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POPULAR PERSONAL FINANCIAL ADVICE VERSUS THE PROFESSORS

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**ABSTRACT**

I survey the advice given by the fifty most popular personal finance books and compare it to the prescriptions of normative academic economic models. Popular advice frequently departs from normative principles derived from economic theory, which should motivate new hypotheses about why households make the financial choices they do, as well as what financial choices households should make. Popular advice is sometimes driven by fallacies, but it tries to take into account the limited willpower individuals have to stick to a financial plan, and its recommended actions are often easily computable by ordinary individuals. I cover advice on savings rates, the advisability of being a wealthy hand-to-mouth consumer, asset allocation, non-mortgage debt management, simultaneous holding of high-interest debt and low-interest savings, and mortgage choices.

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A data appendix is available at <http://www.nber.org/data-appendix/w30395>

Millions of people get financial advice from non-economists. Robert Kiyosaki’s book *Rich Dad Poor Dad* has sold 32 million copies since 1997 (Lisa 2021). Dave Ramsey’s book *Total Money Makeover* has sold 1.5 million copies since 2013 (NPD 2020), and his website reports that his radio show attracts 18 million listeners per week. Authors like these may be more influential than economists are. Chopra (2021) finds that exposure to Dave Ramsey’s radio show, which promotes high saving rates, reduces household retail spending tracked by the Nielsen Homescan panel by at least 5.4%.

What advice are popular authors giving, and how does it compare to the prescriptions of economists’ normative models? In this article, I survey the advice given by the 50 most popular personal finance books (listed in Appendix Table 1), as ranked by the website Goodreads in May 2019. Three of the books contain no advice on the topics I focus on, resulting in a final sample of 47 books. Table 1 summarizes—with some oversimplification—the consensus advice of popular authors and the corresponding advice from benchmark academic theories. The upshot is that popular advice often deviates from economists’ advice.

Understanding popular advice is interesting for several reasons. First, popular advice may help us interpret why the financial choices we observe empirically arise. It is plausible that some choices that depart from economists’ theoretical predictions are being driven by the reasoning and recommendations described by popular authors.<sup>1</sup> Second, popular advice might contain valuable normative insights that economists have overlooked.<sup>2</sup> Third, even if popular advice is not exactly optimal, it may be second-best in a way that illuminates the constraints faced by individuals. For example, one common reason why popular advice deviates from economists’ advice is that popular advice tries to take into account the limited willpower individuals have to stick to a financial plan.

I begin by surveying advice on choosing savings rates over the lifecycle, as well as the advisability of being a wealthy hand-to-mouth consumer who has substantial illiquid assets such as housing but almost no liquid wealth. Next, I cover advice on asset allocation—the fraction of your financial portfolio that should be invested in stocks, securities that pay dividends or interest,

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<sup>1</sup> Respondents to surveys conducted by Choi and Robertson (2020) and Bender et al. (2021) rate “advice from a book or an article I read, or somebody on TV, radio, or the internet” as one of the least important factors for determining their portfolio’s equity share. However, individuals’ choices could be driven by lay reasoning that is *reflected* in popular authors’ writings, even if choices are not causally affected by the authors.

<sup>2</sup> An instance where economists overlooked the wisdom in popular advice before accepting it is found in Canner, Mankiw, and Weil (1997) and the response by Brennan and Xia (2000), Campbell and Viceira (2001), and Wachter (2003) regarding how long-term bond holdings should respond to risk aversion.

equity styles (colloquially known as “smart beta”), international diversification, and active versus passive mutual fund investment. The third section summarizes recommended strategies for managing non-mortgage debt—in particular, which debts to prioritize repaying, and whether simultaneously holding low-interest-earning assets and high-interest debt is a good idea. The final section covers advice about mortgage choices—fixed-rate versus adjustable rate, the size of the down payment, maturity, paying principal ahead of schedule, and refinancing.

## **Consumption and Savings**

### *Economic Theory on Savings Over the Lifecycle*

Economists think about optimal savings rates in a way that is probably counterintuitive to the layperson. Economic theory targets an optimal *consumption* rate each period. The optimal savings rate is whatever the difference happens to be between income and optimal consumption. In the standard lifecycle/permanent income hypothesis model with neither uncertainty nor borrowing constraints, individuals choose a consumption growth rate that trades off smoothing marginal utility (and hence the level of consumption) over time against the rate of time preference (i.e., the preference for earlier gratification) and the financial return from saving. The desired consumption growth rate and the lifetime budget constraint jointly determine the starting level of consumption. Individuals with constant relative risk aversion utility consume the same amount every period if the rate of time preference equals the interest rate. Because income tends to be hump-shaped with respect to age, savings rates should on average be low or negative early in life, high in midlife, and negative during retirement. From this perspective, the common policy of making the default retirement savings plan contribution rate not depend on age is suboptimal.

Carroll (1997) shows that if individuals are sufficiently impatient relative to the expected growth rate of their income and labor income is risky, they will be buffer-stock savers, aiming to accumulate only a few months’ worth of income in assets to insulate against income fluctuations. Their average savings rate is close to zero after the target asset level is reached, adjusting mainly to keep asset balances near the target level. To guard against the possibility of a catastrophically low labor income realization, buffer-stock savers do not borrow. Carroll (1997) and Gourinchas and Parker (2002) estimate that the typical household is a buffer-stock saver until midlife, at which point it switches over to accumulating greater sums in order to prepare for retirement.

### *Popular Authors on Saving During Working Life*

In contrast to the emphasis on smoothing consumption in economic theory, popular authors advise smoothing savings rates, which is what retirement savings plan defaults typically implement. Dacyczyn (1998, p. 548) is the only popular author who makes the economist-like observation that “the semiresponsible admonition to save 10 percent of your income essentially endorses the constant contracting and expanding of family expenditures. But surprisingly, life is easier and more enjoyable if spending always stays, on average, at a modest level.” The advice of Robbins (2014, p. 58) is more typical in running counter to consumption smoothing:

Whatever that [savings percentage] number is, you’ve got to stick to it. In good times and bad. No matter what. Why? Because the laws of compounding punish even one missed contribution. Don’t think of it in terms of what you can afford to set aside—that’s a sure way to sell yourself short. And don’t put yourself in a position where you can suspend (or even invade) your savings if your income slows to a trickle some months and money is tight.

Chilton (2011, pp. 95-96) explicitly rejects consumption smoothing:

Strangely, a few economists and mathematicians have been pushing the idea of intentionally not saving in your early working years because your income is low and your starting-out-in-life costs are high. They advocate ramping up efforts big time in your middle years... Do not heed that advice... it seldom works in the living room. First, costs have a funny way of never stabilizing. Second, most people aren’t going to be able to transition from setting aside nothing to being supersavers at the flip of a switch. Psychologically, that’s just not realistic. Finally, I can’t get the numbers to work anyway.

