

Financial Security Research Symposium



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Retirement Adequacy and the Outlook for Employer
Sponsored Retirement Plans

Financial Security Research Symposium

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Topics Covered Today

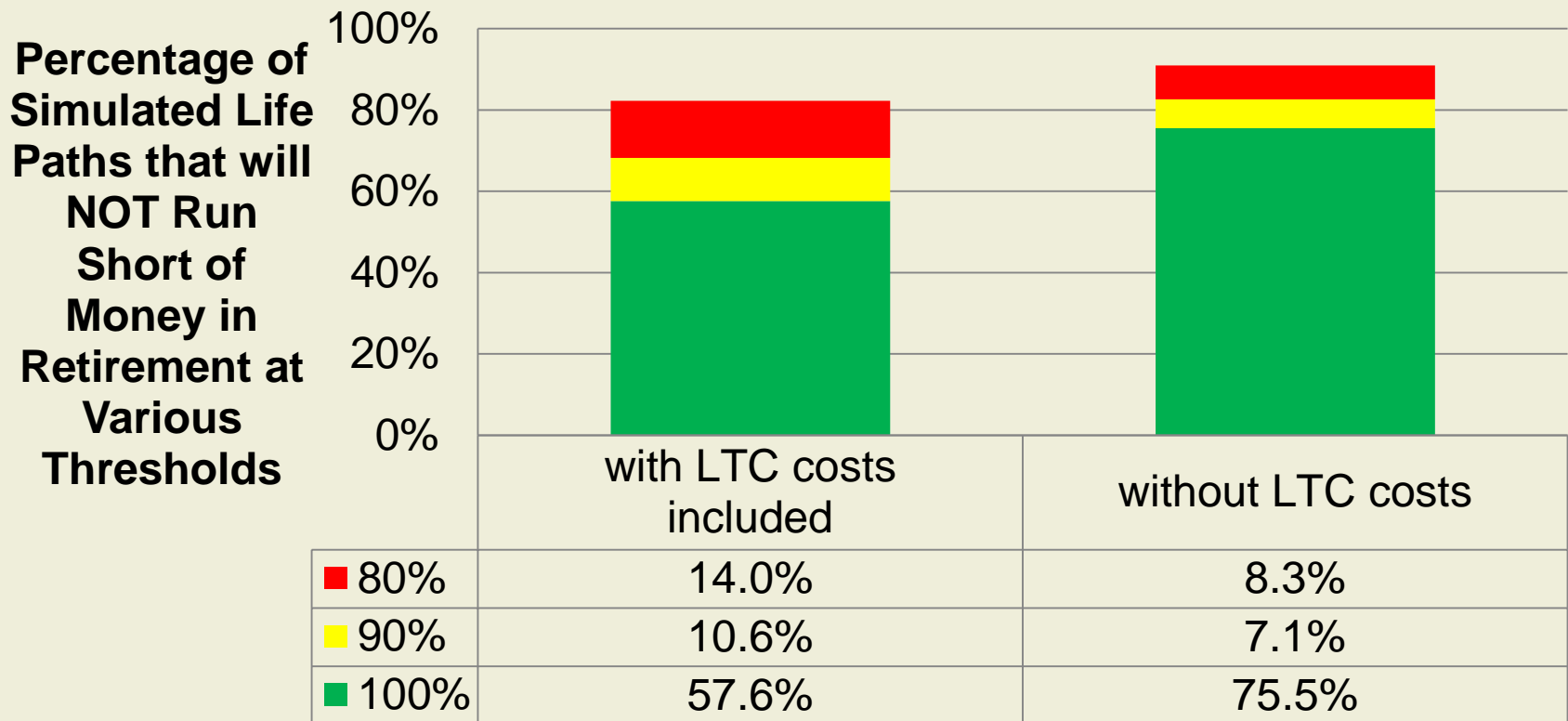
- Retirement Income Adequacy
 - How Is It Calculated?
 - Depends On The Definition Used
 - Retirement Income Adequacy Also Depends On Future Years Of DC Eligibility
- Impact Of Modifying Coverage
 - Reduction In Retirement Savings Shortfalls By Age For Coverage Modifications: Universal DC Vs Auto IRA
- Defined Benefit To Defined Contribution Shift: Implications For Retirement Income Adequacy
- 401(k) Plan Design Issues
 - Improvement In Simulated Retirement Outcomes Moving From Voluntary Enrollment To Automatic Enrollment (With Auto Escalation) 401(k) Plans By Age And Salary
 - Impact Of Leakages
- Key Take-aways/Insights On Future Research Directions

EBRI's Retirement Security Projection Model®

- Accumulation phase
 - Simulates retirement income/wealth for Boomers and Gen Xers from defined contribution, defined benefit, IRA, Social Security and net housing equity
 - Pension plan parameters coded from a time series of several hundred plans.
 - 401(k) asset allocation and contribution behavior based on individual administrative records
 - Annual linked records dating back to 1996
 - More than 24 million employees in 60,000 plans
 - More than 25 million IRA accounts owned by 20 million unique individuals
- Retirement phase
 - Simulates 1,000 alternative life-paths for each household, starting at 65
 - Deterministic modeling of costs for food, apparel and services, transportation, entertainment, reading and education, housing, and basic health expenditures.
 - Stochastic modeling of longevity risk, investment risk, nursing facility care and home based health care.
- Produces a Retirement Readiness Rating
 - Percentage of simulated life-paths that do NOT run short of money in retirement

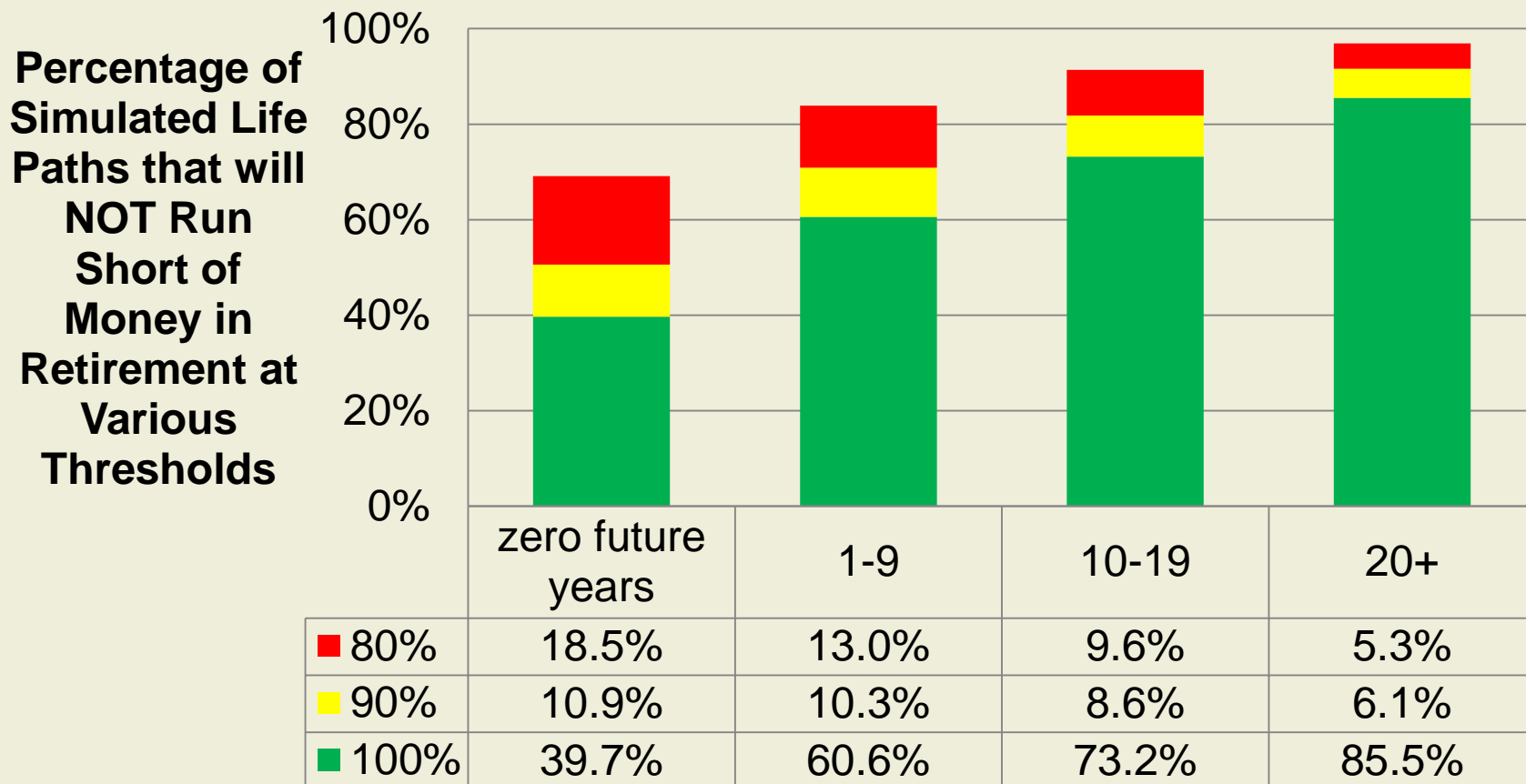
Retirement Income Adequacy Depends on the Definition Used

