# What Explains Low Stock Market Participation Among Black Americans? Evidence from the Survey of Consumer Finances

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**Note**: Any views expressed herein are solely my own and do not necessarily reflect the views of the Federal Reserve System.

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#### Introduction

- In this presentation, I will review racial gaps in stock market participation and attempt to determine the factors that underpin them.
- Then, I'll give a historical overview of the American Black-white wealth gap and uses it to inform the scope of the research question.
- I will establish the rationality of stock market participation given historical returns. This underlines the importance of financial literacy, as the stock market participants risk facing negative returns.
- I establish in the literature the characteristics behind households that participate in the stock market and find that that stock market participation increases with the more financially literate, numerate, intelligent, educated, etc. one is.

#### Introduction Cont'd

- I hypothesize that the Black-white differential in stock market participation is due in part to differences in individual characteristics, household demographics, financial characteristics, and financial knowledge.
- Using 2019 Survey of Consumer Finances (SCF) data, I use probit regression to determine the determinants of the Black-white differential in stock market participation and find that a significant portion of the gap is eliminated by my controls.
- I conclude by offering some policy recommendations. These data seem to show that efforts to increase college completion and financial education among Blacks could potentially be helpful.
- The next step regarding this project would be to continue iterating on the paper and search for potential funding sources.

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- Wealth, the difference in value of one's assets and one's liabilities, is important, as it allows one to better weather economic shocks.
- Beyond that, wealth begets wealth wealthy people are more able to invest in education, invest in business, and live in better neighborhoods, all of which support further wealth creation (Shapiro et al. (2013)).
- Since it's founding, the United States has been plagued with rigid racial wealth inequality. In 1865, the year the 13th amendment that abolished slavery was passed, African Americans owned half of one percent of the wealth in the United States.
- By 1990, African Americans owned a total of one percent of wealth in the United States.

- Prior to the beginning of the twentieth century, this lack of wealth wouldn't have been remarkable - in fact, most people of any race held no wealth.
- However, by 1994, the median white family had a net worth of \$72,000. That same year, the median Black family had a net worth of only \$9,800. Further, half of Blacks had a net worth of zero, compared to only 23 percent of whites.
- African Americans have been historically denied the right to accumulate wealth. Some free Blacks did hold property, totaling to an estimated \$50 million worth in the 1860s.
- Some believed that, instead of land reparations for slavery, Northerners should've purchased the Southern farms and employed the Freedmen. This led to the creation of the farm tenancy prominent in the South (Conley (2010)).

- The system of farm tenancy, also known as sharecropping, didn't allow Black families to build wealth. They also weren't allowed to hold loans or participate in the Westward migration.
- The twentieth century also saw little wealth creation for African Americans. One reason is that Black incomes were depressed, hindering their abilities to save and increase their net worth.
- Though now Blacks were able to sell in the labor market, they still faced obstacles.
- It is even argued by some that the number of blacks in skilled trades declined from 1880 to 1930, due in part to white labor unions. 1920s and New Deal labor policy empowered labor unions to further this discrimination (Bernstein (2000)).

- The Great Depression was particularly hard on African Americans, as many of them worked menial, low-skilled work and were among the first to be discharged.
- Beyond that, many policies of the New Deal, a policy package to lift the economy, were unfavorable to African Americans and did little to ameliorate their plight. One example is the way in which the New Deal promoted labor unions, which excluded Blacks.
- It is argued that the Agricultural Adjustment Act of 1932 led to displacement of Blacks working as tenant farmers and sharecroppers.
   These policies were intended to support landowners, and, at that time, fewer than twenty percent of Blacks owned their own land.

- After the Great Depression, the Federal Housing Authority and the Veterans Administration provided for low-interest, long-term loans to first-time home buyers.
- However, African Americans were left out of these programs, as these loans were primary for suburbs, not the inner cities, where African Americans resided.
- From 1930 1960, when America's suburbs were shaped, less than
  one percent of all home loans were issued to Blacks. The Federal
  Housing Authority's *Underwriting Manual* disallowed loans to
  diversifying neighborhoods.
- This had the effect of decreasing property values in the inner city, as homeowners couldn't find buyers. Also, Blacks faced simple discrimination in residential markets.

- Contemporarily, in light of legal protections against discrimination for Black people, some now theorize that being born into families with no wealth is the main reason African Americans don't accumulate wealth, as wealth begets wealth.
- Holding income, age, parental occupational prestige, gender, family structure, education, parental net worth, and other variables constant, Researcher Salton Conley finds that parental net-worth is the single biggest predictor of personal net-worth.
- This likely represents the effects of parental gift-giving, or the lack-thereof.

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# Why stock market participation matters

- Stocks are a rational investment for households. There are numerous benefits to holding stock for households. One reason is that stocks can hedge households against inflation in the long run.
- From 1972 to 2021, the S&P 500, an index of stocks, saw an average real return of 5.4 percent (Price (n.d.)). Stocks have a higher potential for return compared to other investment vehicles, like bonds or bank certificates of deposit.
- Around the world, financial markets like the stock market have become more accessible, particularly to smaller investors. For instance, access to capital has also markedly increased since the Great Recession (Lusardi & Mitchell (2014)).