These passages illustrate two key motivations for the popular advice to smooth savings rates: the usefulness of establishing saving consistently as a discipline, and the power of compound interest. The former motivation is almost always missing from economic models of optimal saving—a potentially important oversight. Economic models do make the opportunity cost of consumption a key driver of savings recommendations, but it could result in either a negative or positive optimal

current savings rate. In contrast, for popular authors, compound interest implies that you should be saving a positive amount now. Of the 45 books that offer some sort of savings advice, 32 stress the importance of starting to save immediately, and 31 regale the reader about the power of compound interest.<sup>3</sup> Contrary to the standard lifecycle/permanent income hypothesis model's advice that the young should often have negative net worth, 28 books mention the need for everybody to prioritize building an emergency savings buffer of between \$1,000 to two years of income. Contrary to the buffer stock model's recommendation, popular authors advise you to continue saving at a high rate even after an adequate emergency savings fund has been established.

Popular authors tend to champion simple savings rules that have the virtue of requiring minimal computation. Twenty-one books recommend a positive savings rate that does not vary by age. Ten to 15 percent of income is a range that encompasses most of the recommendations. Four books recommend 20 percent or a range that includes 20 percent, and two recommend 50 percent or more on the premise that you should have the financial freedom to be able to walk away from an undesirable job early in life. Only one of the above 21 recommendations adjusts for the amount you have already saved. Nine books advise starting with a target for wealth at retirement in order to compute the necessary savings rate; many of these books compute the constant dollar savings flow per period that is needed to achieve the goal. Only four books recommend taking Social Security benefits into account when choosing a savings rate, despite Social Security replacing 64% of final working-life earnings for the median new beneficiary aged 64-66 in 2005 (Biggs and Springstead 2008).

If your employer matches employee contributions to a 401(k) retirement savings plan, 11 books recommend contributing enough to earn the maximum possible match. Failing to do so is "like walking away from free money" (Kobliner 2017, p. 136). Nobody recommends altering your savings rate in response to how generous the match is. As Ramsey (2003, p. 158) puts it, "if your employer matches... that amount is gravy." The maximum allowable annual contribution to your 401(k) or Individual Retirement Account is another focal amount recommended by six books.

Fifteen books recommend increasing your savings rate over time. If income is rising over time, this strategy is consistent with consumption smoothing. Indeed, four books recommend diverting some of future salary increases to savings rate increases. However, three books

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<sup>3</sup> My classifications of each book's advice, along with the relevant textual excerpts, are available in the Online Appendix.

recommend increasing your savings rate by 1% of income per month over the next few months—faster than plausible income growth for most people—on the theory that you can acclimate to a higher savings rate over time. Eight books say that a lower consumption level becomes easier to tolerate with the passage of time.

Orman (2007a) alone says that it is reasonable to carry revolving balances on one’s credit card in one’s younger years in anticipation of higher future income; she advises that no more than 1% of current pretax annual income be charged each month to the credit card, and these charges should only be for absolute necessities. Thirty-one books warn against borrowing on credit cards, usually in strong terms such as, “Credit card debt is never good” (Kobliner 2017, p. 33). Ramsey (2013, p. 126) gives the most extreme advice against high-frequency consumption smoothing using debt, writing, “The worst time to borrow is when times are bad,” on the grounds that the debt payments will be burdensome if income doesn’t recover. Eighteen books give some variant of the advice that debt can be good when used to fund investments in things that appreciate, such as houses and human capital, but is bad otherwise. Seven books advise against student loans.

### *Mental Accounting*

Standard economic theory does not earmark portions of household savings for specific purposes; money is fungible. In contrast, 17 books advocate subdividing wealth into mental accounts devoted to different goals. Malkiel (2019, p. 358) writes, “A specific need must be funded with specific assets dedicated to that need.” Commonly mentioned mental accounts are a fund for emergencies, a retirement savings fund, a fund for major purchases such as a house or a car, and a fund for children’s college tuition. The previously mentioned recommended savings rates are usually for the retirement and/or emergency funds alone; saving for other expenses is to be done in addition to the baseline savings level.

The choice pathologies induced by mental accounting are well-known (Thaler 1985, 1999). However, using mental accounting when choosing savings rates has some advantages. Karlan et al. (2016) argue that mental accounting increases motivation to save by making salient the link between today’s saving and specific future expenditures. Popular author Kobliner (2017, p. 28) asserts, “Research... suggests that labeling a savings account with a goal... actually results in people adding even more money to their savings pot.” Mental accounting is also an easy way to compute how to adjust spending in response to foreseeable changes in the utility from expenditure.

Economic models typically assume that the individual's utility function is the same every period and that goods are infinitely divisible, which makes optimal expenditure levels smooth across time. In reality, expenditure is much more valuable in certain periods—such as when you are getting married, moving to a new city, or sending a child to college—and needs to be lumpy in order to purchase durable goods, which limits the practical appeal of exactly following the savings recommendations from standard economic models. Funding a mental account devoted to a predictable large expenditure in addition to your baseline saving has the desirable effect of decreasing spending before the period when expenditure is unusually valuable. Such a practice also helps you monitor whether you are on track to have enough money to fund the expenditure when the time comes.

### *Reframing Saving: Pay Yourself First*

One trope recurs so often that it is worth mentioning, as its prevalence across books and decades suggests that it is effective. Economists conceive of current consumption as the carrier of utility and saving as a current sacrifice. Clason (1926/1988) was the first to reframe current saving as the carrier of utility—a payment to yourself—while current spending is reframed as a payment to others and hence a loss to yourself. His rule that you should “pay yourself first” appears in 16 books.

The rule prescribes that when you receive income, a predetermined fraction should be sent to a separate account at once—automatically, advise many modern books—and this money is not to be touched. “The secret... is that you can't spend what you don't see” (Bach 2004, p. 20). The remaining money can be freely spent without careful budgeting. This advice is frequently accompanied by Clason's (1926/1988, p. 19) statement that after increasing one's savings rate by 10 percentage points, “strange as it may seem, I was no shorter of funds than before. I noticed little difference as I managed to get along without it.” The notion that a significant amount of the money we spend brings us almost no marginal utility—making additional saving painless—is endorsed by 18 books.

### *Wealthy Hand-to-Mouth Status*

Kaplan, Violante, and Weidner (2014) document that about 20% of U.S. households are “wealthy hand-to-mouth,” in that they have positive illiquid assets, such as housing and retirement

account balances, but almost no liquid assets. Kaplan, Violante, and Weidner (2014) and Kaplan and Violante (2014) find that such a portfolio composition can be rationalized despite the resulting inability to cushion consumption from income shocks if illiquid assets have extremely high risk-adjusted returns. Angeletos et al. (2001) instead interpret this pattern as the result of households storing wealth in illiquid forms to protect it from their lack of self-control.

If illiquid assets do yield such high returns that it is worth living paycheck to paycheck, then we might expect to see evidence of such a belief in popular advice. I have already mentioned that 28 books explicitly state the need for everybody to prioritize building emergency savings, which is contrary to being a wealthy hand-to-mouth household. Fourteen books say that a house is not a great financial investment. Of the seven books that say that a house is a great investment, six recommend building emergency savings of at least three months' income/expenses, and two warn against becoming a wealthy hand-to-mouth household in order to buy a more expensive house.