2014 Retirement Readiness Ratings With and Without Nursing Home and Home Health Costs for Boomers and Gen Xers



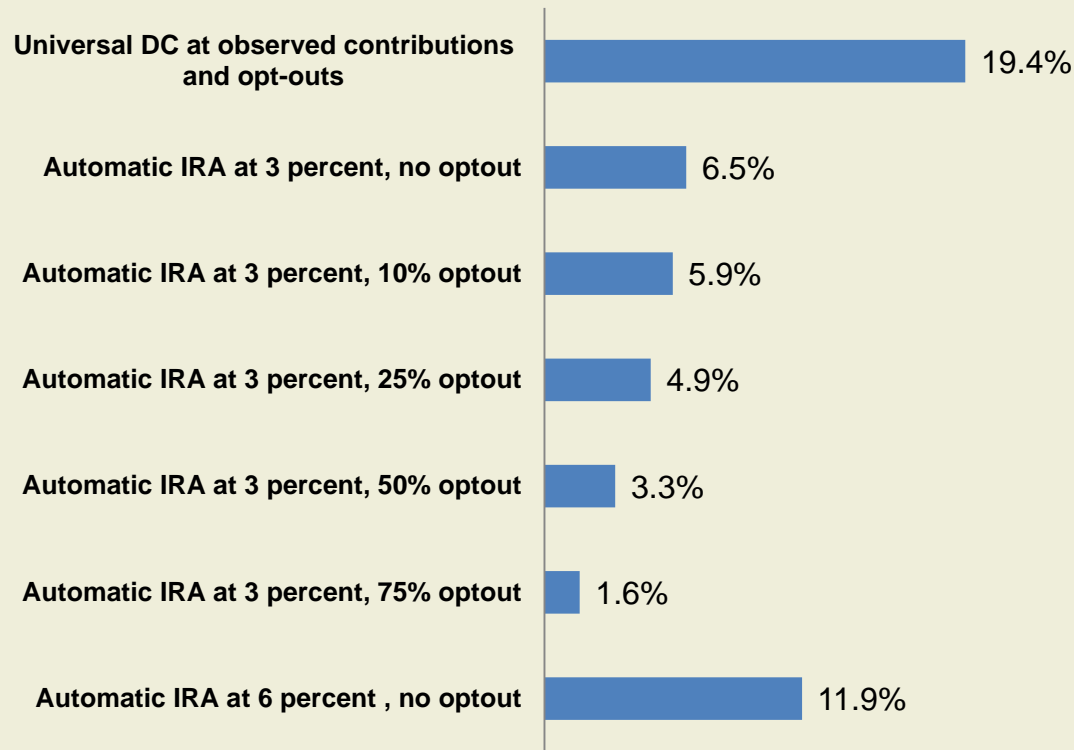
Retirement Income Adequacy Also Depends on **FUTURE** Years of **DC ELIGIBILITY**

2014 Retirement Readiness Ratings **With** Nursing Home and Home Health Costs for Gen Xers



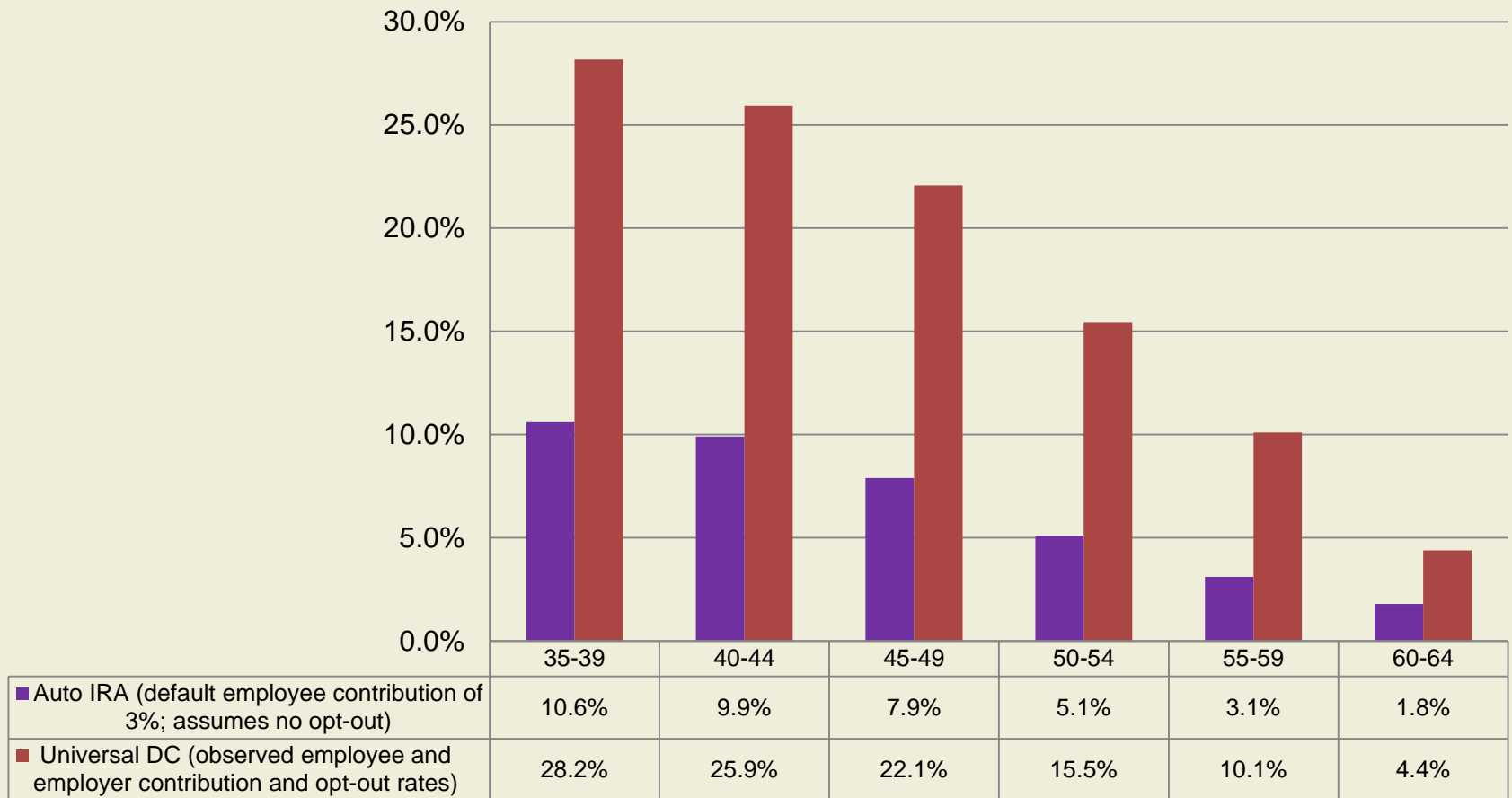
Impact of Modifying Coverage

Reduction in 2014 Retirement Savings Shortfalls* for Various Scenarios (Baseline = \$4.13 trillion)



