

CONTENTS

Acknowledgments ix

PART I. THE PROBLEM: A FIXED PERSONAL FINANCE SYSTEM

1	The Scale of the Problem	3
2	Why People Find Financial Decisions So Difficult	31
3	The Corruption of Finance	52

PART II. THE SPECIFICS: WHAT GOES WRONG IN PERSONAL FINANCE

4	Managing the Ups and Downs	79
5	Making Large Investments	98
6	Living with Risk	124
7	Securing Retirement	150

viii CONTENTS

**PART III. THE SOLUTION: FIXING PERSONAL
FINANCE**

8	The Promise and Peril of Technology	179
9	Shove!	200
10	We Can Do Better	231

Notes 265

Index 317

1

The Scale of the Problem

RENATA CAINES, a young woman who grew up in Boston, graduated from high school in 2007 and borrowed money to fund her education at a local four-year college with the goal of becoming a teacher. She found the costs unexpectedly high and transferred to a New York school, but that made her financial situation even worse: financial aid didn't come through and she dropped out after one semester. To make ends meet, she worked a series of low-paying jobs and took courses at various schools, ending up back in Boston at age 27 with \$65,000 in student debt and still no college degree. "I was 17 when I entered this process," she says. "I didn't understand anything about large amounts of money."¹

George Maddox was 68 and long retired from his job as an Enron plant manager in 2001. With \$1.3 million in his retirement savings invested entirely in the company's stock, George felt secure—he never saw the company's bankruptcy coming. "There was no way I thought it would go belly up," he said ten years later. After losing his entire retirement portfolio, George and his wife rented out their suburban house and moved to a dilapidated family farmhouse in East Texas. To fund their

retirement, George mowed pastures and lawns and his wife went back to work as a substitute teacher.²

Ruth Putnam, an elderly widow living in Clearwater, Florida, managed her retirement very differently. She always avoided stock market risk and kept her retirement savings entirely in certificates of deposit and other money market investments. Yet in the early 2000s, when the Federal Reserve repeatedly cut short-term interest rates, she found that her retirement income had dried up. She began to scrimp “to the point that a lot of my friends think I’m cheap,” and to make ends meet she started to sell her possessions, including her English Rose China collection, piece by piece.³

The United States has no monopoly on stories like this. They are all too common in other countries as well.

Simon Shipley, a 60-year-old Briton living in Tring in Hertfordshire with a long-term health condition, was sold payment protection insurance policies bundled with his mortgage and two other loans. These policies were supposed to guarantee his obligations in the event of death or disability, but for over a decade he was totally unaware of the insurance premiums he paid for them—and would never have been able to make a claim in any case, given his preexisting state of health. While he was eventually awarded compensation once the scandal was unearthed, there are many others like him who unfairly paid premiums and never received any recompense. “It is shocking that they let it continue for so long,” he said.⁴

Virendra Pal Kapoor, a retired Indian botanist, was steered by a broker into purchasing an insurance plan bundled together with a stock investment portfolio (the combo was called a “unit-linked insurance plan”). This product had a life of five years, and it was advertised as an investment vehicle with “free” insurance added on. After five years he was shocked to find that

99.5% of his initial investment had been paid out as insurance premiums that could not be recovered—essentially wiping out his initial outlay. Kapoor was sold the investment by the State Bank of India, a government-owned bank, and he assumed that these investments “would also be backed by the government.” To make matters worse, he received complex statements that misinformed him about the steady erosion of his wealth. He made repeated enquiries to figure out what had happened: “I went to their office to remind them that my policy was due to mature. They didn’t tell me my fund value even then. In fact, they kept saying the system had some problem and that they would not be able to tell me the fund value. Instead, I was asked to fill up a maturity claim form, and they specifically asked me to keep the amount column blank. After about a week, [a tiny sum] was credited to my bank account.” After a long-fought case and multiple exchanges with the insurance regulator, Kapoor received a high-court judgment in his favor, but he has yet to receive any compensation and faces further litigation; the provider has appealed.⁵

People around the world struggle to manage their finances, and decisions they make in good faith can have heartbreaking consequences. How should we react to stories like this?

One natural reaction is outrage at the system that permits such tragedies to occur. Protest movements such as Occupy Wall Street in 2011 and electoral upheavals such as those seen around the world in 2024 express popular anger, but they seem to come and go, often with little long-run impact. Another response is to resolve to be wary—to learn finance and avoid making naive financial mistakes. This benefits a large and profitable industry of financial gurus as well as the people trying to educate themselves out of danger.⁶ A third reaction, perhaps most common of all, is to shrug one’s shoulders: “sh— happens.”

None of these reactions is adequate. Outrage at a system that seems rigged for the few against the many, stoked by personal financial stress and anxiety about the cost of living, is clearly a potent anti-incumbent electoral force. Though we share this outrage, it needs to be channeled to deliver practical improvements in people's lives. We applaud the effort to become more financially sophisticated and hope that this book might make the task a little easier, but financial security is too difficult for most people to achieve in a system as complex as the one that exists today. We are unwilling to simply turn aside and ignore the problems in personal finance; the consequences are too severe for too many people—and the financial system too important for the functioning of modern societies—for us to neglect these issues.

Instead, we advocate rebuilding the personal finance system. This book shows how the system is fixed against ordinary people and proposes to fix it to make it easier and safer for ordinary people to use.

The word “fixed” is emotive, evoking scams and frauds, and we are aware that it is provocative as the title of a book about personal finance. But we use the word advisedly. Throughout the world, personal finance has become distorted, mainly serving the interests of financial services providers and their most financially sophisticated customers. Worse still, this has happened at the expense of people who are less familiar with the workings of finance. A “fixed” system is one that works to the advantage of those operating the system in a way that is unfair and imperfectly understood by the victims. And when people believe a system is fixed, they become angry and distrustful. These circumstances describe all too well the relationship between modern finance and the general population.

Our book is a rallying cry to use the knowledge of economists and the power of government to “fix” the financial system

in the sense that a broken machine can be repaired. The goal is for finance to serve the interests of the general population and to preserve popular trust in the institutions of the market economy—the best system we know of to create widespread prosperity.

How the Financial System Should Work for Ordinary People

Each and every one of us uses finance—payments, savings, credit, or insurance—virtually every day to achieve our goals. Finance is the basic plumbing system underlying all our lives, and we need it to function efficiently.

The financial system is a network of institutions, markets, and instruments that transfer funds between people and organizations, directing those funds to where they are most needed. In a modern economy, the elements of the network are extraordinarily diverse and often rely on advanced information technology. While we are all familiar with specific examples of financial institutions (from banks to insurance companies), markets (trading anything from stocks to artworks), and instruments (from educational loans to mutual funds), a deeper understanding requires that we consider what finance is for.

A good place to start is with the six functions of finance listed by economists Robert Merton and Zvi Bodie: facilitating payments, dividing large assets into small pieces and repackaging them, transferring resources over time, managing risk, providing information, and giving people the right incentives.⁷

The payments system is the oldest and most basic function of finance. Once a society moves beyond barter and starts to use money, it becomes natural to record transactions in a

system of accounts in order to keep track of who owns what.⁸ While it is easy to take the payments system for granted, disruptions to it can do immense damage.⁹ Despite the importance of this subject, it is specialized and technical and could easily fill a book by itself, so in this book we leave it to one side in order to focus on other functions of finance that are central to our concerns.

The second function of finance in Merton and Bodie's list allows people with limited resources to own small shares of large, indivisible assets. For much of history, large assets such as merchant ships were owned by wealthy individuals, or by at most a small number of wealthy people in a partnership. Any liabilities incurred by using such assets were the personal responsibility of the owners. Since the seventeenth century, a legal structure has developed that allows such assets to be owned by corporations, which in turn issue shares: small fractional claims to ownership. Importantly, shares have limited liability, meaning that a shareholder can, at worst, lose the money invested to buy them; this allows people without deep pockets to own shares of productive enterprises and increases the supply of capital to such ventures.¹⁰

Once shares exist, they can be combined in new ways. For example, a mutual fund allows an investor to own a small fraction of a large portfolio containing shares of many different underlying companies. Using mutual funds, people with modest savings can diversify the risks of equity investing.

The third of Merton and Bodie's functions, transferring resources across time, is central to our lives. Most of us grow up with limited financial resources. We may need to borrow to pay for an education. Once we start working, we need to save to build an emergency fund to cover unexpected expenses or loss of income, and we may borrow when an emergency arrives.

To buy a house, or even a car, we must save to make a down payment and borrow the rest of the cost. Meanwhile, as we inevitably age and our children grow up, we save to fund their education and our own retirement. All forms of saving move resources from the present to the future, where they can be productively used; conversely, borrowing moves resources from the future to the present in times of need.

The fourth function of the financial system is the management of risk. We have already mentioned how diversification can reduce the impact of specific risks to particular business ventures. But there are also shocks that affect the whole economy, and some people are better placed than others to cope with these shocks by virtue of their temperament or their resources. Risk-tolerant people can take on a portion of the whole economy's risk by owning a diversified portfolio of shares. Compensation for the risk comes in the form of a higher average return than bank accounts or money market funds afford. People also face specific risks to their physical assets (cars, houses, and personal property), their health, and even their lives. These risks can be effectively managed through insurance, financial contracts that compensate people when such infrequent events occur.

The last two functions of the financial system are the provision of information and incentives. These functions are essential for the operation of a modern economy. The Soviet Communist system of central planning collapsed in the late twentieth century in large part because, lacking prices set in a free market, it failed to provide planners with information about what types of goods and services society needed. Indeed, it also failed to provide workers with the incentives to produce any goods and services at all. As the Soviet joke had it, "They pretend to pay us, and we pretend to work."

The functions of finance are so important that society has a vital interest in ensuring the quality of the financial system. At the macroeconomic level, the system needs to be stable—avoiding disruptive financial crises and associated recessions—and it needs to support economic growth by allocating capital to productive ventures. At the personal level—the subject of this book—the financial system must provide products and services that ordinary people can understand, afford, and safely use.

A Vast and Growing Problem

The problems of personal finance are pressing today because the world has changed in a way that greatly increases the demands on the personal finance system. Most people can no longer rely on extended families, in which members of different ages support each other, or on traditional communities, in which families help each other in times of need. In today's world, people live longer, and in smaller families, so they must personally finance many years of retirement. Far more people enter higher education and struggle to pay for it, and far more people live in cities where housing is hard to afford. These changes have led more people to borrow large amounts of money early in life and to save on a large scale as they approach retirement. At the same time people must manage frequent changes of employment—the old-fashioned “job for life” is a rarity today. Rapidly changing technology—most obviously a smartphone in every pocket—makes new financial products possible, but also creates new kinds of financial mistakes.

Perhaps the most important change is the extraordinary growth in the number of middle-class households in emerging economies. Over the past forty years, economic growth has propelled many millions of people into relative prosperity, a

salutary trend. But entering a modern formal economy for the first time can be disorienting. Many choices must be made to take full advantage of new opportunities to educate the next generation and to finance first home purchases. Risks need to be managed using financial instruments such as life insurance or health insurance, rather than through informal social networks. Retirement savings are necessary to maintain a high standard of living in old age. Bad choices in household financial markets—which some financial service providers are all too eager to encourage and exploit—can snatch away hard-won prosperity and push financially fragile middle-class households back into the ranks of the poor.

What do these changes mean for this book? The ongoing struggles and concerns of middle-class households in both wealthy and poor countries are underemphasized in both the academic literature and in popular narratives that tend to focus on the extremes of the wealth distribution. While we celebrate the reductions in extreme poverty and understand the concerns about the extreme concentration of wealth in the hands of the top 1%, we seek to lay out a framework for a personal finance system that meets the needs of the “neglected middle,” that is, people with moderate levels of incomes and wealth.¹¹ The financial system should help this neglected middle to thrive, moving them away from poverty rather than toward it.