Thus, there is no evidence that popular authors believe that it is advisable to become a hand-to-mouth consumer in order to invest in housing. However, there is some indication that going without a liquid asset buffer in order to take advantage of 401(k) matching contributions—a high, instantaneous, and risk-free return on investment—is viewed more sympathetically. Many of the 11 books that recommend contributing enough to receive the maximum possible 401(k) match do not give advice on how to trade off 401(k) contributions against emergency savings. But three books do recommend prioritizing 401(k) contributions over building an emergency cash buffer.

### *Spending in Retirement*

Fifteen books give advice on spending in retirement. Two books advise planning on lower spending in retirement than during working life, whereas two books advise keeping spending constant across the retirement threshold. Therefore, there is little light shed on the optimality of the empirically observed drop in spending that occurs upon retirement (Bernheim, Skinner, and Weinberg 2001; Aguiar and Hurst 2005).

One book advises spending 3% of your financial wealth per year in retirement, seven books advise 4%, one advises 5%, one advises 6.7%, and two (both by Dave Ramsey) advise 8% on the

theory that nominal investment returns will be 12% and the inflation rate will be 4%.<sup>4</sup> Five books explicitly tie their recommended withdrawal rate to be at or below a stated expected real portfolio return, implying that preserving the real level of capital is the goal, rather than spending down wealth as the lifecycle model recommends.

One reason to avoid decumulating wealth in retirement is to ensure that you don't outlive your savings. The classic model of Yaari (1965) advocates fully annuitizing wealth to eliminate this longevity risk, but only four books recommend buying life annuities. No book explicitly recommends against life annuities, but we might gain some insight into why households buy so few annuities from some of the drawbacks listed or refuted by the books that do encourage annuitization: the risk of early death, the loss of control over one's money, low current interest rates, and the fact that most annuities lack inflation protection.

## **Asset Allocation**

### *Popular Authors on the Equity Share of Portfolio*

Investment time horizon is of paramount concern in popular financial advice. Thirty-one of the 45 books that offer some form of asset allocation advice assert that stocks become less risky, and hence more attractive, as the holding period increases. Twenty of these books justify this argument by pointing to the fact that historically, stocks were less likely to underperform fixed-income assets or to have a negative cumulative return as the holding period increased. Twelve books say that stock returns mean-revert; a common saying is that stocks are "on sale" after a large price decline. Seven books argue that because the economy will grow in the long run, stocks are likely to be profitable investments in the long run.

The perception that stock market risk decreases with holding length leads to popular authors recommending that stock allocations increase with investment horizon. Money is often bucketed by when it will be needed, and a different investment allocation is recommended for each bucket. Twenty-nine books say that money that might be spent soon should be held entirely in cash. In particular, emergency savings should be held in cash, usually in a bank account. Many authors also recommend that non-emergency savings that will be needed in the near term should

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<sup>4</sup> Some books advise spending  $X\%$  of your wealth during your first year of retirement, and to then grow that spending amount at the inflation rate. Other books are vague about how spending should adjust over time in response to changes in one's portfolio value.

be held in cash or fixed income, where “near term” is defined as one year (one book), one or two years (one book), one to three years (one book), five years (seven books), two to seven years (one book), or even as long as ten years (two books).

Longer-term money such as retirement savings is to be invested more heavily in equities, although 14 books warn against allocating 100% to equities because such a portfolio is too risky and lacks diversification across asset classes. Twenty-six books recommend that the asset allocation of long-term money become more conservative with age; nine cite a variant of the “portfolio percent in stocks should be 100 minus your age” rule. Four books recommend that *any* money not needed in the near-term be invested in stocks. These rules create a hump-shaped pattern of portfolio equity share with respect to age. The young have little surplus money that is not needed in the near term, so most of their financial assets will be in fixed income. The middle-aged have accumulated more savings, so a greater portion of their financial assets are deemed suitable for equity investment because they are not needed for short-term spending. Older individuals have a lower equity share because of the growing conservatism prescribed for their long-term money and because more of their money will be needed in the near-term to fund retirement consumption.

The inflation rate is mentioned by 11 books as a reference return that is important for one’s longer-term money to exceed. For example, Ferri (2010, p. 94) recommends, “Each asset class to be held in a portfolio for the long term should be expected to earn a return greater than the inflation rate.” Following such a decision rule implies that risk-taking will increase when real interest rates become negative.

### *Interpreting Empirical Evidence on Lifecycle Portfolio Allocation*

Popular advice offers guidance on how economists should interpret empirical patterns in lifecycle asset allocation. Ameriks and Zeldes (2004) point out that even with perfect panel data, it is impossible to econometrically identify how asset allocation changes with age without imposing a strong assumption about the shape of age, birth cohort, and calendar time effects, since these three variables are perfectly collinear—a person’s age equals the calendar year minus her birth year. Depending on the identifying assumption used, they find that the percent of portfolio allocated to equities is either strongly rising or hump-shaped with respect to age.

In contrast to this econometric ambiguity, none of the books in the sample recommends that one’s stock allocation should be everywhere increasing with age. The weight of popular

recommendations suggests that individuals do not have portfolio rules in mind that everywhere increase equity share with age.

### *A New Explanation for Stock Market Non-Participation*

Popular advice suggests an explanation for stock market non-participation that is absent from the academic literature. Only half of U.S. households hold any stock either directly or indirectly via mutual funds or pension funds (Guiso and Sodini 2013). Non-participation is a puzzle for economic theory because under expected utility preferences, everybody should hold at least a small amount of stock provided that their non-stock income is not too positively correlated with stock returns (Haliassos and Bertaut 1995).<sup>5</sup> The fact that stock market participation rises with wealth has caused the existence of fixed costs of participation to become a leading candidate explanation for non-participation (Vissing-Jørgensen 2004). Because the expected benefit of investing a minimal amount in the stock market must be small, a fixed cost will deter stock market investment among those with little wealth.

But if many people believe that any money that may be spent in the near term should not be invested in stocks, then low stock market participation rates that rise with wealth are a natural outcome even in the absence of fixed costs.

### *Economists on the Equity Share of Portfolio*

Economic models also recommend equity allocations that are hump-shaped with age, but for somewhat different reasons than those found in popular books.

Unlike many popular authors, economists commonly think of investment risk not in terms of the probability of the binary outcome that stocks will outperform bonds or have a positive return, but in terms of the variance of returns. This measure recognizes that the magnitude by which stocks outperform or underperform the safe asset should matter. In the benchmark case where stock returns are identically and independently distributed, the expected outperformance of stocks over bonds increases with investment horizon, but this is offset by the fact that the variance of cumulative stock returns also increases. Samuelson (1969) and Merton (1969) prove that if the

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<sup>5</sup> Any strictly increasing differentiable utility function is locally linear, so agents with such utility functions should be risk-neutral with respect to a small risk (Rabin 2000).

investor has constant relative risk aversion utility and no labor income, the optimal allocation to the stock market does not vary with the investment horizon.

