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How Would Target-Date Funds Likely Impact Future 401(k) Accumulations?

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Joint DOL/SEC Hearing:

Target Date Fund Public Hearing

June 18, 2009

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Thank you for your invitation to testify today on this important topic. I am Jack VanDerhei, research director of the Employee Benefit Research Institute. EBRI is a nonpartisan research institute that has been focusing on retirement and health benefits for the past 30 years. EBRI does not take policy positions and does not lobby.

Last year, as part of EBRI's analysis of the likely impact of the Pension Protection Act's safe harbor automatic enrollment and automatic escalation provisions,[1] we developed a stochastic simulation model to project future 401(k) balances as a function of various plan design variables as well as assumptions with respect to various employee behavioral responses.

Today I will report on the results I obtained using the EBRI simulation model to determine how target-date funds (TDFs) would likely impact 401(k) participants assumed to be automatically enrolled. I realize that TDF use in 401(k) plans is not limited to those automatically enrolled, and our March 2009 *EBRI Issue Brief* by Craig Copeland[2] provides significant detail on the differences. However, based on our simulation results, it appears that this 401(k) auto-enrollment will represent the majority of TDF use in the future and hence I will concentrate my comments today on those results

The simulation model starts with all workers, whether or not they are currently enrolled in a 401(k) plans, and tracks them through age 65 by stochastically assigning job change, whether the new employer sponsors a 401(k) plan, cashout behavior, and financial market performance. In addition, we use the EBRI/ICI 401(k) database[3] to statistically impute asset allocation under participant directed baseline scenarios.

Although the model produces several output metrics, the one of most interest for today's discussion is the ratio of "401(k) accumulations"[4] divided by wage at the time of retirement—or, for purposes of cashout behavior discussed later, the time of job change. Most of the analysis presented today will focus on the percentage increase or decrease of those balances moving from participant-directed investments to target-date funds.

Given my time constraints, I will limit my comments today to the comparison of "average" TDF in terms of equity allocation; however, I have included sensitivity analysis in the appendix for both the most aggressive and most conservative TDFs as well.

As you can see from the table of contents on page 2 of the handout, I am bifurcating my results into those dealing with account balances <u>at retirement</u> and those dealing with account balances <u>at job change</u> for those who cash out. Although the results for these seven figures all assume baseline rate of return assumptions (which are provided on the last page of the handout), results for alternative return assumptions are provided in the appendix (Figures 8–12).[5]

Figure 1 shows the interquartile range for the percentage increase in balances moving from participant direction to target date funds. As you can see from the medians in the middle column for each age cohort, the average impact appears to be minimal (less than 1 percent); however this can be very deceiving. The 25th and 75th percentiles show that this can make a huge difference, especially for those exposed to TDFs at a relatively young age. For those 25–29, the top 25 percent have at least an 8 percent gain, but the bottom 25 percent have at least a 5.9 percent loss.

Given the incredible range of asset allocations because of individual participant investment direction, it should not be surprising that the adoption of TDFs has a large range of different outcomes. Figure 2 shows the same type of analysis as the previous figure, although this time the relative gains are displayed as a function of the participant's initial equity allocation. Obviously, the primary advantage of TDFs when viewed in this context is the expected gains for those with an initial equity allocation of less than 40 percent. Although the median gains are still relatively small (less than 5 percent for all groups other than those with zero equity exposure), the 75th percentile is in the range of a 14–25 percent gain for those under 30 percent equity allocation, while the 25th percentile is only a 2–6 percent loss.

While some financial advisors may argue that less than a 30 percent equity allocation may be optimal for those very close to retirement age, it is likely that this will not be the case for younger participants. To show the potential value of TDFs for young employees, I bifurcate the analysis in Figure 2 for those under age 45 (Figure 3) and those 45 or over (Figure 4). As you can see in Figure 3, the positive results of TDFs in the lower equity allocation range are much more pronounced with the 75th percentiles for those with less than a 30 percent allocation in the positive 25–37 percent range, while the losses associated with the 25th percentile is always less than 6percent. Moreover, even the median gains in this range are in excess of 5 percent for all groups.

While the previous figures illustrated that TDFs can indeed make a substantial difference in balances at retirement for some participants, another concern that was often expressed after the proposed qualified default investment allocation (QDIA) regulations were released dealt with the potential impact on participants who were likely to cash out their 401(k) balances at job change rather than role them over to an individual retirement account (IRA) or retain them in a 401(k) plan. Figure 5 shows the expected impact on these individuals of moving from participant-directed investments to TDFs, as a function of the employee's tenure on the job. The median impact is extremely small (1 percent or less); however the interquartile range increases with duration, as expected, and the 75th percentile for those with 11 or more years with the employer exceeds 6 percent.

Another related issue during the discussion period for the proposed QDIA regulations dealt with the potential utility of including a stable-value alternative. Figure 6 shows the results of an average TDF vs. a stable-value fund on those who cash out. Two interesting, but conflicting, messages come through:

- First, the median increase from TDFs is positive, reaching a value just in excess of 5 percent for those in the highest tenure category.
- However, the probability that a participant who cashes out would have had a larger balance in stable value consistently remains in the 40 percent range.

Finally, Figure 7 shows the same analysis but this time comparing an average TDF with a money market fund. The medians in this case are substantial: ranging from approximately 5 percent for the lowest tenure range to approximately 1/3 for those with 11 or more years in the plan. Moreover, the probability that the TDF balance exceeds the money market account for this group is monotonically increasing from 71 percent for the lowest-tenure group to 85 percent for those in the highest-tenure group.

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[1] Jack VanDerhei and Craig Copeland, "The Impact of PPA on Retirement Savings for 401(k) Participants" EBRI Issue Brief, June 2008. http://ebri.org/publications/ib/index.cfm?fa=ibDisp&content_id=3948

[2] Craig Copeland, "Use of Target-Date Funds in 401(k) Plans, 2007" EBRI Issue Brief, March 2009. http://ebri.org/publications/ib/index.cfm?fa=ibDisp&content_id=4203

[3] For more information on the EBRI/ICI database, see Jack VanDerhei, Sarah Holden, Luis Alonso, and Craig Copeland, "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2007" EBRI Issue Brief, December 2008. http://ebri.org/publications/ib/index.cfm?fa=ibDisp&content_id=4132

[4] This denotes both the 401(k) balances with either the current employer or previous employers that have been retained as well as any IRA balances that are attributable to 401(k) rollovers.