The Growth of the Global Middle Class

The extraordinary growth of the global middle class is illustrated in figure 1.1. The figure shows the income distribution across the world, estimated for the years 1975 and 2015. In 1975, the world income distribution was bimodal or “two-humped,” with a large poor population, primarily in Asia, and

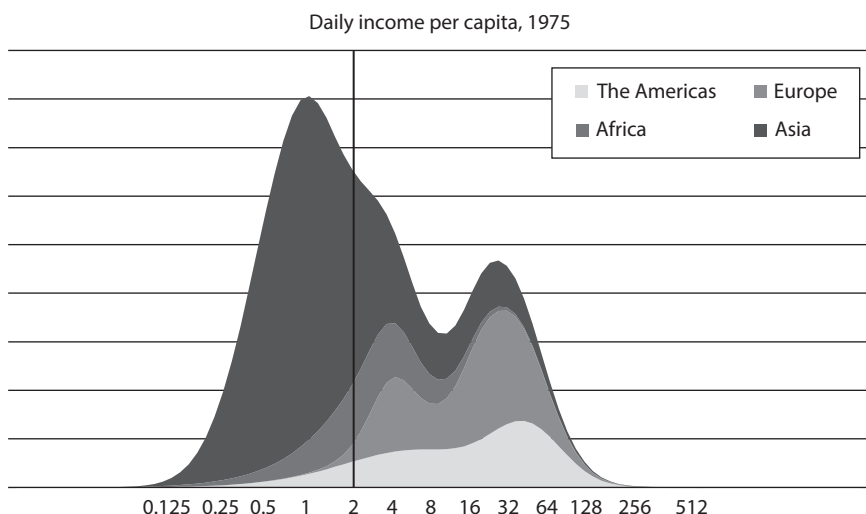


FIGURE 1.1. Global income distribution in 1975 and 2015. The horizontal axis in this figure shows daily income, converted to common units (2011 US dollars) to take account of differences in the cost of living across countries and changes in the cost of living over time. This axis is on a log scale, meaning that a given horizontal movement corresponds to multiplying income by a given amount. A vertical line indicates the United Nations’ international poverty line, defined as an income of \$1.90 per day, below which a person experiences extreme poverty. The vertical axis measures the number of people, so the height of the curve at each income level is proportional to the number of people with that income. Different shades of gray indicate different regions of the world. *Source:* “Income mountains dataset—documentation,” Gapminder, November 9, 2023, <https://www.gapminder.org/data/documentation/income-mountains-dataset/>.

a smaller middle-class population, primarily in Europe and the Americas.

The forty years between 1975 and 2015 saw two striking changes. The share of the world’s population in Asia and Africa increased relative to the population in the Americas and particularly Europe. At the same time, a large fraction of that population,

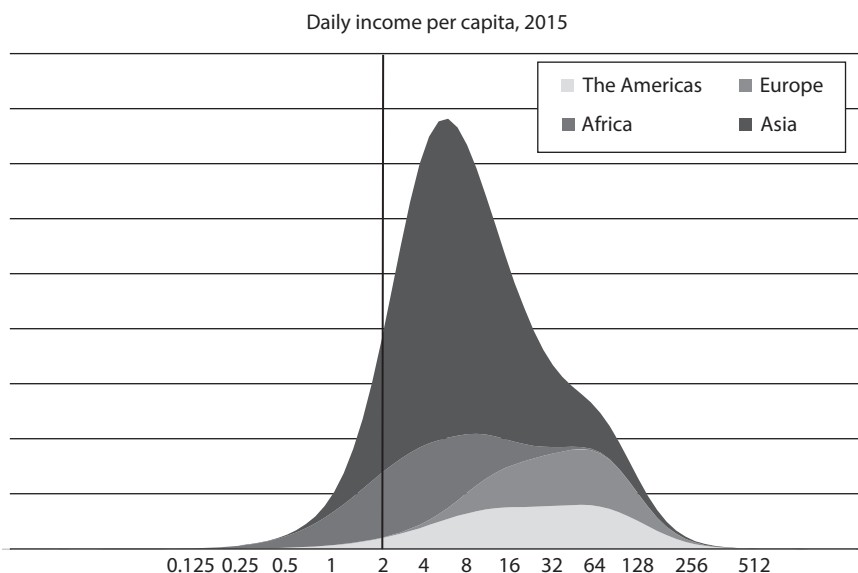


FIGURE 1.1. (*continued*)

particularly in Asia, moved out of poverty and into the global middle class. The world income distribution now has a single hump with a peak corresponding to a daily income between \$5 and \$10. While this is, of course, very low income by the standards of wealthy developed countries, many more people now have sufficient income to consider longer-term financial objectives such as paying for education, buying a home, buying insurance, or saving for old age, but have very little experience in making these decisions given their recent emergence from poverty.

The Struggles of the Global Middle Class

What specific personal finance challenges do these households face? One particularly important challenge is to finance retirement. As people live longer, they face greater needs to fund

living expenses in later years, but the trend toward smaller families and away from traditional multigenerational households means they must do so without relying exclusively on younger family members to look after them. In some countries this need is met by public pensions funded by the contributions of younger workers, but aging populations are stressing the finances of such systems. In many other countries retirement systems encourage people to save during their working lives, accumulating financial assets that they can run down in retirement.

An important fact, particularly relevant for the retirement challenge, is that the rates of return paid by safe financial instruments have been extremely low in recent years. The yield on 20-year inflation-indexed US Treasury bonds is a good measure of the real return (that is, the return over and above the effects of inflation) that a saver can earn on a safe long-term investment. This yield declined from around 4% in the late 1990s to a negative yield at the time of the COVID-19 pandemic in 2020 and 2021, although it has since returned to a modestly positive level around 2%. A low real interest rate significantly increases the challenge of saving enough to fund a decent standard of living in retirement.¹²

Another challenge is to allow people to borrow money to finance education. In developed countries, primary and secondary education are largely publicly funded, but higher education can be expensive and is often financed in part through student loans—a topic that has been the subject of much recent public debate.¹³ In many emerging countries, even primary and secondary education often require private funding. Given the vital role of education in a modern economy, it is important to allow people to obtain an education even if they lack the financial means to pay for it up front.

A third challenge is to allow people to buy the houses or apartments they live in. Housing is typically more expensive in

urban areas, so the global trend of urbanization has increased the importance of a financial system that supports home purchases. House prices have also increased relative to income in recent years. In the United Kingdom, for example, the ratio of house prices to household incomes roughly doubled from a median level of 4 to a median level of 8 between 1970 and 2020, and in the United States—where house price growth has been more moderate on average across the country, although extreme in some places—the ratio rose from 4.5 to 6 between 1990 and 2020. To buy houses, people take out mortgages, thereby incurring a debt that can be many times their annual income. Mortgage contracts can take many forms, both within and among countries, and the institutional arrangements of the mortgage system have important implications for household well-being as well as for macroeconomic stability.

Unfortunately, these challenges are far more daunting for middle-class and poor people than for the wealthy. In the remainder of this chapter, we show how wealthy people save and borrow on more advantageous terms than the middle class or the poor. In this way the personal finance system exacerbates inequality.

Inequality and the Financial System

Inequality is one of the defining concerns of the early twenty-first century. While human societies have typically featured wide inequalities of condition, trends in recent decades have intensified this concern.

The rapid growth of many poorer countries, particularly in Asia, has ameliorated inequality of income across all individuals globally. As we showed in figure 1.1, the world income distribution, treating each individual as an observation no matter where they live, appears more equal today than it did fifty years ago.

However, the level of global inequality remains high: according to one credible estimate, in 2021 the poorest half of the world population received 8.5% of world income, while the top 10% received 52%.¹⁴ Furthermore, the convergence of income has occurred *between* countries rather than *within* them. Income distributions within most countries of the world have actually become more unequal. This trend is strongest in former Communist countries such as Russia and China, but it is visible around the world.¹⁵ Since most people compare themselves with others living in the same society, their perceptions of inequality have also increased, with palpable effects on both political discourse and electoral outcomes.¹⁶

The distribution of wealth is harder to measure than the distribution of income, because in most countries, income is reported to governments for tax purposes while wealth is not.¹⁷ Economists have developed procedures for imputing wealth from capital income (the income received from financial assets), but such procedures are imperfect.¹⁸ Despite these problems, it is clear that inequality of wealth is even more extreme than inequality of income. One estimate is that in 2021, the poorest half of the world population owned 2% of the world's wealth, while the top 10% owned 76%. At the very top of the wealth distribution there has been a striking rise in the wealth held by dollar billionaires and other extremely wealthy individuals.¹⁹

A Closer Look at the Wealth Distribution

We are concerned mainly with the struggles of the global middle class. Accordingly, our main interest is in the distribution of wealth below the very top. This can be characterized by household surveys such as the US Survey of Consumer

Finances (SCF), administered by the Federal Reserve Board, or the European Household Finance and Consumption Survey (HFCS), administered by the European Central Bank. Even if the very wealthiest people avoid responding to such surveys, the survey data will adequately represent the bulk of the wealth distribution.

Figure 1.2 shows the US wealth distribution reported in the SCF in 2022. Households in the survey are ranked by the value of their net worth, defined broadly to include both financial assets such as cash, bonds, and stocks (held in bank accounts, brokerage accounts, or retirement accounts) and nonfinancial assets such as durable goods, housing, and private businesses, less any debts (including credit card debt, student loans, and mortgages). When we use the word “wealth” in this book, we are referring to net worth measured this way.

The figure shows how wealth and assets are concentrated among a small number of wealthy people. A household at the 90th percentile of the wealth distribution has total assets roughly ten times more valuable than the median household, and the wealthiest households in the survey have total assets almost thirty times greater again than those at the 90th percentile.

While figure 1.2 illustrates US data, wealth inequality is a pervasive phenomenon around the world. It is somewhat less acute in Northern and Western Europe, but even more extreme in emerging economies. Figure 1.3 shows the distributions of wealth reported by survey participants in four major middle-income and emerging economies (China, India, South Africa, and Thailand) alongside those reported in three advanced economies (Germany, the United Kingdom, and the United States). The figure reveals that emerging economies have extreme poverty—the poorest people in these countries are far poorer than the poorest in advanced economies. Emerging

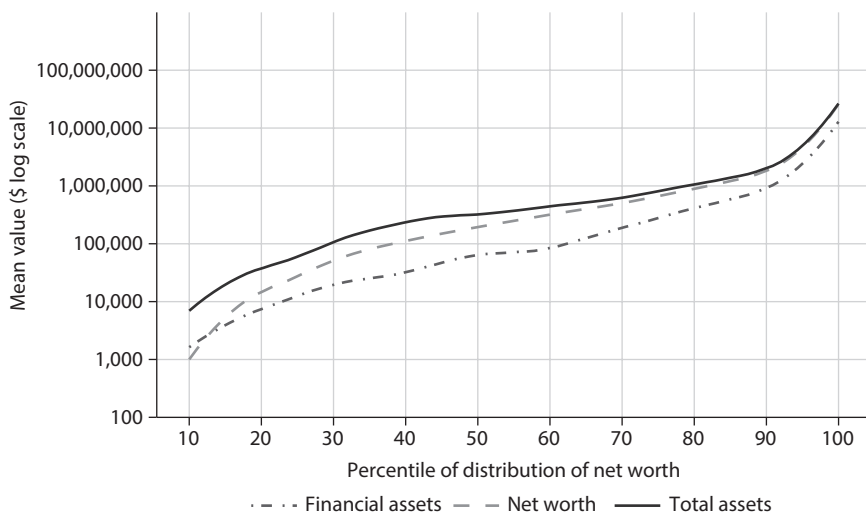


FIGURE 1.2. The US wealth distribution in 2022. The horizontal axis of the figure runs from 10 to 100, corresponding to percentiles of the wealth distribution. A household at the far left of the figure (percentile 10) has the lowest positive net worth of any household in the survey, while a household at the far right (percentile 100) has the highest net worth. (The figure begins at the 10th percentile of the overall wealth distribution, as below this level there are households with negative net worth, whose debts are larger than their assets.) The vertical axis reports dollars, using a proportional (log) scale so that each vertical increment corresponds to multiplying wealth by 10. The three lines in the figure show the survey-weighted average levels of total assets, financial assets, and wealth (net worth, that is, total assets less debts) for households at each percentile of the wealth distribution. *Source:* authors' calculations using the 2022 Survey of Consumer Finances.

economies also have a very well-off top 1%—they are within touching distance of the very wealthiest in advanced economies.²⁰ In between, emerging countries have a large group of households with lower-middle-class wealth, but these households lack the “mass affluence” of the upper middle class in developed countries.

