

# Implications of the COVID-19 Pandemic for the US Social Security Program

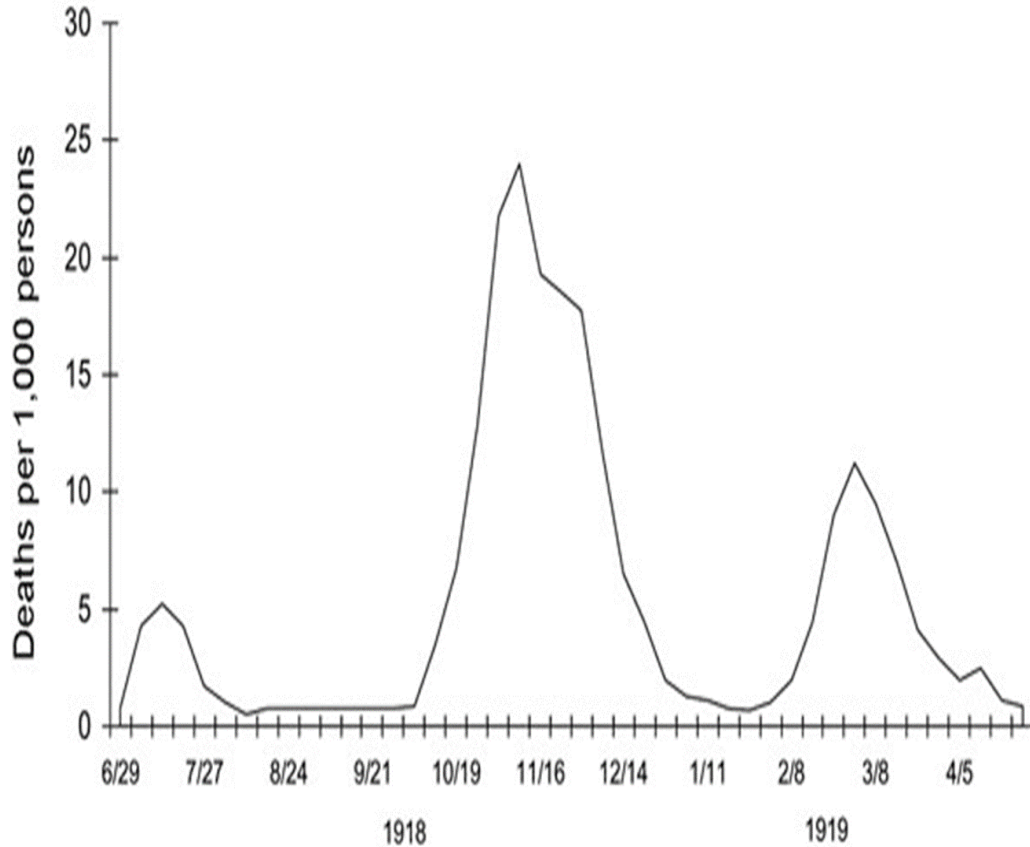
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NBER Summer Institute / Economics of Social Security Workshop  
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# COVID-19: Background

# 1918: Three Waves

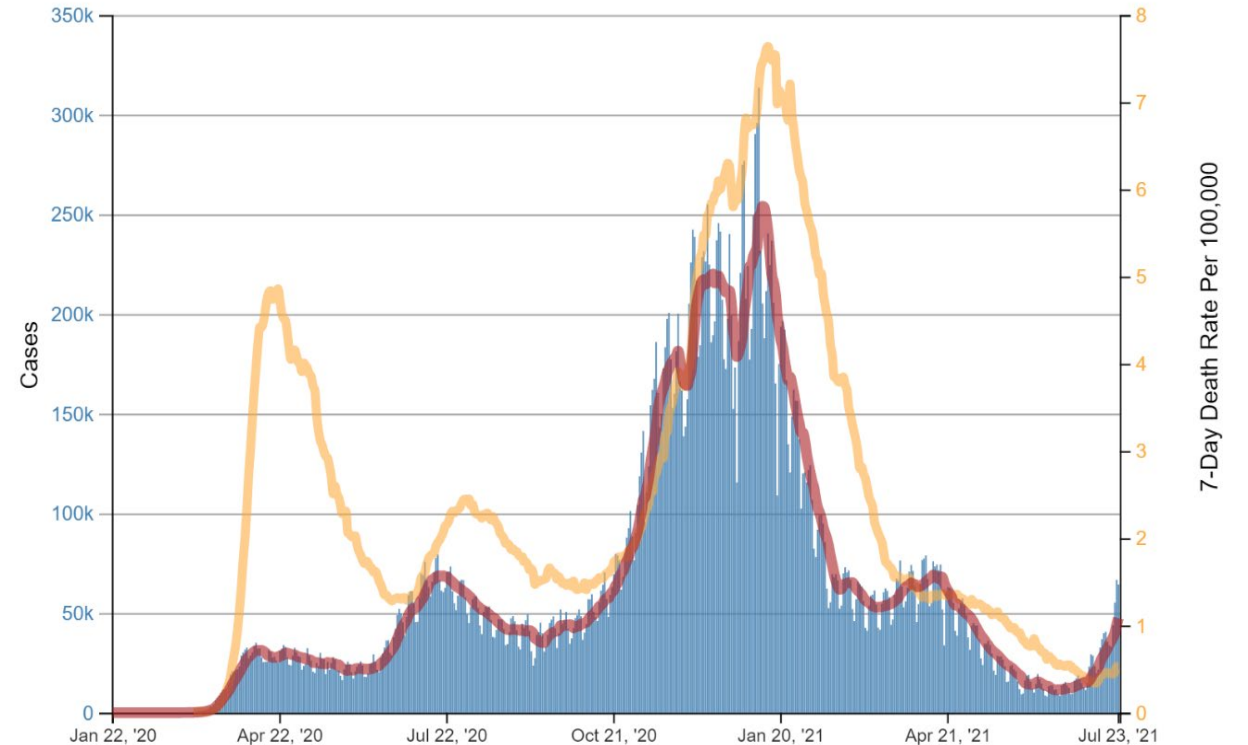
Figure 1. Death Rates of the Spanish Flu, June 1918 to May 1919