[5] For more information on the return assumptions, see Young Park, "Plan Demographics, Participants' Saving Behavior, and Target-Date Fund Investments" EBRI Issue Brief, May 2009. http://ebri.org/publications/ib/index.cfm?fa=ibDisp&content_id=4280

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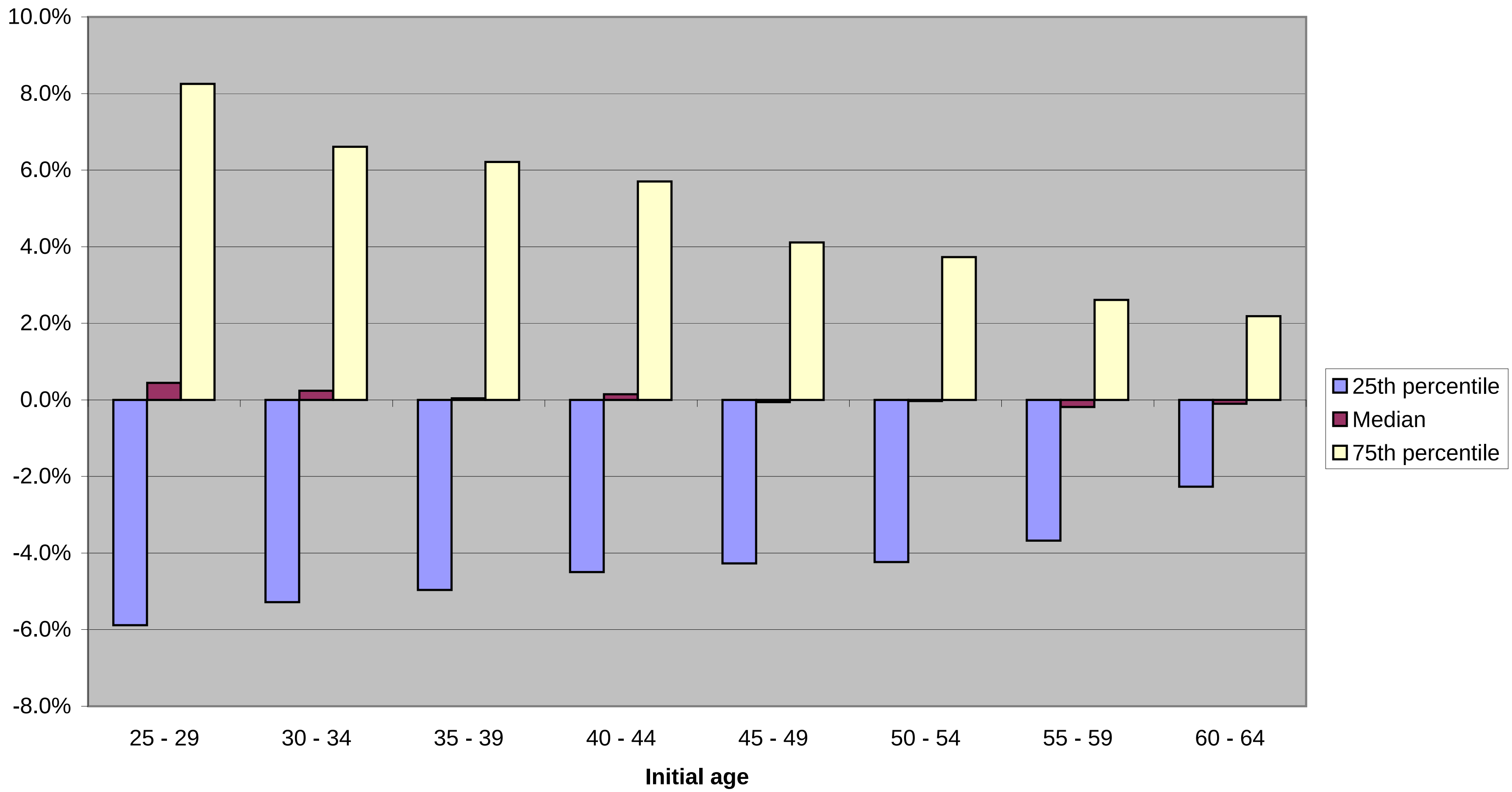
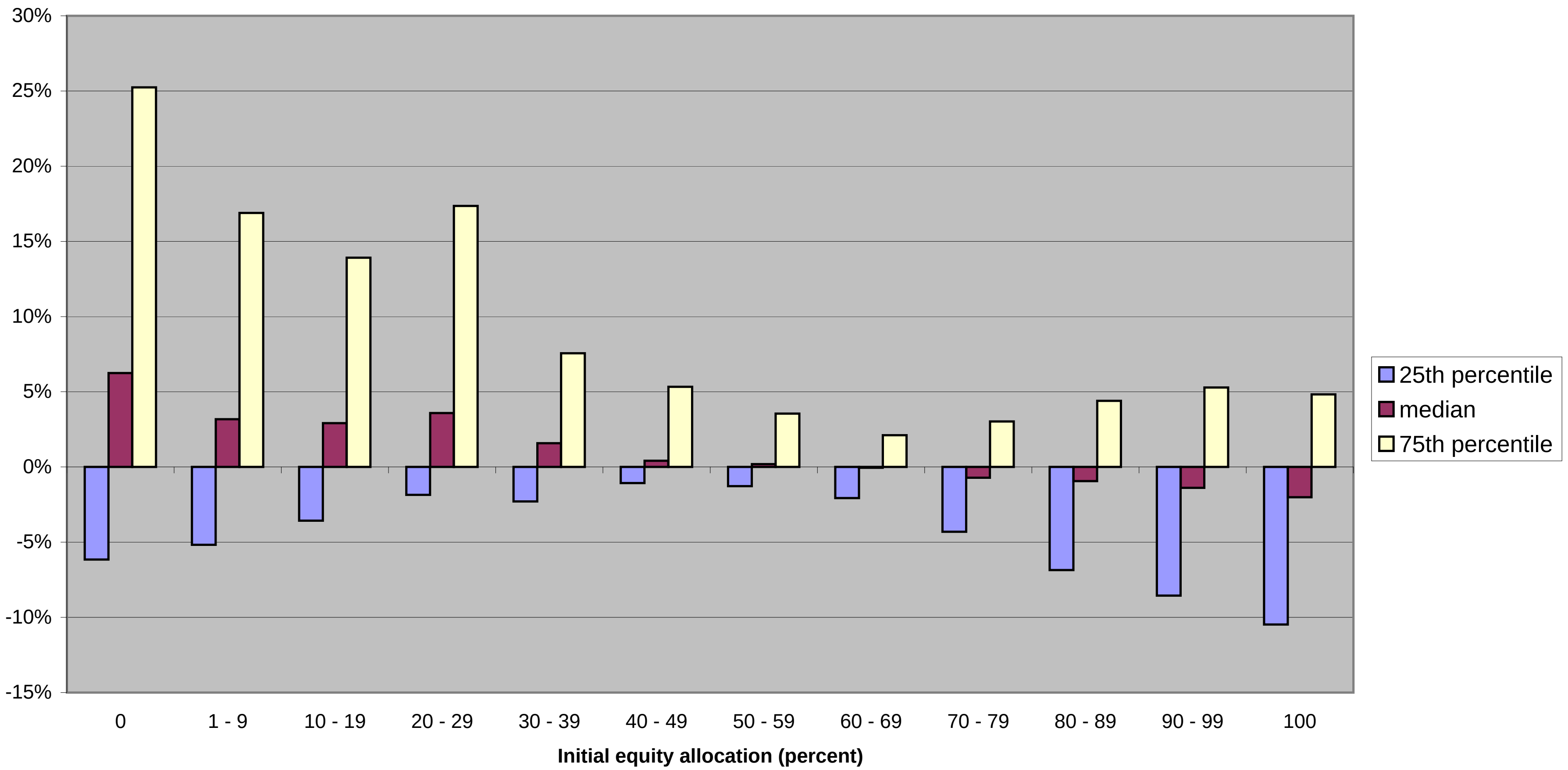
Figure 1: Increase in balances (401(k) + rollover IRA) at retirement age as a function of initial age in average target date vs participant direction: Baseline return assumptions