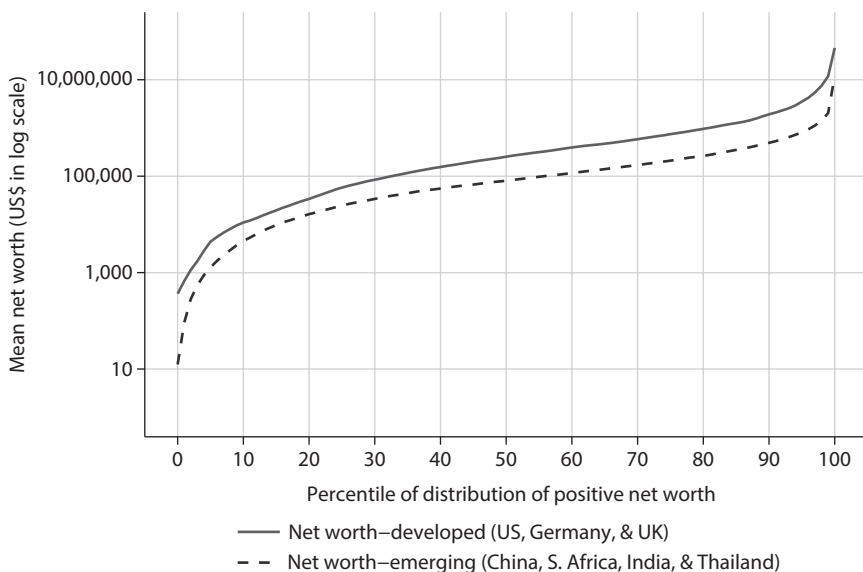


FIGURE 1.3. Comparing the distribution of total wealth in developing and developed countries. To match the wealth shares of the top 1st, 5th, and 10th percentile groups in the WID, we add synthetic households to the top percentile of the wealth distribution in the survey data. This addition is only necessary for the emerging countries, as the advanced economy wealth shares match well. The added synthetic households are essentially billionaires, who are typically missing in these survey data. PPP exchange rates are applied throughout for comparison. Population estimates are used to compute population-weighted average levels of net worth across emerging and developed economies at each percentile. *Source:* authors' calculations using the US SCF 2022, UK WAS 2020, EU HFCS 2021, China HFS 2017, S. Africa NIDS 2017, Indian HFS 2019, Thailand HFS 2017, and the World Inequality Database (WID).

Drivers of Wealth Inequality

Multiple factors drive wealth inequality, and many of them have been researched extensively.²¹ One obvious point is that when people save for old age, they acquire financial assets, effectively converting the earning power they have early in life—what

economists call “human capital”—into financial capital. Thus, some of the inequality illustrated in figures 1.2 and 1.3 is simply the difference between young people with earning power and older people with retirement savings. However, one can create similar plots for people of a given age; even with this correction, wealth inequality is only modestly reduced in the United States. The amount of retirement saving also varies across countries. In countries with generous public pension systems, such as Germany and Italy, people need to do relatively little saving to finance their retirement, hence little wealth inequality arises from this source.

Wealth inequality also arises from inequality in wages and salaries and from legacies that children born into wealthier families often receive from their parents. We have less to say about these sources of inequality, which can be addressed by measures such as public funding of education, progressive income taxes, and estate taxes.

We contend in this book that the financial system itself is an important contributor to wealth inequality, and in particular, the inequality between middle-class and wealthier people. There are three main ways in which finance drives inequality. First, richer people earn higher average returns on their savings. Second, richer people borrow more cheaply. Third, richer people save more.

A comparison of two simple scenarios helps to illustrate these channels. Imagine Ms. Richie, who has inherited a small fortune and heads a household with \$1 million in assets and \$500,000 in debt. She has a well-paying job and makes \$350,000 per year after taxes, saving 20% of this, or \$70,000 per year. In contrast, Mr. Bunker heads a middle-class household with \$100,000 in assets and \$50,000 in debt. He makes \$35,000 per year after taxes and again saves 20% of this, or \$7,000 per year. Although these two households have the same ratios of assets and liabilities to their income, and the same savings rates out of

income, they are tremendously unequal, with Ms. Richie ten times better off than Mr. Bunker.

Now suppose that Ms. Richie can access investment opportunities and advice that allow her to earn 5% per year on her assets, and that she is able to borrow at an advantageous rate of 6% per year. In contrast, Mr. Bunker earns a lower return of 3% per year from an inferior menu of investment opportunities and pays a higher interest rate of 8% per year on his debts. These differences in returns are modest, but they allow Ms. Richie to pay off her debts sooner than Mr. Bunker can pay off his, and then to build up her assets more rapidly. Ms. Richie is out of debt over a year earlier than Mr. Bunker, and she is twelve times richer after five years and fourteen times richer after twenty years. These are very substantial changes in the relative wealth levels of the Richies and Bunkers, driven by seemingly small differentials in the interest rates they pay and earn.

So far, we have assumed that Ms. Richie and Mr. Bunker save the same fraction of their income. However, there is plenty of evidence that savings rates increase with wealth, perhaps in part because of the higher returns that wealthy people can often earn on their savings. In our simple example, if Mr. Bunker saves only 15% of his after-tax income, or \$5,250 per year, it takes him an extra seven years to pay off his debts. Ms. Richie is then fourteen times richer than Mr. Bunker after five years and nineteen times richer after twenty years.²²

This simple example demonstrates that small differences in the rates of return earned on investments, the interest rates paid on debts, and savings rates can cause substantial differences in wealth inequality, magnifying differences in initial wealth levels. But is this example realistic? Is it truly the case that the Richies of the world earn higher rates of return on their savings and pay lower interest rates on their debts when compared to the Bunkers? Do

Richies actually tend to save more than Bunkers? The answer, from a large body of careful academic research, is “yes,” although the findings are more subtle than the caricature constructed here. Sadly, the differences plugged in to this simple example are, if anything, an underestimate of the differences manifest in the data.

Figure 1.4 illustrates the differences in investment returns and debt costs using data from Sweden in the period from 2000 to 2007, reported in an academic paper by Laurent Bach, Laurent Calvet, and Paolo Sodini. The solid line in the figure, which over most of the wealth distribution slopes down to the right as wealth increases, shows that richer people generally pay lower interest rates on their debts. The dot-dashed line, which over most of the wealth distribution slopes up to the right as wealth increases, shows that richer people generally earn higher returns on the assets they invest. The dashed line combines this information to calculate the excess return on wealth over the safe interest rate, taking account of both the returns on assets and the costs of debts. This line has a strong upward slope. The poorest people earn only the safe interest rate on their wealth, while the richest people earn an average return that is eight percentage points above that rate.

The differences in debt costs and investment returns illustrated in figure 1.4 are large enough to account for almost all the increase in wealth inequality measured in Sweden in the same period of time, even without any differences in savings as a fraction of wealth.²³ Similarly, in a recent study of stock market investors in India we found that differences in the returns on stock portfolios were sufficient to explain virtually all of the increasing inequality we observed in the values of these portfolios.²⁴ These results concern *changes* in wealth inequality, but a recent study by economists Annamaria Lusardi, Pierre-Carl Michaud, and Olivia Mitchell estimates that return differences account for 30–40% of the *level* of wealth inequality in the United States.²⁵ While we do

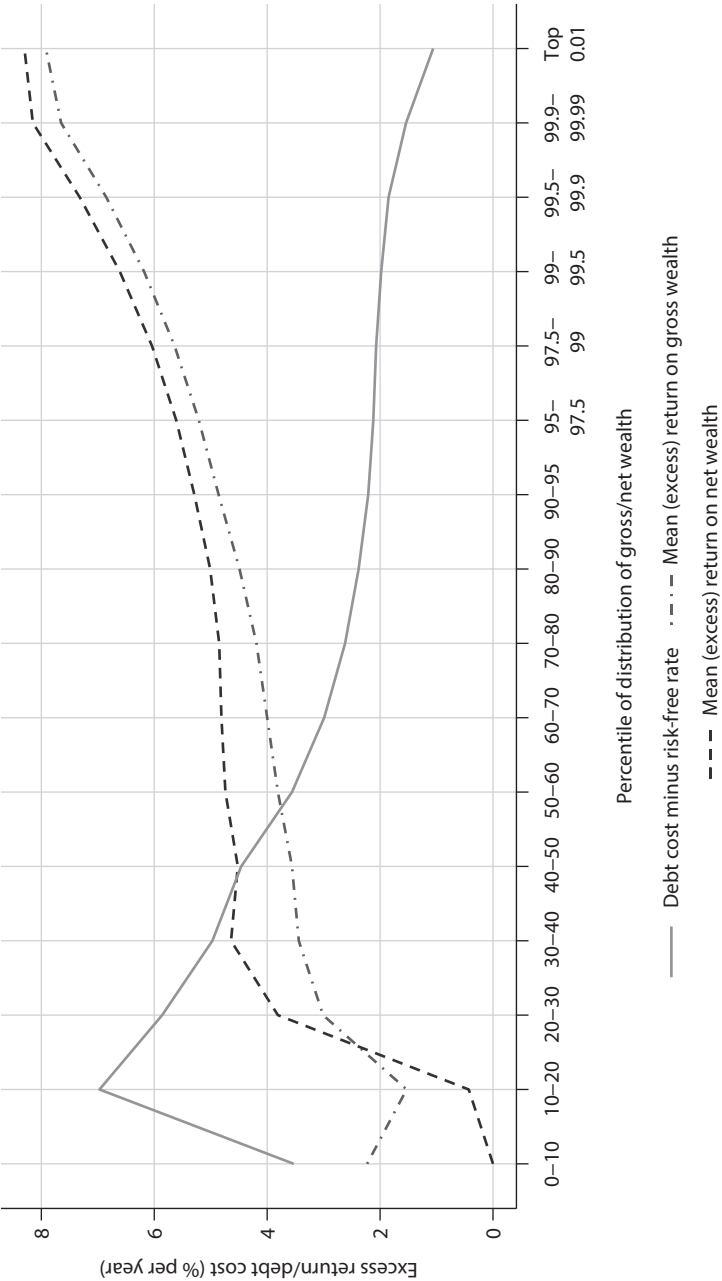


FIGURE 1.4. Debt costs and returns on invested wealth in Sweden from 2000 to 2007. Source: Laurent Bach, Laurent Calvet, and Paolo Sodini, “Rich pickings? Risk, return, and skill in household wealth,” *American Economic Review* 110 (2020): 2703–2747, tables 1 and 2.

not claim that return differences are the only reason for wealth inequality, they powerfully contribute to it.

How Richer People Earn Higher Investment Returns

Why do richer people earn more on their investments, and is there anything that can be done to reduce this source of wealth inequality? We outline several important factors here and go into greater detail later in the book.

First, the provision of almost any financial service involves a fixed cost to establish an account, operate the information technology to track and update its value, and so forth. This fixed cost is no smaller for smaller accounts, so it represents a greater proportion of the assets invested for a small account. Hence, we should expect fees to be greater for smaller accounts as a proportion of account size. Information technology can help by driving down costs, but so long as any fixed cost exists it will tend to penalize the proportional returns of smaller accounts.