Source: The Spanish Flu and the Stock Market: The Pandemic of 1919 by Bryan Taylor | Feb 27, 2020 | Economics, Historical, Insights

# COVID-19: So Far

Trends in Daily COVID-19 Cases and 7-Day Cumulative Incidence Rate of COVID-19 Deaths in the United States Reported to CDC, per 100,000 population



Source: <https://covid.cdc.gov/covid-data-tracker>

# Effects on Social Security: Our Estimates to Date

# Updated Baseline Published in November 2020

- The 2020 Trustees Report was released on April 2020, and did not reflect any effects of the COVID-19 pandemic or ensuing recession
- In September/October 2020, we developed an updated baseline, modifying the 2020 Trustees Report assumptions to reflect pandemic and recession effects
- The updated baseline reflected our expectations at that time
- We released a memo in November 2020 with some details on the assumptions and cost effects  
([https://www.ssa.gov/OACT/solvency/UpdatedBaseline\\_20201124.pdf](https://www.ssa.gov/OACT/solvency/UpdatedBaseline_20201124.pdf))
- Importantly—we are using this updated baseline as the basis for scoring any new legislative proposals, until the 2021 Trustees Report is released

# Implications of COVID-19 on Social Security: Our Thinking in September 2020

- Over the 75-year long-range projection period, effects are likely minor
  - The pandemic itself, and the pandemic-induced recession, may be largely recovered by 2023 with little permanent effect
  - Note that Trustees Reports have incorporated the likelihood of periodic negative events
    - For example, we have assumed an ultimate annual improvement in death rates of around 0.73 percent on average; others have persistently assumed 1.0 percent or higher with no deceleration
    - The Trustees Reports have also assumed long-term unemployment rates will be higher on average than “forecasters”, reflecting occasional downturns
- However, there are clearly near-term considerations due to the pandemic
- *Stay tuned for the 2021 Trustees Report release and our updated thinking...*

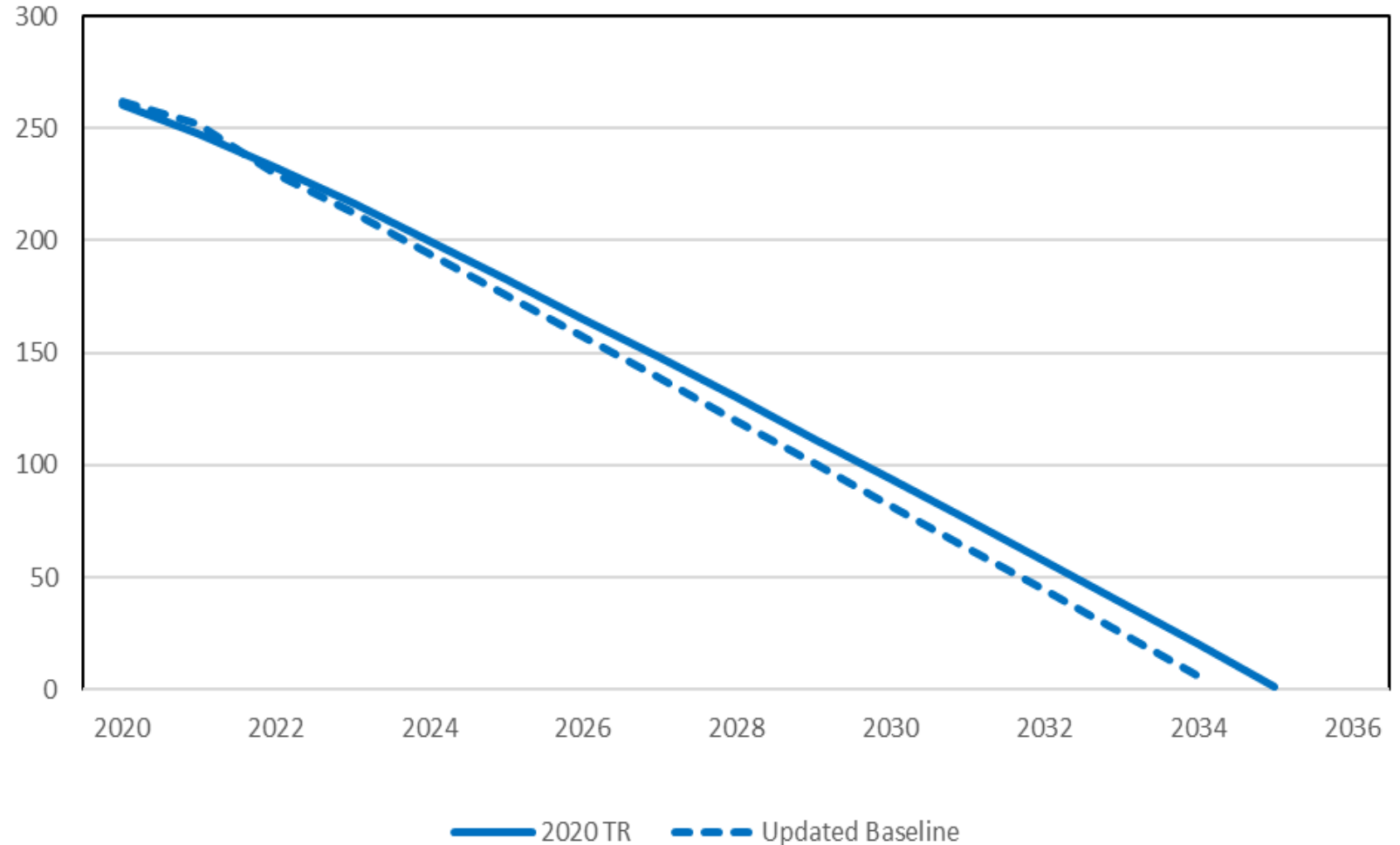
# Year of Reserve Depletion (Fall 2020 Updated Baseline)

