EBRI EMPLOYEE BENEFIT RESEARCH INSTITUTE

Impact of the 2020 Market Crisis on Retirement Income Adequacy—and How Can Employers Help

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SPEAKERS



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Moderated by: Lori Lucas, CFA, President & CEO of EBRI







Preliminary Analysis on the Impact of the 2020 Market Crisis on Retirement Income Adequacy EBRI Webinar: April 14, 2020

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Outline of the presentation

- Brief summary of the simulation model
- Previous EBRI research
- Analysis on the impact of the 2020 market crisis as represented by several scenarios
 - Impact on aggregate retirement deficits for all US households ages 35-64
 - Results combined across all scenarios: Optimistic, Intermediate, Pessimistic
 - Impact on three different retirement income adequacy metrics by age for each scenario
- NB: this version of the model has NOT included likely impact from the CARES Act yet
- Key Take-Aways
- Future Work
- Appendix: additional information on the simulation model



EBRI's Retirement Security Projection Model (RSPM)

Accumulation phase

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- Simulates retirement income/wealth to retirement age for ALL US households ages 35-64 from defined contribution, IRA, Social Security
 - •401(k) participant behavior based on individual administrative records
 - Annual linked records dating back to 1996
 - oSocial security based on current statutory benefits for baseline
 - o Sensitivity analysis available for scenarios in which Trust Fund is exhausted
- Retirement/decumulation 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, long-term care (LTC) costs
- Output (Aggregated across all households in a cohort and expressed in 2019 dollars)
 - Retirement Savings Shortfalls: Present value of simulated retirement deficits at retirement age
 - 1/1/20: aggregate of \$3.68 trillion
 - Retirement Savings Surpluses: Present value of simulated retirement surpluses at retirement age
 - Retirement Savings Net Surplus: Present value of simulated retirement surpluses less retirement deficits at retirement age

For a list of approximately 50 studies using RSPM please see: bit.ly/ebri-rspm-new

Previous EBRI Research

- February 2009, The Impact of the Recent Financial Crisis on 401(k) Account Balances
 - Calculates how long it might take for end-of-year 2008 401(k) balances to recover to their beginning-of-year 2008 levels.
 - At a 5 percent equity rate-of-return assumption, those with longest tenure with their current employer would need nearly two years at the median to recover, but approximately five years at the 90th percentile.
 - At a zero percent equity rate of return, this recovery time increases to approximately 2.5 years at the median and nine to 10 years at the 90th percentile.
- July 2010, The EBRI Retirement Readiness Rating: [™] Retirement Income Preparation and Future Prospects
 - Percentage of population "at risk" for inadequate retirement income decreased by more than 10 percentage points from 2003 to 2010.
 - The impact of automatic enrollment more than made up for the impact of the financial and real estate market crises.
- February 2011, A Post-Crisis Assessment of Retirement Income Adequacy for Baby Boomers and Gen Xers
 - Looking at all Early Boomer households that would need to save an additional amount (over and above the savings already factored into the baseline model), the median percentage of additional compensation for these households desiring a 50 percent probability of retirement income adequacy would be 3.0 percent of compensation each year until retirement age to account for the financial and housing market crisis in 2008 and 2009.



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AGGREGATE CHANGE IN RETIREMENT DEFICITS

UNDERLYING SCENARIOS

- Scenario A: Assumes investment results only, with no behavioral modifications on the part of employees or plan sponsors for each of the following three scenarios:
 - Optimistic is half of the 2020 first quarter decline
 - Intermediate equals the 2020 first quarter decline
 - **Pessimistic** equals the decline experienced in 2007-2009
- Scenarios B-F: These scenarios build on the Intermediate market scenario as follows:

Scenario:	Optimistic	Intermediate	Pessimistic
B : % of plan sponsors suspending match for a certain # of years	10% for 1 year	20% for 1 year	40% for 3 years
C: Scenario B and participants in plans with suspended matches also reducing contributions	10% for 1 year	20% for 1 year	40% for 3 years
D: 1 st Quarter returns, and a certain percent of plans with <\$10 million in assets terminating	20%	40%	100%
E: 1 st Quarter returns, and a one-time increase in withdrawals of a certain percentage	6.6%	13.2%	26.5%
F: 1 st Quarter returns, and unemployment causing a 10% percentage decrease in eligibility for a certain number of years	1 year	2 years	3 years



Increase in Aggregate Retirement Deficit from the 1/1/20 Level of \$3.68 Trillion

All U.S. Households Ages 35-64

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Increase From 1/1/20 Baseline of \$3.86 Trillion (In billions)



PRELIMINARY Source: EBRI Retirement Security Projection Model® version 3623.