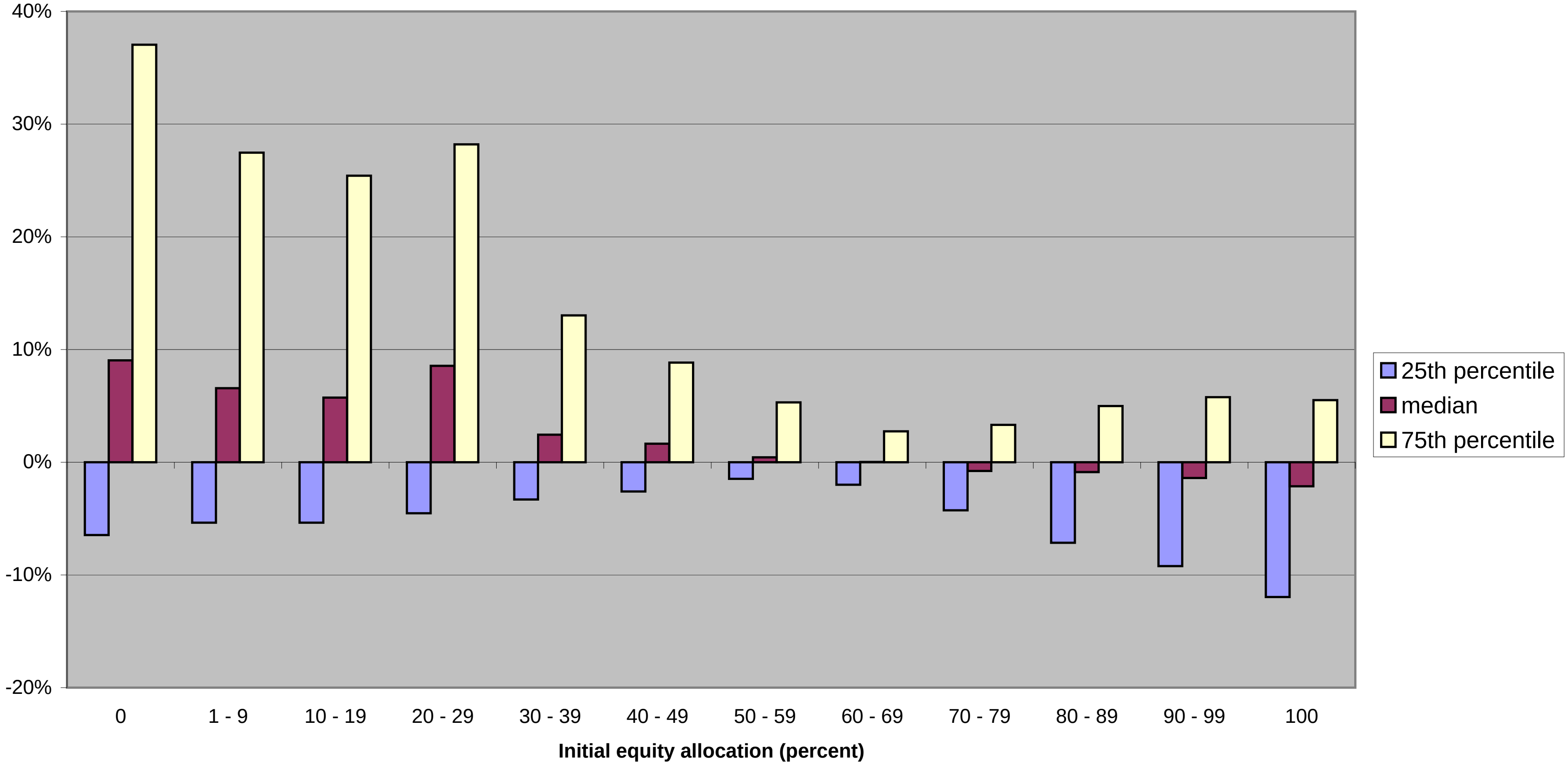
Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 2: Increase in balances (401(k) + rollover IRA) at retirement age as a function of initial equity allocation in average target date vs participant direction



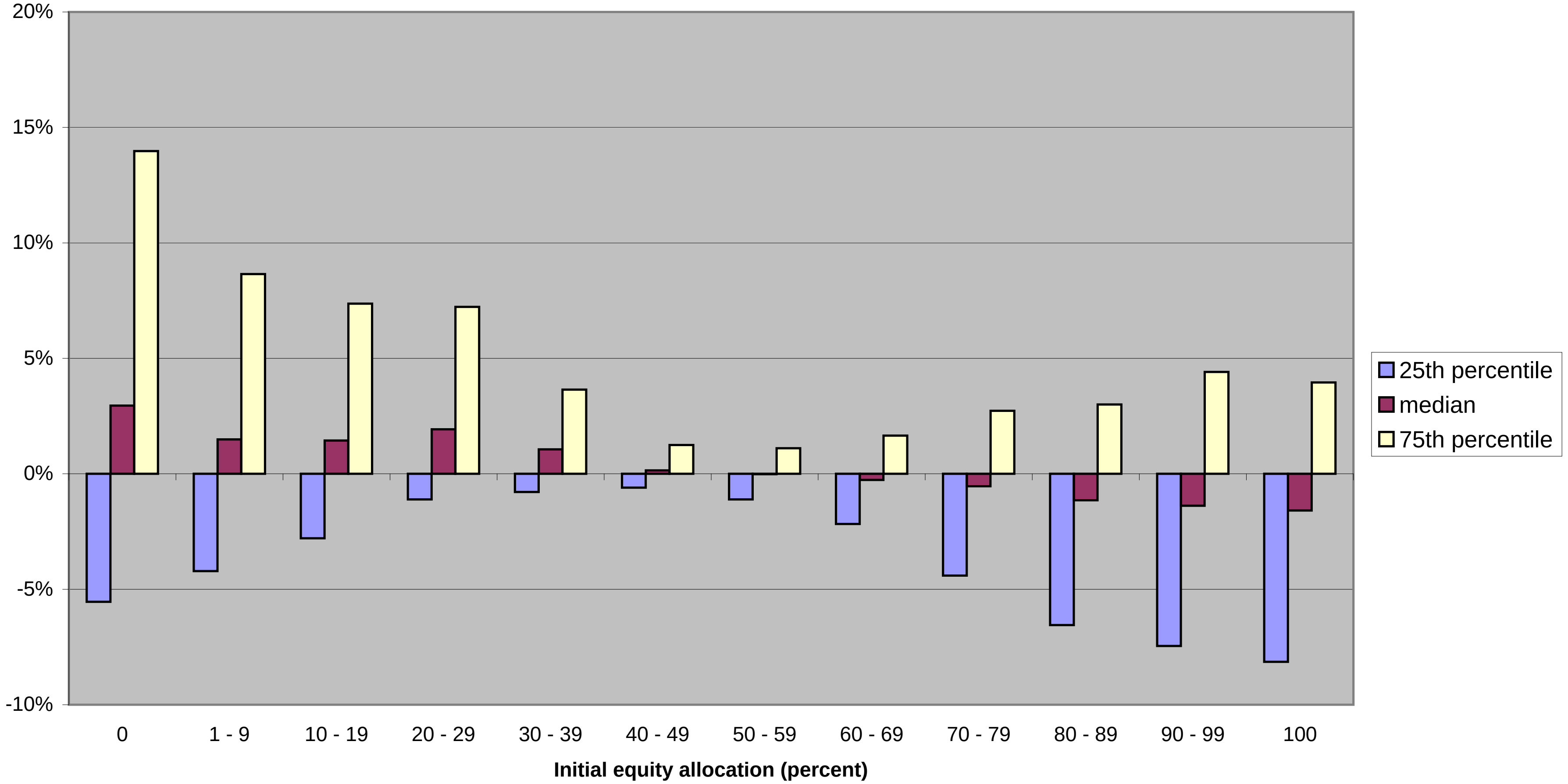
Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 3: Increase in balances (401(k) + rollover IRA) at retirement age as a function of initial equity allocation in average target date vs participant direction: Participants younger than 45