Under the updated baseline, **OASDI** and OASI reserves are projected to become depleted in **2034** and 2033, respectively, one year earlier than in the 2020 Trustees Report

DI reserves are projected to become depleted in 2059, six years earlier than in the 2020 Trustees Report

*What will the 2021 Trustees Report show?*

**OASDI Trust Fund Ratio: Reserve Depletion One Year Earlier from COVID-19**



# Effects on Social Security: Demographic

Demographic factors will influence responses in the near term, but Social Security financial status will be affected only in the long term



# Mortality: Our Thinking in September 2020 *and Now*

- Assuming that there would be only a modest increase in deaths above typical levels in the fall of 2020, we estimated that overall mortality rates for calendar year 2020 would be about **12 percent higher** than would have been projected in the absence of the pandemic (**~350K excess deaths**)
- For 2021 and 2022, we assumed temporary increases in the levels of deaths of about **6 percent** and **2 percent**, respectively, due to COVID-19 effects
- For years after 2022, we assumed no significant net effect from COVID-19
- *What do we know now? Deaths overall for 2020 were about 16 percent higher and will likely be close to that for 2021*
  - *Mortality rates in 2020 were actually lower for those under about age 15*

# Mortality: Potential COVID Effects Going Forward

- Will increases in death rates continue to be similar across all adult ages?
- Will there be persistent effects on mortality in the longer term?
  - Direct virus-related immediate deaths
  - Indirect deaths due to deferred care
  - Increased deaths of despair/violence—suicide, homicide?
  - Decreased life expectancy from compromise for COVID survivors; how much?
- Data available to date and medical implications are still unclear

