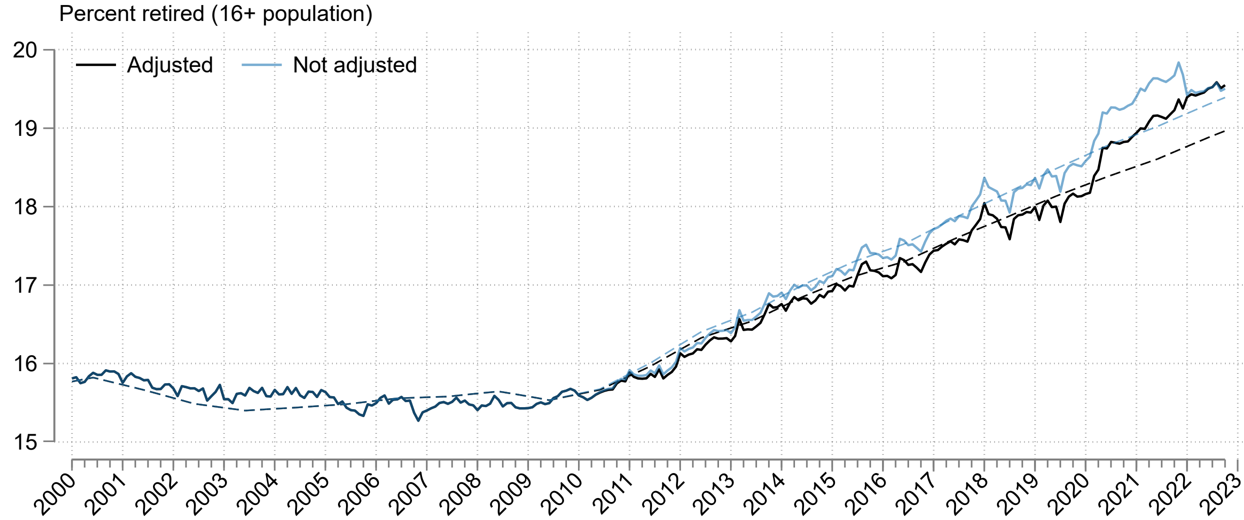


B. Hypothetical unretirement transitions (from retirement to labor force)



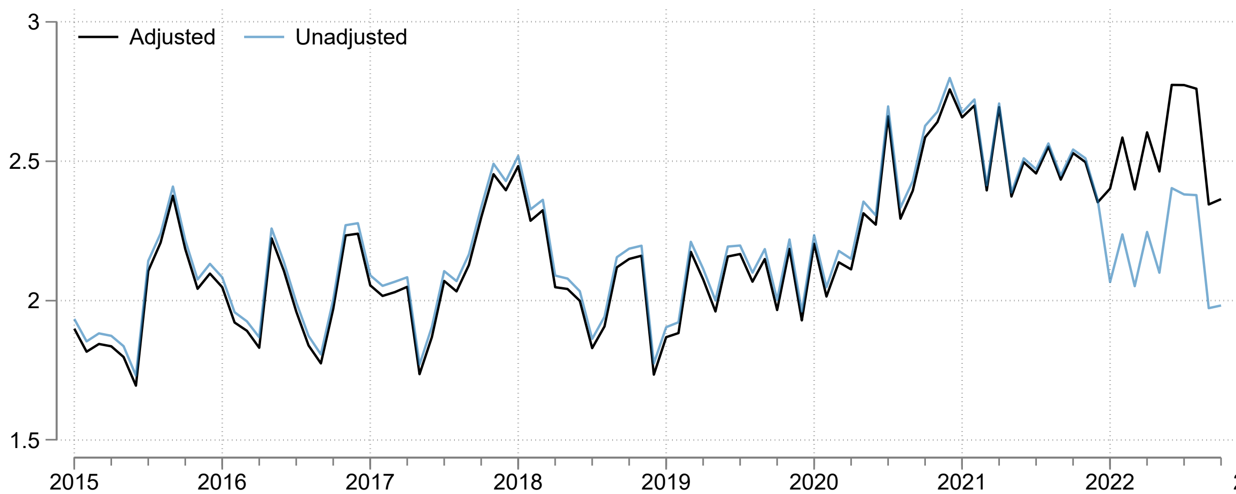
Note. Figures show the percent of 55+ transitioning from the labor force to retirement (panel A) or retirement to the labor force (panel B) over a 12-month period. Solid dot indicates 2023:Q3. The three colored lines after 2022:Q3 indicate hypothetical scenarios for each transition, which—holding all other flows constant—are sufficient to fully ease excess retirements over 12, 24, or 36 months.