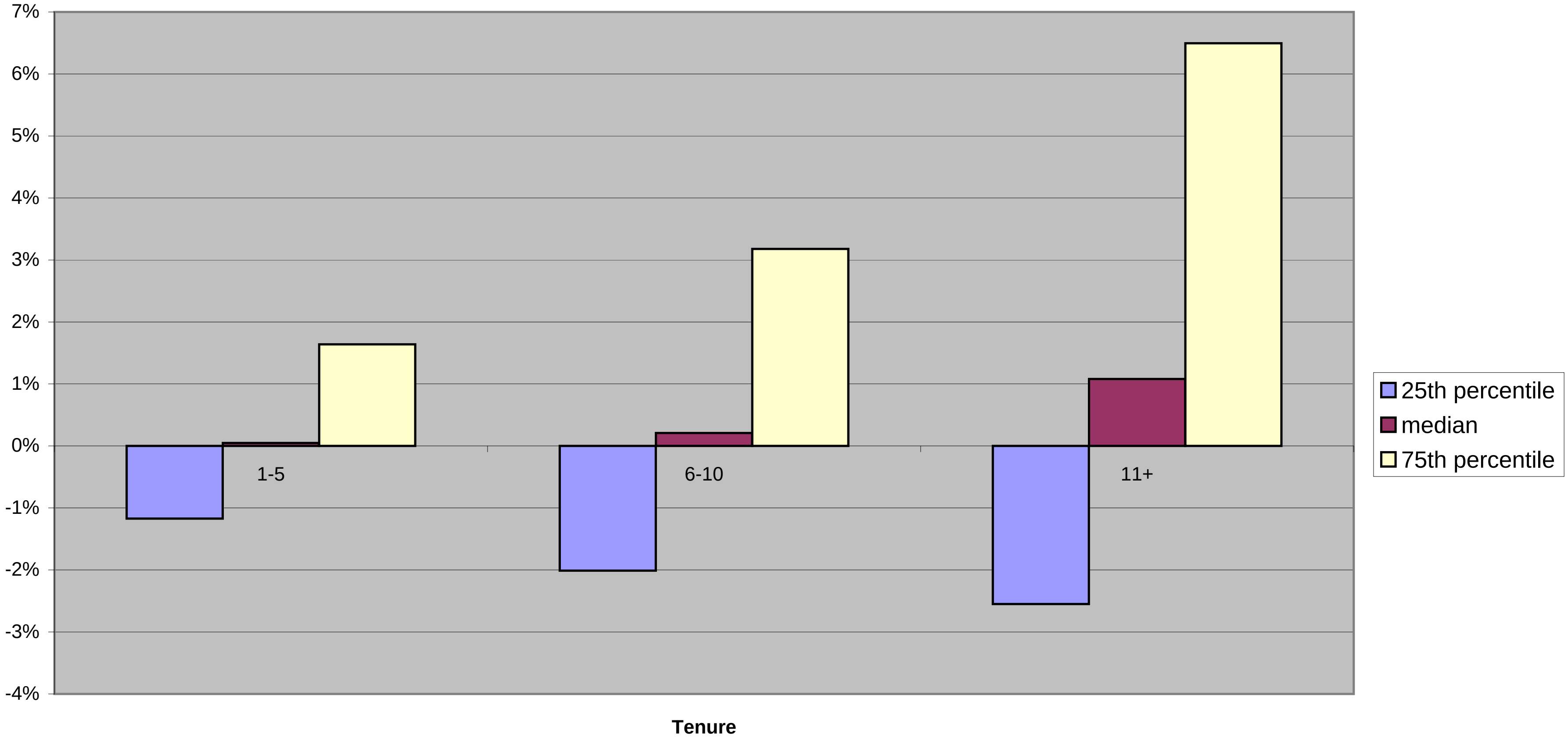
Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 4: Increase in balances (401(k) + rollover IRA) at retirement age as a function of initial equity allocation in average target date vs participant direction: Participants ages 45 and older



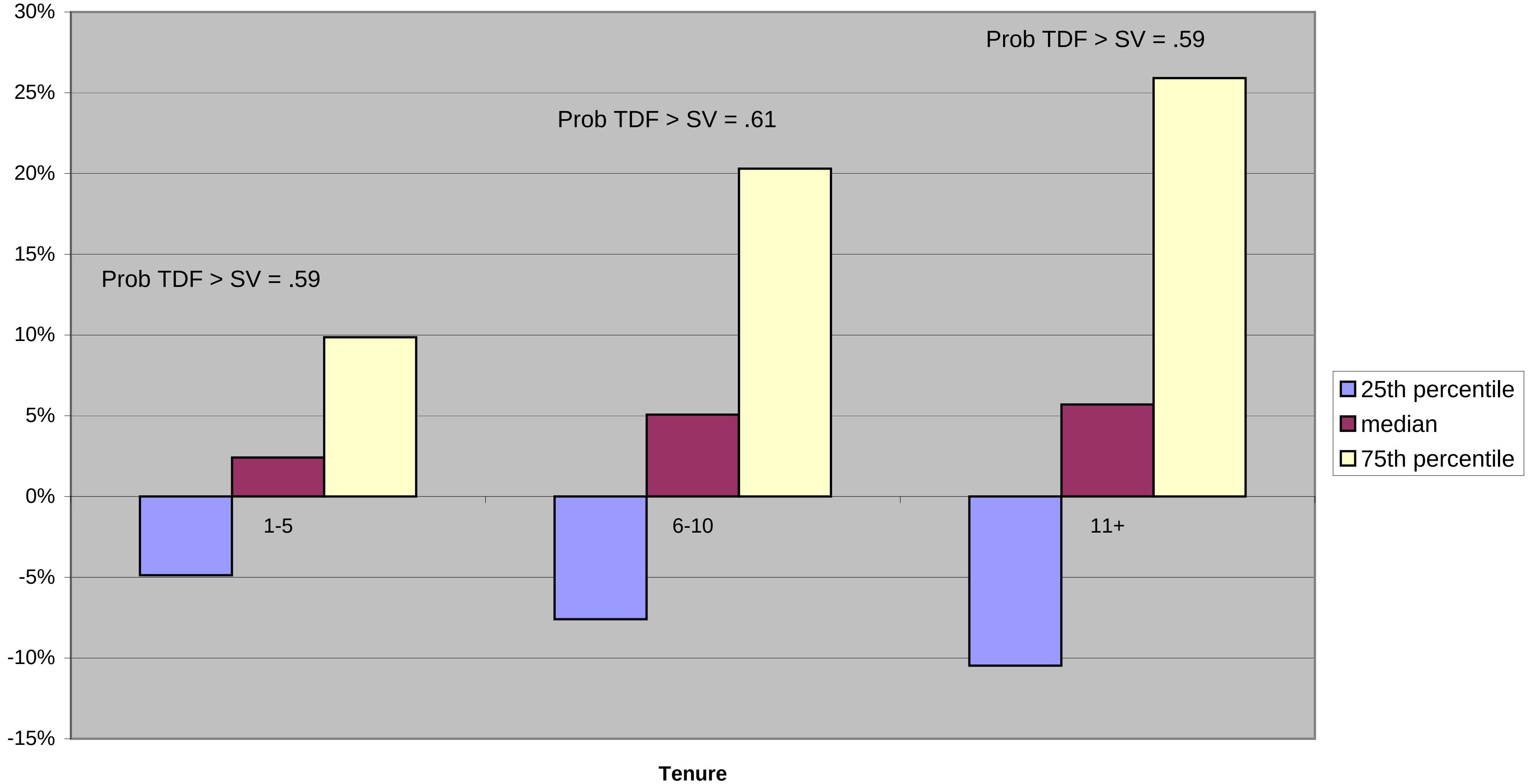
Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 5: Increase in balances for those assumed to cash out when they change jobs as a function of tenure in average target date vs participant directed