ALL SCENARIOS COMBINED: IMPACT BY AGE

AGGREGATE INCREASE IN SHORTFALLS BY SCENARIO



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Source: EBRI Retirement Security Projection Model® version 3623. Note: All scenarios combined: Pessimistic, Intermediate, Optimistic.

AGGREGATE DECREASE IN <u>SURPLUSES</u> BY SCENARIO



-1070	Ages	35-39	40-44	45-49	50-54	55-59	60-64
Optimistic		-7.1%	-7.7%	-8.5%	-9.2%	-10.0%	-10.8%
Intermediate		-13.0%	-13.5%	-14.5%	-15.1%	-15.9%	-16.5%
Pessimistic		-27.7%	-30.0%	-31.6%	-32.8%	-34.0%	-35.1%

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Source: EBRI Retirement Security Projection Model® version 3623. Note: All scenarios combined: Pessimistic, Intermediate, Optimistic.

AGGREGATE DECREASE IN <u>NET SURPLUSES</u> BY SCENARIO





PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. Note: All scenarios combined: Pessimistic, Intermediate, Optimistic.



INVESTMENT RESULTS ONLY BY AGE AND AGE-SPECIFIC BALANCE QUARTILES

IMPACT OF 1ST QUARTER MARKET VOLATILTY ON RETIREMENT SAVINGS <u>SHORTFALLS</u>

by age-specific quartile of 401(k) + IRA balances





PRELIMINARY Source: EBRI Retirement Security Projection Model® version 3623. *Note:* 20Q1 investment results only, no behavioral modification on the part of employees or sponsors.

IMPACT OF 1ST QUARTER MARKET VOLATILTY ON RETIREMENT SAVINGS <u>SURPLUSES</u>

by age-specific quartile of 401(k) + IRA balances



PRELIMINARY

EMPLOYEE BENEFIT Source: EBRI Retirement Security Projection Model® version 3623. *Note:* 20Q1 investment results only, no behavioral modification on the part of employees RESEARCH INSTITUTE or sponsors.

IMPACT OF 1ST QUARTER MARKET VOLATILTY ON RETIREMENT SAVINGS <u>NET SURPLUSES</u>

by age-specific quartile of 401(k) + IRA balances

-12.3%



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-9.9%

Highest

EMPLOYEE BENEFIT Source: EBRI Retirement Security Projection Model® version 3623. *Note:* 20Q1 investment results only, no behavioral modification on the part of employees RESEARCH INSTITUTE or sponsors.

-13.9%

-15.2%

18

-17.9%

-16.5%



IMPACT OF INDIVIDUAL SCENARIOS BY AGE

SCENARIO A: INCREASE IN <u>SHORTFALLS</u> UNDER VARIOUS INVESTMENT SCENARIOS



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EMPLOYEE BENEFIT

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Source: EBRI Retirement Security Projection Model® version 3623. Note: Scenario A: investment results only, no behavioral modification on the part of

employees or sponsors.

Optimistic is half of the 2020 first quarter decline. Intermediate equals the 2020 first quarter decline. Pessimistic equals the decline experienced in 2007-2009.

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SCENARIO A: DECREASE IN <u>SURPLUSES</u> UNDER VARIOUS INVESTMENT SCENARIOS



100/							
-40 /0	Ages	35-39	40-44	45-49	50-54	55-59	60-64
Optimistic		-5.4%	-6.7%	-7.8%	-8.8%	-9.7%	-10.6%
Intermediate		-9.2%	-11.5%	-12.7%	-14.1%	-15.1%	-15.9%
Pessimistic		-19.9%	-24.0%	-26.9%	-29.9%	-32.1%	-33.6%

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Source: EBRI Retirement Security Projection Model[®] version 3623. *Note:* Scenario A: investment results only, no behavioral modification on the part of employees or sponsors.

Optimistic is half of the 2020 first quarter decline. Intermediate equals the 2020 first quarter decline. Pessimistic equals the decline experienced in 2007-2009.

SCENARIO A: DECREASE IN <u>NET SURPLUSES</u> UNDER VARIOUS INVESTMENT SCENARIOS



///0/							
-40 /0	Ages	35-39	40-44	45-49	50-54	55-59	60-64
Optimistic		-6.1%	-7.3%	-8.3%	-9.3%	-10.4%	-11.4%
Intermediate		-10.4%	-12.4%	-13.6%	-15.0%	-16.2%	-17.1%
Pessimistic		-22.4%	-26.1%	-28.9%	-32.0%	-34.6%	-36.3%

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Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario A: investment results only, no behavioral modification on the part of employees or sponsors.

Optimistic is half of the 2020 first quarter decline. Intermediate equals the 2020 first quarter decline. Pessimistic equals the decline experienced in 2007-2009.