The story is different if stock returns are negatively autocorrelated, which causes the annualized variance of cumulative log stock returns to decrease with investment horizon. Campbell, Lo, and MacKinlay (1997, p. 80) survey the academic literature and conclude that “there is little evidence of mean reversion of long-horizon returns” of the form popular authors describe, where low recent stock market returns unconditionally predict high future stock market returns. However, low stock market returns that lower the price-dividend ratio because they are not accompanied by a contemporaneous drop in dividends *do* forecast high future returns (Cochrane 2010, pp. 422-424). Barberis (2000) finds that if one takes into account today’s price-dividend ratio and expectations of how it will evolve in the future, the *conditional* annualized variance of cumulative log stock market returns declines with horizon. Conditional variances are the theoretically relevant object for the investment decision, since they represent the uncertainty that the investor faces after considering her information set. My sense is that most financial economists believe that conditional annualized stock market risk decreases with horizon. However, Pastor and Stambaugh (2012) argue that an expansive view of parameter uncertainty implies that conditional annualized stock market risk *increases* with horizon.

If conditional annualized return variance decreases with investment horizon, then economic theory generally recommends that long-horizon investors whose coefficient of relative risk aversion is above one (the empirically relevant case) hold more stock than short-horizon investors (Barberis 2000). Wachter (2002) finds that when stock returns are mean-reverting and perfectly correlated with a return predictor (e.g., the dividend-price ratio), the investor optimally breaks up his portfolio into subaccounts for funding each consumption event. Money that is intended to be spent further in the future should be invested more aggressively. This bucketing strategy is akin to the approach popular authors recommend, although money intended for near-term use should not generally be invested entirely in cash.

Standard theory also departs from popular advice in not regarding the *level* of the risk-free interest rate as relevant for portfolio allocation, but only the *difference* between expected risky asset returns and the risk-free interest rate. In other words, one should not become more prone to reach for yield in low-interest-rate environments if risk premia remain unchanged, although

Campbell and Sigalov (2022) present a model where a requirement to consume the expected return of the portfolio each period (a “sustainable spending” constraint) could justify such behavior.

A rationale for portfolio equity shares that decline with age that does not depend upon return mean reversion lies with human capital (Bodie, Merton, and Samuelson 1992). If labor income is like a bond interest payment that is relatively uncorrelated with stock returns, then a young person has an implicit fixed-income position whose value is usually enormous relative to her financial assets. As the person ages, the present value of future labor income declines because she has fewer wage payments remaining. To offset the decline in implicit fixed-income holdings, the financial portfolio should hold more fixed income over time. Labor supply flexibility also increases the capacity to bear risk in one’s financial portfolio, since a low investment return can be mitigated by working more. If the young have more labor supply flexibility than the old, then this is another reason for the young to hold a greater share of stocks in their portfolios than the old.

Cocco, Gomes, and Maenhout (2005) find that in a lifecycle model with fixed labor supply, human capital causes an agent whose risk aversion is at the upper boundary of what is usually thought to be plausible to allocate 100% of his portfolio to equities for much of working life before gradually reducing his equity share as he approaches retirement. Adding the possibility of disastrous transitory labor income shocks makes the young invest more conservatively than the middle-aged due to the increase in background risk. A fixed cost of stock market participation also deters the young, who have low asset holdings, from investing in stocks (Gomes and Michaelides 2005).

### *Missing Drivers of Equity Share in Popular Advice*

Despite the importance of human capital, only eight popular books mention it as a relevant consideration for lifecycle asset allocation. All eight indicate that higher future wage earnings increase optimal risk-taking in the financial portfolio, but none explicitly mention labor supply flexibility, instead writing things like, “[the young] can use wages to cover any losses from increased risk” (Malkiel 2019, p. 344).

Two concepts that are foundational for portfolio choice theory are rarely if ever mentioned by popular authors: diminishing marginal utility of consumption and return covariance with marginal utility.

Economists conceive of risk aversion as being driven by the speed at which marginal utility diminishes as consumption increases. Swiftly diminishing marginal utility means that the upside potential of a gamble is not so valuable, making gambles less attractive. Only five books suggest that diminishing marginal utility should be a determinant of one's portfolio equity share. All five give the impression that diminishing marginal utility is relevant only after one achieves or is close to achieving one's target wealth level. For example, Ferri (2010, p. 285) writes, "You only take the amount of risk that you need to accomplish a financial objective... There is no need to invest at your peak risk tolerance level once you have accumulated enough assets to easily reach your investment objectives with lower risk." Three books argue that investors do not know their own risk tolerance—which they define as the ability to not sell your stock in a bear market rather than the speed with which marginal utility diminishes—until they have lived through a major market decline. Thus, they recommend that younger investors scale back the risk of their portfolios until they have gained such experience.

Another fundamental driver of asset allocation in economic models is the covariance of each asset's return with marginal utility: Investors should be more reluctant to hold assets that tend to deliver low returns when an extra dollar is especially valuable. This means that in equilibrium, such assets will have low prices and hence high average returns. (The previously discussed variance of returns matters for portfolio choice only to the extent that it is ultimately tied to this covariance.) The celebrated equity premium puzzle (Mehra and Prescott 1986) is the observation that stocks' returns don't seem to have a large covariance with marginal utility, as measured by aggregate consumption growth, and yet their average returns are high, making stocks anomalously good deals. It is striking that *none* of the popular advice books mentions period-by-period covariance with marginal utility as a consideration for asset allocation. This suggests that consumption-based asset pricing models, which seek to explain expected returns using covariances of returns with consumption, fail because people simply don't make portfolio decisions with such covariances in mind.

The closest any author comes to this notion is a concern mentioned by 11 books that one might be forced to sell prematurely at a loss. The act of selling plays a central role. Orman (2012, p. 246) writes, "If you don't have the time to leave this money sitting there, it is possible that when you do need to take it out, that need will arise at the worst possible time... One year later, you find the house you want and make the offer, which is accepted—on April 14, 2000, a day the market

goes down considerably, and the day you had decided to sell. You will most likely take out far less than you initially put in. If you could have just waited—but you could not, for you needed the money to buy your home.” Notice that this concern would apply even to risky assets whose returns are uncorrelated (in expectation) with marginal utility, and that it would not apply if other assets were sold to finance expenses while the underwater asset were held. As Robin and Dominguez (2018, p. 292) write, in the minds of popular authors, “The only days you care about an investment’s value are the day you buy it and the day you sell it.”

### *Dividends and Interest*

Modigliani and Miller (1961) prove that in a frictionless market with no taxes, a firm’s payout policy is irrelevant for its valuation. The intuition is that any investor who desires a certain amount of cash from her investment can generate it by selling shares instead of relying on a dividend. In the real world, dividends and interest are tax-disadvantaged relative to capital gains in the U.S., which makes the prevalence of dividends a puzzle (Baker and Weigand 2015).

