CHRIS PEDERSEN

2 Funds for Life

A quest for simple & effective investing strategies
For Kent and Jean, who asked only that I pay it forward.
Investing is not nearly as difficult as it looks. Successful investing involves doing a few things right and avoiding serious mistakes.

John C. Bogle
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Praise For 2 Funds for Life

A masterpiece for people who want to dig into the details of two funds for life whether it's before or in retirement.

Paul Merriman, founder of The Merriman Financial Education Foundation,
Co-author of We’re Talking Millions

Good investing is simple, but not always easy. 2 Funds for Life takes readers on a fascinating journey to build simple & effective portfolios. I learned a lot from this book. Read it.

Wesley. R. Gray Ph.D., CEO of Alpha Architect,
Co-author of Quantitative Value and Quantitive Momentum

Mastery of a topic often leads to an odd conclusion - simple is usually better. Chris brings the heavy-duty research to make the point. You don't need dozens of funds -- what we call in industry-speak "mutual fund salad." In fact, you may only need a few. Read this book and simplify your portfolio and your life!

Meb Faber, Founder and Chief Investment Officer,
Cambria Investment Management

“2 Funds for Life” is a tour de force on how to think about investing for a lifetime. If you want to understand how to personalize your investment approach and increase the chance of reaching your long-term financial goals, this book is for you.

Daryl Bahls, Director of Analytics
The Merriman Financial Education Foundation
If you’re ready for a deep dive into the analytics of performance, Chris is your guy! Plus, he outlines a straightforward portfolio model that makes sense.

Craig Israelsen, Ph.D., Founder of the 7Twelve® Portfolio

Recognizing that the investor matters more than the investment, Chris Pedersen has combined just two funds into a sophisticated but simple investing strategy that incorporates lessons learned from both financial theorists and behavioral economists. Wonderful!

James M. Dahle, MD, Founder of The White Coat Investor

With just two mutual funds or ETFs, Chris shows investors how they can take advantage of well-known investing concepts. The beauty of the strategy is in its simplicity. Investors get a high level of diversification and the potential for building lifetime wealth with very little effort.

Charles Rotblut, CFA, Vice President & AAII Journal Editor
American Association of Individual Investors

2 Funds for Life applies the KISS Principle to Investing. Investing Made Understandable!

Ed Fulbright, CPA, PFS  Host of Mastering Your Money Radio

"The investment industry goes out of its way to convince you investing is far too complex for any regular person to even try, much less succeed. Luckily for us, Chis Pedersen has done the research to find the perfect balance between simplicity and performance in investing, and his extraordinary book 2 Funds for Life presents the succinct and elegant case for how you can invest confidently for the long-term and your ultimate financial independence."

Brad Barrett,
Co-host and co-founder of the ChooseFI Podcast
Foreword

I first met Chris Pedersen in a phone conversation after he had sent me an email offering to help me in my work of educating investors.

I was immediately impressed with his generosity, his thoughtful intelligence, and his openness to new ideas: all hallmarks of a great teacher.

As I described my 50-plus years as a financial educator, author, and founder of an investment advisory firm, we started talking about the very best long-term equity portfolio I have ever discovered: something I call the “Ultimate Buy and Hold Strategy.”

Over the long term, this combination of 10 equity asset classes has significantly outperformed the Standard & Poor’s 500 Index while adding only minimal additional risk.

However, Chris and I both knew this portfolio was too complex for many do-it-yourself investors.

Though Chris started doing work for The Merriman Financial Education Foundation right away, it wasn’t until many months later that I threw out a challenge: Could he figure out a way to capture the long-term benefits of this strategy using only two funds?

Chris immediately accepted my challenge, and his solution turned out to be brilliant.

I told him something I’ve been hearing from investors for a long time: “I wish I had known about this 40 years ago.”
Chris’s solution led to a book that Richard Buck and I wrote in 2020, *We’re Talking Millions! 12 Simple Ways to Supercharge Your Retirement*.

While we were writing this book, Chris’s help was invaluable as he repeatedly applied his data-crunching skills to make sure we identified the best ways to use the plan he had figured out.

In our book, Rich and I summarized the research behind this two-fund strategy, but we didn’t dig deeply into the underlying data. Our focus was to outline a plan that can be quickly understood and implemented.

However, even the best possible investment plan will work only to the extent that an investor trusts it. To my mind, trust is strongest when it’s backed up by research.

That’s where Chris’s book comes in.

I’ve been delighted to see how well, in the following pages, Chris describes this two-fund strategy and the data behind it.

I regard this book as an “owner’s manual” for any investor who’s embarking on this two-fund strategy.

2 Funds for Life should help create the trust that can lead to the lifetime discipline that will extract the maximum value from this two-fund strategy.

The heart of this strategy is the target-date retirement fund, and Chris does a fine job of explaining it – along with its most important shortcoming, the lack of a way for investors to achieve above-average returns.

2 Funds for Life is based on the best academic research available – and more than 90 years of stock-market data.

In my view, this book is a home run for patient long-term investors – especially those in their 20s and 30s. It combines the undeniable benefits of small-cap value
stocks with a defensive strategy built on massive diversification, low expenses, and a glide path to gradually decrease risk.