SCENARIO B: INCREASE IN <u>SHORTFALLS</u> DUE TO PLAN SPONSORS REDUCING MATCHING CONTRIBUTIONS FOR A GIVEN PERIOD OF TIME



PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario B: use 20Q1 investment returns but X percent of sponsors suspend matches for Y years.

SCENARIO B: DECREASE IN <u>SURPLUSES</u> DUE TO PLAN SPONSORS REDUCING MATCHING CONTRIBUTIONS FOR A GIVEN PERIOD OF TIME







PRELIMINARY Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario B: use 20Q1 investment returns but X percent of sponsors suspend matches for Y years.

-13.5%

-14.7%

-12.4%

-10.4%

24

-16.2%

-15.6%

SCENARIO B: DECREASE IN <u>NET SURPLUSES</u> DUE TO PLAN SPONSORS REDUCING MATCHING CONTRIBUTIONS FOR A GIVEN PERIOD OF TIME



PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario B: use 20Q1 investment returns but X percent of sponsors suspend matches for Y years.

SCENARIO C: INCREASE IN <u>SHORTFALLS</u> DUE TO PLAN SPONSOR AND PARTICIPANT CONTRIBUTION CHANGES



PRELIMINARY

EMPLOYEE BENEFIT

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario C: same as B with X percent of sponsors suspending contributions for Y years and their participants reduce contributions by Z percent. *Participants in plans with suspended matching contributions.

SCENARIO C: DECREASE IN <u>SURPLUSES</u> DUE TO PLAN SPONSOR AND PARTICIPANT CONTRIBUTION CHANGES



PRELIMINARY

EMPLOYEE BENEFIT

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario C: same as B with X percent of sponsors suspending contributions for Y years and their participants reduce contributions by Z percent. *Participants in plans with suspended matching contributions.

SCENARIO C: DECREASE IN <u>NET SURPLUSES</u> DUE TO PLAN SPONSOR AND PARTICIPANT CONTRIBUTION CHANGES





PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario C: same as B with X percent of sponsors suspending contributions for Y years and their participants reduce contributions by Z percent. *Participants in plans with suspended matching contributions.

SCENARIO D: INCREASE IN <u>SHORTFALLS</u> DUE TO A CERTAIN PERCENT OF PLANS WITH <\$10 MILLION IN ASSETS TERMINATING*



PRELIMINARY

EMPLOYEE BENEFIT

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario D: use 20Q1 investment returns but X percent of plans with less than \$10 million in assets permanently terminate the plan. *Assumes 1st Quarter 2020 returns.

SCENARIO D: DECREASE IN <u>SURPLUSES</u> DUE TO A CERTAIN PERCENT OF PLANS WITH <\$10 MILLION IN ASSETS TERMINATING*



	Ages	35-39	40-44	45-49	50-54	55-59	60-64
20% Terminating		-10.6%	-12.2%	-13.2%	-14.4%	-15.4%	-16.0%
40% Terminating		-12.3%	-13.0%	-14.1%	-14.8%	-15.6%	-16.2%
100% Terminating		-15.4%	-16.2%	-16.2%	-16.1%	-16.3%	-16.7%

PRELIMINARY Source: EBRI R

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Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario D: use 20Q1 investment returns but X percent of plans with less than \$10 million in assets permanently terminate the plan. *Assumes 1st Quarter 2020 returns.

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SCENARIO D: DECREASE IN <u>NET SURPLUSES</u> DUE TO A CERTAIN PERCENT OF PLANS WITH <\$10 MILLION IN ASSETS TERMINATING*



PRELIMINARY EMPLOYEE BENEFIT Source: EBRI R

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario D: use 20Q1 investment returns but X percent of plans with less than \$10 million in assets permanently terminate the plan. *Assumes 1st Quarter 2020 returns.

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SCENARIO E: INCREASE IN <u>SHORTFALLS</u> DUE TO A ONE-TIME INCREASE IN PARTICIPANT WITHDRAWALS*



PRELIMINARY

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Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario E: use 20Q1 investment returns but assume a one-time increase in total withdrawal of X percent. *Assumes 1st Quarter 2020 returns.

SCENARIO E: DECREASE IN <u>SURPLUSES</u> DUE TO A ONE-TIME INCREASE IN PARTICIPANT WITHDRAWALS*







PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario E: use 20Q1 investment returns but assume a one-time increase in total withdrawal of X percent. *Assumes 1st Quarter 2020 returns.

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-16.1%

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-15.3%

SCENARIO E: DECREASE IN <u>NET SURPLUSES</u> DUE TO A ONE-TIME INCREASE IN PARTICIPANT WITHDRAWALS*



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PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario E: use 20Q1 investment returns but assume a one-time increase in total withdrawal of X percent. *Assumes 1st Quarter 2020 returns.