Second, fixed costs may be high enough to deter small savers from opening some types of investment accounts altogether. This is one (but not the only) reason why young people and poorer people often do not own any stocks or other risky assets, instead keeping their money in safe but low-yielding bank accounts. Staying out of the stock market reduces the cost of investing but it also reduces returns, so in a sense it takes small investors out of the frying pan but puts them into the fire.

A third factor that often disadvantages ordinary people is their lack of financial knowledge. Financial education can potentially help to increase financial sophistication, but only limited financial education is provided for free as part of general public education. People must pay to acquire more knowledge, in time if not in money, and this is another type of fixed cost.

Paying for financial advice is another option, but once again this is costly, and it bears the risk of conflicts of interest as advisers make self-serving recommendations. If someone is only investing a small amount of money, it may not be worth the effort to become educated about the best investment opportunities or worth the cost to employ high-quality financial advisers.²⁶

Fourth, poorer people often have unstable incomes and expenses, creating a need for quick access to funds in the event of an emergency. This can limit their ability to invest in illiquid assets, which can bear high returns but prohibit or penalize early withdrawals. Such assets can be as simple as bank certificates of deposit (CDs) or as complex as venture capital funds, but all are out of reach if liquidity is paramount.

People are acutely aware of their need for liquidity, so policy changes that reduce the liquidity of investments by, for example, reducing the right of early access to retirement savings (“one’s own hard-earned savings”) can be extremely unpopular. In the febrile atmosphere before the 2024 election in the United Kingdom, Sir Keir Starmer, the leader of the Labour Party, was forced to disown statements on taxing lump-sum withdrawals from pension pots following public consternation, claiming that he had made an “old-fashioned mistake” when mentioning this possible policy change.²⁷ And in India in 2016, a rule to limit withdrawals from the Employee Provident Fund (a pension fund with matching contributions from employers) provoked widespread riots, leading to the rollback of the rule.²⁸

Fifth, regulation can fence off profitable investments from poorer people. In the United States, for example, “accredited investors” include anyone with sufficiently high income or net worth (currently over \$1 million), while “qualified purchasers” include anyone with investments of \$5 million or more. Accredited investors and qualified purchasers have privileged access to

private placements of unregistered securities and to various forms of private equity and venture capital. While these investments are certainly risky for less sophisticated investors, and we do not advocate unfettered access to them, regulatory barriers based on income and wealth—as opposed to financial knowledge—do contribute to the return advantage of wealthy investors.²⁹

Sixth, wealthy people may be better able to tolerate investment risk since their basic needs are more easily met. Even among people who have opened brokerage accounts and are investing in stocks, there is a general tendency for the share of wealth invested in stocks, and hence the average rate of return, to increase with the level of wealth.

Seventh, large portfolios can be more easily diversified, which limits risk and reduces the probability that a large negative return will drastically reduce the investor's net worth. This factor is less important than it used to be because mutual funds are now available that offer good diversification even to small investors. However, while the penetration of mutual funds has been increasing recently, there are still many countries where mutual funds are not widely adopted by investors.³⁰ One such country is India, where direct investments in stocks are still very popular. In a recent study of the Indian stock market, we found that larger Indian investors in the stock market have grown their wealth faster on average through superior diversification.³¹

Finally, social networks are important. Wealthy people are more likely to obtain financial education informally, from their friends and relatives, and more likely to learn about specific profitable investment opportunities. While these network effects can sometimes lead people astray—as when friends recommend risky cryptocurrencies or a fraudulent Ponzi scheme, such as the one infamously operated by Bernard Madoff—more often they are a further source of advantage for wealthy investors.

How Richer People Borrow More Cheaply

The cost of borrowing is also important, particularly as people have increased their use of debt to manage volatile incomes and to finance increasingly costly higher education and housing. When wealthier people borrow, they can do so more cheaply for several reasons. The fixed costs of originating a loan (and of recovering as much money as possible in the event of default) make small-dollar loans inherently expensive. The unstable income of poorer people increases the probability of default, which naturally raises the interest rate that lenders must charge. Many poorer people have only a short track record of financial activity, and hence it is hard for lenders to confidently evaluate their prospects of repayment.³²

The cheapest way to borrow is often to put up an asset as collateral for a loan, most obviously a house that can be used to obtain a mortgage or a home equity loan. Wealthy people typically have more assets available for this purpose than poorer people do. Even when poorer people do take out mortgages, their less stable income makes it more likely that they will default. This can lead poorer borrowers to lose their houses to foreclosure, thereby realizing lower returns on their investment in housing. A recent study has documented how this effect has disadvantaged racial and ethnic minority homeowners in the United States.³³

Finally, poorer people lacking financial savvy may not understand the importance of shopping around or bargaining over interest rates, and lenders may try to strike tough bargains in the expectation that they are dealing with naive borrowers who will take the interest rates they are offered. An infamous example of this problem is the evidence that US auto dealers selling new cars offer female buyers and racial and ethnic minority buyers worse prices than they offer white male buyers.³⁴

Richer People Save More

A final concern is that wealthy people tend to save more than poorer people do.³⁵ To the extent that wealth differences reflect differences in patience and effort, say between patient people who work hard to save and accumulate wealth and impatient people who spend to excess and become poor—the proverbial ants and grasshoppers of Aesop’s fable—it is not the fault of the financial system. Nor can even the best financial system overcome the fact that the less well-off may have little left over after paying for basic necessities like clothing and schooling.

But the financial system can also be culpable and contribute to the inequality of saving. Poorer people in the system who have inadequate investment knowledge and earn low returns are likely to save less because they lose faith in formal finance. This effect can be amplified when entire communities shun the formal financial system and rely on informal family networks to provide loans and financial protection in case of adversity. In such communities, the incentive to save is reduced by the knowledge that family support is available to meet one’s own emergency needs, and that any resources one accumulates are likely to be drawn on by needier relatives.

Where We Are Headed

Part I of this book, “The Problem: A Fixed Personal Finance System,” presents our critique of finance at a high level. In this chapter we have explained the scale of the problem: the severe consequences that distortions in the personal finance system can have for people’s lives, the sheer number of people who are affected, and the impact on inequality. In chapter 2 we discuss why people find financial decisions so difficult and the mistakes

they tend to make. In chapter 3 we show how these mistakes corrupt the energies of capitalism, leading far too many financial products to exploit mistakes rather than correct them.³⁶ Finance is difficult today not only because it is inherently challenging for human brains to solve financial problems but also because the personal finance system makes things more complicated than they need to be.

The devil is in the details, and we tackle them in part II, “The Specifics: What Goes Wrong in Personal Finance.” We work through four broad aspects of personal finance: managing month-to-month fluctuations in income and spending needs by the use of emergency savings and, where necessary, short-term borrowing (chapter 4); deciding when to make large, long-term investments in education and housing and managing the debt that is needed to fund those investments (chapter 5); living with risk, both investment risk that is worth taking for the rewards it brings and the inherent risk of human life that can be handled with the use of insurance (chapter 6); and saving during working life in order to be able to retire and managing those savings in retirement (chapter 7). In each of these four areas we explain the challenges people face in today’s financial system and discuss the extraordinary efforts required to surmount them. By the end of this part of the book, we hope readers will understand the many ways in which financial decisions are frustrating and exhausting and look for an alternative to the status quo.

Part III, “The Solution: Fixing Personal Finance,” offers such an alternative, combining the general critique of finance in part I and the specific understanding of financial problems in part II to offer a practical reform program for personal finance. We propose concrete solutions and ways to combine best practices from around the world as a road map to a better personal finance system.

In chapter 8 we discuss how to harness technology to improve personal finance but stress the insufficiency of a purely technological approach. In chapter 9 we ask how the government can intervene in the personal finance system. We argue that financial education, while valuable, is insufficient to address the problems we have described. The recently popular light-touch “nudge” approach to financial regulation is also inadequate and needs to be supplanted by more muscular regulation: not so much a nudge as a vigorous shove.³⁷ In chapter 10 we offer a vision for a better financial system that prioritizes simplicity, low cost, safety, and ease of use. We argue that all people need access to a financial “starter kit” of basic high-quality products embodying these principles, and we discuss how this proposal can be implemented.

We use general business terminology but define more specialized financial terms when we need them. We illustrate some important trends using figures, but the reader of this book will not encounter any dense tables of numbers. In characteristic academic fashion, we back up statements in the text with references, putting these in endnotes so they do not disturb the flow of the argument. The endnotes are intended to supplement and enliven the main arguments in the text, but a busy reader need not worry they have missed anything essential by skipping them. Throughout, we draw on the insights of a substantial academic literature and make them accessible to a general reader.

We have written this book for anyone who cares about personal finance and is willing to question the structure of our financial system rather than take it for granted. A reader of this book needs no special training in economics or finance—merely the familiarity with personal finance that almost every adult acquires in ordinary life.

INDEX

Note: Page numbers in italics denote figures.

- Aadhaar ID, 201
- AARP Foundation, 313n4
- ABLE accounts, 298n7
- accredited investors, 25–26, 218, 261–262
- ACH transfer, 184
- Acorns.com, 314n8
- active investing, iron law of, 136–137
- actuarial fairness, 140–141, 294–295n32
- adjustable-rate mortgages (ARMs), 116–118, 229; funding sources for, 234, 289n37; in starter kit, 247
- adverse selection, insurance and, 141–142
- Affordable Care Act (2010), 316n27
- African Americans: appeal of cryptocurrencies for, 192–194; Freedman’s Savings Bank collapse and, 193, 277n32; marketing aimed at, 274n9. *See also* race
- Africrypt exchange, 191
- age, financial literacy and, 33–35, 34–35
- age pyramid, 151, 152
- Akerlof, George, 55
- algorithmic discrimination, 189, 197–198
- Alipay, 184, 293n17
- allocation of retirement assets, 165–169, 257–259
- AlphaGo Zero program, 43–44
- alternative financial products/ services, 53, 68–74; friends and family, 71–72, 89, 280–281n15; moneylenders and loan sharks, 72–74; money under the mattress, 69–70
- ambiguity aversion, 291n6
- annual percentage rate (APR), 91; credit cards and, 92, 206; paying off debt in order of, 94–95; reducing on existing debt, 95
- annual percentage rate (APR) disclosures, 206, 282n31
- annuities, 169–172; deferred payout, 172; failure to buy, 273n2; markups on, 170–171; in starter kit, 259–260; variable, 300n33
- Apothecaries’ Act (1815), 228, 312–313n65
- artificial intelligence (AI): bias and, 189; fintech and, 180; patents, 301n1
- Asimov, Isaac, 184–185
- asset accumulation, paying off debt to enable, 268n22
- asset allocation: diversification and, 292n13; in retirement accounts, 165–169, 257–259
- asset management fees, 137–138
- asset management skill, 137
- assets, allowing people with limited resources to own shares of large, 8
- assumable mortgages, 248, 315n20
- Augustine, Saint, 48
- Australian pension system, 160, 298n10

