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# Risk-taking across generations

Investor Insights

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- The typical millennial household takes substantial equity risk. However, one notable group, at least a quarter of millennial investors, may have been strongly influenced by bear-market experience and have adopted conservative portfolios.
- Over the recent five-year period from 2012 through 2017, there has been a general shift toward more balanced strategies and away from all-equity allocations.
- Millennials who started investing at Vanguard after the global financial crisis are more than twice as likely to hold zero-equity portfolios as those who started investing before.

## Most households are willing to take equity market risk

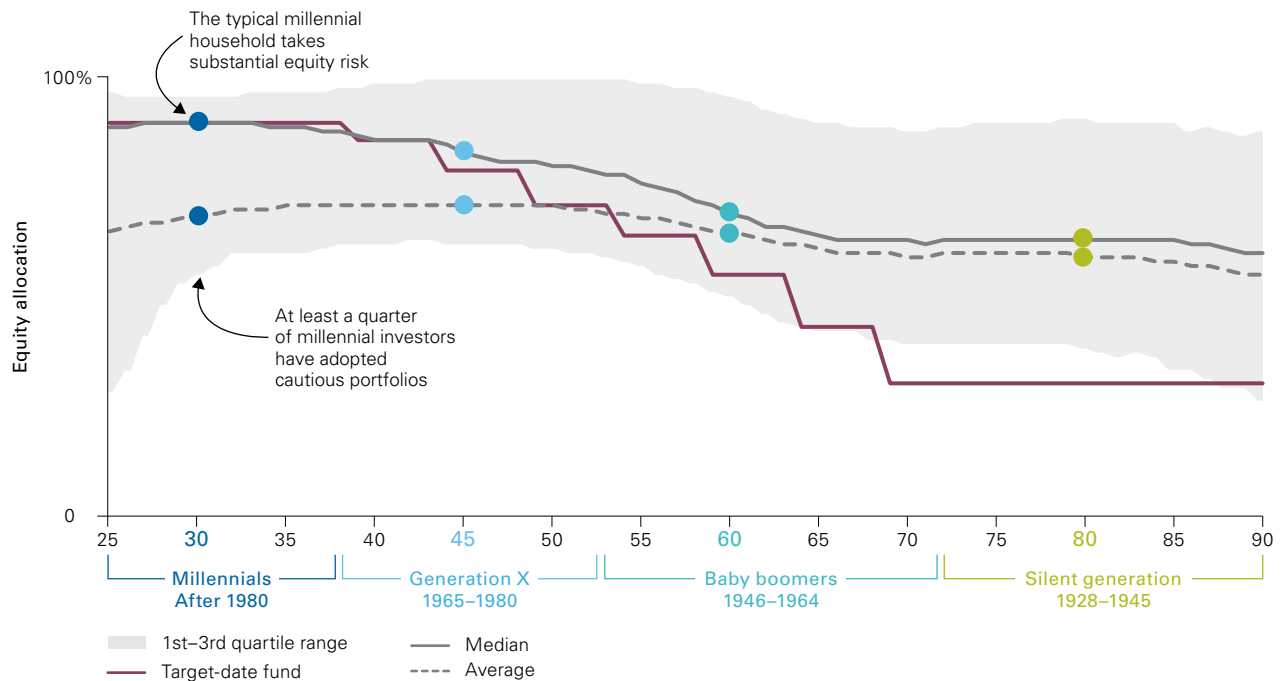
Millennial investors may be more risk-averse as a generation, certain survey evidence suggests.<sup>1</sup> Millennials, born after 1980, have experienced two severe bear markets—the collapse of the internet bubble in 2001–2002 and the global financial crisis of 2008–2009.

We analyze 4 million Vanguard retail investor households holding a combination of IRA and taxable brokerage or mutual fund accounts to assess household risk-taking.<sup>2</sup>

We find that the typical millennial household takes substantial equity risk, allocating on the order of 90% of portfolio assets to equity markets (Figure 1).<sup>3</sup> This level of risk-taking is consistent with certain professional portfolio recommendations, such as the glide path of Vanguard Target Retirement Funds.<sup>4</sup> Young people are saving for retirement and for other reasons, so cash can be an appropriate holding. However, there is a notable group, at least a quarter of millennial investors, who may have been strongly influenced by bear-market experience and have adopted conservative portfolios.

Figure 1. Age-based equity allocations among Vanguard retail investors

Taxable-account and/or IRA investors as of December 31, 2017



Source: Vanguard, 2018.

1 See "ICI Research Perspective." *Investment Company Institute*. October 2017 Vol. 23, No. 7: 14; and "U.S. Asset Management and Wealth Edition." *The Cerulli Edge*. January 2018 Issue #245. 1: 13.

2 Individuals in the same household are considered to be investing together, therefore the aggregate household portfolio is considered. If a household contains multiple members, the age of the oldest member is used.

3 These results are very similar to equity allocations among younger investors in defined contribution accounts. See *How America Saves 2018*, Vanguard, available at [institutional.vanguard.com](http://institutional.vanguard.com).