Appendix Figure 1: Percent retired (age 16 and older), with and without adjustment for 2020 Census population weights

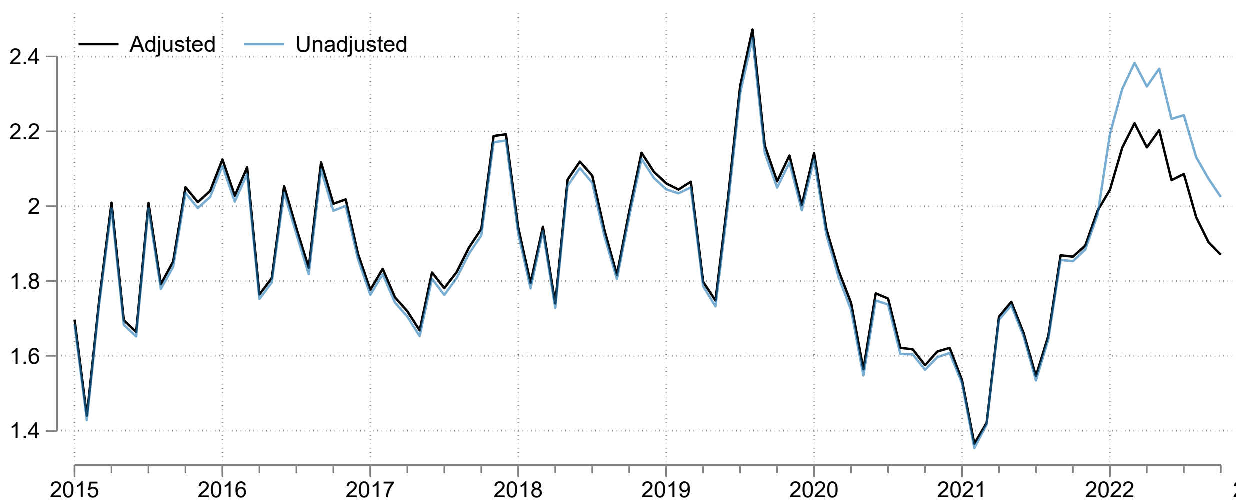


Note. Figure shows the actual retired share of the population (solid line) and retired share that would be expected given the population age distribution, age-specific retirement rates, and other factors (dashed line) as described in the text. Black lines are adjusted for population controls as described in the text, and blue lines are unadjusted. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Last observation is October 2022.

Appendix Figure 2: "Retirement rate." Percent that are retired and were in the labor force one year earlier (age 55 and older), with and without adjustment for 2020 Census population weights



Appendix Figure 3. "Unretirement rate." Percent that are in the labor force and were retired one year earlier (age 55 and older), with and without adjustment for 2020 Census population weights



Note. Figures show the percent of 55+ transitioning from the labor force to retirement (Appendix Figure 2) or retirement to the labor force (Appendix Figure 3) over a 12-month period. Black lines show transition rates adjusted for population controls, as described in the text. Blue lines show transition rates unadjusted for population controls. Data are seasonally adjusted and adjusted for updated population controls to the Current Population Survey. Last observation is October 2022.