- automated savings reminders, 222–223
- automated teller machines (ATMs), 199, 304n38
- automatic refinancing, 247, 315n18
- automatic savings goal reminders, 240, 241
- automating financial decisions, 228–230
- Bach, Laurent, 22
- Bank of Israel, 224, 289n36, 311n57
- bankruptcy: personal, 96; protections in law, 283n41; reform of code, 244; student loan debt and, 284n1
- banks: automated savings reminders from, 222–223; loans from, 89–90; outdated regulation of deposit insurance and, 188–189; overdraft fees, 92–93, 225; overdraft protection, 214; US consumers' attachment to physical branches, 275n14
- base rate neglect, 43
- "Basiskonto," 236
- Bayes, Thomas, 271n16
- Bayes' Theorem, 271n16
- Behavioral Insights Team (nudge unit) (UK), 212
- bias: fintech and, 189; present, 48–49
- biased self-attribution, 45
- billionaires, wealth in emerging economies and number of, 267n20
- birth rate, funding retirement and declining, 151
- Bitcoin, 192; as payment vehicle for illicit transactions, 194; price since inception, 193; transaction fees, 305n4
- BlackRock Emergency Savings Initiative, 222, 313n5
- Bleemer, Zachary, 105
- blockchain technology, 68, 179; decentralized finance and, 187–188, 190
- Blundell, Richard, 282n25
- Bodie, Zvi, 7, 8
- Boeing, 133
- bonds, retirement investments and, 166–168
- Book of Common Prayer, 145
- borrowers, matching with lenders, 242–243
- borrowing, 8, 88–93; from families and friends, 71–72, 89, 280–281n15; to fund higher education, 106–110; richer people borrowing more cheaply, 20–21, 27. *See also* debt; loans
- Boston Globe* (newspaper), 106
- Brandeis, Louis, 314–315n16
- bundling: financial products, 62–64, 224; insurance, 148
- buy-now-pay-later (BNPL) credit, 182–183; encouraging impulse buying, 185–186; excluding from financial starter kit, 244; use in the United Kingdom, 301n4
- Caines, Renata, 3, 262–263
- Cajee brothers, 191
- Calvet, Laurent, 22
- Campbell, John, 145, 197, 270n1, 275n14, 284–285n5
- CAPE ratio, 135, 135, 293n20
- capital, pooling in financial markets, 74–75
- capital income, taxes on, 156–157
- capitalism, financial system perverting, 55–56
- capping/caps: interest rates, 218; loan-to-value ratio of mortgages, 248–249; overdraft fees, 225; size of starter-kit loans, 243; transaction fees, 217–218, 225
- car insurance, 251
- Carnegie, Andrew, 293n14
- cash: downside of keeping large amounts of, 70; keeping, 69–70
- catastrophe insurance, 252–253
- celebrity endorsement, regulation of, 227
- Center for Retirement Research, 161, 162
- central planning system, 9

- checking accounts, 237–238, 241
- China: income inequality in, 16;
peer-to-peer lending market in,
187
- chip-and-pin ID card, 201
- choice architecture of finance,
269–270n37
- chonsei, 64–65
- Christmas clubs, 281n21
- Church of England, 145
- Clark, Brandy, 292n9
- climate change: catastrophe insurance
and, 252–253; effect on agricultural
income, 83
- Coinbase, 192
- CoinDesk, 303n23
- collateral, ease of obtaining loan and,
27
- colleges. *See* universities/colleges
- commitment devices, 48–49; types of,
86
- Commodity Futures Trading
Commission (CFTC), 216
- common stock. *See* equities
- Commonwealth, 222, 313n5
- Compare the Market, 183
- comparison shopping in finance,
235–236; enabling, 223–225; for
insurance, 148–149
- complexity of current financial system,
52, 62–64, 231–232
- compound interest: lack of understand-
ing of, 39–40; retirement saving and
power of, 156
- conditional probability, 41–42
- condo associations, maintenance and,
287n25
- conflicts of interest: between financial
professionals and their customers,
25, 65–66; governments and
clamping down on, 226–228
- consent-based data privacy system,
need for alternatives to current
system, 197
- consumer credit agencies, 90
- consumer duty rules, 219, 309n40
- Consumer Financial Protection
Bureau (CFPB) (US), 90, 215;
complaints received about
creditors, 93–94; complaints
received about credit reports,
209–211, 210; complaints received
about debt collectors, 95; com-
plaints received about online
lenders, 92; complaints received
about reverse mortgages, 174–175;
complaints received about student
loan system, 107–108; credit card
fees and, 92, 307n18; credit card late
fees and, 225; overdraft fees and, 93;
on shopping for mortgage, 115–116;
starter kit for finance and, 235–237;
on take up of reverse mortgages, 173
- consumers, disclosures to, 205–209
- corruption of finance, 52–75; bundling
and confusion about finance, 62–65;
consumers following familiarity,
59–60; financial firms' conflicts of
interest, 65–67; financial system
and the economy, 74–75; four finan-
cial mistakes, 53–55; paying off savvy
customers, 60–62; perverting
capitalism, 55–56; rent and rent
seeking and, 56–59; unpopularity
of finance and search for alterna-
tives, 67–74
- costs: of credit, 91–93; of credit cards,
206–207; disclosure of, 206–207; of
equity participation, 129–130; of
financial products/services,
231–232; of financial transactions,
113–114; of higher education,
101–102, 105–106, 208–209; of
investment management, 273n3;
lowering for financial products, 232;
of mortgages, 113–114, 116, 120, 229,
247; of refinancing, 119. *See also*
fees; fixed costs
- Council for Economic Education,
306n10

- Coverdell Education Savings Account (ESA), 298n7
- COVID-19 pandemic: government-backed mortgage forbearance, 287n27; student loan forbearance and, 286n16; understanding exponential growth and, 39
- credit: cost of, 91–93; financial system and provision of, 74–75; linked with insurance, 254; new types of, 90–91; relying on informal social networks for, 71–72; short-term unsecured, 242–244
- Credit Card Accountability, Responsibility, and Disclosure Act (Credit CARD Act) (2009), 213, 275n12
- credit card fees, 207; late, 92, 94–95, 207, 225, 312n58; prime vs. subprime borrowers and, 307n18
- credit card offers, Schumer box on, 205–206
- credit cards, 90; cost disclosure, 206–207; market power and, 274–275n12; transferred balances, 95, 283n43
- credit history, credit cards and, 90
- credit lines: emergency, 90; fintech lenders and, 90; in starter kit, 242
- creditors, pressure from, 93–94, 95–96
- credit registries, 202, 242
- credit reports, 242; in United States, 209–211
- credit risk, moneylenders managing, 72–73
- credit scores, 90; effect on cost of mortgage, 116; how to increase, 282n28
- credit screening, race and, 303n19
- crypto booms, 44, 47
- cryptocurrencies, 68; appeal to communities poorly served by traditional finance, 192–193; dangers of, 179, 190–195; facilitating illicit transactions, 194; memecoins, 197; miners, 194; as part of payments system, 184; private keys and, 190–191; transaction fees, 305n4; volatility of, 192, 193
- cryptocurrency exchanges, 191–193, 303n23; lack of regulation of, 188–189
- crypto intermediaries, high interest rates promised on stablecoins, 88
- crypto scams, 188, 303n23
- current accounts, 237–238, 241
- customization, fintech and, 182–183
- cyclically adjusted price-earnings (CAPE) ratio, 135, 135
- data privacy, 197
- Dave.com, 91, 183
- debt: borrowing, 88–93; interest rates on formal and informal, 73, 73–74; paying off, 93–97, 268n22; paying off in order of APR, 94–95; taking on for higher education, 99–100 (*see also* student debt/loans); taking on to purchase home, 99–100 (*see also* mortgages). *See also* borrowing; loans
- debt collectors, 95–96
- debt trap, 93, 228–229
- decentralized finance (DeFi), 187–188; controlling risks of, 195–199; defined, 190. *See also* cryptocurrencies
- deductible (excess), 142–144, 252, 296n39
- default, social networks and loan, 71–72
- default options, 211, 212, 213–214
- defined benefit (DB) pensions, 153–155, 254–255; annuities and, 170
- defined contribution (DC) pensions, 154–156, 255
- delaying financial decision making, 50
- demand, driven by perceived benefits, 55
- deposit insurance, outdated regulation of, 188–189
- developed countries: borrowing from families and friends in, 280–281n15; household balance sheets in, 111;

- household financial vulnerability in, 83, 84; wealth distribution in, 19
- developing countries: borrowing and emergency funding from families and friends in, 280–281n15; household financial vulnerability in, 83, 84.
- See also* emerging economies
- digital footprints, 242–243, 269n32
- digital identification system, 201–202
- Di Maggio, Marco, 186
- Direct Plus parent loan program, 109
- disclosures: APR, 282n31; to consumers, 205–209; credit card, 205–207; to other businesses, 209–211; starter-kit fee, 238–239
- discriminatory algorithms, 189, 197–198
- disposition effect, 272n22
- distributed digital ledger, 190
- diversification: asset allocation and, 292n13; direct investments and, 26; equity participation and, 131–134; growth of wealth and, 269n31; limiting risk, 26; naive, 293n16; retirement savings/investment and, 166–167, 258; theory of, 292n11
- Dodd-Frank Act (2010), 310n44
- Dogecoin, 197
- dollars, stating credit card fees in, 207
- earnings, higher education's effect on, 100–101, 102–106
- economic benefits of higher education, 100–101, 102–106
- economy, effect of using informal financial strategies on, 74–75
- educational debt, in starter kit, 244–246
- electricity use, of DeFi transactions, 194
- emergencies, insurance and, 139–140
- emergency credit line, 90
- emergency funds: coping with temporary mismatches between income and spending and, 86; encouraging people to create, 221–223; family and friends as source of, 71–72, 89, 281n15; interest on, 87–88; lack of, 82, 83; need for quick access/liquidity and, 25, 87; prioritizing creation of, 128–129; using tax refunds for, 87, 313n4
- emerging economies: fintech and payments systems in, 184; growth of middle class in, 10–11; household balance sheets in, 111; use of regulatory sandboxes in, 195; wealth distribution in, 17–18, 19
- emotional nature of financial decisions, 49–51
- Employee Provident Fund (India), 25
- employers: defined-benefit plans and, 154–155; 401(k) accounts, 158, 160, 163; offering emergency fund savings accounts, 222, 239; offering financial education through, 37; offering tax benefits based on success in enrolling employees in retirement accounts, 256; payroll advance schemes and, 243
- Enron bankruptcy, effect on investors, 3–4, 133, 167
- equities, returns on, 126–127
- equity participation, 126–131, 138–139; cost of, 129–130; diversification and, 131–134; iron law of active investing, 136–137; low rate of, 127, 128–129; management fees, 137–138; past returns and future results, 134–136; psychological barriers to, 129–130; rates by asset class, 127, 127–128
- ESG (environmental, social, and governance) scores, 216
- European Central Bank, 17
- European Household Finance and Consumption Survey (HFCS), 17
- Evolve Bank, 188–189
- excess (deductible), 142, 144, 252, 296n39
- exchange-traded funds (ETFs), 250
- expectations of returns, 293n17
- Expedia, 209
- Experian, 301n4