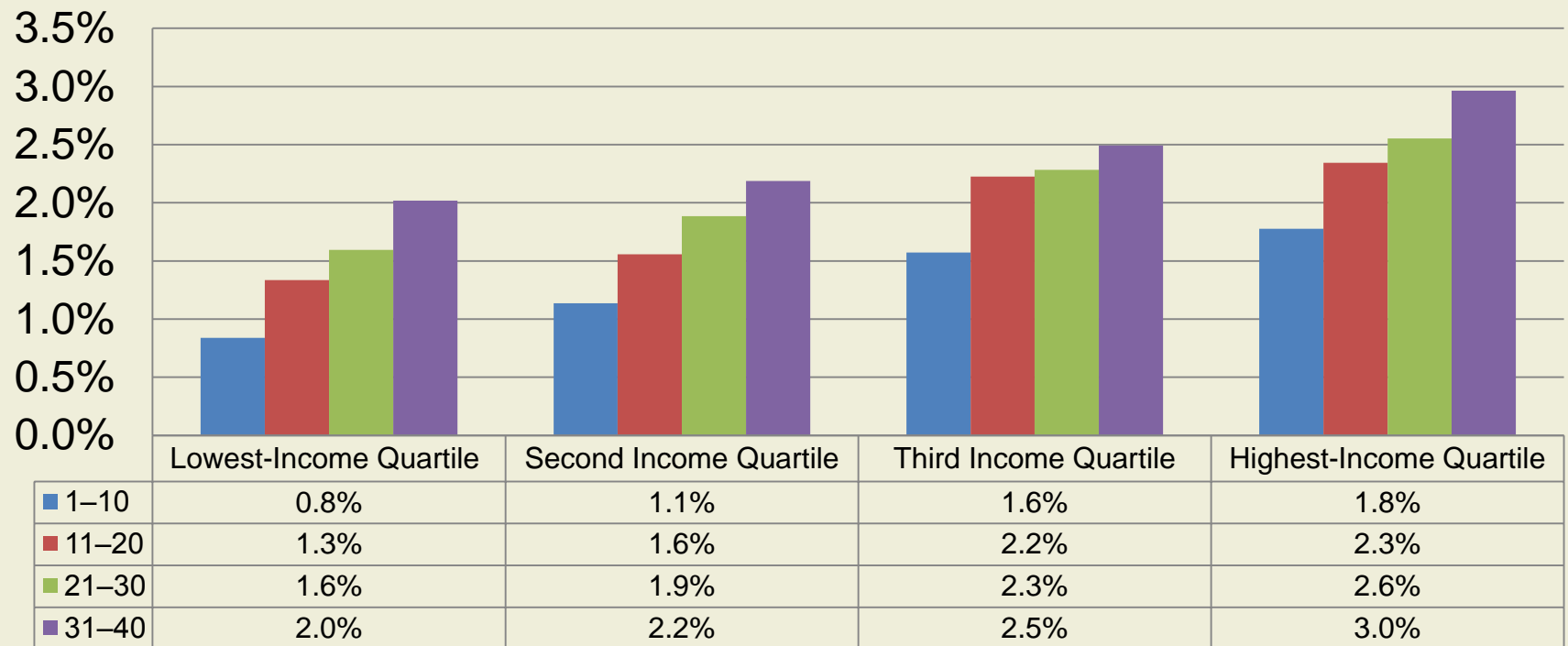
- Universal defined contribution scenario assumes all employers not currently offering DB and/or DC start sponsoring a defined contribution plan in 2015
 - But they will choose one similar to employers in their size range
- Assumptions for auto IRA scenario
 - All employers (regardless of size) are required to provide DB/DC or Auto IRA
 - No erosion from DC to Auto IRA
 - Husband's employer size is used to categorize employer size for married HH
 - 100% autocorrelation for employer size

Reduction in Retirement Savings Shortfalls by Age for Coverage Modifications

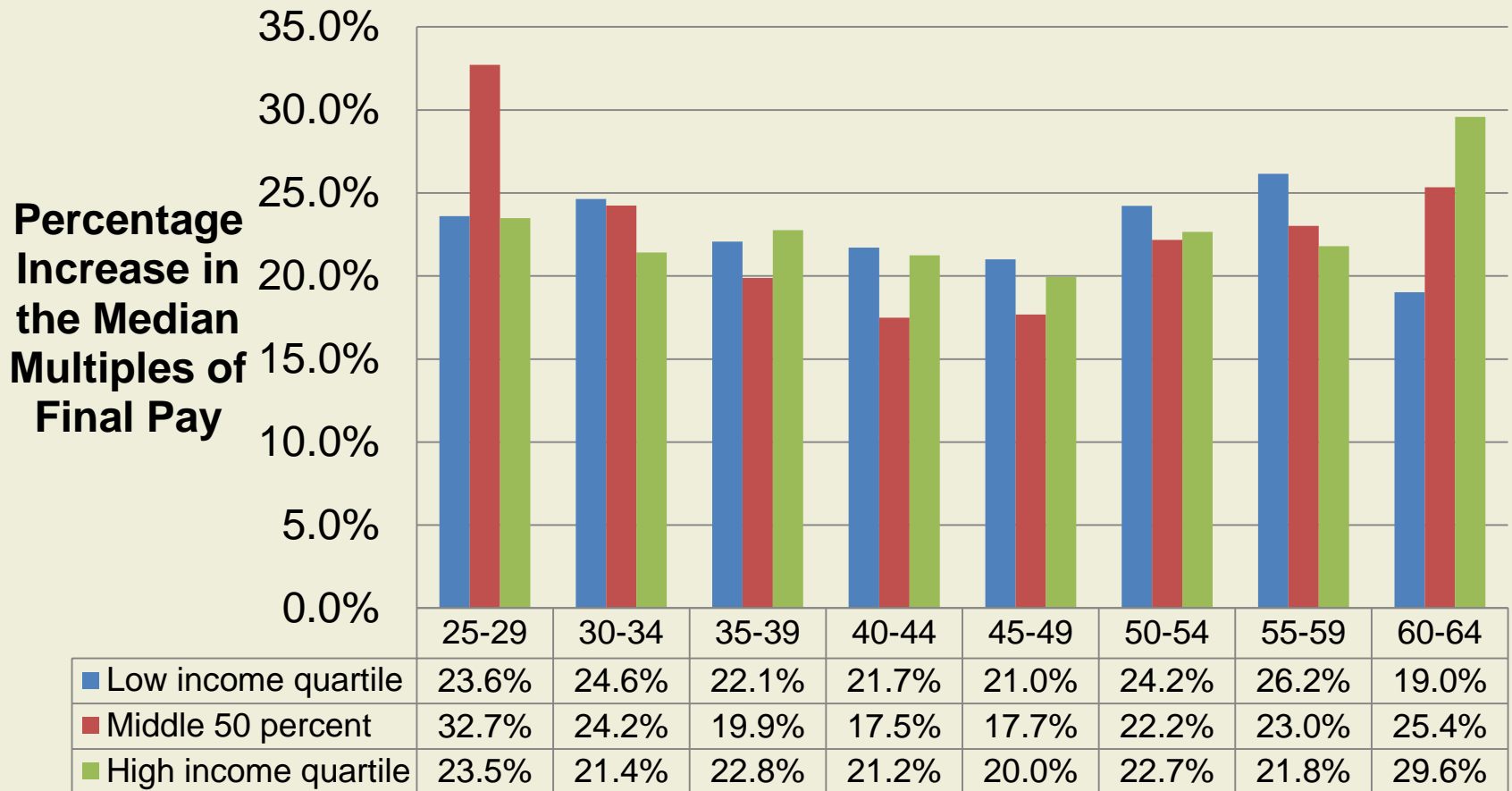


Defined Benefit To Defined Contribution Shift: Implications For Retirement Income Adequacy

Median of Final-Average DB Plan Generosity Parameters Needed for Equivalence With VE 401(k) Plan Among Employees Currently Ages 25–29, by Salary Quartile and Years of Eligibility: Baseline Assumptions for Males