# Fertility: Our Thinking in September 2020 *and Now*

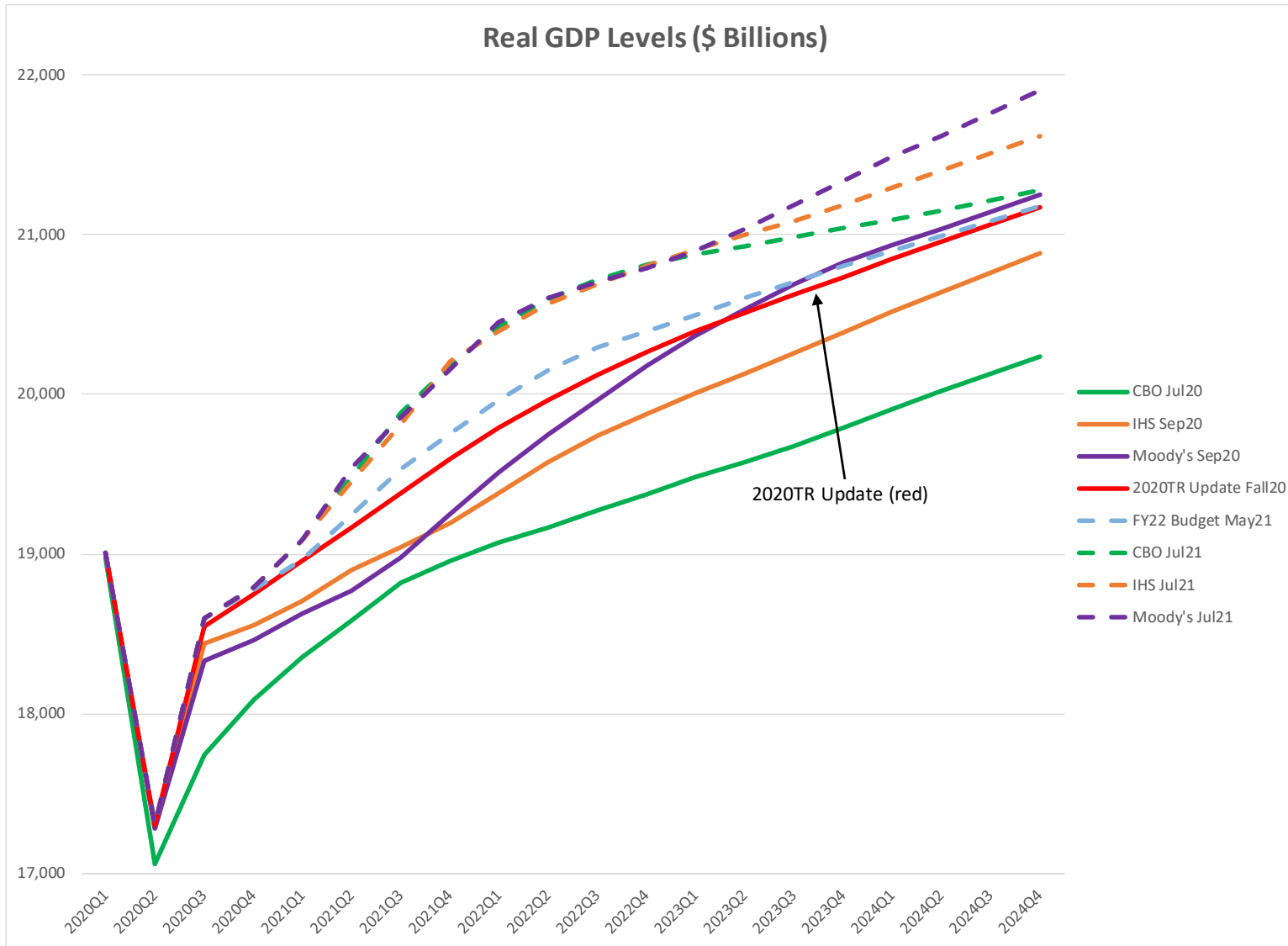
- We assumed that the COVID-19 pandemic will affect birth rates in years 2021 through 2025
- We assumed lower birth rates, resulting in a total fertility rate (TFR) of 1.57 in 2021 (~**340K fewer births**) and 1.65 (~**200K fewer births**) in 2022
- We assumed that these low rates in 2021 and 2022 will be fully made up for by increased rates in 2023 through 2025, before returning to the “no pandemic” rates starting in 2026
- In other words, the pandemic will cause a number of women to defer childbearing from 2021-2022 to 2023-2025
- *What do we know now? Not too much more...*

# Effects on Social Security: Economic

In the near term, effects are largely due to reduced payroll tax, which in turn is due to reduced employment and GDP

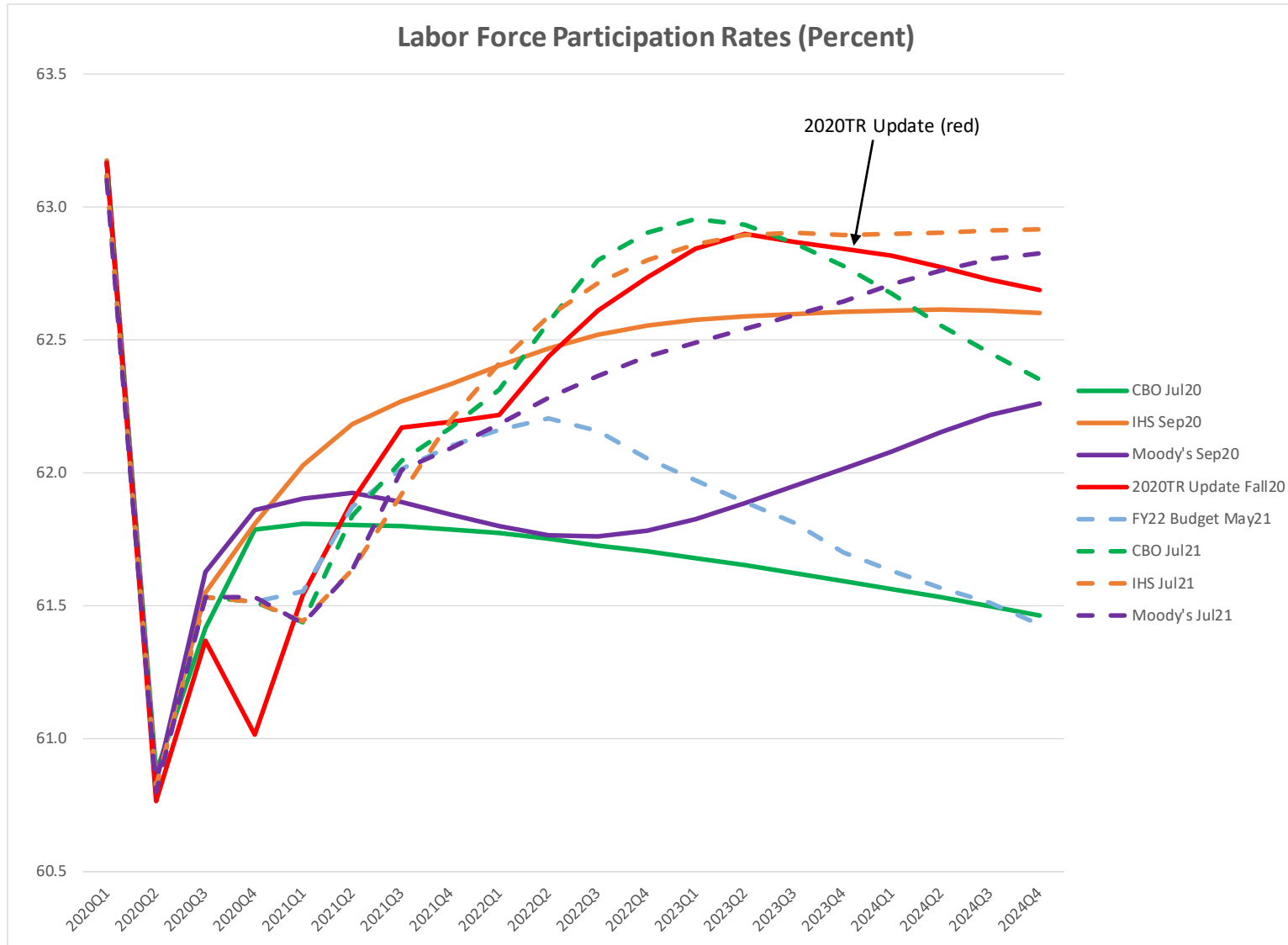
Longer term effects are highly uncertain; will the economy and society return to the same as before; how fully and how soon?