Nine of the books in our sample reject the dividend irrelevance theorem, and no book recommends eschewing dividends or interest for tax reasons. Multiple books refer to the need for “income,” particularly when the investor is older, for which bonds are the preferred source. Malkiel (2019) recommends coping with the current low-interest-rate environment by holding relatively stable dividend-paying stocks in place of what would be bond holdings in normal times. Kiyosaki (2012) dismisses the relevance of capital gains, arguing that cashflow from the investment is the only relevant factor. Relatedly, Ferri (2010, p. 30) writes that commodities have lower expected returns than stocks because they “pay no interest, have no earnings, and pay no dividends,” which seems to be an expression of the fallacy that dividend payments do not come at the expense of capital gains (Hartzmark and Solomon 2019). Lynch (1989, p. 205) argues that “the presence of the dividend can keep the stock price from falling as far” because “if investors are sure that the high [dividend] yield will hold up, they’ll buy the stock just for that.” But inconsistent with this assertion, from July 1927 to June 2022, a value-weighted portfolio of all non-dividend-paying stocks has more positively skewed monthly returns than dividend-paying stocks in the bottom 30% or middle 40% of the positive dividend yield distribution.<sup>6</sup>

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<sup>6</sup> Value-weighted portfolio returns are obtained from Kenneth French’s website. Stocks are sorted by dividend yield as of each June-end.

## *Equity Styles*

Stocks with certain characteristics—or styles—have historically had higher average returns than stocks with the opposite characteristics. For example, value stocks (which have low prices relative to their current fundamentals such as book equity, dividends, or earnings) have had higher returns than growth stocks, and small-cap stocks have had higher returns than large-cap stocks (Fama and French 1992). These average return differences do not appear to be compensation for bearing the classical measure of risk, market beta (the responsiveness of an asset's return to the aggregate stock market's return, which captures how an asset affects the variance of a well-diversified portfolio's return). This has led to an active academic debate about whether average style returns are due to mispricing or rational compensation for risk that is not captured by market beta.

Twenty-six books make a recommendation about equity style tilts. Eight books recommend tilting one's portfolio towards value stocks, while one book recommends tilting towards growth stocks. Fourteen books recommend tilting towards small stocks. The advice to diversify across opposing styles (and underweight stocks in the middle of the style dimension) is common, which weakens style tilts. Eight books recommend holding both growth and value stocks, while thirteen books recommend holding both large and small stocks in a way that creates a small-cap tilt.

Many fewer books say that these tilts could entail taking on more risk, which suggests that most authors think that their recommended tilts generate superior risk-adjusted returns. Only three books mention the possibility that value stocks are riskier than growth stocks. Ferri (2010, p. 91) writes that “growth stocks tend to perform well in a recession and early recovery, while value stocks tend to do best well into a recovery and at economic peaks.” This appears to be untrue in the data; from July 1926 to June 2022, the Fama and French (1993) value minus growth factor HML has an average monthly return of 0.37% during NBER recessions plus the first year of recovery, and 0.35% otherwise. Bernstein (2010, p. 120) writes that “Fama and French... insist that the higher return of value stocks reflects the fact that these companies... are weaker and thus more vulnerable in hard times...” but notes that “growth stocks demonstrate their own peculiar risks” because “from time to time, the public becomes overly enthusiastic about the prospects for companies at the leading edge of the era's technology.” Bernstein (2017, p. 124) warns about value stocks' risks for particular investors: “Employees of cyclical ‘value’ companies should be

particularly wary of value portfolios, as in the event of a severe recession both their job prospects and their portfolios will suffer disproportionately.” In contrast, six books say that growth stocks are riskier than value stocks. Four books say that small stocks are riskier than large stocks, and only one book says the opposite.

### *International Diversification*

In a frictionless market with homogeneous investors, every investor should hold each country’s securities in proportion to its market capitalization. In practice, investors heavily overweight the securities of their own country, foregoing significant diversification benefits (French and Poterba 1991).

Twenty-six books have something to say about international equity investment. Only two books recommend not diversifying internationally at all. The remainder recommend holding international stocks, but of those that give specific portfolio percentages, all recommend allocations that are below the 59% of global stock market capitalization that non-U.S. stocks constitute as of 2021 (SIFMA 2021). The average recommended weight is 27% of equity holdings, with the range being from 12.5% to 50%.

Most books give no reasoning for why they underweight international stocks. Seven books say that international stocks are riskier than U.S. stocks, citing higher return volatility, currency risk, lower liquidity, subpar accounting and financial transparency standards, and political instability. Bogle (1999, 2017) notes that a significant portion of the revenue and profits of S&P 500 companies comes from other nations, so U.S. stocks already provide international exposure, and Collins (2016) writes that increasing cross-border market integration has reduced the diversification benefits of holding foreign stocks. Bogle (1999, 2017) and Collins (2016) also argue that the U.S. is the most attractive market to invest in because its economy will experience the strongest future growth. Bernstein (2017, p. 79) says that one’s international stock exposure should be limited by how tolerable one finds it when one’s portfolio “often temporarily underperforms everybody else’s,” given that one will be surrounded by other investors whose portfolios are home-biased.

Coeurdacier and Rey (2013) survey the academic literature on home bias. Many papers rationalize home bias by creating models where domestic equities are a hedge against the risk in income that can’t be traded in financial markets (such as wages)—a motive that is not mentioned

in any popular book. Conversely, the motives for underweighting international stocks that do appear in popular books tend to be rejected by economists. The foreign trading costs and perceived foreign risk due to low information quality necessary to rationalize the observed level of home bias are too large to be plausible (French and Poterba 1991). Currency risk can be hedged away at a cost that is negligible in major currencies (Perold and Schulman 1988). The correlation of multinationals' stock returns with their domestic stock market is very high, limiting the international diversification benefit obtained by buying the multinational stocks of one's own country (Lewis 1999). Bekaert, Hodrick, and Zhang (2009) and Christoffersen et al. (2012) find that trends in cross-market stock market return correlations have not eliminated the benefits of international diversification. Finally, a security's expected return equals its discount rate, regardless of its expected cashflow growth. Therefore, the perceived strength of the U.S. economy is not a reason to overweight it if the market efficiently prices this strength.

#### *Active vs. Passive Mutual Fund Management*

The average actively managed U.S. equity mutual fund that tries to beat the market's return underperforms the average passive fund that tries to match the market's return by 0.67% per year (French 2008). Thus, mainstream economic advice is to avoid active management. Nevertheless, 60% of mutual fund and ETF assets in 2020 are invested in actively managed funds (Investment Company Institute 2021).

Popular authors largely advise investing in passive index funds. Twenty-four books recommend indexing. Only seven books recommend active management. One of these books is by Peter Lynch, whose advice is not surprising given that he made his fortune as an active mutual fund manager. Authors that recommend active management generally recommend picking funds based on their past performance. Empirically, money flows into mutual funds strongly chase past returns (Chevalier and Ellison 1997), but evidence that performance persists is weak (Carhart 1997; Choi and Zhao 2021).