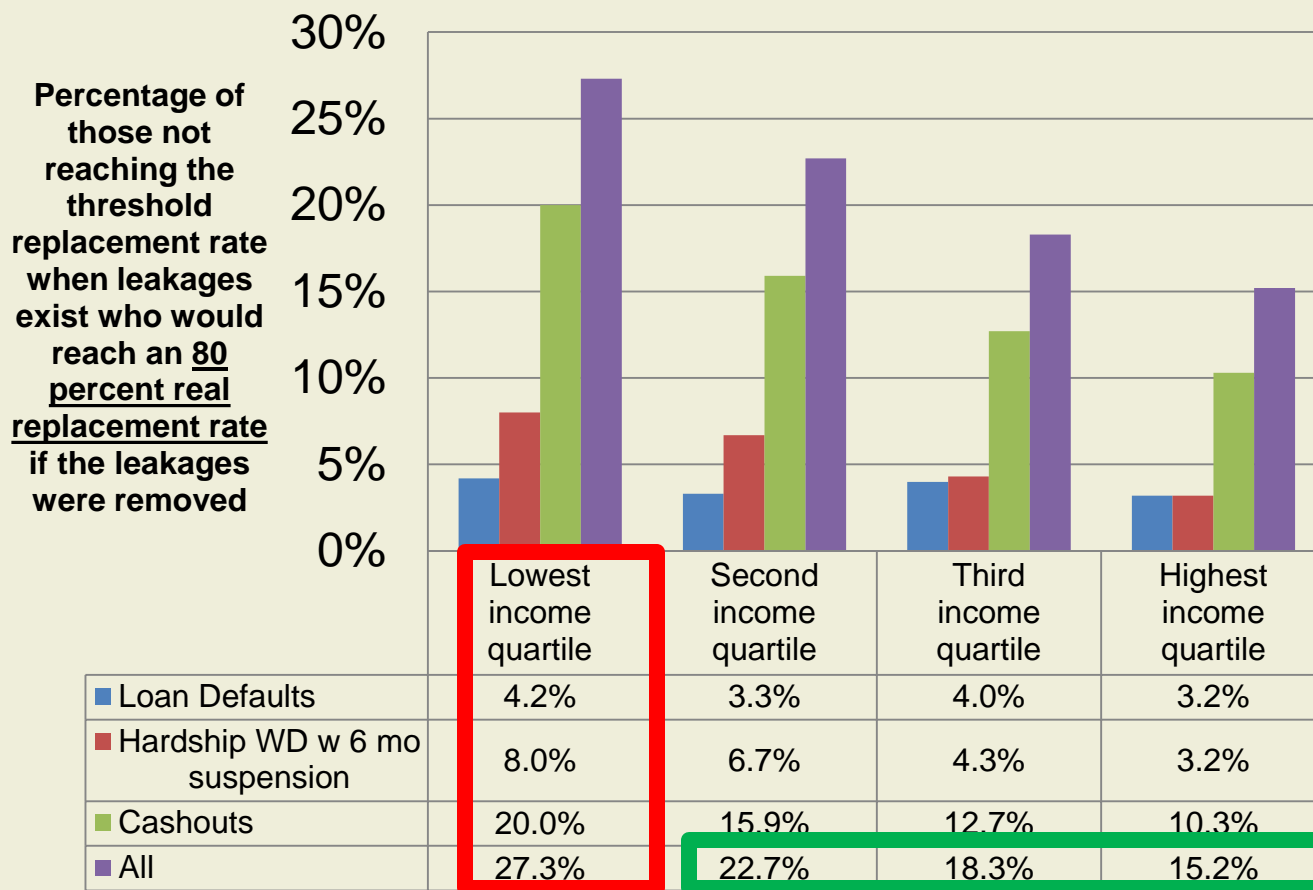


Improvement in Simulated Retirement Outcomes Moving from Voluntary Enrollment to Automatic Enrollment (with Auto Escalation) 401(k) Plans by Age and Salary



Impact of Leakages for Automatic Enrollment Plans

Assuming No Participant Behavior Change for Participation, Contribution or Asset Allocation



- The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan.
- Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62.
- Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates.
- Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt-out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007)

Key Take-Aways and Insights on Future Research Directions

- 58 to 82 percent of Boomer and Gen X households are expected to have “adequate” retirement income
 - Depends on definition of adequacy
 - If long-term costs are eliminated, this increases to 76-91 percent
- Only 40 percent of Gen X households with no future years of eligibility for DC participation would have adequate retirement income (at 100 percent of average expenditures)
 - But this increases to 61 percent for those with 1-9 years of future eligibility and 73 percent for those with 10-19 years
- Total retirement shortfalls (in 2014\$) for households 35-64 = \$4.13 trillion
 - Automatic IRA with 3 percent default and NO opt-outs decrease that by 6.5 percent
 - Universal DC (with observed contribution and opt-outs) decrease that by 19.4 percent
 - Both have relatively limited impact on those on the verge of retirement
- A change from VE to AE with auto-escalation increases the median multiple of final pay for 401(k) balances by at least 17 percent regardless of age or income quartile
- 1 in 5 of “middle income” 401(k) participants with at least 30 years of eligibility who are simulated to not have at least a combined 80 percent real replacement rate would do so if all three forms of leakages were eliminated
 - Assuming no participant behavior change for participation, contribution or asset allocation
- Future Research Directions
 - Extremely important to include plan-specific data with participant information

Expanding Access to Retirement Saving Programs

William Gale

Director, Retirement Security Project, Brookings Institution

September 7, 2016

Financial Security Research Symposium

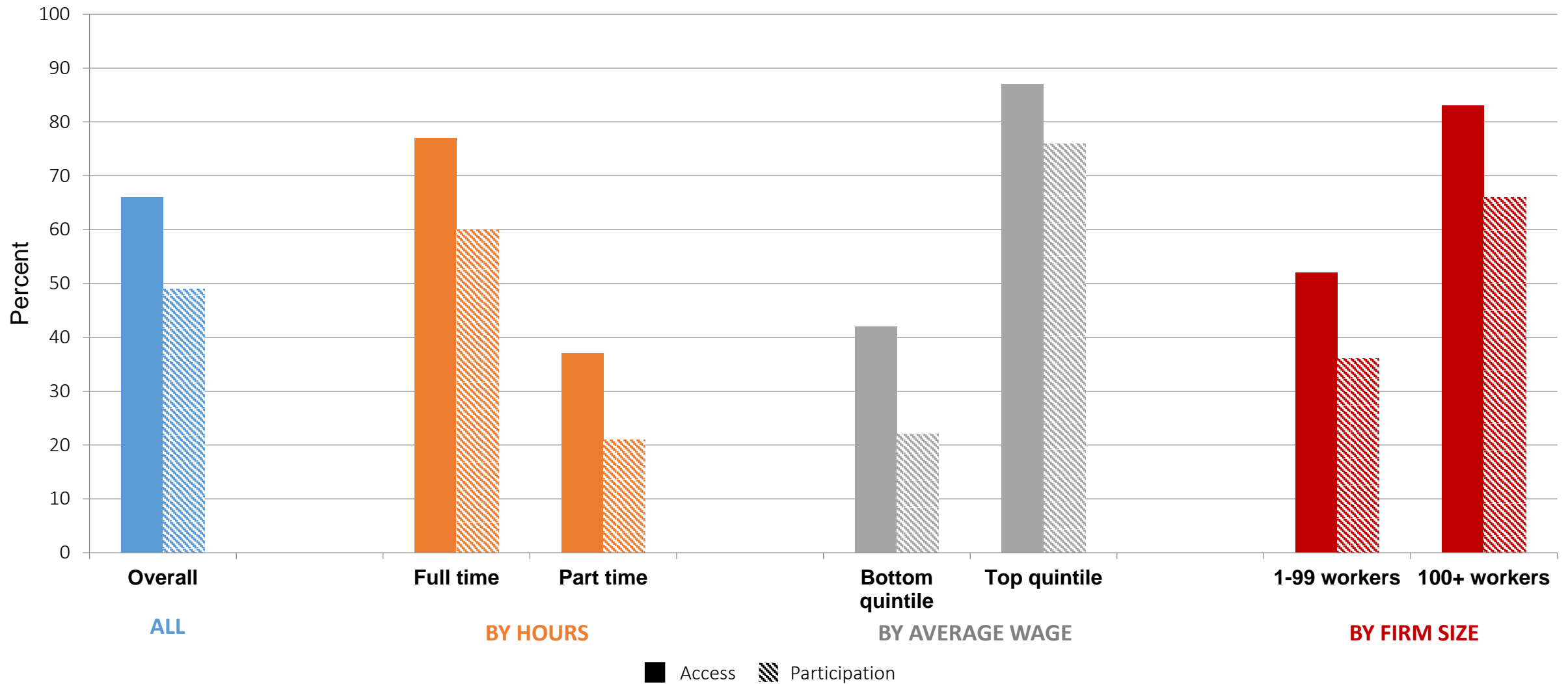
Main Points

- Access to retirement saving plans (or “coverage”) is necessary but not sufficient to generate adequate retirement saving
 - Necessary ... because people do not generate much retirement wealth outside of retirement plans and housing
 - Insufficient ... because participation choices, contribution levels, investment allocations, rollover choices, and distribution patterns still require attention
- There is a lot of room to raise access/coverage rates
 - Coverage is high among (a) full-time, year-round workers in medium and large firms and (b) government employees
 - Coverage is much lower among other groups: small-business employees, part-time workers, contingent workers

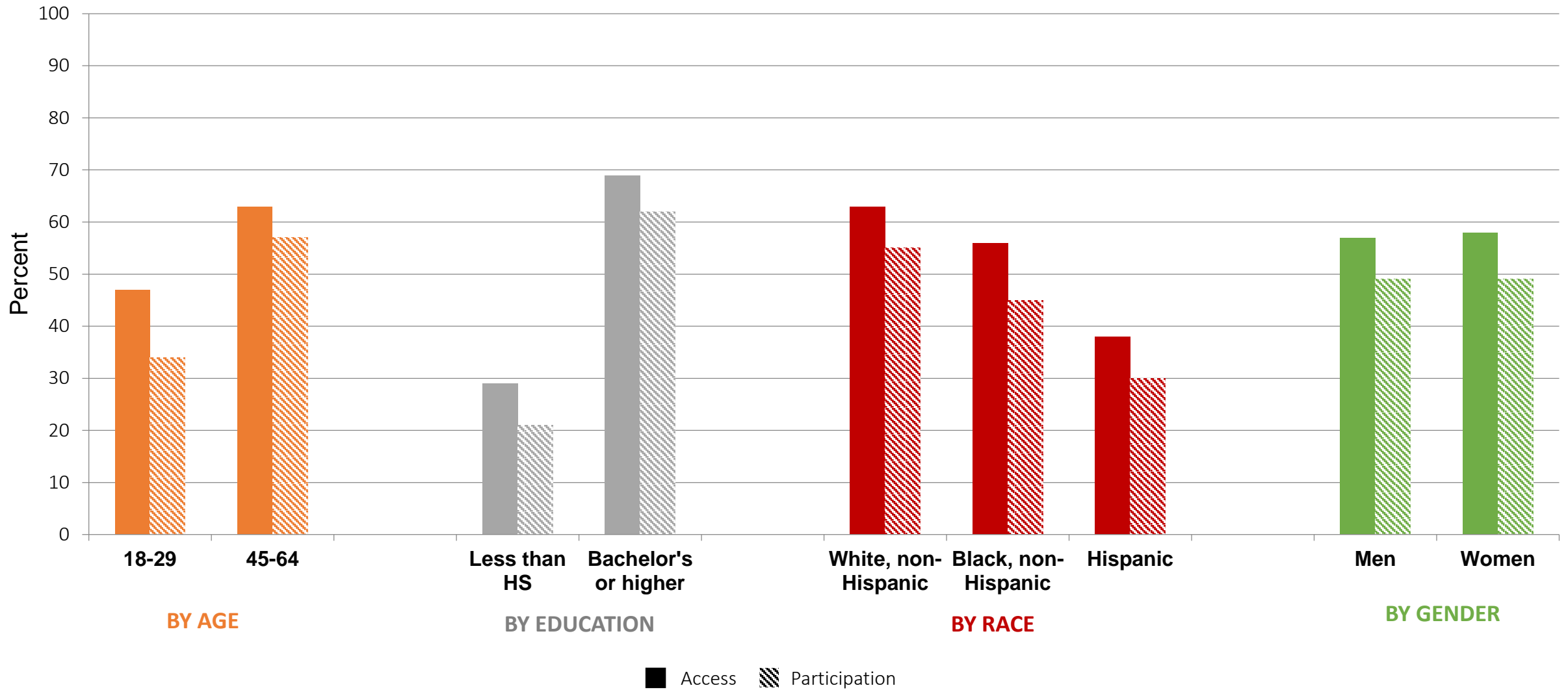
Main Points (cont.)