# Direct GDP Effects



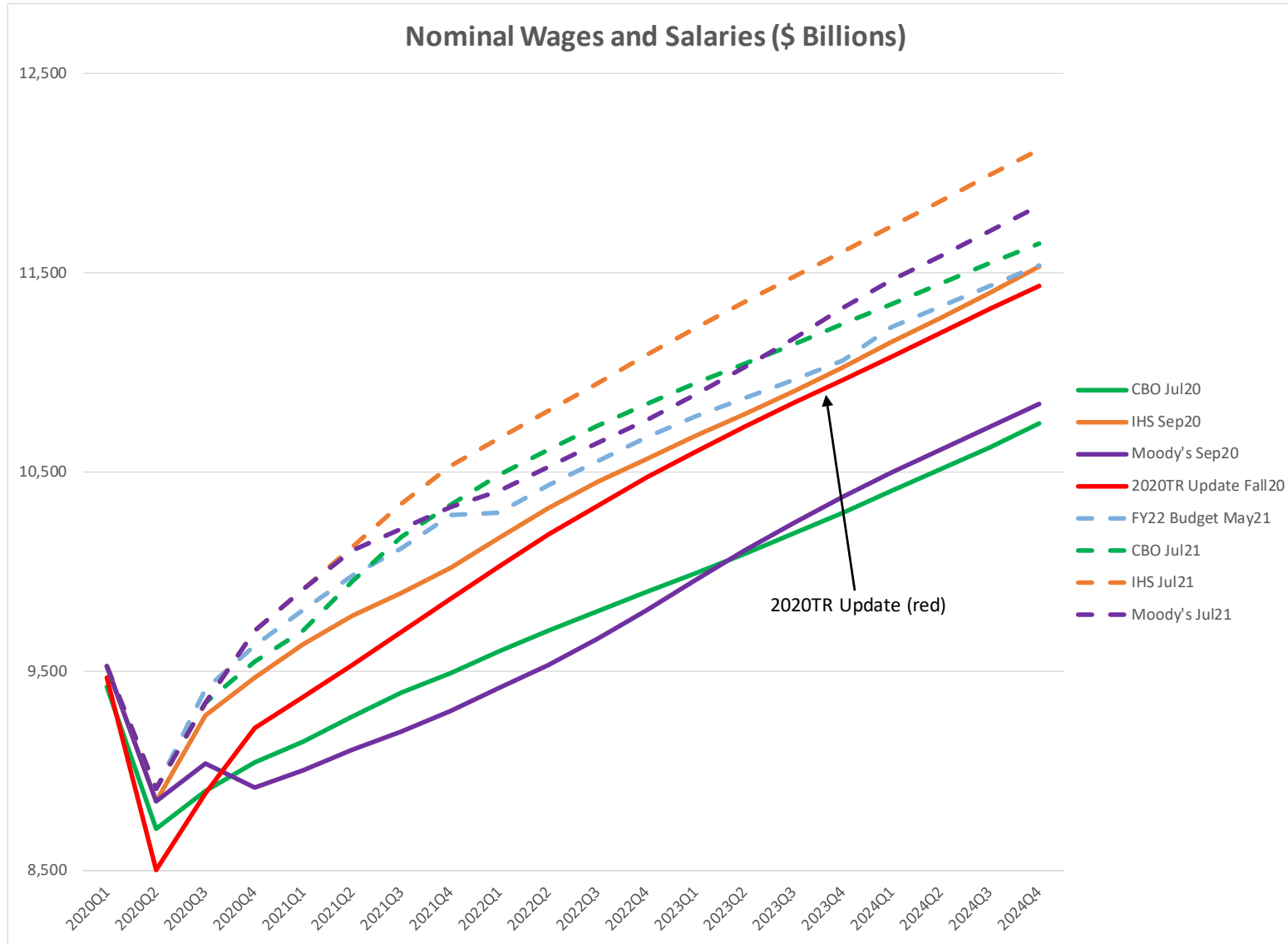
- What were we and other experts projecting last fall, when we developed our updated baseline (solid lines)?
- What about now (dashed lines)?
- *Projections are more optimistic now than a few months ago*