- experience: extrapolation from, 134;
reinforcement learning and, 44
- exponential growth, unintuitiveness
of, 39, 271n11
- extended warranties, 142–143, 295n35
- extrapolation: danger of, 40, 134; by
investors, 136
- Facebook, influence of friends on
home purchases, 134, 288n31
- FAFSA form, 220
- Fair Debt Collection Practices Act
(1977), 95
- familiarity, choosing financial
products and, 54, 58–60, 133,
293n14
- family, relying on to provide insur-
ance, credit, loans, investment
opportunities, and help in
retirement, 14, 28, 71–72, 89,
280–281n15
- family structure, retirement and
changes in, 151–153
- Federal Deposit Insurance Corporation
(FDIC), 215
- Federal Housing Administration,
301n37, 303n24
- Federal Reserve, 17, 215; Survey of
Household Economics and
Decisionmaking, 82
- Federal Trade Commission (FTC),
186, 211, 302n10, 308n27
- FedNow service, 203
- Fedwire system, 202–203
- fees: credit line, 243; index fund, 225;
junk, 310n46; mutual fund, 250–251;
overdraft, 92–93, 207; real estate
transaction, 113–114; retirement
account, 258; savings account, 239;
starter-kit, 238–239; transaction
account, 238. *See also* costs; credit
card fees
- fee structure, comparison shopping
and simple, 235–236
- FiCycle, 306n11
- fiduciary duty, 67, 219; alternative to
broadly imposing, 201; imposing on
financial advisers, 227–228
- field of study, affecting return on
investment in higher education, 104
- finance: functions of, 7–10; unpopu-
larity of, 53, 67–68
- financial advising/advisers: conflicts
of interest and, 25, 66–67, 226–228;
robo-advising, 183; trustworthiness
of, 66–67; using social media to
recruit clients, 312n60
- financial aid for higher education,
101–102, 285n6
- financial assets: relative to consumption,
84; random factors affecting price
of, 44
- financial commitment devices, 48–49,
86–88
- Financial Conduct Authority (FCA)
(UK), 215; consumer duty rules
and, 219, 309n40; policy on naming
and shaming in, 216; regulation of
celebrity endorsements and, 227;
Salary Finance platform in, 195;
starter kit for finance and, 235–237
- financial contracts, Islamic principle
on shared risk in, 234
- financial decision making, 31–51;
automating, 228–230; default
options and, 211, 212, 213–214;
financial decisions are intermittent
and emotional, 49–51; financial
illiteracy and, 32–36; inadequacy
of financial education, 36–38; perils
of intuitive finance, 38–47; struggle
with temptation, 31, 47–49, 84–86
- Financial Diaries, The* (Morduch and
Schneider), 80–81
- financial education: in college
curriculum, 37, 204; for complex
financial products, 261; government
role in, 200, 203–204; in high school
curriculum, 37, 203–204; inadequacy
of, 36–38; naive borrowers and lack

- of, 27; standards for, 306n10;
- wealthy people obtaining from social networks, 26
- financial firms, lack of trust in, 67–68
- financial history, digital footprints of, 242–243, 269n32
- financial illiteracy, 32–36; defined, 33; U-shaped pattern in, 270n6
- financial information flow: disclosures to consumers, 205–209; disclosures to other businesses, 209–211
- financial infrastructure, government providing, 200–203
- financial innovation: patent protection and, 59–60; sophisticated customers and, 62
- financial institutions, defined, 7
- financial literacy: lack of, 24–25; test of, 32–36, 34–35
- financial literacy movement, 32
- financial markets: function of, 270n1; pooling capital in, 74–75
- financial products: bundling, 62–65; choosing because familiar, 59–60; effect of market power on use of, 56–57; expenses associated with, 60–61; failure to shop around for, 54, 56–58; financial education and rapidly changing, 38; four design principles for, 232; mismanagement of, 54–55, 60–62; misperception of benefit of, 53–54; misunderstanding costs of, 54; retirement and rates of return on safe, 14
- financial regulatory system, fragmentation of, 215–216
- financial services, public provision of, 219–220
- financial stress, 277n28
- financial system: contributions to wealth inequality, 20–21; defined, 7; design principles for a better, 231–234; how it should work for ordinary people, 7–10; need for stability in, 10; outrage at, 5–6; scale of problem of, 28–30. *See also* personal finance system
- financial vulnerability, 79–85
- influencers, 226–227
- fintech (financial technology): accessibility of, 180–182; algorithmic discrimination and, 189, 197–198; benefits of, 180–184; customization of financial products and, 182–183; decentralized finance and the cryptocurrencies, 190–195; ease of comparing products and, 183; exacerbating inequality, 189; financial digital footprints, 242–243, 269n32; harvesting of personal data, 186–187; lack of regulation of, 187–189; manipulation of human psychology, 196–197; payments system and, 184; performance chasing and, 185; risks of, 184–189, 195–199; targeting human weaknesses, 185; transformation of personal finance and, 180–184; under-adoption of, 198–199; use of personal data, 197. *See also* technology
- fintech lenders, credit from, 90, 91
- first-order stochastic dominance, 296n39
- 529 accounts, 109, 298n7
- fixed costs: of borrowing, 27; effect on investing, 24; fintech and cutting, 181–182; intermittent financial actions and, 49–50
- fixed-rate mortgages (FRMs), 116–118, 229; failure to refinance, 61; funding sources for, 234, 289n37; moving, lock-in, and, 121–122; paying off early, 119; in starter kit, 246–247
- Flaubert, Gustave, 306n12
- Floki Inu cryptocurrency, 197
- fluctuating income, coping with, 80–85
- Foundation* series (Asimov), 184–185

- 401(k) accounts, 158, 160, 163;
 - contribution limits, 297n7; defaults, 299n22; target date funds, 167
- 403(b) accounts, 297n7
- 457 accounts, 297n7
- fraud, insurance and, 295n33
- Freedman's Savings Bank, collapse of, 193, 277n32
- frequency, misuse of, 40
- Friedman, John, 217, 256
- friends: home purchase decisions
 - and, 134, 288n31; relying on to provide insurance, credit, loans, and investment opportunities, 71–72, 89, 280–281n15
- FTX, 191
- future, downweighting against present, 47–49
- gambling: acceptance of risk and, 130–131; fintech encouraging, 185
- gamification: cryptocurrency and, 197; manipulation of customers with, 185
- Garber, Alan, 145
- gender gap: in financial literacy, 33, 34–35; multiple-choice tests and, 270n5
- gig economy, short-term credit and, 91
- global middle class: growth of, 11–13, 12–13; struggles of, 13–15
- global wealth distribution, 17–18, 19
- gold, 69–70, *III*, 191, 278n38, 293n15; Pepys's buried, 70, 278n37
- Gottlieb, Daniel, 147
- government: clamping down on
 - conflicts of interest, 226–228;
 - curbing market power, 223–225;
 - encouraging emergency savings, 221–223; financial education and, 200, 203–204; financial infrastructure and, 200, 201–203; incentives for starter-kit savings accounts, 239–240; matching savings contributions, 240; need for single agency for personal finance, 215–216; provision of financial services, 219–220; role in pension plans, 153–154; role in reforming personal financial system, 200–201; supporting and managing personal finance system, 179–180
- Haliassos, Michael, 234
- Hamilton* (musical), 65
- Harvard College financial aid, 285n6
- HealthCare.gov, 220
- health insurance, 251–252; claims transparency, 316n27; delay and deny, 148, 296–297n47; low-deductible, 144–145; premiums, 274n12
- health savings accounts (HSAs), 222
- Help to Save scheme (UK), 240, 310n42
- Hemingway, Ernest, 40
- higher education: benefits of, 98, 99, 100; cost of, 101–102, 105–106; decision to invest in, 98–100, 288n31; financial aid sources, 101–102; funding, 99–100, 106–110; how much and what kind, 100–106. *See also* universities/colleges
- high school curriculum, financial education in, 37, 203–204
- HODL (hold on for dear life), 192
- home bias, 293n14
- home equity, borrowing for higher education using, 109–110. *See also* reverse mortgages
- homeowners insurance, 251
- Hometap, 249
- home valuation, regulation of, 249
- Horizon scandal, 311n50
- household assets, housing as, 110, *III*, 112, 112

- household balance sheets, importance of housing and mortgages in, 110–112, 111, 112
- Household Finance Committee (Reserve Bank of India), 73, 288n36, 295n36, 316n27
- households, direct contribution pensions as burden on, 155–156
- House of Debt* (Mian and Sufi), 249
- housing: buying a home, 112–115; challenges of buying, 14–15; decision to purchase, 98–100, 288n31; financial importance of, 110–112, 111, 112; moving, forced refinancing, and lock-in, 121–122; participation rate in real estate market, 291n5; in retirement, 172–175. *See also* mortgages
- housing equity: as source of retirement income, 164; wealth-income ratios and, 162
- house prices: adjusting mortgage balances to, 249–250; effect on buying decisions, 114–115, extrapolating trends in, 114; retirement wealth to income ratios and, 162
- Howells, James, 191
- Huffman, Felicity, 285n9
- Icesave, 87–88
- identification (ID) systems, 202–203; digital, 201–202
- illusion of control, 45
- impulse buying, fintech encouraging, 185–186. *See also* buy-now-pay-later (BNPL) credit
- incentives: failure of central planning system to provide, 9–10; finance professionals and sales, 65; for starter-kit savings accounts, 239–240; tax, 217
- income: capping allowable ratio of mortgage payments to, 248–249; fluctuating, 80–81; mortgages and, 114; wealth-income ratios, 161, 161–162
- income-contingent student loan repayment, 108–109, 245–246, 286n19
- income distribution, global, 11–12, 12–13, 15–16
- income-driven repayment (IDR) plans, 314n14
- income inequality, measurement of, 266n15
- income tax refunds, added to emergency funds, 87, 313n4
- index funds, 225; fees, 225; for retirement accounts, 258; in starter kit, 250–251
- India: effect of weather on agricultural income in, 83; fragmentation of financial regulatory system in, 215, 309n39; initial public offerings in, 45; lack of diversification in stock market in, 26; limiting withdrawals from Employee Provident Fund in, 25; method of quoting mortgage rates in, 224–225; unit-linked insurance plans (ULIPS) in, 63–64; university placement records in, 104; use of marginal cost of funds-based lending rate in, 288n31. *See also* Reserve Bank of India
- Individual Retirement Accounts (IRAs), 158; contribution limits, 297n7
- inequality, financial system and, 15–28; exacerbated by fintech, 189; global income distribution, 11–12, 12–13, 15–16; investor accreditation and, 262; mortgage terms and, 15
- inflation: effect on real incomes, 82; taxes on capital income and, 156–157
- information, financial system and provision of, 9–10
- information technology, improving financial products using, 233

- Institute for Fiscal Studies, 163
- institutional investors, 294n30
- instruments, defined, 7
- insurance, 139–149; actuarial fairness and, 140–141; buying against large risks, 142–145; catastrophe, 252–253; feeling when risk does not materialize, 295–296n38; fraud and, 295n33; how to think about, 140–142; linking with credit, 254; long-term, 145–147, 253–254; mandatory, bundling, and shopping for, 147–149; need for transparency in, 252; partial, 141–142; risk management and, 9; self-insurance, 295n34; short-term, 251–253; unit-linked plans, 4–5, 63–64, 309n39. *See also* deposit insurance; health insurance; life insurance
- insurance companies, acquisition of personal data, 187
- insurance premiums, lapsation and, 54–55, 61, 145–147
- Insurance Regulatory and Development Authority (IRDAI), 309n39
- interbank payments, fintech and, 184
- interest: emergency funds and, 87–88; on transaction accounts, 237–239
- interest-only (IO) mortgages, 122–123, 249
- interest rate caps, 218
- interest rates: annuities and, 171; on formal and informal debt, 73, 73–74; mortgage, 115–118; prime vs. subprime borrowers and, 307n18; real, 266n12; reverse mortgages and, 173; short-term vs. long-term, 289n39; starter-kit fixed-rate mortgages and, 247
- interest rates on debt, effect on wealth inequality, 21–22, 23
- interest rates on loans, richer vs. poorer people and, 27
- intermittent financial decisions, 49–51
- intuition, about exponential growth, 271n11
- intuitive finance, 31, 38–47; danger of learning from others, 45–47; limits of reinforcement learning and, 43–45; uncertainty exposing weakness of human intuition, 40–43
- intuitive reasoning, lack of accounting for historical information, 41–43
- investment management, costs and fees of, 273n3
- investment risk, wealthy people and tolerance for, 26
- investments: in starter kit, 250–251. *See also* higher education; housing; mortgages; risky investments
- Investment Savings Accounts (ISAs), 157–159, 297n6
- investors, accredited, 25–26, 218, 261–262
- iron law of active investing, 136–137
- Islamic principle on financial contracts, 234
- Israel, mortgage reform in, 207–208, 224, 289n36
- Jackson, Howell, 270n1
- James, LeBron, 193
- Jansson, Thomas, 234
- jewelry, as emergency fund, 69–70
- Johnson, Jasmin, 106
- Jump\$tart Coalition for Personal Financial Literacy, 306n10
- junk fees, 218; defined, 310n46
- Juno, 188
- Kahneman, Daniel, 271n8
- Kakaku.com, 183
- Kapoor, Virendra Pal, 4–5, 63, 215, 263–264
- Karabulut, Yigitcan, 234
- Katz, Justin, 186
- Kayak, 209
- Keillor, Garrison, 271n8
- Keogh accounts, 297n7
- Kiyosaki, Robert, 265n6
- Klarna, 182