- Under the current ERISA model, under which employers have responsibility for retirement plans, raising coverage rates will only become more difficult as the labor market evolves toward a more contingent workforce
- There are, nevertheless, several promising approaches to raising coverage

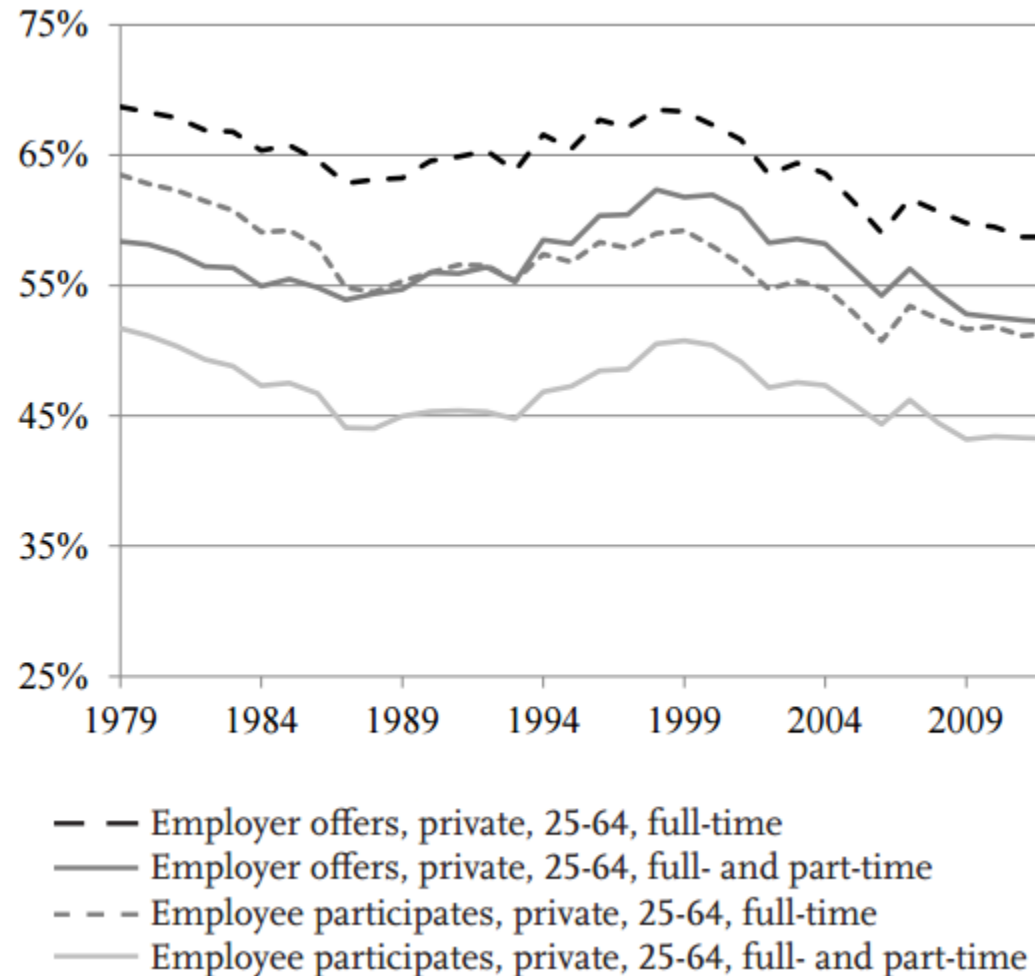
Coverage and Participation in Employer-Sponsored Retirement Plans, Private Sector Workers by Job Characteristic: March 2016



Coverage and Participation in Employer-Sponsored Retirement Plans, Private Sector Workers by Personal Characteristic: 2010-14



Coverage and Participation in Employer-Sponsored Retirement Plans: 1979-2012



The Growing Contingent Workforce

- Growth in non-traditional employment situations
 - Consultants, contractors, temps, day laborers, gig workers, etc.
 - Gig economy is tip of the iceberg
 - About 8 percent of the workforce (11 million people) in 2010 (GAO)
- Diverse situations imply the need for a variety of options/solutions
- Retirement system is designed for traditional employer-employee relationships and is not (yet) well-suited to contingent work arrangements

How to Raise Access

- Employer Mandate
 - To offer coverage and facilitate payroll deduction
 - NOT to sponsor a plan or make employer contributions
- Automatic enrollment
 - In conjunction with a mandate
 - With opt-out provision
- Nothing else will work well without the first two ingredients
 - Provision of additional saving options (myRA, MEPs)
 - Tax incentives (saver's credit)
 - Financial literacy / information (marketplace)

Auto IRA

- Iwry and John (2009)
 - Employers without a DB or DC plan would be required to automatically enroll workers in an IRA and facilitate contributions with payroll deductions
 - Exemptions for small employers (or those not using electronic payroll)
 - Employer tax credit for set-up and administrative costs
 - Employers would not be required to contribute
 - Employers would not be ERISA fiduciaries
 - Employees could opt out
- Included in Obama Administration budgets
- Federal legislation introduced several times, but never acted upon, so states have moved

MyRA

- For workers without access to an ESRP
- Roth IRA – no fees, start-up costs, or minimum contribution
- Investments go into ultra-low-risk Treasury securities
- A participant who accumulates \$15k can choose to roll the funds into a Roth IRA (but there's no requirement or automatic rollover)
- The program has been operational since Nov 2015

Multiple Employer Plans (MEPs)

- Historically, some employer associations offered retirement benefits to their workers in the private sector
 - Those firms had to have some common characteristic
 - Plans could be DB or DC
- New rules allow states to administer MEPs
 - Under which firms do not need a common characteristic
- Lower administrative burden for employers
- Improved fee and return structures for employees

Marketplace Models

- States offer small employers a menu of retirement plans, including both ERISA and non-ERISA options
- Options can include IRAs, IRA SIMPLE plans, MEPs, 401(k)s, MyRA, and even DB plans
- Shares some features with marketplace models under ACA
- First marketplace will open in 2017 in Washington (state)

Saver's Credit

- The saver's credit is not well-designed and is not well-understood
- It could be improved and better understood by
 - setting a constant match rate and phasing-out the contribution limit with income
 - putting the funds directly into the account rather than returning them as cash to the taxpayer
 - making it refundable
- These changes would have little effect on access under current arrangements, but could have bigger effects if combined with the employer mandate and automatic enrollment

Decouple the Retirement Plan and the Firm

- Change the basic ERISA model
 - Attach the retirement plan to the worker, not the employer
 - Employers would be required to facilitate payroll deductions into the account and could make contributions, but would not have to sponsor a plan
 - Like Social Security, the account is portable and would follow a worker from job to job
- Several related proposals in the US
 - Harkin, Friedman, Foster et al.
 - Gale, Holmes, John (2016) – Employer-Facilitated Accounts

Conclusions

- Essential features: employer mandates and automatic enrollment
 - Could be facilitated by marketplace models
 - Could be supplemented with a more robust and visible saver's credit
 - Probably don't need additional saving options
 - These various instruments can work together (as complements) rather than being seen as substitutes.
- Note: The employer mandate is tiny
 - The mandate is just to make payroll deductions
 - If a firm is already deducting federal and state income taxes and payroll taxes and uses electronic payroll services, the increase in costs should be trivial
 - If necessary, a very small tax credit should be sufficient to defray costs
 - The mandate should not involve employer contributions
 - The mandate should not imply any fiduciary role or trigger any non-discrimination rules

Conclusions (cont.)