# Labor Force and Employment



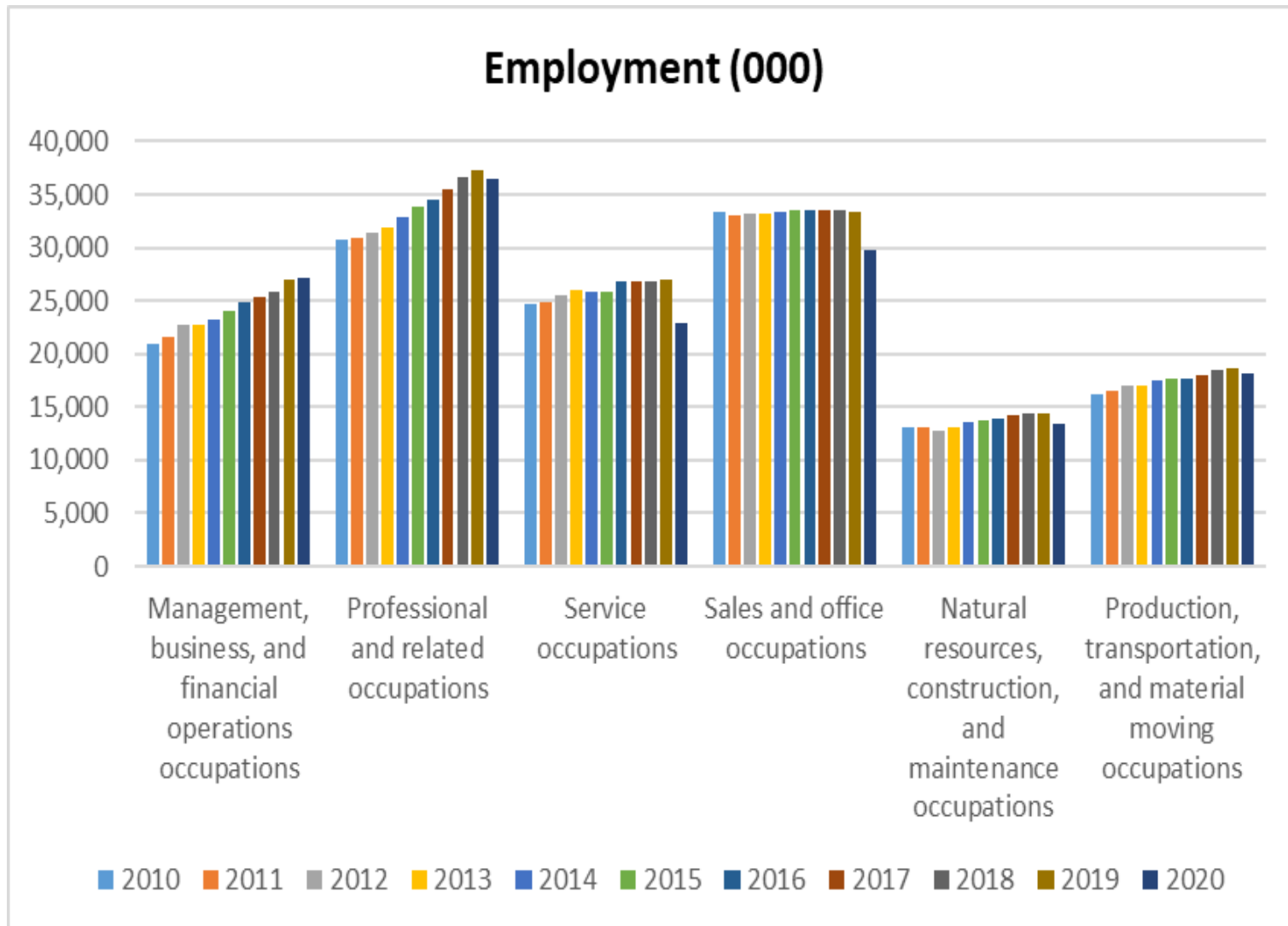
- How severe and prolonged will declines in LFPR be?
- Employment has a direct effect on Social Security payroll tax revenue
- *Future expectations of LFPR and employment vary widely!*

# Earnings and Payroll Tax Revenue



- Lower earnings means lower payroll tax revenue for the trust funds
- *What do we know now? Stronger recovery in 2020Q3 through 2021Q2*