## Why stock market participation matters cont.

- With this breakdown in barriers to stock ownership, one would expect more people, particularly historically underserved groups, to invest in the stock market at higher rates, since they bear more personal responsibility for their financial well-being in retirement.
- This underlines the importance of financial knowledge and financial literacy, as they stock market can be risky.
- It has been shown in the existing literature that those who are less financially literate make poorer economic choices. This is to say that there is a link between financial literacy and economic decision making (Kimball & Shumway (2006)).

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## Hypothesis

- To see whether these factors are economic, I will control for income and wealth outside of stock market.
- To test whether these differentials are due to individual demographic variables, I include variables for whether or not a male heads the household, whether or not the household head has a BA, and age.
- To test whether the factors are due to household characteristics, I'll
  control for the presence of kids and the presence and whether the
  household head is married.
- It could be that Blacks, given their historical relationship with financial instruments, may be particularly wary of the stock market and have a abnormally low level of risk tolerance, financial knowledge, and financial literacy.

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# Data and Methodology

- This thesis uses data from the 2019 Survey of Consumer Finances (SCF).
- The SCF is a triennial cross-sectional survey of U.S. households that collects data on household financial portfolios and demographic characteristics, with an oversample of wealthy households.
- To analyze the determinants of stock market participation, I will use a
  probit model with a dummy for stock market participation as the
  dependant variable and the demographic and financial variables as the
  independent variables.

# Data and Methodology cont.

• The model takes the form:

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P(\textit{hstocks} = 1|\textit{black}, \textit{age}, \textit{man}, \textit{ba}\_\textit{attainment}, \textit{kids}, \textit{married1}, \\ \textit{income}, \textit{networth}\_\textit{minus}\_\textit{stocks}, \textit{knowl}, \textit{yesfinrisk}, \textit{finlit}) = \phi(\beta_0 + \beta_1 \textit{black} + \beta_3 \textit{age} + \beta_4 \textit{man} + \beta_5 \textit{ba}\_\textit{attainment} + \beta_6 \textit{kids} + \beta_7 \textit{married1} + \beta_7 \textit{income} + \beta_8 \textit{networth}\_\textit{minus}\_\textit{stocks} + \beta_9 \textit{knowl} + \beta_{10} \textit{yesfinrisk} + \beta_{11} \textit{finlit}),
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•  $\phi(\cdot)$  is the cumulative standard normal distribution function. I will estimate five separate regression models to see the relative effects of different classes of variables on stock market participation.

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# Regression output

	(1)	(2)	(3)	(4)	(5)
black	-0.263*** (-11.87)	-0.147*** (-6.72)	-0.140*** (-6.38)	-0.136*** (-6.26)	-0.110*** (-5.08)
age		0.00311*** (8.26)	0.00297*** (7.23)	0.00265*** (6.40)	0.00203*** (4.80)
man		0.166*** (10.10)	0.123*** (5.72)	0.118*** (5.55)	0.0928*** (4.37)
ba_attainment		0.208*** (18.69)	0.204*** (18.15)	0.195*** (17.24)	0.154*** (12.80)
kids			-0.00290 (-0.48)	-0.00322 (-0.54)	-0.00433 (-0.73)
married1			0.0564** (3.23)	0.0505** (2.92)	0.0310 (1.78)
income				-1.63e-09* (-2.28)	-1.57e-09* (-2.44)
networth_minus_stocks				6.03e-10*** (3.43)	5.01e-10** (3.26)
knowl					0.0194*** (5.79)
yesfinrisk					0.0772** (2.95)
finlit					0.0669*** (7.43)
N	23297	23297	23297	23297	23297

t statistics in parentheses

Sd errors are clustered by respondent

<sup>\*</sup> p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

#### Results and Discussion cont.

- Above, the average marginal effects are reported
- One key finding is that much of the racial gap in stock market participation remains even after controlling for the variables. Even with the controls, Blacks still have an 11 percent less likelihood of participating in the stock market.
- Some of this is undoubtedly due to the SCF's oversample of wealthy households, which would increase rate of stock market participation for whites.
- More complicated analyses may have yielded different results; Wang and Hanna (2007) use an Oaxaca (1973) decomposition technique and find that their right-hand-side variables completely explain the Black-white racial gap in stock market participation.

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#### Conclusion

- This presentation provides context for and explains much of the 26 percent racial stock market participation gap in the United States.
- Perhaps policymakers should pay particular attention to education completion and financial education efforts for Black Americans.
- This remaining gap could be due to the oversample of wealth households in the SCF, some unobserved variable(s), or some observed variable(s) not included in the model.
- Future research should estimate these regressions across multiple specifications and/or use alternate techniques to try to account for the remaining differential.

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- Bernstein, D. E. (2000). Racism, railroad unions, and labor regulations. *The Independent Review*, *5*(2), 237–247.
- Conley, D. (2010). Being black, living in the red: Race, wealth, and social policy in america. Univ of California Press.
- Kimball, M., & Shumway, T. (2006). Investor sophistication, and the participation, home bias, diversification, and employer stock puzzles. *Unpublished Manuscript, University of Michigan*.
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of economic literature*, 52(1), 5–44.
- Price, M. (n.d.). Average stock market return. The Motley Fool.

  Retrieved from https://www.fool.com/investing/how-to-invest/
  stocks/average-stock-market-return/
- Shapiro, T., Meschede, T., & Osoro, S. (2013). The roots of the widening racial wealth gap: Explaining the black-white economic divide.

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