The agreement between popular advice and economists' advice may stem from the fact that the statistics on average performance and performance persistence are straightforward to calculate, easy to understand, and widely publicized.

## Non-Mortgage Debt Management

Twenty-three books give advice on how to pay down non-mortgage debt, focusing predominantly on credit card debt.

### *Prioritizing Which Debt to Pay*

For economists, a very basic principle of optimal debt repayment is to prioritize paying down the debt charging the highest interest rate.<sup>7</sup> In practice, households often do not follow this principle (Gathergood et al. 2019).

Surprisingly, ten books recommend *not* prioritizing one's highest-interest debt, versus ten books that endorse prioritizing one's highest-interest debt. Nine books endorse some variant of the debt snowball method, which is famously associated with Dave Ramsey. The debt snowball prioritizes paying off the smallest-balance debt first while paying the minimum required payment on the others. When the smallest-balance debt is paid off, the money that was being applied towards it now goes towards paying off the next-smallest-balance debt (in addition to the minimum payment on this next debt), and so on until all debts are paid off. Ramsey (2011, p. 100) writes, "People sometimes say, 'But Dave, doesn't it make more sense mathematically to pay off the highest interest rates first?' Maybe. But if you were doing math, you wouldn't have credit card debt, would you? This is about behavior modification. You need some quick wins or you will lose steam and get discouraged... every time you cross a debt off the list, you get more energy and momentum..." With a similar eye towards motivation, two books recommend prioritizing the debt that bothers you the most, regardless of its interest rate.<sup>8</sup>

### *Co-Holding of High-Interest Debt and Low-Interest Assets*

Twelve books say that in order to pay off one's debt, it is important to establish a firm rule that one will not borrow anything more. For example, Warren and Tyagi (2005, p. 144) write, "This is the moment to look at yourself in the mirror and say out loud, '*The debt stops here.*' Every morning tell yourself, 'I will not take on more debt today.'"

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<sup>7</sup> There are some caveats to this principle if defaulting on some debts is a significant possibility. For example, if a high-interest debt is easier to discharge in bankruptcy than a low-interest debt, it may make sense to deprioritize the former. If a low-interest debt is collateralized with an asset such as a house or a car that can be seized in default, it may be optimal to prioritize paying this debt while defaulting on an uncollateralized debt with a higher interest rate.

<sup>8</sup> Three of the above books advise prioritizing either the highest-interest debt or the lowest-balance debt. One of the books advises prioritizing either the lowest-balance debt or the debt that bothers you the most.

The existence of this rule potentially gives some insight into the co-holding puzzle—the fact that 33% of households who are paying high interest rates on their credit card debt simultaneously hold at least one month of income in liquid assets earning low interest rates (Gross and Souleles 2002). The interest rate spread is large; the St. Louis Fed’s website reports that in May 2022, the average rate on credit card accounts being charged interest was 16.65%, while the average savings account interest rate was 0.06%. Economists have tried to rationalize co-holding by appealing to the fact that some expenses must be paid by cash or check (Telyukova and Wright 2008), strategic maneuvering in advance of bankruptcy (Lehnert and Maki 2007), attempts to limit household spending by reducing unused credit capacity (Bertaut, Haliassos, and Reiter 2008), and insuring against the risk that one’s credit limit will be reduced (Fulford 2015).

Fourteen books endorse co-holding, but for very different reasons. Only one of them mentions in passing any justification found in the academic literature—the risk of a credit limit reduction.<sup>9</sup> Among the 11 books that say something against co-holding, eight nonetheless recommend some positive amount of co-holding. The most frequently cited justification for co-holding (mentioned by seven books) is that it prevents borrowing additional amounts. Warren and Tyagi (2005, p. 147) write, “This [emergency savings buffer] is the money that will keep you from sliding back into the credit card trap when something goes wrong.” Ramsey (2013, p. 100) says that he used to recommend devoting all assets to paying down debt, but “I discovered that people would stop their whole Total Money Makeover because of an emergency—they felt guilty that they had to stop debt-reducing to survive... If you use debt after swearing off it, you lose the momentum to keep going.” Four books refer to the motivation created by building assets even while paying down debt. Bach (2004, p. 204) writes, “If you were to direct all of your available cash flow to debt reduction...it might literally be years before you could begin saving for the future. This is too negative—so negative, in fact, that many people who follow this path get discouraged, give up early, and never get to the saving part.” Three books endorse building up “long-term” savings in particular while paying down debt, ignoring the return differential between borrowed money and invested money. Lowry (2017, p. 215) writes, “Why bother saving when you have debt? Because trying to play catch-up later is a pain! Did that compound interest example show you nothing?!”

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<sup>9</sup> Tyson (2019, p. 76) writes, “On the other hand, if you use savings to pay down credit-card debt, you can run your credit-card balances back up in a financial pinch (unless your card gets canceled).”

## **Mortgage Choices**

### *Fixed vs. Adjustable-Rate*

Fixed-rate mortgages (FRMs) are exposed to inflation risk. FRM borrowers are better off under unexpectedly high inflation because it erodes the real present value of their loan repayments. Borrowers can protect themselves against a drop in inflation that lowers nominal interest rates by refinancing their FRM, although many FRM borrowers fail to refinance optimally (Keys, Pope, and Pope 2016).

In contrast, the real present value of adjustable-rate mortgage (ARM) payments is almost unaffected by inflation because changes in expected inflation change nominal ARM interest rates roughly one-for-one. However, ARM borrowers are exposed to the risk that real interest rates will change. They are also exposed to short-run variability in real mortgage payments; an increase in expected future inflation raises interest payments today even though the price level has not risen yet. ARMs usually charge lower interest rates than FRMs because ARM interest rates are pegged to short-term interest rates, whereas FRM interest rates are pegged to long-term interest rates and include a premium for offering the refinancing option.

Weighing the above considerations, Campbell and Cocco (2003, 2015) find that borrowers should generally prefer ARMs over FRMs unless interest rates are low. Guren, Krishnamurthy, and McQuade (2021) find that ARMs are also better than FRMs for macroeconomic stability because short-term interest rates tend to fall more than long-term interest rates during recessions and FRMs require the borrower to refinance in order to obtain payment relief, which they will be unable to do if their home value has fallen enough to cause maximum loan-to-value requirements to bind.

Twenty-four books give advice about making choices about mortgages. The purported macroeconomic stabilization benefits of ARMs notwithstanding, 11 books say that ARMs are riskier than FRMs, with discussion focusing on the fluctuating monthly payments of ARMs. The absence of discussion of inflation suggests that the perceived safety of FRMs is driven in part by money illusion; only two books mention that FRMs are exposed to inflation risk, but they see this exposure as advantageous—either as a hedge or a profit opportunity. Given views on the risks of ARMs, it is not surprising that eight books recommend choosing an FRM instead of an ARM. Only two books recommend choosing a hybrid ARM, which charges a fixed rate for a period of

time before shifting to an adjustable rate, but they both advise avoiding exposure to the floating interest rate phase of the contract by choosing an initial fixed-rate period that corresponds to how long you plan to stay in the home.