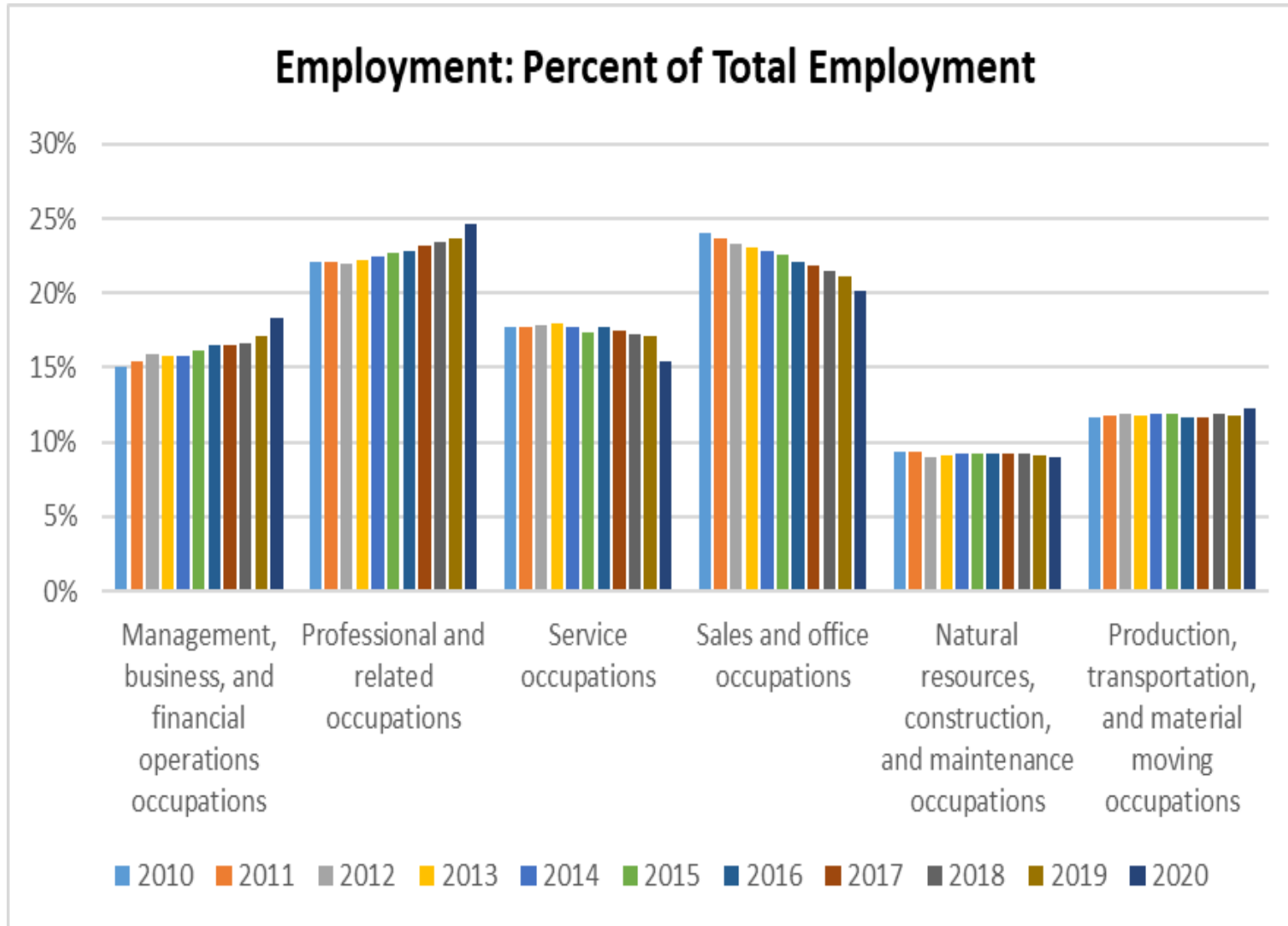
# Trends in Employment by Occupation



- Employment effects in all areas in 2020 (BLS cpsaat09)
- Will trends of 2010-19 return, and continue?



# Trends in Employment by Occupation



- Employment distribution more revealing
- Share for management and professional, highly paid, increased in 2020
- Will these shifts continue with technology, automation, and increasing education levels?
- Might increases in infrastructure spending change these trends?