- Lake Wobegon, 137
- lapsation problem, insurance and, 54–55, 61, 145–147
- large language models, 180
- late fees, credit card, 92, 94–95, 207, 312n58
- lawsuits, approved financial products and protection from, 217
- learning from others, danger of, 45–47
- Lee, Bruce, 234
- Lee, Spike, 193
- legacy financial systems, 202
- legal system to protect investors, 202
- Lemonade, 182
- lenders, matching with borrowers, 242–243
- Levine, Phillip, 208–209
- Liang, Kevin, 272–273n26
- libertarian paternalism (“nudge”), 211–215
- life expectancy: amount need to save for retirement and, 159; annuities and, 169–170; retirement and increase in, 150–151
- life insurance, 253–254; lapsation problem, 54–55, 61, 145–147; unit-linked insurance plans, 63–64
- limited liability of shares, 8
- liquidity, emergencies and need for, 25
- liquidity management, 258–259, 316n31
- living in retirement, 169–175; annuity puzzle, 169–172; housing in retirement, 172–175
- Lloyd’s of London insurance market, 68, 266n10
- loan consolidators, 95
- loans: emergency credit, 89–90; prepayment penalties, 268n22; relying on informal social networks for, 71–72, 89; social sanctions to enforce repayment, 72, 279n43. *See also* borrowing; debt
- loan sharks, 72–74, 89
- loan-to-value ratio, caps on mortgage, 248–249
- lock-in, effect on housing and labor markets, 121–122, 248
- London & Capital Finance, 216
- longevity risk, 169
- long-term inflation-indexed bonds, 166
- long-term insurance, 253–254. *See also* life insurance
- long-term interest rates, 289n37
- losses: aversion to, 130; deferring pain of, 45
- lottery: initial public offering and, 137; prize-linked savings account and, 223, 240, 241; state, 292n9; value of ticket vs. its cost, 53, 273n1
- low-cost index funds, in starter kit, 250
- luck, confusion with skill, 44–45
- Lusardi, Annamaria, 22
- luxuries, necessities vs., 85, 125, 290n1
- machine learning technology, credit screening and, 303n19
- Maddox, George, 3–4, 44, 133, 167, 263
- Madoff, Bernard, 26, 68, 72
- Madrian, Brigitte, 270n1
- management fees: paid by governments for asset management, 297n6; on retirement savings, 156, 165, 168–169
- mandatory insurance, 147–148
- marginal cost of lending rate (MCLR), 224–225, 288n36
- marginal utility, 290–291n1; on small scale, 126; of spending, 125; of wealth, 125
- market efficiency, logic of, 294n21
- market power, 56–58; credit card market and, 274–275n12; governments curbing, 223–225; reverse mortgage lenders and, 301n37
- markets, defined, 7
- Markowitz, Harry, 292n11
- memecoins, 197
- meme-stock investing, 137, 233, 297n27
- mental accounting, 281n17
- Merton, Robert C., 7, 8, 265n7

- Merton, Robert K., 265n7
Mian, Atif, 249
Michaud, Pierre-Carl, 22
micro-pensions, 257
Microsoft millionaires, 44, 47
middle class: growth of in emerging economies, 10–11. *See also* global middle class
miners, cryptocurrency, 194
minimal financial resources, families with, 81, 82, 280n9
Mitchell, Olivia, 22
mobile phone penetration, 180, 181
money: keeping “under the mattress,” 69–70; psychological pain of losing, 130; taboo against talking about, 46–47
Money and Pensions Service (UK), 282n24
Moneybox, 86–87
moneylenders, 72–74, 88–89
money market investments, 4, 9, 88, 126, 131, 166–168, 237–239, 247
Monty Python’s Flying Circus, 275n13
Moody’s Investors Service, on stablecoins, 282n23
moral hazard, 142
Morduch, Jonathan, 80
Morningstar mutual fund rankings, 138
mortgage markets: lack of innovation in products, 60; simplifying decision making in, 229
mortgage rates, Indian method of quoting, 224–225
mortgages: adjusting outstanding balance to housing prices, 249–250; assumability and portability, 248, 315n20; borrowers predicting future trajectory of long-term rates, 118; choosing, 117–118; comparison shopping for, 115–116; cost of, 113–114, 116, 120, 229, 247; defaulting on, 123; forbearance for payment during COVID-19 pandemic, 287n27; forms of, 15; income-contingent, 114; interest-only, 122–123, 249; interest rates, 115–118; lock-in and, 121–122, 248; managing, 118–121; obtaining, 115–118; paying off, 122–123; qualified, 217, 310n44; reform in Israel, 207–208, 224, 289n36, 311n57; reverse, 173–175, 260–261, 298n12, 300n35; in starter kit, 246–250; teaser rates, 118–119; use of marginal cost of fund-based lending rate in, 288n31. *See also* adjustable rate mortgages (ARMs); fixed rate mortgages (FRMs); housing; refinancing mortgages
moving, lock-in problem and, 121–122
M-PESA, 184
multiple-choice tests, gender and, 270n5
Musk, Elon, 197
mutual funds, 8; enabling diversification, 132; lack of adoption of, 26; management fees, 137–138, 250–251. *See also* target date funds

name and shame, as tool to document abuses, 216–217
national differences in personal financial systems, 233–234
National Financial Capability Study (NFCFS), 33–36, 34–35, 270n2
National Retirement Risk Index (NRRI), 162–163, 165
National Standards for Personal Financial Education, 306n10
natural disasters, insuring against, 252–253
necessities, luxuries vs., 85, 125, 290n1
Nerd Wallet, 183
net worth, as measure of wealth, 17
not-for-profit financial institutions, government and, 220, 311n52
Nudge (Thaler and Sunstein), 211–212
“nudge,” 30, 180, 200, 270n37; insufficiency of, 211–215; studies of, 308n31

- Occupy Wall Street, 5
- Oedipus, 297n1
- Office of Evaluation Sciences, 212
- Office of the Comptroller of the Currency (OCC), 215
- online calculators to determine college costs, 208–209
- on-time graduation, return on investment in higher education and, 104–105
- outcomes, uncertainty about future, 40–43
- overconfidence: in financial under-
standing, 33–36; Kahneman on, 271n8
- overdraft fees, 92–93, 207
- overdraft protection, 214
- owner-occupied housing, 113; in retirement, 172–175
- ownership registries, 202, 203

- Paisabazaar, 242–243
- partial insurance, 141–142
- passive investing, 136
- patent protection, retail finance and limited, 59–60, 276n19
- pay-as-you-go public pensions, 153
- payday lenders, 89, 275n15
- payment protection insurance (PPI), 4, 63, 148
- payments system, 7–8; fintech and, 184; government role in, 202
- payouts, insurance and caps on, 141–142
- payroll advance schemes, 243
- peer effects, 46
- Pell Grants, 101, 285n6
- Pension Fund Regulatory and Development Authority (PFRDA), 309n39
- Pension Protection Act (2006), 299n22, 310n44
- pension scams, 68, 277n33
- Pepys, Samuel, 70, 191, 278n37
- performance chasing, fintech and, 185
- personal bankruptcy, 96
- personal finance system: characterized as “fixed,” 6; government action to support, 179–180; national differences in, 233–234; need to rebuild, 6–7; problems of, 10–15. *See also* starter kit for personal finance
- personal information: fintech and harvesting of, 186–187, 197; required to receive disclosures, 208–209
- “phishing for phools,” 55
- Phishing for Phools* (Akerlof and Shiller), 274n8
- phone bias, 293n14
- physical commitment devices, 86
- Point (online lender), 249
- points, fixed-rate mortgage, 120, 229, 247
- Policy Bazaar, 183
- Ponzi scheme, Bernard Madoff and, 26, 72
- population, growth in global, 12–13
- portable mortgages, 248, 315n20
- Posner, Richard, 208
- postal savings systems, 220, 241
- Post Office (UK), 220; Horizon scandal and, 311n50
- premiums: deductibles and, 252; health insurance, 274n12; long-term insurance and, 253–254
- prepayment penalties, 268n22
- present, downweighting future against, 47–49
- present bias, 48–49
- price manipulation, rules against, 227
- prices, failure to shop around and raised, 56–58
- prime borrowers, 90, 92, 307n18
- privacy, cheaper credit and, 91
- privacy paradox, 187
- privacy policies, fintech firms and, 186–187
- private key, cryptocurrency and, 190–191
- prize-linked savings accounts, 223, 240, 241

- probability, conditional, 41–42
- property taxes, deferred for retirees, 261, 316n36
- prospect theory, 291–292n7
- public pensions, 14, 20; pay-as-you-go, 153
- Putnam, Ruth, 4, 166, 263
- QR-code based payment system, 184
- qualified mortgages (QMs), 217, 310n44
- race: credit screening and, 303n19; effect on returns on housing investment, 114; gaps in college success and, 285n11; mortgage rates and, 120; on-time graduation and, 105. *See also* African Americans
- Ramadorai, Tarun, 186, 275n14, 284–285n5
- Ramsey, Dave, 265n6
- rates of return, effect on wealth inequality, 21–22, 23
- Reagan, Ronald, 267n20
- real estate investment, 293n15
- real interest rates, 266n12
- real options problem, refinancing mortgage as, 120–121
- realtor commissions, 113
- redlining, 193, 303n24
- reference points, financial decision making and, 38–39
- refinancing mortgages, 118–121; automatic, 229, 247, 315n18; cost of, 119; delaying, 289n41; discretionary, 247–248; failure to, 54, 61; when to refinance, 119–120
- Registered Education Savings Plan (RESP) (Canada), 240, 310n42
- registered investment advisors (RIAs), 227
- regulation: of celebrity endorsements, 227; cryptocurrency exchanges and lack of, 191–192; of DeFi products, 195–199; of deposit insurance, 188–189; fencing off investments from poorer people, 25–26; fragmentation of, 215–216; of home valuation, 249; lack of fintech, 187–189; preventing from going too far, 218–220; of public health, 56
- regulatory sandboxes, testing new DeFi products using, 195–196, 304n32
- reinforcement learning, limits of, 43–45
- reinsurance market, 296n46
- rent, 58–59
- rents, apartments, chonse and, 64–65
- rent seeking, 58–59
- replacement rate, 159
- representativeness, 43
- Reserve Bank of India (RBI): Household Finance Committee report on household finance, 73, 73–74; regulation of banks, 309n39. *See also* Household Finance Committee (Reserve Bank of India)
- resources, transferring across time, 8–9
- retirement, 150–175; global middle-class struggle to fund, 13–14; living in, 169–175; longer life, fewer children, and, 150–156
- retirement accounts: asset allocation, 165–169, 257–259; contribution limits, 297n7; default options and, 212, 213–214; fees, 258; liquidity management and, 258–259; micro-pensions, 257; reluctance to save in, 164; in starter kit, 254–257; target date funds in, 230, 258, 259; tax-favored, 156–159, 217, 255–256; withdrawals from, 255–257
- retirement financing, 254–261; annuities and reverse mortgages, 259–261; asset allocation in retirement accounts, 165–169, 257–259