4 Target-date equity allocation refers to the equity allocation of the Vanguard Target Retirement Fund that most closely corresponds to the year in which the investor would reach age 65. Target-date funds are designed to provide a retirement portfolio based on a single factor, age to retirement, and not on other factors such as other investment objectives, personal risk tolerance and time horizon, and other financial circumstances. Investments in Target Retirement Funds are subject to the risks of their underlying funds. The year in the Fund name refers to the approximate year (the target date) when an investor in the Fund would retire and leave the workforce. The Fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. An investment in the Target Retirement Fund is not guaranteed at any time, including on or after the target date.

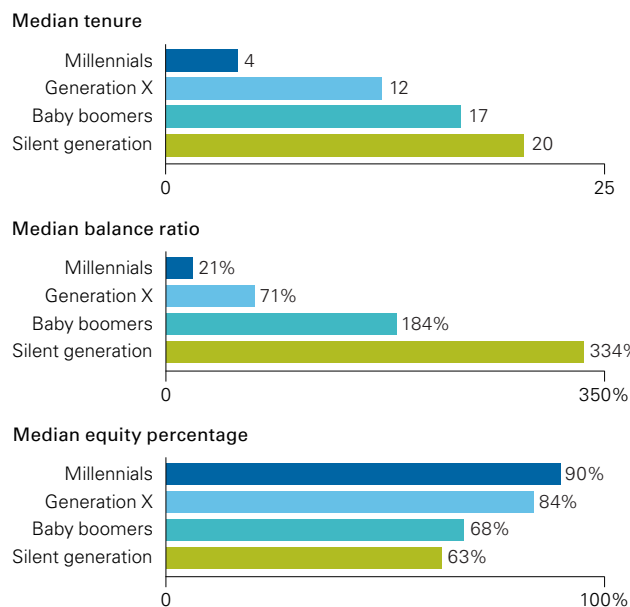
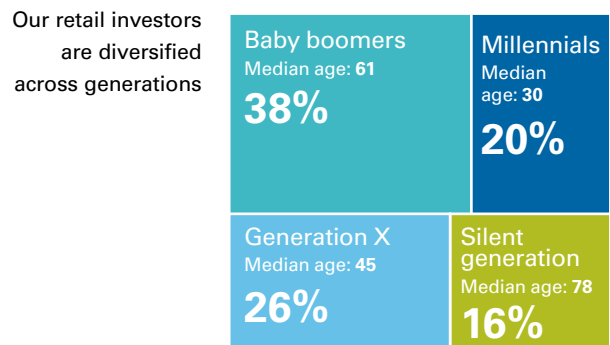
What’s more, economic models of financial and human capital suggest that households should reduce equity exposure with age. We find, however, that among baby boomer and silent-generation investors, the decrease is less substantial than might be expected. The typical boomer retail investor maintains an equity allocation of 68%; the typical silent-generation household, an equity allocation of 62%.

Why this greater-than-expected taste for equity market risk among older investors? It’s worth noting that many current retirees hold traditional pensions, allowing, all other things equal, for more equity risk-taking. Other possible drivers of risk appetite among older investors include concerns over health care costs, low bond yields, and a desire to fund bequests for heirs. And beyond these financial factors are the shared generational experience of investing—both cohorts enjoyed the positive results of the great equity bull market from 1982–2000.<sup>5</sup>

### Individual investors span the generations and are at different points in the investing life cycle

Our retail investor sample is diversified across generations and ages (Figure 2). There are several notable differences among the generations. Almost half of millennial households opened their first Vanguard account in the last three years. Balances tend to be modest—the median millennial household has only 21% of the overall median household balance.<sup>6</sup> At the same time, the number of millennial households in our sample exceeds the number of silent-generation investors. Silent-generation households are wealthier and have held Vanguard accounts for much longer; three-quarters have Vanguard tenure of at least 15 years, and median balances are more than triple the overall median balance.<sup>7</sup>

Figure 2. Retail investor demographics



Note: The median balance ratio is the ratio of the generational median balance to the overall median balance.

Source: Vanguard, 2018.

<sup>5</sup> Malmendier and Nagel (2011) find sharper differences in risk-taking across older generations. See Malmendier, Ulrike, and Stefan Nagel, 2011. “Depression Babies: Do Macroeconomic Experiences Affect Risk Taking?,” *The Quarterly Journal of Economics*, 126 (1): 373–416.

<sup>6</sup> The Vanguard median household balance is approximately \$60,000.

<sup>7</sup> Also note that our sample includes Vanguard-only assets, not the household’s entire financial portfolio. It also excludes real estate, Social Security and pensions, and other assets.

**More households are embracing balanced strategies—with some important exceptions**

Over the recent five-year period from 2012 through 2017, there has been a shift toward more balanced strategies and away from extreme equity allocations. In 2017, 33% of Vanguard retail investor households held an all-equity or zero-equity portfolio, down from 38% in 2012 (Figure 3). Perhaps reflecting increased caution about equity markets, the reduction has come in the fraction of households holding all-equity portfolios, which declined from 24% of all households in 2012 to 19% in 2017.