# Effects on Social Security: Program-Specific

# Earnings, Employment, and the Average Wage Index: Our Thinking in September 2020 *and Now*

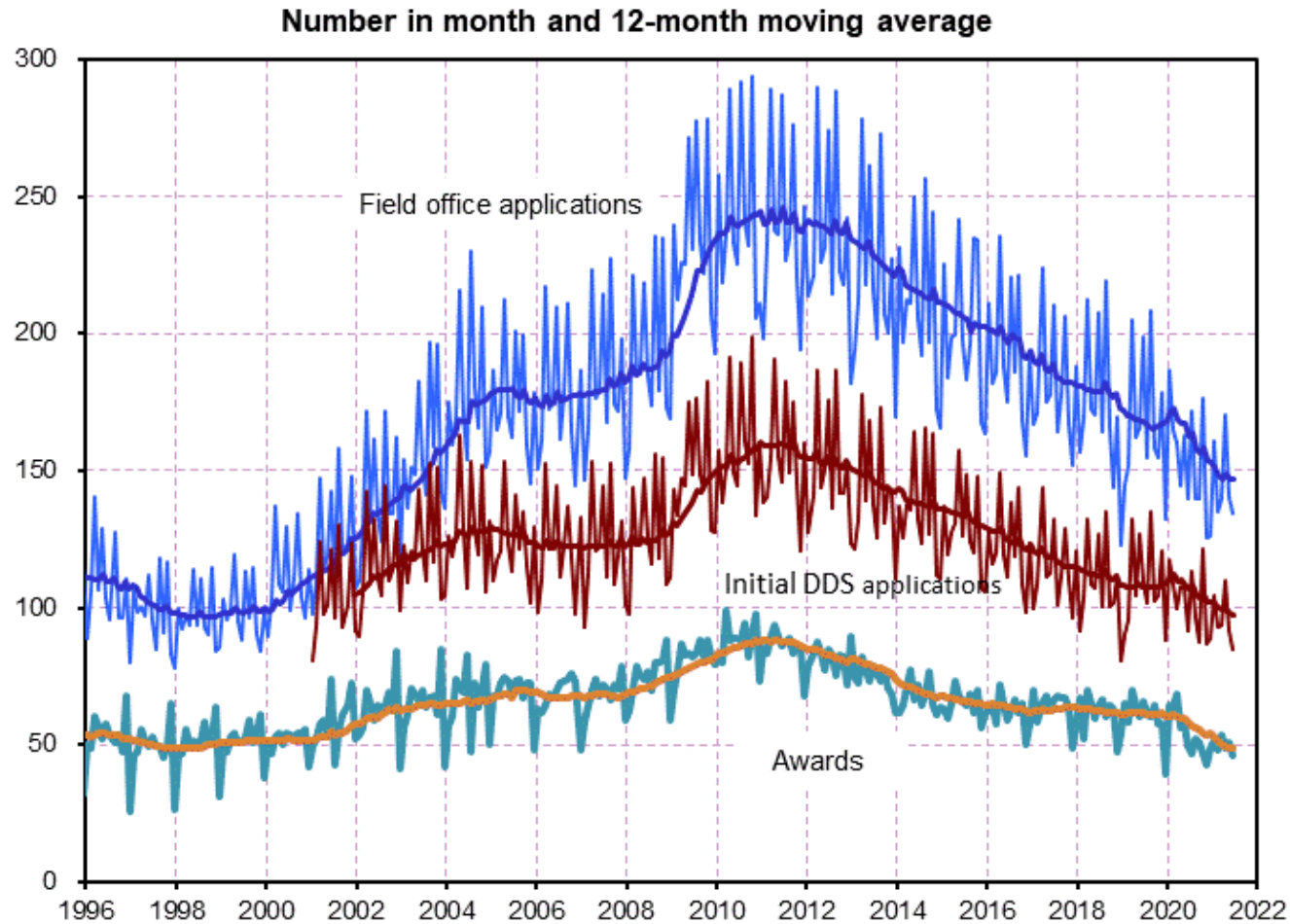
- The national average wage index (AWI) is determined based on the ratio of total wages paid in the year to the total number of at-any-time workers in the year
- In September 2020, we expected that total wages in 2020 would be substantially below the level in 2019, and that the AWI for 2020 would decline by about 4 percent from 2019—meaning lower Social Security benefits for those who become “newly eligible” in 2022
- *What do we know now? Because the economy rebounded so quickly, and those who lost jobs or had decreased earnings in 2020 were mainly part-time and/or lower paid workers, total wages in 2020 increased and the AWI is now expected to **increase** for 2020*

# Timing of Benefit Applications: Retirement (OASI)

- There has been speculation that job losses in the COVID-induced recession will cause workers to apply for retirement benefits earlier than they would have otherwise
- We are not seeing this in the data—yet
- It may be that workers are delaying start of retirement benefits, relying on extended unemployment benefits
- Note that earlier benefit start for those with age-reduced benefits actually tends to lower longer-term cost

# Timing of Benefit Applications: Disability (DI)

Disabled worker data through June 2021 (numbers in thousands)



Source: <https://www.ssa.gov/oact/STATS/dibGraphs.html>

- Similarly, we aren't yet seeing evidence of increased DI applications
- Recessions tend to have a delayed impact on applications
- Applications for disabled worker benefits increased rapidly in the last recession from 1.5 million in 2007 and 2008 to 1.8 million in 2009 and 1.9 million in 2010
- Note the consistent drop since then

# Effects on Social Security: Bottom Line

# Effects from Employment and Other Factors: Questions

- To what extent will the nature and conditions of employment change in the future—and to what extent will COVID affect the pre-pandemic trends? How about “gig” employment?
- Will remote work for many occupations that have been less affected by the pandemic persist? Or will these changes diminish over time?
- Will the reductions in productivity and employment in some areas recover?
- The degree of longer-term persistent effects on the level of economic activity and on demographic factors is as yet unknowable

Questions?