- retirement portfolio, Enron bankruptcy and loss of, 3–4, 133, 167
- retirement savings, 156–165; amount required, 159–160; complicated consequences of, 164–165; do people save enough, 160–164; effect of cut in short-term interest rates on, 4; encouraging more conservative approach to, 229–230; how to save, 159–160; wealth inequality and, 19–20
- returns, expectations of, 293n17
- returns on investment, how richer people earn higher, 24–26
- revenue, from customers' mismanagement of financial products, 60–61
- reverse mortgages, 173–175, 260–261, 298n12, 300n35
- reverse redlining, 193, 303n24
- Rich Dad Poor Dad* (Kiyosaki), 265n6
- richer people: advantages provided by financial system to, 20–21; ease of diversification in large portfolios, 26; higher savings rate among, 28; how they borrow more cheaply, 27; how they earn higher investment returns, 24–26; tolerance of investment risk, 26
- risk: financial contracts and shared, 234; how to think about, 124–126; national differences in comfort with, 234; scaling financial, 294n22. *See also* insurance
- risk aversion, 125–126; estimating, 291n3
- risk management, 9; in starter kit, 250–254
- risk-taking, formula for optimal, 292n10
- risk-worthiness, 294n22
- risky investments: asset management fees, 137–138; diversification and, 131–134; investment participation, 126–131, 138–139; iron law of active investing, 136–137; relation of past returns to future results, 134–136; thinking about risk, 124–126
- Robinhood, 185
- robo-advising businesses, 183, 301n5
- Roth accounts, 157–159, 255, 297n6
- rounding up approach to increasing savings, 86, 240, 281n19, 314n8
- Rumsfeld, Donald, 291n6
- Russia, income inequality in, 16
- safety of financial products, increasing, 232
- Salary Finance, 195–196
- sales incentives, conflict of interest between customers and financial professionals, 65
- salient outcomes, exaggeration of probability of, 41
- sandboxes, testing new DeFi products using, 195–196, 304n32
- save, temptation to spend and failure to, 31, 47–49, 84–86
- SAVE plan, 286n19
- savings, 86–88; automatic mechanisms for, 86–87; for college, 109, 240, 298n7, 310n42; government matching schemes, 310n42; as means of moving resources from present to the future, 8–9; median level of, 81; relying on family and friends for financial security and lack of, 71–72, 89, 280–281n15; richer people and higher rates of, 28; richer people earning higher average returns on, 20–21; by rounding up, 86, 240, 281n19, 314n8. *See also* retirement savings
- savings accounts: linked to transaction accounts, 239; prize-linked, 223, 240, 241; in starter kit, 239–241
- scams: cryptocurrency, 188, 303n23; pension, 68, 277n33
- Schneider, Rachel, 80
- Schumer, Charles, 205
- Schumer box, 205–206
- second-order stochastic dominance, 296n39

- secured debt, mortgages as, 100
- Securities and Exchange Board of India (SEBI), 309n39
- Securities and Exchange Commission (SEC) (US), 216
- self-insurance, 295n34
- SEP-IRA account, 297n7
- shares, people with limited resources owning, 8
- Sharpe, William, 131
- Sharpe ratio, 292n10; diversification and, 131–132
- Shiller, Robert, 55
- Shipley, Simon, 4, 63, 263
- shocks: coping with financial, 9; effects of systemic, 82
- short-term borrowing, risk of debt trap and, 228–229
- short-term fluctuations, managing, 237–244; short-term unsecured credit, 242–244; transaction and savings accounts, 237–241
- short-term insurance, 251–253
- short-term interest rates, 289n37
- “shoving” (reforming) the financial system, 200–230; automating financial decisions, 228–230; channeling flow of financial information, 205–211; clamping down on conflicts of interest, 226–228; curbing market power, 223–225; disclosures to consumers, 205–209; disclosures to other businesses, 209–211; fighting biases with biases, 221–223; financial education, 203–204; financial infrastructure and, 201–203; how to shove, 215–220; “nudges” are insufficient, 211–215; what to shove, 221–230
- shrouded equilibrium, 276n21
- Silk Road, 194
- simplification of financial products, 232
- skill: asset management, 137; luck confused with, 44–45
- Skinner, Jonathan, 160
- sludge, 204, 309n36
- smart contracts, 190, 192, 195
- smart disclosure, 209
- Smetters, Kent, 147
- Smith, Adam, 55
- social commitment devices, 86
- social media, financial advisors recruiting clients via, 312n60
- social media influencers, conflicts of interest and, 226
- social networks: learning from, 45–47; relying on friends and family to provide insurance, credit, loans and investment opportunities, 71–72, 89, 280–281n15
- social sanctions, to enforce loan repayment, 72, 279n43
- Social Security system, 163, 170; personal identification and, 202; ratio of workers to beneficiaries, 297n4; replacement rate and, 153
- Sodini, Paolo, 22
- Soros, George, 53
- South Korea, chonsei in, 64–65
- spending: declining marginal utility of, 125; income variability and fluctuations in, 81; paying off debt quickly and cutting, 94
- spending temptation, failure to save and, 31, 47–49, 84–85
- Sphinx, 297n1
- stablecoins, 281n21, 281–282n23
- stamp tax, 113
- standard deviation, 131, 132, 280n2, 292n10
- Starmer, Keir, 25
- starter kit for personal finance, 235–237; annuities and reverse mortgages, 259–261; asset allocation in retirement accounts, 257–259; beyond the, 261–262; educational debt, 244–246; financing large investments, 244–250; investments, 250–251; long-term insurance, 253–254; managing risk, 250–254;

- managing short-term fluctuations, 237–244; mandatory to offer or mandatory to choose question, 236–237; mortgages, 246–250; retirement accounts, 254–257; retirement financing, 254–261; short-term insurance, 251–253; short-term unsecured credit, 242–244; transaction and savings accounts, 237–241
- startup business, conditional probability and, 41–43
- State Bank of India, 5
- stochastic dominance, defined, 296n39
- stock portfolios, returns on, 22
- stock prices, 134–136; CAPE ratio and, 135, 135
- stock volatility, 292n12
- structured products, 138; in starter kit, 251
- student debt/loans, 3, 14, 106–110; bankruptcy and, 284n1; default rates, 286n18; forbearance period during COVID-19 pandemic, 286n16; income-contingent repayment, 108–109, 245–246, 286n19; income-contingent repayment plans, 108–109, 245–246, 314n14; problem of financial illiteracy and, 33; SAVE plan and, 286n19; in United Kingdom, 266n13
- subprime borrowers, 90, 92, 307n18
- Sufi, Amir, 249
- Sun Also Rises, The* (Hemingway), 40
- Sunstein, Cass, 211–212
- Superannuation Co-Contribution Scheme (Australia), 310n42
- surveillance pricing, 186
- Survey of Consumer Finances (SCF) (US), 16–17, 162, 164–165
- Survey of Household Economics and Decisionmaking (SHED), 82
- Sweden, wealth inequality in, 22, 23
- Swensen, David, 258–259
- SWIFT, 184
- Synapse, 189
- system of accounts, 8
- tangible assets, avoiding overinvestment, 293n15
- target date funds, 167–168, 169, 299n24, 299–300n25, 310n44; retirement accounts and, 230, 258, 259
- taxes, retirement savings and, 156–159, 255–256
- tax-favored retirement accounts, 156–159, 217, 255–256
- tax incentives: for employers, 217, 256; inequality in response to, 158; for retirement savings, 217, 241
- tax refunds, adding to emergency funds, 87, 313n4
- teaser mortgage rates, 118–119
- technology: AI patents, 301n1; connecting lenders with borrowers, 242–243; information, 233; mobile phone penetration, 180, 181. *See also* fintech (financial technology)
- temptation, financial decision making and spending, 31, 47–49, 84–86
- Tencent, 184
- term life insurance, 253
- Terra Luna, 281–282n23
- Tether (cryptocurrency stablecoin), 281n21
- Thaler, Richard, 209, 211–212
- Thomas, Stefan, 191
- Thompson, Brian, 296–297n47
- titles, financial, 226, 227–228, 312–313n65
- Tobin, James, 292n11
- Total Money Makeover* (Ramsey), 265n6
- transaction accounts: linked to savings accounts, 239; starter kit, 237–239, 241. *See also* checking accounts; savings accounts
- transaction fees: capping, 217–218, 225; cryptocurrency, 305n4; disclosure of, 207

- transferred balances, 283n43
- transparency: in insurance, 252, 316n27; in mortgage offers, 288–289n36; in rating loan servicers, 246
- Treasury bonds, rates of return on, 14
- TreasuryDirect, 220
- Treasury inflation-protected securities (TIPS), 166, 266n12
- trigonometry, 306n12
- Truth in Lending Act (TILA) (1968), 206, 282n31
- Tucker, Will, 209
- Tufano, Peter, 270n1

- Uettwiller, Antoine, 186–187
- uncertainty about future outcomes, financial decision making and, 40–43
- unemployment benefits, 88
- Unified Payments Interface (UPI), 184
- Unison, 249
- United Kingdom: adjustable-rate mortgages in, 116–117, 229; Behavioral Insights Team (nudge unit), 212; financial aid for higher education in, 101–102; high school financial education curriculum in, 203; income-contingent repayment of student loans in, 109; payment protection insurance (PPI) scandal in, 63, 148; pension scams in, 277n33; student debt in, 266n13; sufficiency of retirement savings in, 163; tax-favored retirement accounts in, 157; use of buy-now-pay-later plans in, 301n4; use of regulatory sandboxes in, 195–196; volatile income in, 82–83
- United States: college savings in, 109; credit reporting in, 209–211; differences on returns on investment and wealth inequality in, 22, 24; distribution of household assets in, 112; equity participation in, 127, 127–128; financial infrastructure in, 202–203; financial vulnerability in, 80–85; fixed-rate mortgages in, 117; fragmentation of financial regulatory system in, 215–216; high school financial education curriculum in, 203; how much to save for retirement in, 159–160; lack of emergency savings in, 82–83; low-deductible health insurance in, 144–145; Pell Grants in, 101; prevalence of financial vulnerability in, 83, 84; real estate transaction costs in, 113; real returns on higher education in, 102–106, 103; refinancing in, 120–121; Sharpe ratio for stock market in, 132; shift from defined benefit to defined contribution pensions in, 154–155; student loan program in, 106–107; sufficiency of retirement savings in, 162–163; tax-favored retirement accounts in, 157; tax refunds in, 87, 313n4; volatile income in, 80–81, 82–83; wealth distribution in, 17, 18; wealth-income ratios in, 161, 161–162; wealth inequality in, 20
- unit-linked insurance plans (ULIPs), 4–5, 63–64, 309n39
- universal basic wealth, 240
- universities/colleges: differences in return on investment among, 103–106; financial education in, 37, 204; online calculators to figure costs of, 208–209; placement records, 104. *See also* higher education
- university admissions cheating case, 285n9
- unsecured credit, short-term, 242–244
- unsecured debt, college loans as, 99–100
- UPS, emergency savings accounts and, 222, 313n5
- Upstart, 242–243
- usury, 218

- Vanguard, 220
 variable annuities, 300n33
 Venmo, 184
 Vestager, Margrethe, 189
 volatility (variability): of cryptocurrencies, 194; effect on investment of, 289n41; of income, 80, 280n2, 280n7; of spending, 81; standard deviation as a measure of, 131, 280n2; of stock returns, 292n12
 Volcker, Paul, 199, 304n38

Wall Street (film), 130
Wall Street Journal (newspaper), 53
 Walther, Ansgar, 186–187
 Washington, George, 221
 wasteful competition, 58
 wealth: average growth rate of, 269n31; marginal utility of, 125; wealthy people understating own, 267n20. *See also* richer people
 wealth-income ratios, 161, 161–162
 wealth inequality, 16; accredited investors and, 262; contributions of financial system to, 20–21; drivers of, 19–24; wealth distribution, 16–19, 18, 19
 Wells Fargo, 68
 Williams, Emily, 186
 Willis, Lauren, 214
 withdrawals from retirement accounts, taxing, 255–256
 World Inequality Database, 267n20

 XRP transaction fees, 305n4

 Yaron, Amir, 311n57
 Yotta, 188

 Zafar, Basit, 105
 Zelle, 184, 281n16