The Business Cycle Dynamics of the Wealth Distribution

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Recent research suggests household heterogeneity is important in propagating aggregate shocks and determining macroeconomic outcomes (see, e.g., Kaplan et al., 2018). Despite recent advances in measuring long-term trends in the wealth (Saez and Zucman 2016, Kuhn et al., 2018) and income distributions (Piketty et al., 2018), as well as the income distribution's business cycle dynamics, (Guvenen et al., 2019), data on the evolution of household portfolios at business cycle frequency are limited. This scarcity of data has limited the understanding of the evolution of household balance sheets during recessions.

In this paper we quantify the dynamics of the U.S. wealth distribution over the business cycle from 1989 to present using new quarterly, distributional household balance sheet measures from the Distributional Financial Accounts (DFAs). The DFAs combine two leading measures of household wealth, the Financial Accounts of the United States (a quarterly measure of aggregate household wealth) and Survey of Consumer Finances (a triennial measure of the household wealth distribution in the U.S., complemented with U.S. rich list data) and infer quarterly changes across the wealth distribution using established "temporal disaggregation" methods (see, e.g., Chow and Lin, 1971). To verify that the data are credible, we show that our methodology recovers out-of-sample SCF balance sheets with reasonable accuracy, provide standard errors to show that our estimates are well identified, and compare our estimates to studies of long-run wealth inequality.

We next use the quarterly DFA data to show that U.S. wealth inequality is strongly pro-cyclical, as wealth gains and losses incur disproportionately to the wealthiest of households during the economic expansions and downturns. There are two high-level reasons why wealth accumulation will vary across wealth groups: (1) systematic portfolio differences, leading to different exposure to aggregate asset returns and differential returns to wealth, and (2) different group-specific asset returns, via heterogeneous rates of return on assets, and differences in savings across group. In our data, dynamics in wealth accumulation and concentration are mostly explained by differences in exposure to asset price changes, as in Bach et al, 2020. The wealthiest 1% of households hold

riskier assets that have both higher expected but also more cyclical aggregate price returns, while households outside the top 1\% hold a mixture of assets with less exposure to cyclical risk (as in Bach et al., 2020 and Kuhn et al., 2018). That said, group-specific factors—such as heterogeneous rates of return—are relevant for wealth accumulation of the wealthiest 0.1 percent of households (as in Fagereng et al., 2020).

Next, we exploit our quarterly time series to estimate the wealth distribution's response to shocks to key economic variables. We apply the local projection methods of Jorda (2005) to estimate the effect of changes in the output gap, unemployment rate, inflation, and monetary policy on wealth inequality. We find that increases in the output gap and unemployment rate increase wealth inequality, as do accommodative monetary policy shocks. In fact, our estimates imply that a 1pp accommodative Federal Funds Rate shock increases inequality by an amount equivalent to 10\% of the rise since 1989. Thus, our results suggest that policy rate reductions designed to support the overall economy have the unintended effects of increasing wealth inequality, and furthermore, that these effects can be large.

Finally, we consider the evolution of household balance sheets through recent recessions. We document very different trends in the Great Recession and COVID-19 pandemic, with an unprecedented deterioration during the Great Recession due to a slower recovery in employment and house prices, and an unprecedented strengthening following the COVID-19 recession due to a quick recovery in asset prices and significant fiscal support.

References

Bach, L., Calvet, L. E., and Sodini, P. (2020). Rich pickings? risk, return, and skill in household wealth. American Economic Review, 110(9):2703–47.

Chow, G. C. and Lin, A.-L. (1971). Best linear unbiased interpolation, distribution, and extrapolation of time series by related series. The Review of Economics and Statistics, 53(4):372.

Fagereng, A., Guiso, L., Malacrino, D., and Pistaferri, L. (2020). Heterogeneity and persistence in returns to wealth. Econometrica, 88(1):110–170.

Guvenen, F., Karahan, F., Ozkan, S., and Song, J. (2019). What do data on millions of U.S. workers reveal about life-cycle earnings dynamics?

Jorda, O. (2005). Estimation and inference of impulse responses by local projections. American Economic Review, 95(1):161–182.

Kaplan, G., Moll, B., and Violante, G. L. (2018). Monetary policy according to HANK. American Economic Review, 108(3):697–743.

Kuhn, M., Schularick, M., and Steins, U. I. (2018). Income and wealth inequality in America, 1949-2016.

Piketty, T., Saez, E., and Zucman, G. (2018). Distributional National Accounts: Methods and estimates for the United States. The Quarterly Journal of Economics, 133(2):553–609.

Saez, E. and Zucman, G. (2016). Wealth inequality in the United States since 1913: Evidence from capitalized income tax data. The Quarterly Journal of Economics, 131(2):519–578.

Smith, M., Zidar, O., and Zwick, E. (2019). Top wealth in the United States: New estimates and implications for taxing the rich.