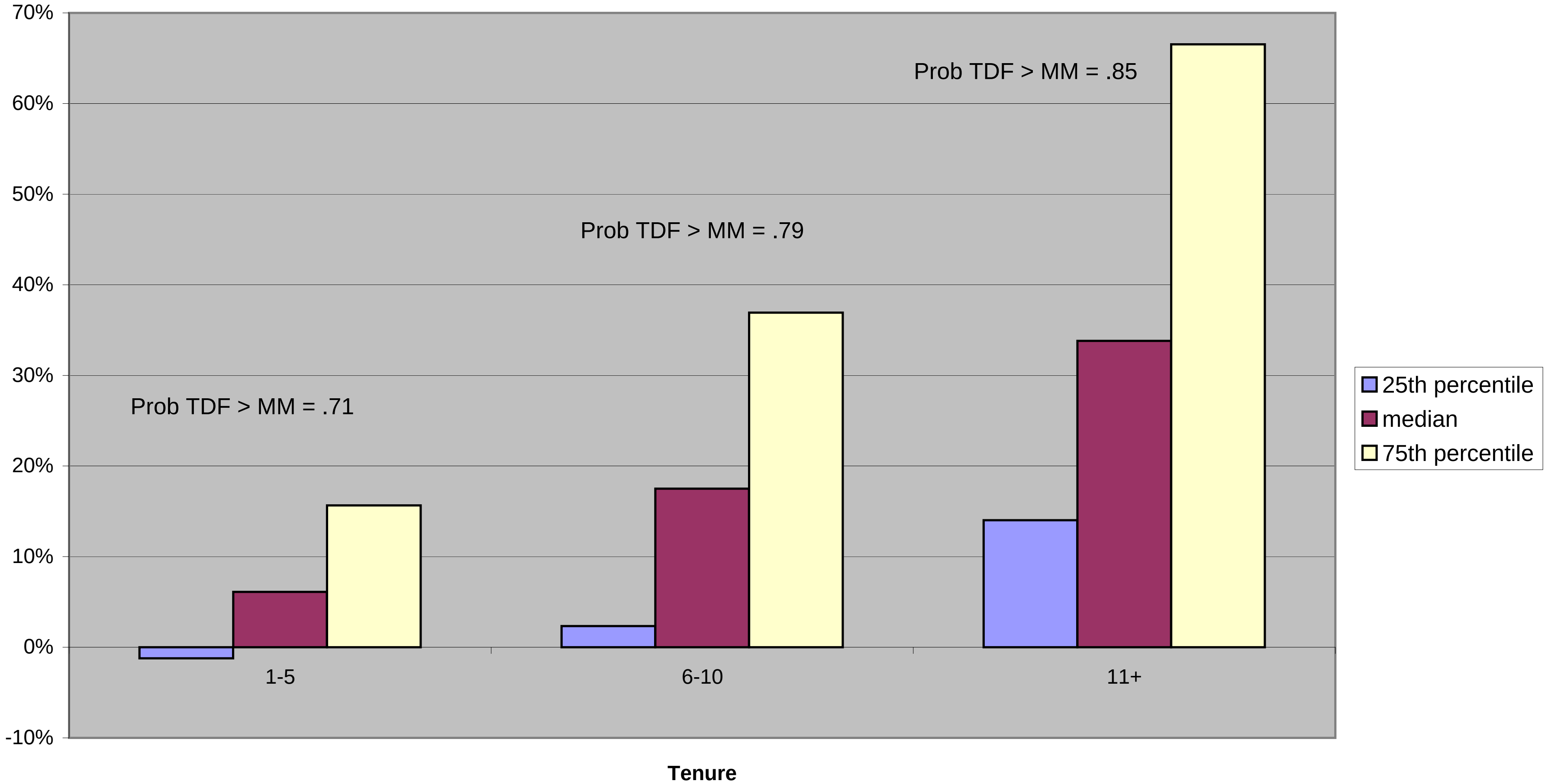
Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 6: increase in balances for those assumed to cash out when they change jobs as a function of tenure in average target date vs stable value



Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 7: Increase in balances for those assumed to cash out when they change jobs as a function of tenure in average target date vs money market