- Heterogeneity of the workforce and work arrangements needs more attention
 - Can't do payroll deduction if there is no payroll
- Access is just the first step
 - Broader reforms are possible and not crazy
- If possible, address the issue at the federal level
 - If that isn't possible, encourage/facilitate the states
 - Having one unified plan is better than 50 plans, but having 50 plans is better than having none

Financial Security and Longer Careers*

John Laitner

8-30-2016

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Idea

Question: In an economy with longer life spans and fewer children, will lengthier careers help provide financial security for old age — and a way of preserving a balance between the needs and contributions of different generations?

Answer: We examine answers that economists' life-cycle model of household behavior might suggest

Environment

- Public health, gentler living & working conditions, and modern medicine are extending lives. If households choose to allocate most increases in longevity to longer retirement, the ratio of consumers to workers will rise; households will need to plan even more carefully for their post-employment expenditure needs; and, pressures on government finances will increase
- If, on the other hand, households choose to extend their careers, say, proportionately to life spans, far fewer adjustments will be necessary

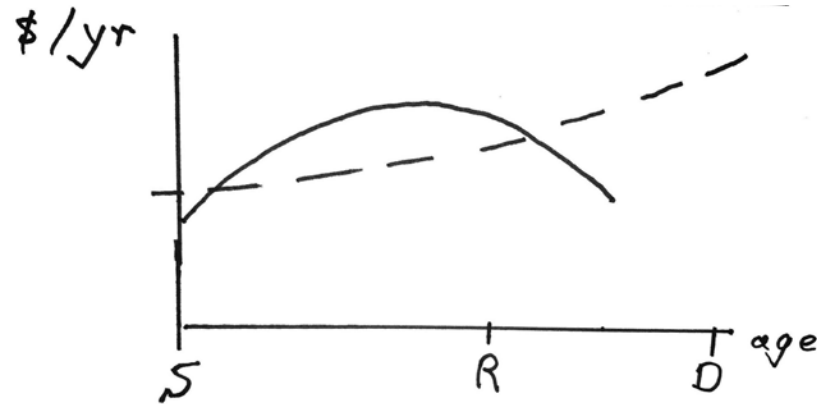
Standard Life-Cycle Model

- Model: We are given an exogenous profile of potential lifetime earnings. Household utility maximization (subject to lifetime resource constraints) yields an optimal retirement age, R , and the optimal consumption expenditure C_s for each age s
- See Modigliani [1986] and many others

Optimal Behavior

- Graphical representations:

Optimal R and Consumption Profile



- Solid Curve: (potential) earnings profile
- Dashed Curve: desired consumption expenditure profile
- Age for starting work, S ; age of retirement, R ;
age of death, D
- At the desired retirement age, the value of additional work exactly equals the value of the (corresponding) lost leisure

Issue (i): Might the tail off in earnings at older ages be endogenous?

- The standard life-cycle model takes the household profile of lifetime earning ability to be exogenous. Assuming the optimal retirement age R lies within the profile's downward sloping range (see the curve's right-hand end), the scope for longer careers will tend to be limited
- On the other hand, as longevity increases, the scope for longer careers will be far greater if household earnings profiles are endogenous

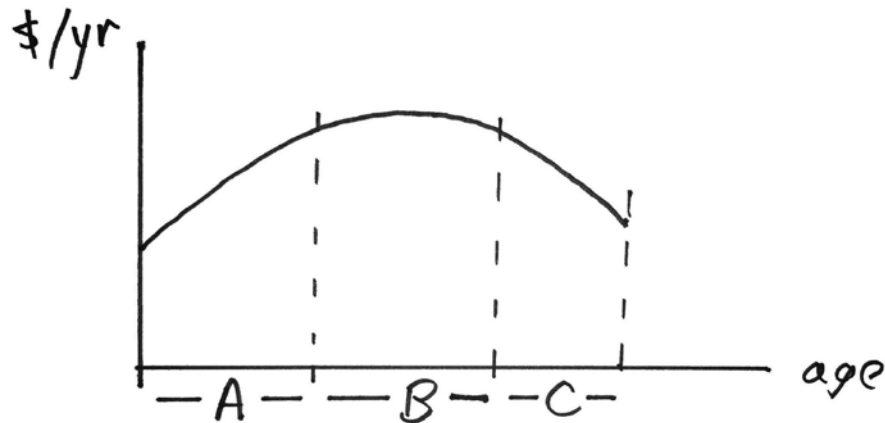
Endogenous Earnings Profiles: Investments in Health

- Is the downward sloping part of the earnings profile due to failing health? Are investments in health that delay the tail off possible (e.g., Scholz & Seshadri [2010])?
- Alternatively, is there a natural tendency toward a “compression of morbidity” (e.g., Freedman, Martin, & Schoeni [2002])?

Endogenous Earnings Profiles: Investments in Skill

- The Ben Porath [1967] interpretation of household earnings profiles provides a different scenario:

Household Lifetime Earnings Profile

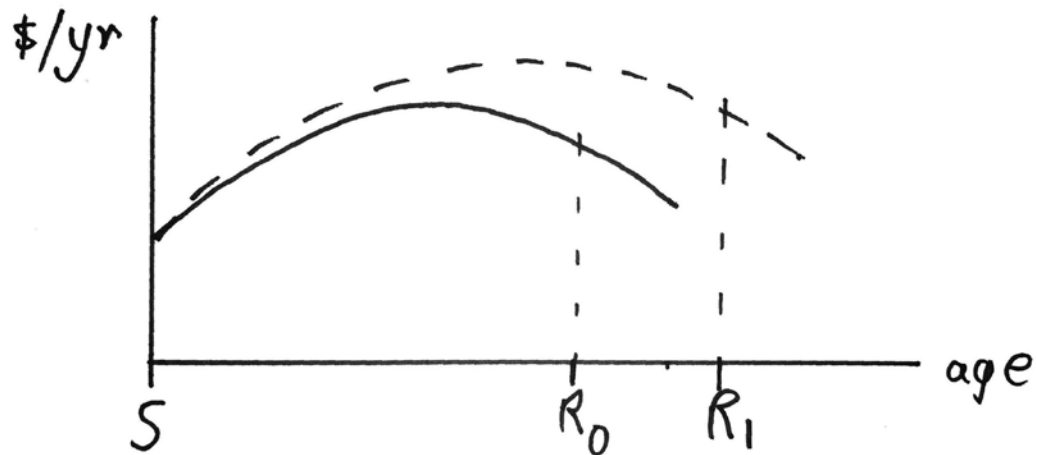


- Region A: high investment in skill acquisition
- Region B: high payoff from previous investments; low new investment
- Region C: consequence of low recent investments

Ben Porath Formulation

- In the Ben Porath framework, earnings profiles end up depending upon a household's planned retirement age

Earnings Profile given Retirement Age R_0 or R_1



- Solid Curve: lifetime (potential) earnings profile if planned retirement age is R_0
- Dashed Curve: lifetime (potential) earnings profile if planned retirement age is R_1

Bottom Line

- In the Ben Porath formulation, or in setups with endogenous investments in health, substantial increases in R could follow rises in longevity. Large increases are possible because households can shift their earnings profiles, rather than just moving along them
- In simpler life-cycle frameworks, on the other hand, the shape of lifetime earnings profiles suggests that future longevity improvements might well lead more to longer retirement than to longer careers

Issue (ii): Is it possible that older workers cannot keep up with technological progress?

- Beyond a worker's experience and investments in skill, aggregative technological progress is an important determinant of lifetime earning profile shapes
- If older workers cannot adapt to new technologies as rapidly as the young, that may tend to block longer careers
- Gorodnichenko, Laitner, Song and Stolyarov [2013] find, however, only limited evidence that older workers benefit less from technological change than the young. Rather, there seems to be a tradeoff: aging leads both to the benefits of work-related experience and (perhaps) to somewhat lower adaptability

Issue (iii): The existing tax system might incentivize artificially early retirement. Perhaps this suggests an avenue for promoting longer careers?

- Laitner & Silverman [2012]:
 - Income and payroll taxes tend to increase the relative attractiveness of leisure
 - General tax reductions may be infeasible. But, reductions targeted to the age range of retirement could be efficient
- An aging work force makes the consequences of such reform potentially more significant

Conclusion

- The life-cycle model has provided a versatile tool for studying household wealth accumulation and retirement behavior
- The model suggests several potential scenarios for career lengths in the future. It also suggests that tax reforms might encourage longer careers

Future Research

- Estimating structural life-cycle models requires panel data on individual households covering virtually entire life spans. Only relatively recently have data sets of this nature, such as the Health and Retirement Study (HRS), come available
 - Linking surveys to administrative-record data is a key — as in the case of the lifetime SSA earnings records linked to the HRS
 - Additional links to Medicaid, employer data, etc., will make the HRS even more valuable in the future
 - In an ever-changing environment, adding more birth cohorts is highly desirable

Future Research (cont.)