### *Down Payment*

Four books write approvingly of obtaining a mortgage with a 5% down payment or less in order to become a homeowner sooner, but all of these books were published before 2008. Five books recommend trying to make a down payment of at least 20% of the home's purchase price. None of the books in the sample suggest decreasing your down payment if you are pessimistic about housing returns in order to limit your financial exposure to house prices, as recommended by the risk-shifting model of Bailey et al. (2019) when homeowners are constrained from adjusting the size of their house in response to pessimism.<sup>10</sup>

### *Mortgage Term*

Six books recommend taking a 30-year mortgage, citing the flexibility created by the lower monthly payments and the ability to lock in an interest rate for 30 years. Three books, all by Dave Ramsey, recommend a 15-year term. Ramsey (2013, p. 173) writes, "The really interesting thing I have observed is that fifteen-year mortgages always pay off in fifteen years... Thirty-year mortgages are for people who enjoy slavery so much they want to extend it for fifteen more years and pay thousands of dollars more for the privilege."

### *Mortgage Prepayment and Refinancing*

Paying off your mortgage ahead of schedule is recommended by 11 books. Although the interest savings from doing so is mentioned by seven books, four books cite the emotional reward from owning your house debt-free as a reason. On the other hand, one book recommends against accelerating mortgage payments, citing higher expected returns from investing in the stock market, and five books are ambivalent about whether you should repay more quickly. The academic literature offers little guidance on this question.

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<sup>10</sup> Bailey et al. (2019) provide numerous examples of popular financial advice to follow such a risk-shifting strategy. The fact that it does not appear in my sample suggests that such advice has had limited penetration.

Advice on when to refinance an FRM is found in only five books. Chilton (1998) recommends refinancing if interest rates fall by at least 1%. Tyson (2019, p. 303) writes that refinancing is optimal “if you can recover the expenses of the refinance within a few years” or if you will keep the property and mortgage for at least as long as it will take to recover the refinancing expenses. Olen and Pollack (2016) say that refinancing is rarely worthwhile if the interest rate has dropped by less than 1% and otherwise depends on your tax rate, the outstanding mortgage balance, and when you expect to move homes; they refer readers to consult calculators on the Internet. Ramsey (2013, p. 173) writes that “the best time to refinance is when you can save on interest,” while Roth (2010, p. 216) says that the “standard advice” to wait until interest rates have dropped 2% is obsolete because closing costs are lower now.

Popular advice is considerably less nuanced than the approximately optimal refinancing rule derived by Agarwal, Driscoll, and Laibson (2013). The optimal strategy is complicated because of the option value of waiting for the interest rate to potentially fall further before paying the refinancing cost. The interest rate threshold for refinancing depends on the standard deviation of the mortgage interest rate, the cost of refinancing, the discount rate for future cashflows, the outstanding mortgage balance, the marginal tax rate against which mortgage interest can be deducted, and the expected time until the borrower will sell the home.

## **Conclusion**

Popular financial advice can deviate from normative economic theory because of fallacies. But popular financial advice has two strengths relative to economic theory. First, the recommended action is often easily computable by ordinary individuals; there is no need to solve a complex dynamic programming problem. Second, the advice takes into account difficulties individuals have in executing a financial plan due to, say, limited motivation or emotional reactions to circumstances. Therefore, popular advice may be more practically useful to the ordinary individual. Developing normative economic models with these features, rather than ceding this territory to non-economists, may be a fruitful direction for future research.

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Table 1

Advice summary

Topic	Consensus popular advice	Benchmark academic advice
Saving	<ul style="list-style-type: none"> <li>• Save 10-15% of income regardless of age and circumstances during working life</li> <li>• Don't annuitize. Spend to keep real level of wealth roughly constant in retirement.</li> <li>• Divide savings into mental accounts devoted to different goals</li> </ul>	<ul style="list-style-type: none"> <li>• Smooth consumption over time</li> <li>• Low or negative savings rates when young, high savings rate in midlife</li> <li>• Fully annuitize wealth in retirement. If not annuitized, negative savings rate in retirement.</li> <li>• All wealth is fungible</li> </ul>
Portfolio equity share	<ul style="list-style-type: none"> <li>• Hold money that might be spent in short term entirely in cash</li> <li>• Money that won't be spent in short term may be invested in equities</li> <li>• Equity share should be hump-shaped with respect to age</li> </ul>	<ul style="list-style-type: none"> <li>• Invest money that will fund near-term consumption more conservatively than money that will fund consumption far in the future</li> <li>• Equity share should be hump-shaped with respect to age</li> <li>• Equity share should depend on how quickly marginal utility diminishes, how much stock returns covary with marginal utility</li> </ul>
Dividends	<ul style="list-style-type: none"> <li>• High dividends are attractive</li> </ul>	<ul style="list-style-type: none"> <li>• High dividends are unattractive</li> </ul>
Equity styles	<ul style="list-style-type: none"> <li>• Value stocks and small stocks are attractive</li> </ul>	<ul style="list-style-type: none"> <li>• Value stocks and small stocks may or may not be attractive</li> </ul>
International diversification	<ul style="list-style-type: none"> <li>• Hold international stocks, but far less than in proportion to their global market cap weight</li> </ul>	<ul style="list-style-type: none"> <li>• Hold international stocks in proportion to their global market cap weight</li> </ul>
Active mutual fund management	<ul style="list-style-type: none"> <li>• Invest only in passive index funds</li> </ul>	<ul style="list-style-type: none"> <li>• Invest only in passive index funds</li> </ul>
Non-mortgage debt paydown	<ul style="list-style-type: none"> <li>• Either prioritize paying highest-interest debt or lowest-balance debt</li> <li>• Co-holding low-interest assets and high-interest debt may be a good idea</li> </ul>	<ul style="list-style-type: none"> <li>• Prioritize paying highest-interest debt</li> <li>• Do not co-hold low-interest assets and high-interest debt</li> </ul>
Mortgage choices	<ul style="list-style-type: none"> <li>• Choose a fixed-rate mortgage</li> </ul>	<ul style="list-style-type: none"> <li>• Choose an adjustable-rate mortgage unless interest rates are low</li> </ul>