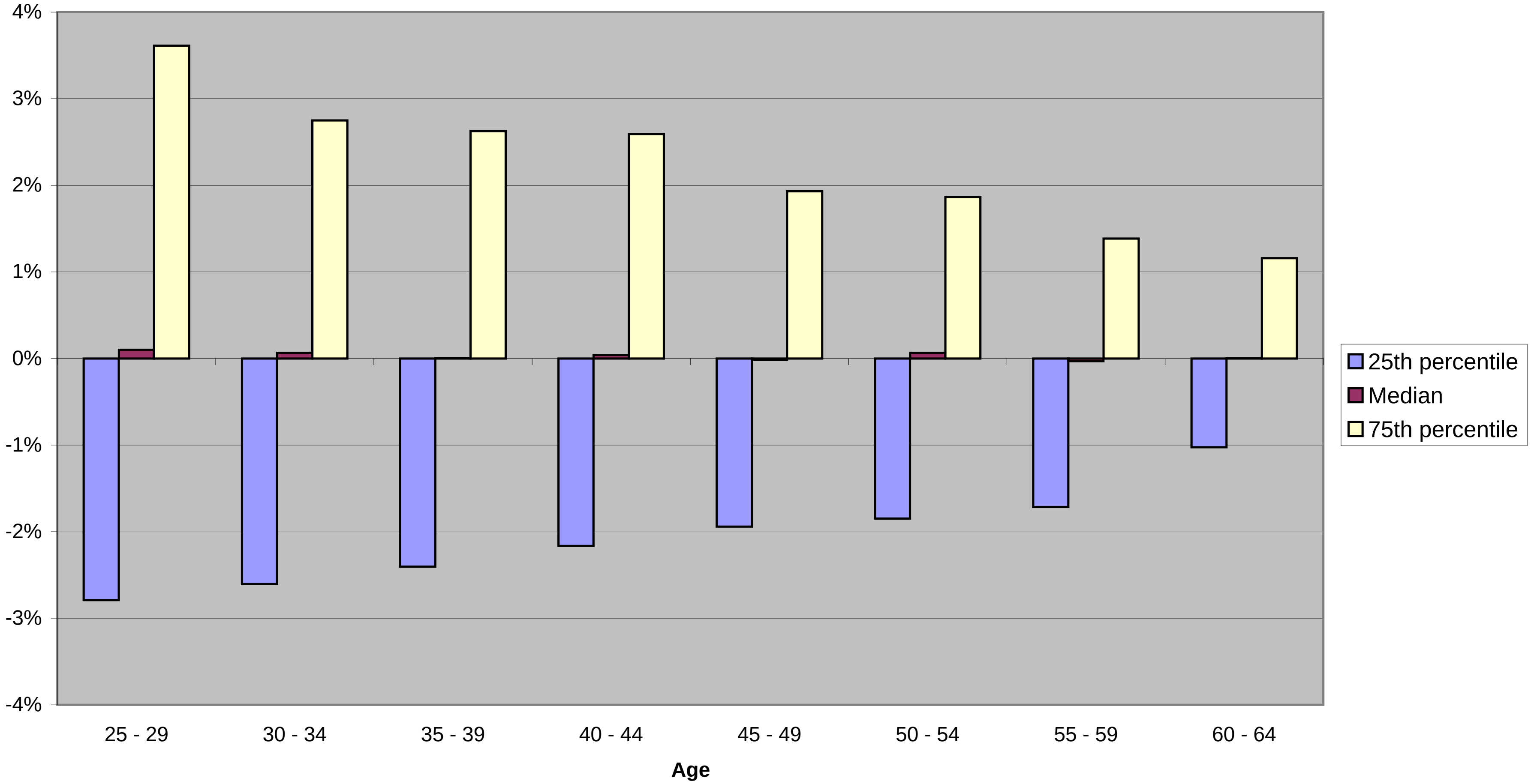


Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Appendix

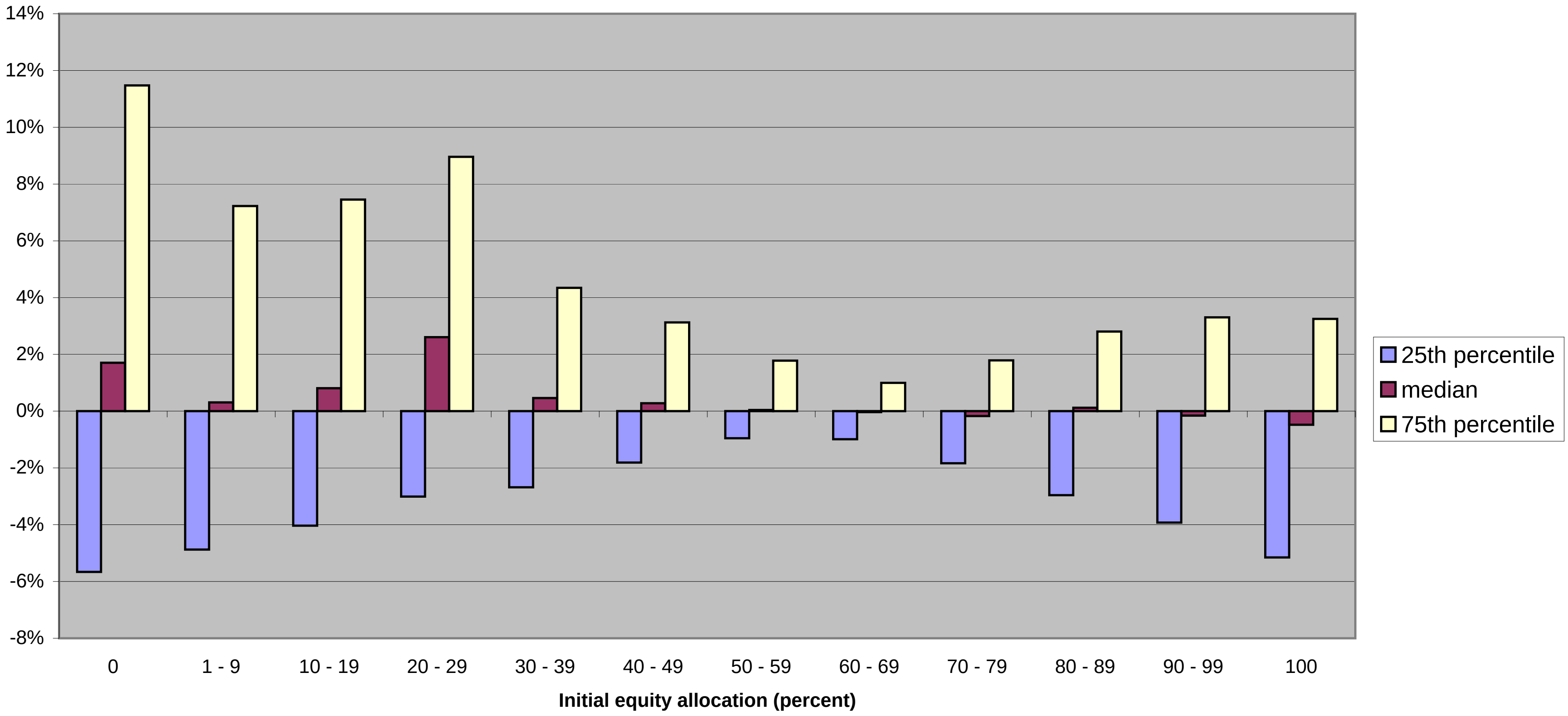
a. account balances at retirement: TDF vs. participant directed, expressed as a percentage delta (alternative lower ror assumptions for average equity allocation)
    i. results by age (Figure 8)
    ii. results by initial equity allocation under participant direction
        1. under age 45 (Figure 9)
        2. age 45 and over (Figure10)
b. account balances at retirement: TDF vs. participant directed, expressed as a percentage delta (baseline ror assumptions for aggressive equity allocation)
    i. results by age (Figure 11)
c. account balances at retirement: TDF vs. participant directed, expressed as a percentage delta (baseline ror assumptions for conservative equity allocation)
    i. results by age (Figure 12)
d. Mean and covariance assumptions for:
    i. Baseline
    ii. Alternative (lower) scenario
    iii. Truncated scenario

Figure 8: Increase in balances (401(k) + rollover IRA) at retirement age as a function of age in average target date vs participant direction: alternative (lower) return scenario