- High quality microdata on household consumption expenditure, and time use, would constitute another major advance
- In recent decades, the macroeconomic environment has provided a number of surprises. Modeling must take into account the apparent uneven nature of technological progress, the effects of globalization, etc.

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THE OHIO STATE UNIVERSITY

Home Equity Borrowing in Retirement: Current Trends and New Insights from Research

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The views expressed in this paper are those of the authors and do not necessarily represent the views of the Federal Reserve Board, the Federal Reserve System, or their staffs.



Motivation

Home equity is an important part of a senior household's financial portfolio

- ✓ Approximately 80% of households over the age of 62 own their homes, with average equity among owners of about **\$210,000** (2013 SCF)
- ✓ Equity comprises a large proportion of wealth for seniors; homeowners in the 60th income percentile and below have average home equity of about **\$142,000** and average financial assets of only **\$107,000** (2013 SCF)

Seniors tend to not draw down equity in retirement

- ✓ For seniors, equity extraction tends to occur after a household experiences a financial, health or household shock, often through home sale (e.g. Davidoff 2010; Nakajima & Telyukova 2011; Venti & Wise 1990; 2004; Poterba, Venti & Wise 2011)
- ✓ With regard to borrowing, there may be consumption smoothing motivations for home equity extraction (Hurst & Stafford 2004; Mian & Sufi 2009; 2011)
- ✓ Future borrowing is influenced by current debt; seniors have more mortgage debt than prior generations
 - **<20%** of households over the age of 62 had mortgage debt in 1992, compared with **40%** in 2010 & 2013 (2010 SCF; 2013 SCF)
 - Average LTV for seniors homeowners increased from about **30%** in 1992, to **45%** in 2010 (2010 SCF)



Research Questions

1. What factors are associated with seniors' extraction of home equity through different borrowing channels, including a reverse mortgage?
2. What is the relationship between home equity borrowing and senior financial health? Does borrowing through a reverse mortgage improve or worsen a senior's financial stability, as measured through credit outcomes?

To inform these questions, I will primarily draw from three papers that we have written as part of our larger research project on this topic, supplemented with insights from other scholars and current trends.



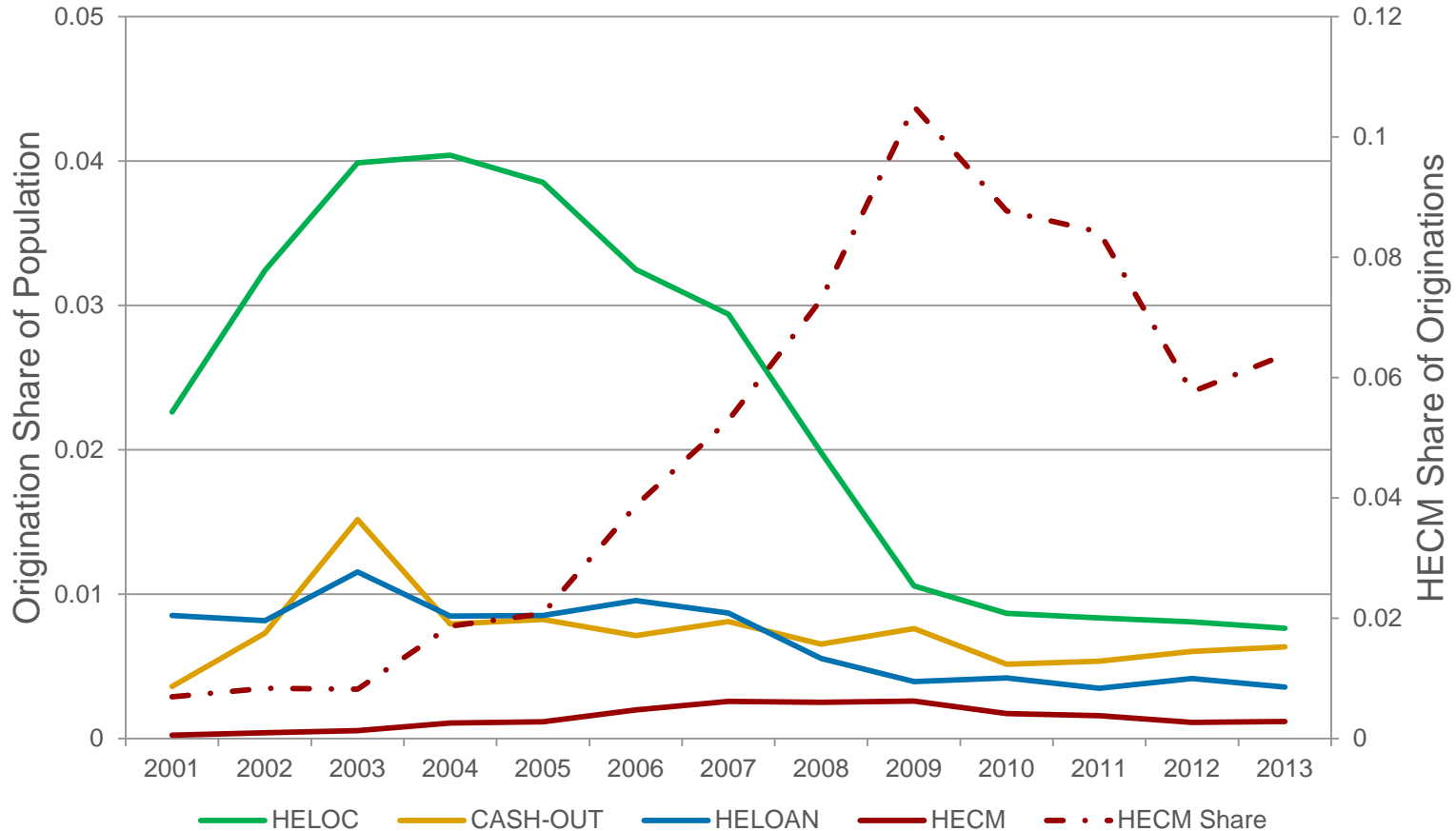
Home Equity Borrowing Channels

1. Cash-out refinancing
 - Primary extraction channel for all homeowners (Bhutta & Keys 2016), second most common channel for seniors
2. Revolving home equity line of credit (HELOC)
 - Primary extraction channel for seniors
3. Closed-end home equity loans
 - Typically structured as second liens
4. Reverse mortgages- federally insured home equity conversion mortgage (HECM)
 - Only available to seniors age 62+; approximately 2 percent of the eligible population holds a reverse mortgage



Home Equity Borrowing Time Trends, by Channel

Loan Originations for Consumers 62+



Source: Author's calculations from HUD HECM data and the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP)



Factors Influencing Borrowing, by Channel

	HELOC	CASH-OUT	HECM
Median House Prices	↑	↑	↑
HPI Δ, Positive	↑	↑	
HPI Δ, Negative			↑
Credit constrained borrowers and areas	↓	↑	↑
Credit constraints interacted with HPI Δ, Positive	↓	↑	
Credit card utilization rates	↑	↓	↑
Income	↑		↓
Race: % population that is Black	↓	↑	↑