Appendix Table 1

Books included in the sample

	Goodreads rank
<b>Bach, David.</b> 2002. <i>Smart Couples Finish Rich</i> . New York: Broadway Books.	36
<b>Bach, David.</b> 2002. <i>Smart Women Finish Rich</i> , 2nd edition. New York: Broadway Books.	29
<b>Bach, David.</b> 2004. <i>The Automatic Millionaire</i> . New York: Broadway Books.	9
<b>Bernstein, William.</b> 2010. <i>The Four Pillars of Investing</i> . New York: McGraw-Hill Education.	14
<b>Bernstein, William.</b> 2017. <i>The Intelligent Asset Allocator</i> , 2nd edition. New York: McGraw-Hill Education.	47
<b>Bogle, John.</b> 1999. <i>Common Sense on Mutual Funds</i> . New York: John Wiley & Sons, Inc.	38
<b>Bogle, John.</b> 2017. <i>The Little Book of Common Sense Investing</i> , 10th anniversary edition. Hoboken, NJ: John Wiley & Sons, Inc.	11
<b>Chilton, David.</b> 1998. <i>The Wealthy Barber</i> , updated 3rd edition. Roseville, CA: Prima Publishing.	19
<b>Chilton, David.</b> 2011. <i>The Wealthy Barber Returns</i> . Kitchener, Ontario: Financial Awareness Corp.	34
<b>Clason, George.</b> 1926/1988. <i>The Richest Man in Babylon</i> . New York: New American Library.	6
<b>Collins, J. L.</b> 2016. <i>The Simple Path to Wealth</i> . Scotts Valley, CA: CreateSpace Independent Publishing Platform.	15
<b>Dacyczyn, Amy.</b> 1998. <i>The Complete Tightwad Gazette</i> . New York: Villard.	48
<b>DeMarco, M. J.</b> 2018. <i>The Millionaire Fastlane</i> . Fountain Hills, AZ: Viperion Publishing Corporation.	39
<b>Eker, T. Harv.</b> 2005. <i>Secrets of the Millionaire Mind</i> . New York: HarperBusiness.	21
<b>Ferri, Richard.</b> 2010. <i>All About Asset Allocation</i> , 2nd edition. New York: McGraw-Hill Education.	46
<b>Fisker, Jacob Lund.</b> 2010. <i>Early Retirement Extreme</i> . Scotts Valley, CA: CreateSpace Independent Publishing Platform.	26
<b>Graham, Benjamin, and Jason Zweig.</b> 2003. <i>The Intelligent Investor</i> , 4th revised edition, updated with new commentary by Jason Zweig. New York: Harper.	7
<b>Hallam, Andrew.</b> 2017. <i>Millionaire Teacher</i> , 2nd edition. Hoboken, NJ: John Wiley & Sons.	27
<b>Kiyosaki, Robert.</b> 2012. <i>Rich Dad Poor Dad</i> , 20th anniversary edition. Scottsdale, AZ: Plata Publishing.	2
<b>Kiyosaki, Robert.</b> 2017. <i>Rich Dad's Cashflow Quadrant</i> , 1st Plata Publishing edition. Scottsdale, AZ: Plata Publishing.	16
<b>Kobliner, Beth.</b> 2017. <i>Get A Financial Life</i> . New York: Simon & Schuster.	20
<b>Lindauer, Mel, Taylor Larimore, and Michael LeBoeuf.</b> 2014. <i>The Bogleheads' Guide to Investing</i> , 2nd edition. Hoboken, NJ: John Wiley & Sons.	12
<b>Lowry, Erin.</b> 2017. <i>Broke Millennial</i> . New York: Penguin Random House.	33
<b>Lynch, Peter.</b> 1989. <i>One Up on Wall Street</i> . New York: Simon & Schuster.	32

<b>Malkiel, Burton.</b> 2019. <i>A Random Walk Down Wall Street</i> . New York: W. W. Norton & Company.	10
<b>Mecham, Jesse.</b> 2017. <i>You Need a Budget</i> . New York: HarperBusiness.	28
<b>Olen, Helaine, and Harold Pollack.</b> 2016. <i>The Index Card</i> . New York: Portfolio/Penguin.	23
<b>Orman, Suze.</b> 2007a. <i>The Money Book for the Young, Fabulous &amp; Broke</i> . New York: Riverhead Books.	35
<b>Orman, Suze.</b> 2007b. <i>Women &amp; Money</i> . New York: Spiegel & Grau.	13
<b>Orman, Suze.</b> 2012. <i>The 9 Steps to Financial Freedom</i> , 3rd paperback edition. New York: Currency.	37
<b>Ramsey, Dave.</b> 2003. <i>Financial Peace Revisited</i> . New York: Viking.	25
<b>Ramsey, Dave.</b> 2011. <i>Dave Ramsey's Complete Guide to Money</i> . Brentwood, TN: Ramsey Press.	43
<b>Ramsey, Dave.</b> 2013. <i>The Total Money Makeover</i> , classic edition. Nashville, TN: Nelson Books.	3
<b>Richards, Carl.</b> 2015. <i>The One-Page Financial Plan</i> . New York: Portfolio/Penguin.	50
<b>Robbins, Tony.</b> 2014. <i>Money: Master the Game</i> . London: Simon & Schuster.	18
<b>Robbins, Tony.</b> 2017. <i>Unshakeable</i> . New York: Simon & Schuster Paperbacks.	22
<b>Robin, Vicki, and Joe Dominguez.</b> 2018. <i>Your Money or Your Life</i> . New York: Penguin Books.	4
<b>Roth, J. D.</b> 2010. <i>Your Money: The Missing Manual</i> . Sebastopol, CA: O'Reilly Media.	49
<b>Sethi, Ramit.</b> 2019. <i>I Will Teach You to Be Rich</i> , 2nd edition. New York: Workman Publishing.	5
<b>Sincero, Jen.</b> 2017. <i>You Are a Badass at Making Money</i> . New York: Penguin Books.	41
<b>Stanley, Thomas.</b> 2001. <i>The Millionaire Mind</i> . Kansas City, MO: Andrew McMeel Publishing	17
<b>Stanley, Thomas.</b> 2009. <i>Stop Acting Rich... And Start Living Like a Real Millionaire</i> .	42
<b>Stanley, Thomas, and William Danko.</b> 1996. <i>The Millionaire Next Door</i> . Lanham, MD: Taylor Trade Publishing.	1
<b>Thames, Elizabeth Willard.</b> 2018. <i>Meet the Frugalwoods</i> . New York: HarperCollins Publishers.	44
<b>Tobias, Andrew.</b> 2016. <i>The Only Investment Guide You'll Ever Need</i> , 2nd Mariner Books edition. New York: Houghton Mifflin Harcourt Publishing Company.	24
<b>Tyson, Eric.</b> 2019. <i>Personal Finance for Dummies</i> , 9th edition. Hoboken, NJ: John Wiley & Sons.	31
<b>Warren, Elizabeth, and Amelia Warren Tyagi.</b> 2005. <i>All Your Worth</i> . New York: Free Press.	30

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*Books that contain no advice on covered topics*

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<b>Ferris, Timothy.</b> 2009. <i>The 4-Hour Workweek</i> , expanded and updated edition. New York: Crown Publishers	40
<b>Hill, Napoleon.</b> 1937/2018. <i>Think and Grow Rich</i> . Holden-Crowther Publications.	8
<b>Wattles, Wallace.</b> 1910/2007. <i>The Science of Getting Rich</i> . New York: Penguin Group.	45

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