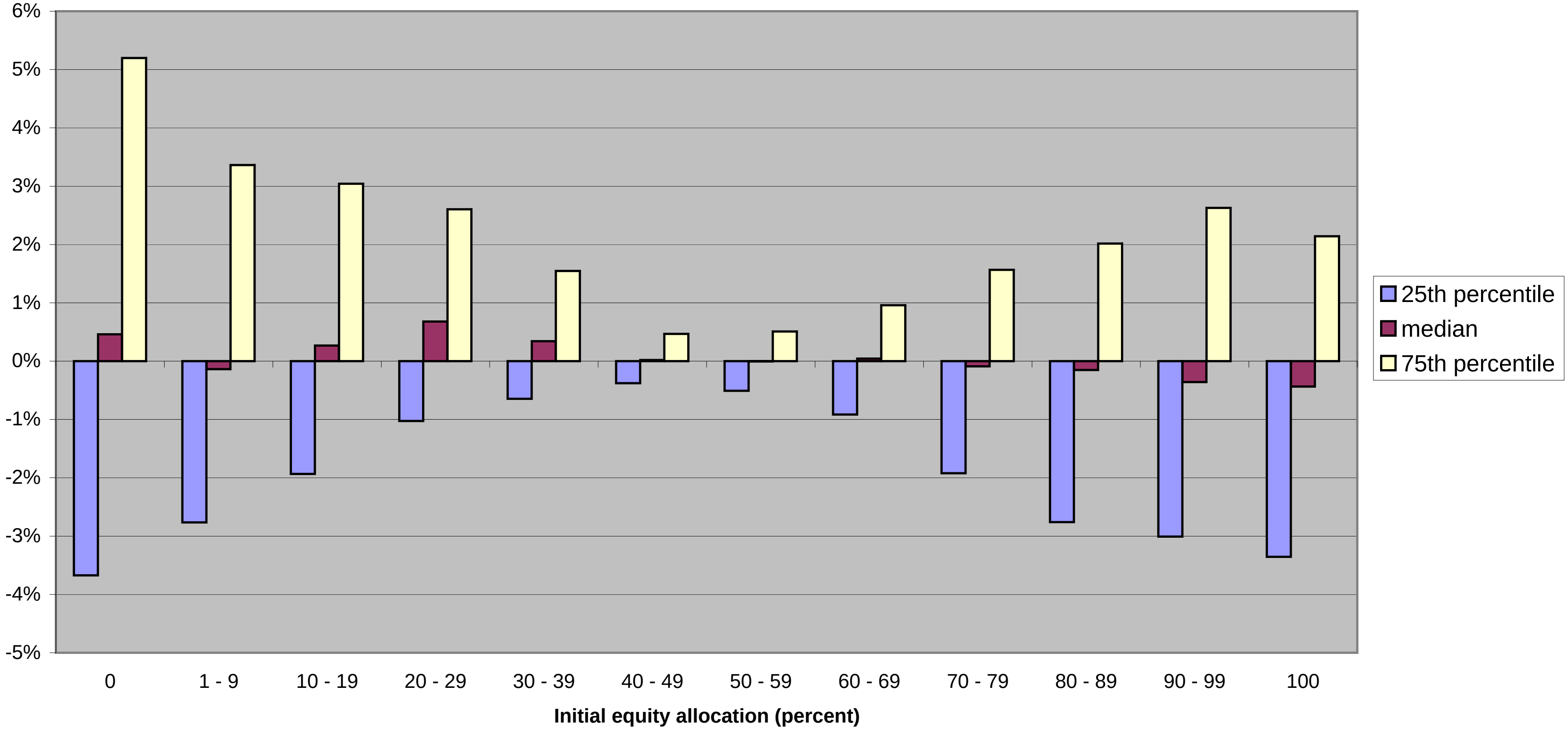
Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 9: Increase in balances (401(k) + rollover IRA) at retirement age as a function of initial equity allocation in average target date vs participant direction: Participants younger than 45, alternative (lower) return scenario



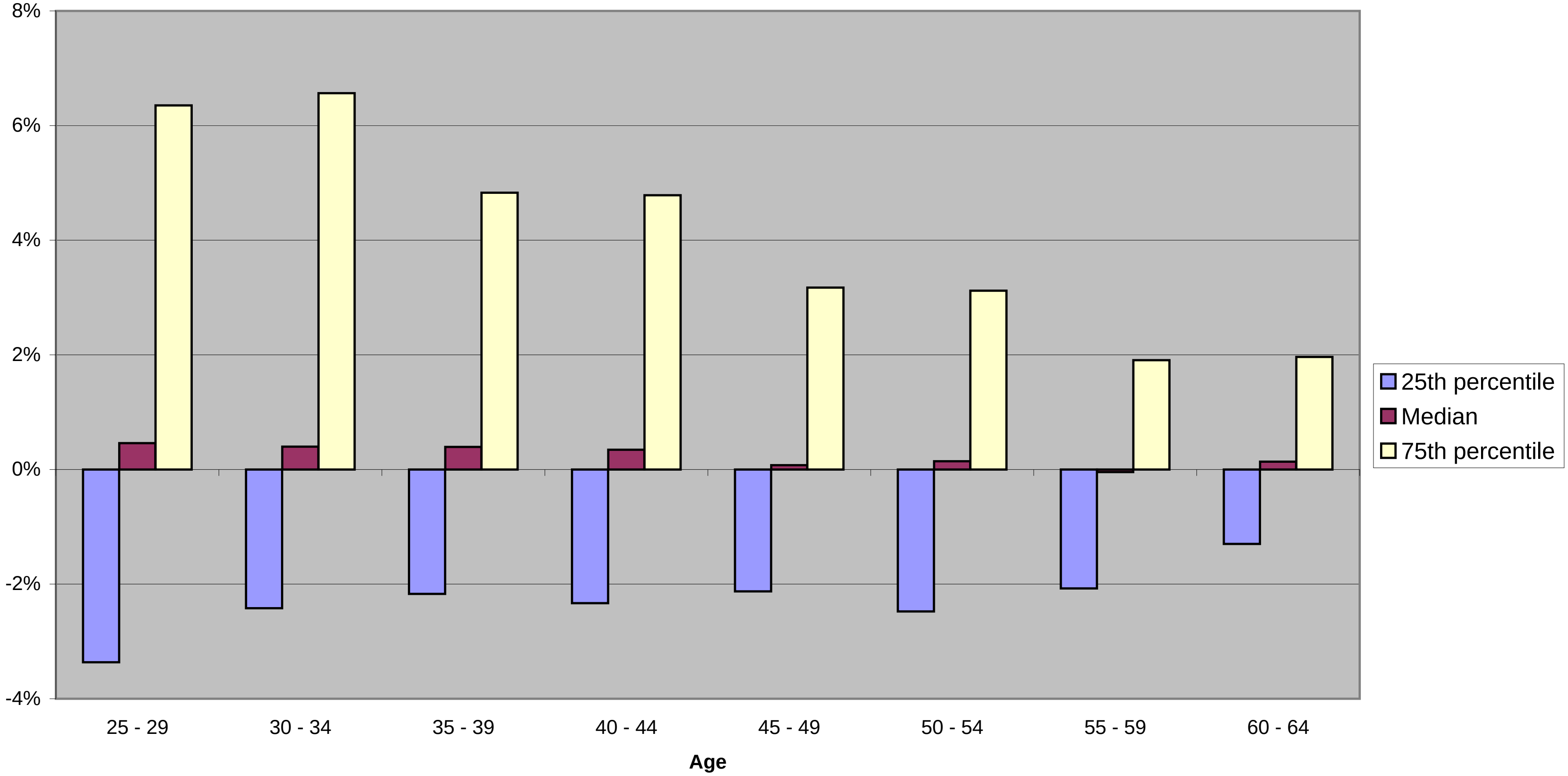
Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 10: Increase in balances (401(k) + rollover IRA) at retirement age as a function of initial equity allocation (average target date vs participant direction): Participants ages 45 and older, alternative (lower) return scenario