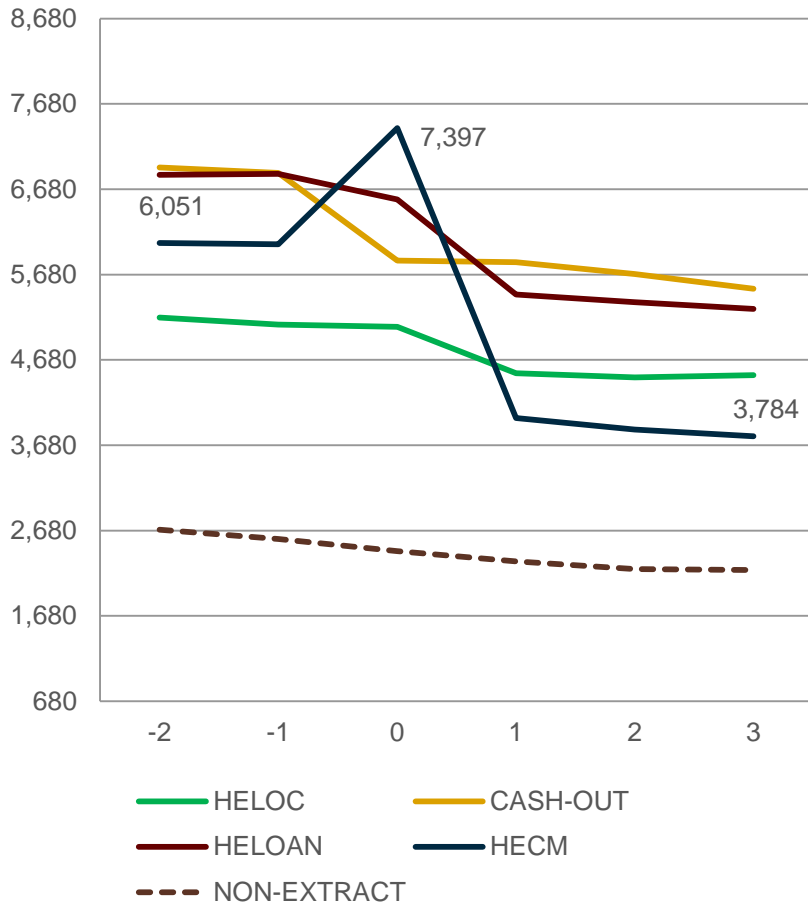
Home Equity Borrowing & Credit Outcomes

- Differences between extractors and non-extractors
 - ✓ Extracting equity through borrowing allows households to smooth consumption and access liquidity without the substantial costs of selling the home; may allow seniors to payoff higher cost debt, diversify asset portfolio and make large purchases
 - ✓ However, extracting equity raises overall LTV and may raise monthly debt burdens; in 2006, extractors were 90 percent more likely to default on their mortgages within four years after extraction than non-extractors (Bhutta & Keys 2016)
- Differences by channel of extraction: HECMs
 - ✓ Unlike HELOCs, HECMs cannot be reset in future periods with decline in house values or borrower credit quality; limited underwriting for HECMs; federal insurance bears the cost of negative equity
 - ✓ HECM allows access to liquidity without repayment (until termination), reducing strain on household budget and freeing up cash for other consumption
 - ✓ HECM requires all forward mortgages to be paid off, thus freeing up income that would have been used for the mortgage payment
 - ✓ Establishing a HECM as a line of credit may provide a buffer against financial shocks, thereby increasing liquidity and reducing default

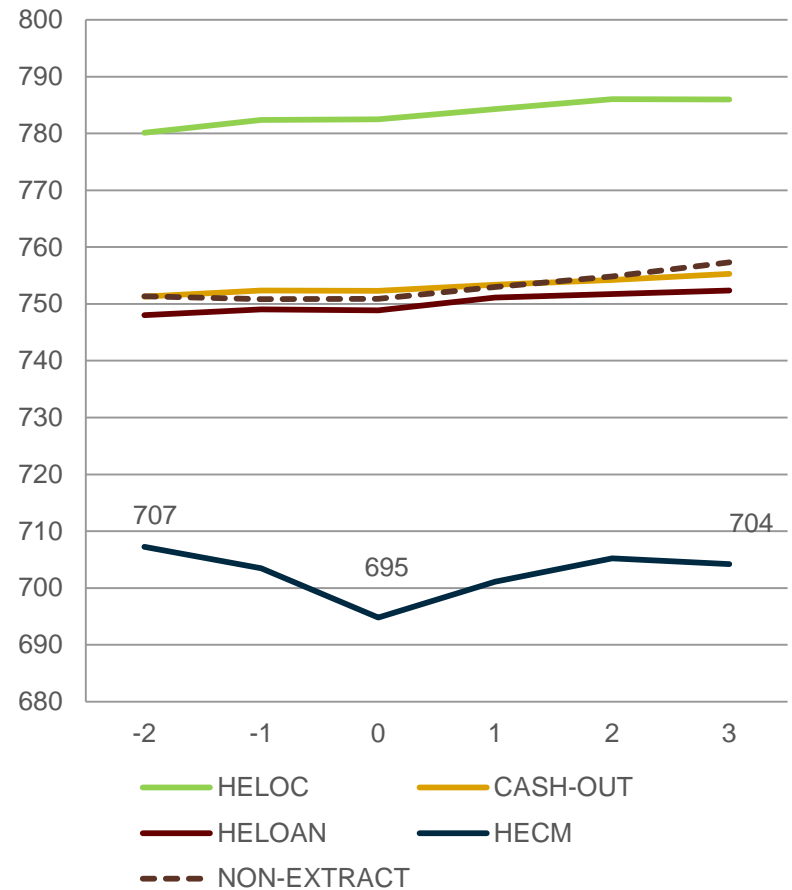


Credit Trends, by Extraction Channel

Credit Card Debt



Equifax Risk Score

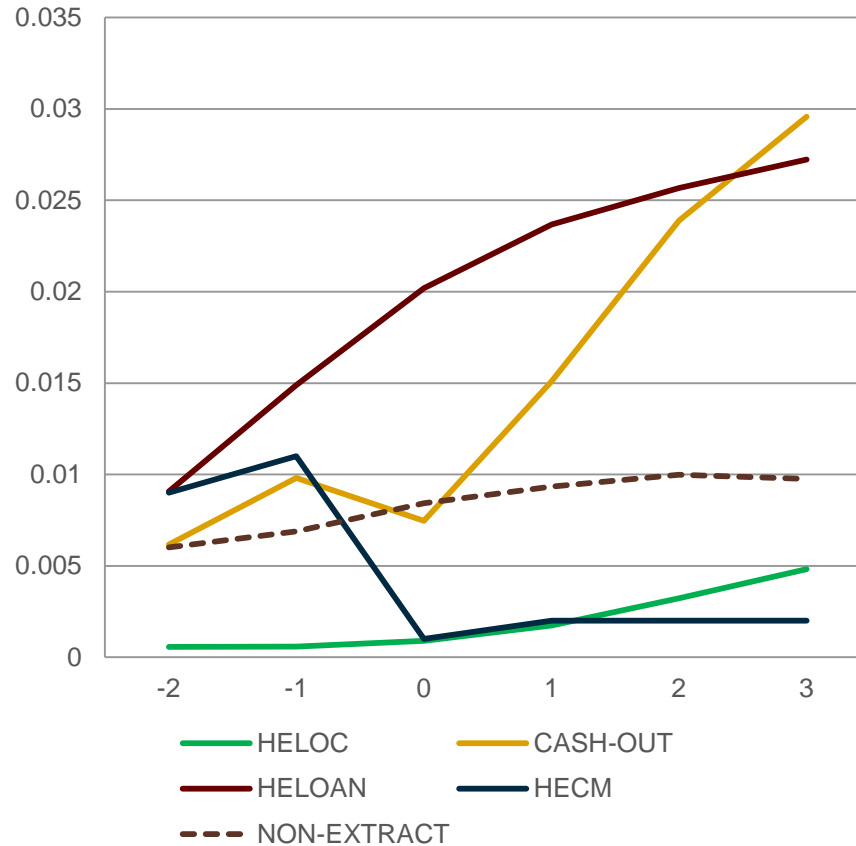


Source: Author's calculations from HUD HECM data and the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP)



Credit Trends, by Extraction Channel

Foreclosure on Credit File



Source: Author's calculations from HUD HECM data and the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP)



HECM Borrowing & Default

- As of April 2015 HECM lenders must assess a borrower’s “ability to pay” and follow minimum credit, debit and affordability standards
 - As of 2014, 12 percent of all HECM borrowers were in technical default due to failing to pay property taxes and/or homeowner’s insurance, and they had exhausted all available proceeds on the reverse mortgage.
 - We estimate a **6 percent reduction in HECM volume** due to the **credit portion of the policy**, based on the proportion of households who would “fail” the criteria and be unable to afford an escrow for taxes and insurance.
 - We estimate that the policy could reduce tax and insurance default by as much as **40 percent**.

Policy Simulations	%Δ in Predicted HECM volume	Δ in T&I Default Rate	% Δ in T&I Default Rate
Initial withdrawal limit	-7.6%	-3.0	-17.8%
Set-aside for credit score less than 580 + initial draw limit	-11.7%	-8.2	-49.9%
Hard limit: drop observations with bad credit	-17.3%	-4.8	-29.5%
Set-aside for bad credit	-5.7%	-6.5	-39.8%
Set-aside for bad credit + initial draw limit	-13.2%	-8.5	-52.0%

Source: Moulton, Stephanie, Donald Haurin and Wei Shi. 2015. An Analysis of Default Risk in the Home Equity Conversion Mortgage (HECM) Program. *Journal of Urban Economics* 90: 17-34. .



Future Research

Home equity borrowing and physical health in retirement

- We know that health shocks trigger equity extraction, primarily through selling and moving. But what about health shocks and home equity borrowing?
 1. Do households extract equity through borrowing in response to health shocks? If not, to what extent is lack of borrowing due to health shock because of a credit or budget constraint? HECM theoretically relaxes this constraint.
 2. Would extracting equity through borrowing- and in particular through a HECM- in response to a health shock have different longer term impacts on future health, and health expenses (e.g. probability and timing of going on Medicaid) than (a) selling and moving; or (b) not extracting equity at all?

Data needs (wish list)

- Medicare/Medicaid data merged with HUD HECM data; could use HRS linked Medicare/Medicaid data for other extraction channels and non-extractors
- Expanded panel survey of HECM borrower outcomes, combined with HRS survey respondents