SCENARIO F: INCREASE IN <u>SHORTFALLS</u> DUE TO UNEMPLOYMENT CAUSING A 10 PERCENT DECREASE IN ELIGIBILITY FOR A CERTAIN NUMBER OF YEARS*



PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario F: use 20Q1 investment returns but unemployment causes a 10 percent decrease in eligibility for X years. *Assumes 1st Quarter 2020 returns.

SCENARO F: DECREASE IN <u>SURPLUSES</u> DUE TO UNEMPLOYMENT CAUSING A 10 PERCENT DECREASE IN ELIGIBILITY FOR A CERTAIN NUMBER OF YEARS*



100/							
-10/0	Ages	35-39	40-44	45-49	50-54	55-59	60-64
1 Year		-9.4%	-11.6%	-12.8%	-14.2%	-15.2%	-15.9%
2 Years		-9.7%	-11.7%	-12.9%	-14.3%	-15.3%	-16.0%
■3 Years		-9.9%	-11.9%	-13.0%	-14.4%	-15.3%	-16.0%



PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. *Note:* Scenario F: use 20Q1 investment returns but unemployment causes a 10 percent decrease in eligibility for X years. *Assumes 1st Quarter 2020 returns. 36

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SCENARIO F: DECREASE IN NET SURPLUSES DUE TO UNEMPLOYMENT CAUSING A 10 PERCENT DECREASE IN ELIGIBILITY FOR A CERTAIN NUMBER OF YEARS*



	Ages	35-39	40-44	45-49	50-54	55-59	60-64
■1 Year		-10.6%	-12.6%	-13.7%	-15.1%	-16.3%	-17.1%
2 Years		-10.9%	-12.7%	-13.9%	-15.2%	-16.4%	-17.2%
■3 Years		-11.1%	-12.9%	-14.0%	-15.4%	-16.4%	-17.3%



PRELIMINARY

Source: EBRI Retirement Security Projection Model® version 3623. Note: Scenario F: use 20Q1 investment returns but unemployment causes a 10 percent decrease in eligibility for X years. *Assumes 1st Quarter 2020 returns. © Employee Benefit Research Institute 2020



KEY TAKE-AWAYS

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KEY TAKE-AWAYS

- Market volatility may be the largest factor during this crisis in increasing retirement savings shortfalls, and decreasing savings surpluses, especially in a worst-case scenario.
- However, for the youngest workers, permanent termination of the DC plans under \$10 million in assets could have a large great impact.
- Match suspensions by plan sponsors, contribution suspensions by workers, increases in withdrawals, and decreased eligibility do not have as much impact when spread over all US households (however, they may have a significant influence on those impacted by these factors).
- While employers and policy makers cannot control market fluctuations, they can be aware of the impact of plan sponsor and participant behavior on retirement income adequacy and develop approaches that can help mitigate damaging behavior today and position plans for robust utilization when the crisis passes.





FUTURE WORK

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FUTURE WORK

- Additional scenarios
- Different sets of assumptions
- Permutations of various scenarios
- Updated for changes in market conditions
- Incorporation of CARES Act into projections





APPENDIX: ADDITIONAL INFORMATION ON THE SIMULATION MODEL

When is a household considered to run short of money in EBRI's simulation model?

- If aggregate resources in retirement are not sufficient to meet average retirement expenditures
 - This version of the model is constructed to simulate retirement income adequacy
 - Alternative versions of the model allow similar analysis for replacement rates, standard-of-living calculations, and other ad hoc thresholds.
- The baseline version of the model used for this analysis assumes all workers:
 - retire at age 65
 - that they immediately begin drawing benefits from Social Security and defined benefit plans (if any)
 - to the extent that the sum of their expenses and uninsured medical expenses exceed the projected after-tax annual income from those sources
 - •They immediately begin to withdraw money from their individual accounts (defined contribution and cash balance plans, as well as IRAs).



When is a household considered to run short of money (continued)?

- If there is sufficient money to pay expenses without tapping into the tax-qualified individual accounts
 - those balances are assumed to be invested in a non-tax-advantaged account where the investment income is taxed as ordinary income.
- Individual accounts are tracked until the point at which they are depleted.
 - At that point, any net housing equity is assumed to be added to retirement savings in the form of a lump-sum distribution (not a reverse annuity mortgage (RAM)).
- If all the retirement savings are exhausted and if the Social Security and defined benefit
 payments are not sufficient to pay expenses, the household is designated as having run short of
 money at that point.





Neil Lloyd





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Here are some ways:

Register for the upcoming April 21 webinar on Older Americans' Debt

Attend the virtual Policy Forum the week of June 29th.

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