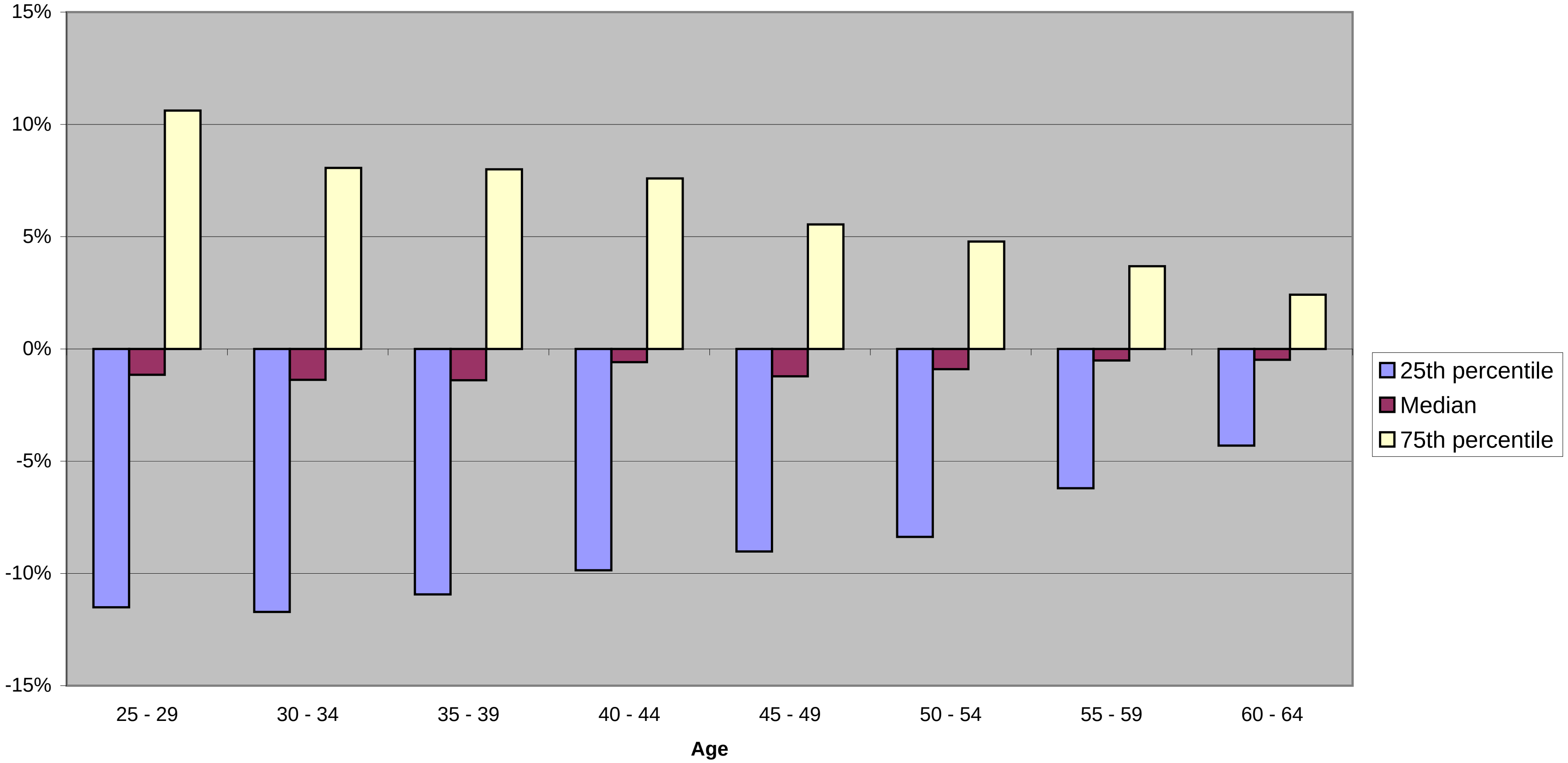
Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 11: Increase in balances (401(k) + rollover IRA) at retirement age as a function of age in aggressive target date vs participant direction



Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Figure 12: Increase in balances (401(k) + rollover IRA) at retirement age as a function of age in conservative target date vs participant direction



Source: Author's simulations based on June 16, 2009 modifications to the EBRI/ERF Retirement Security Projection Model. For additional detail on the model, see VanDerhei and Copeland, "The Impact of PPA on Retirements Savings for 401(k) Participants," EBRI Issue Brief, June 2008

Baseline Asset Class Return, Volatility, and Correlation

	Expected Return	Standard Deviaton	Correlation Matrix	U.S. Equity	Non-U.S. Equity	Fixed Income
U.S. equity	8.9%	18.0%	U.S. equity	1		
Non-U.S. equity	8.9	19.1	Non-U.S. equity	0.54	1	
Fixed income	6.3	2.9	Fixed income	0.26	0.21	1

Source: Grant Gardner and Yuan-An Fan, *Russell's Approach to Target-Date Funds: Building a Simple and Powerful Solution to Retirement Saving,* August 2006.

Alternative Asset Class Return, Volatility, and Correlation

	Expected Return	Standard Deviaton	Correlation Matrix	U.S. Equity	Non-U.S. Equity	Fixed Income
U.S. Equity	4.45%	9.00%	U.S. equity	1		
Non-U.S. Equity	4.45	9.55	Non-U.S. equity	0.54	1	
Fixed Income	3.80	1.75	Fixed income	0.26	0.21	1

Source: Park (2009) and Grant Gardner and Yuan-An Fan. *Russell's Approach to Target-Date Funds: Building a Simple and Powerful Solution to Retirement Saving,* August 2006.

Truncated Asset Class Return, Volatility, and Correlation Using Historical Data from 1989 to 2008

Annualized Return	Standard Deviaton	Correlation Matrix	U.S. Equity	Non-U.S. Equity	Fixed Income	Money Market	Stable Value
8.43%	20.16%	U.S. equity	1				
3.14	21.13	Non-U.S. equity	0.73	1			
7.43	5.31	Fixed income	0.25	-0.16	1		
2.82	1.26	Money market	0.17	0.08	0.15	1	
6.17	1.37	Stable value	0.30	-0.18	0.53	0.51	1

Source: Standard & Poor's, Morgan Stanley Capital International, Barclays Capital, and Hueler Analytics.
Note: S&P 500 Index is used for U.S. equity, MSCI EAFE Index for Non-U.S. equity, and Barclays U.S. Aggregate Index for fixed income.

Hueler Analytics Stable Value data are used for stable value funds.