The shift toward more balanced strategies occurred across all generations. For baby boomer and silent-generation households, both all-equity and zero-equity portfolios declined. Among millennials, and to a lesser extent Generation X, the reduction in extreme portfolios was driven by a sharp reduction in all-equity allocations. This reduction is at least partially attributable to the

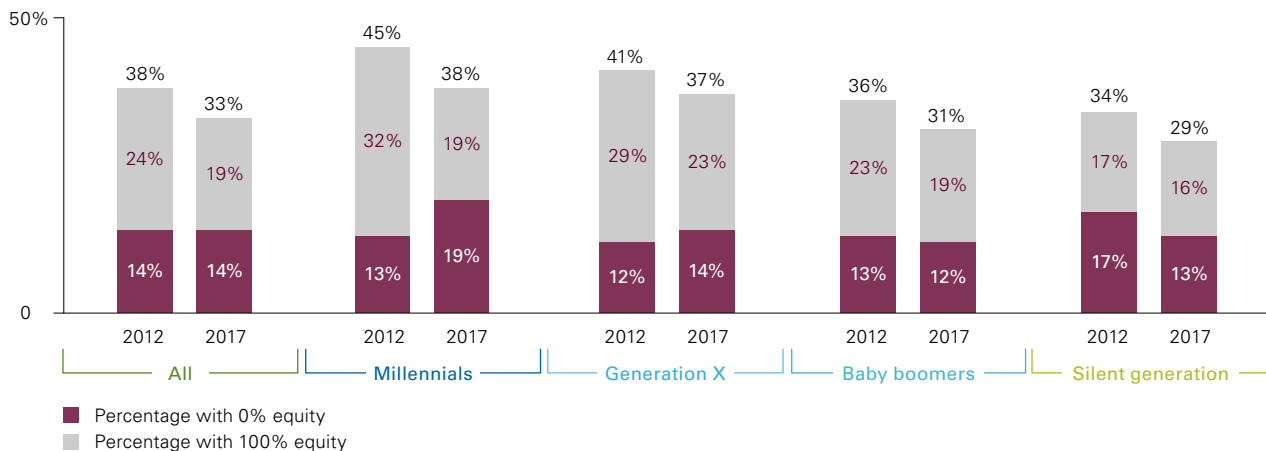
increasing use of target-date funds, particularly among newer millennial investors. About one-third of all millennial households in our sample own target-date funds.

At the other extreme, there is a striking increase in the fraction of millennial investor households holding zero-equity portfolios, with 19% of millennial households holding no equities in 2017, up from 13% in 2012. Millennials are the cohort most likely to hold low-risk portfolios despite having long investment time horizons and small financial capital relative to human capital. However, this may reflect shorter-term saving goals.

One important factor here is inertia. New investors may be hesitant to put their money into the stock market. A full third of millennials who opened their first account in the past year hold no equities, for example—a figure that drops sharply as tenure increases.

**Figure 3. Prevalence of extreme allocations by generation**

Taxable-account and/or IRA investors as of December 31, 2017



Source: Vanguard, 2018.

### The effects of the global financial crisis may be influencing risk tolerance—for some

Certainly another important factor is the shared demographic cohort experiences of a bear market, particularly the global financial crisis of 2008–2009. There are marked differences in equity allocation between millennials who started investing at Vanguard before the crisis and those who started after (**Figure 4**). For both groups, the median equity allocation is around 90%. Yet comparing those who opened their accounts after the crisis with those who did so before, twice as many households have zero-equity portfolios (22% after the crisis versus 10% prior) and fewer households have all-equity portfolios (14% after the crisis versus 33% prior).

Memories of the financial crisis may make many millennials more reluctant to take on market risk due to heightened fears of market losses. For that group—millennials who opened accounts after the crisis began—market risk is more salient than potential return. For millennials who began investing at Vanguard *before* the crisis, the opposite seems true.

### Implications

Although there may be concerns that millennial investors are too conservative as a generational cohort, we find that most Vanguard millennials are taking significant levels of equity market risk.

At the same time, a small but important group may have been affected by the global financial crisis and ought to reevaluate risk levels. We find greater risk-taking among older Vanguard investors than might be expected using conventional financial planning rules of thumb (such as “100 minus your age” to determine the percentage of stocks to hold). This risk-taking likely reflects older cohorts’ experience with the great equity bull market of the 1980s and 1990s, as well as their broader financial wealth holdings, including the greater presence of pensions. Whether younger investors will, in the future, hold similar levels of equities as today’s older investors will depend not only on stock market experience but also on the changing nature of retirement savings.

**Figure 4. Characteristics of millennial households by year of entry**

Taxable-account and/or IRA investors  
as of December 31, 2017

| Entry year                           | 2007 and earlier | 2008 and later |
|--------------------------------------|------------------|----------------|
|                                      | 24%              | 76%            |
| Median age                           | 32               | 30             |
| Median balance                       | \$24,000         | \$11,000       |
| Median equity percentage             | 90%              | 89%            |
| Percentage holding target-date funds | 23%              | 35%            |
| Percentage with 0% equity            | 10%              | 22%            |
| Percentage with 100% equity          | 33%              | 14%            |
| Total extreme portfolios             | 43%              | 36%            |

Source: Vanguard, 2018.

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