In addition, Chris shows more conservative investors how to turn down the heat – and more aggressive investors how to turn it up.

If you want to retire with more money, this book shows you how.

If you want to retire earlier, this book shows you how.

If you want to have more money to spend in retirement, this book shows you how.

If – in addition to all that — at the end of your life you want to have money to leave to individuals and/or organizations, this book shows you how.

Investors often ask me if this is the right time to put a plan like this to work.

For at least 40 years I’ve been telling them: “The best time to plant a tree is 20 years ago. The second-best time is right now!”

Paul Merriman
Preface

I am a financial wizard.

At least, that’s what my grandfather taught me to say when I was learning to talk.

Sadly, my deep dive into personal finance didn’t begin until I was on the verge of retirement. Fortunately, the lessons I’d learned from my parents’ and grandparents’ examples were enough to set us on the right course. Still, as I stood at the precipice that marks the end of a career and the beginning of retirement, I was scared. Had we saved enough? Should we change how we were invested? Where would the money come from when paychecks stopped? And how much would we be able to spend every year without running out? It was time to realize my grandfather’s dream. Maybe I couldn’t become a financial wizard, but I could certainly learn about investing. I’ve always learned best by doing and trying to teach others. It was time to apply another lesson I’d learned from my mother: When in doubt, volunteer.

I can still remember getting the call. I’d been listening to Paul Merriman’s podcasts for several months when I emailed him and offered my help. Paul did what he often does—he picked up the phone and called me. I paced around in our garage as we discussed ways I could help. For whatever reason, things clicked. The first thing I did was create a set of Best-in-Class ETF recommendations. Then we made it easy for Paul’s listeners to use The Merriman Financial Education Foundation’s recommended portfolios at Motif and later M1 Finance. After that, we began researching ways to study dynamic allocations like the ones in target-date funds. It was fun, and I was learning.
Somewhere in all of this, Paul mentioned that he had an open invitation to visit John Bogle but hadn’t done it yet. Given Bogle’s age, I encouraged Paul to prioritize the visit before the opportunity was gone. Paul did. When he came back from the visit, he shared a gem: “Simplify.” To this point, the foundation’s focus had been on the Ultimate Buy-and-Hold portfolio, which was made of 10 equity funds and three bond funds. Mr. Bogle thought we could do better, and we agreed.

By the fall of 2017, we were ready to share 2 Funds for Life with the world. Target-date funds are good, but many investors could do better, and we showed them how. I knew the topic deserved a book, but I also knew it would take some time to do it well. Four years later, this book is the result. There are new variations of the 2 Funds for Life strategy and new research to answer some of the many user questions that have come up over the years.

I’ve been “retired” for four years now. The fears that gripped me in the transition to retirement have given way to appreciating the investor’s paycheck. Since I’m a shareholder, the CEO who used to get me so worked up now works for me. My former colleagues do as well. If you’ve invested in the broader stock market, they work for you too. Our invested capital is fueling innovation for the future. The companies that need it reward us for taking the risk by growing their businesses’ value and sharing their profits.

I may never be a financial wizard, but I’ve developed some skills that might seem magical. In the pages ahead, we’ll travel back in time to see how various simple investing approaches we use now would have worked in the past. And we’ll estimate how choices we make now will likely impact our future. Whether it’s wizardry or not, I think my grandfather would be pleased.
Acknowledgement

The true financial legacy we get from our parents is measured more in knowledge, attitudes, and behaviors than in dollars and cents. I was lucky to be born to parents who instilled in me a desire to work hard and invest in myself, my future, and others. They weren’t the first links in this long chain, and I’m striving not to be the last.

I thank my best friend and eternal companion, Suzanna, for supporting and celebrating my efforts. She may never read or appreciate this book, but she’s the best and only financial advisor I’m likely to need. Her common sense and cool head have helped us avoid many mistakes and resiliently bounce back from others.

For the illustrations in this book, I’m deeply indebted to my daughter Maren. Her love of nature shows in everything she does. Her art also inspired me to write a better book. If savings and wealth don’t help us live better lives, what’s the point?

To my daughter Katrina, thanks for the many discussions on imputing data and modeling. I know my puzzles are simpler than yours, but your insights got me unstuck more than once on this quest.

Of course, Paul Merriman gets a big shout-out. Working with his Foundation has given me the chance to learn by teaching. It’s exposed me to hundreds of listener questions, mounds of data, and frequent opportunities to stretch myself. Perhaps more important than all of that, it’s given me an added sense of purpose in retirement. The friendship and collaboration I’ve enjoyed working with Paul have been one of life’s great gifts.
Our colleague, Daryl Bahls, has also been instrumental in the creation of this book. He was my main sounding board and collaborator for the rhyme and regress asset class return histories that power the backtests. He also provided the method for calculating the safe withdrawal rates and the heatmaps for Appendix 1. He is by far the most detail-focused reviewer we have. His tireless and patient reviews, edits, and suggestions have greatly improved this book. I’m delighted to be able to work with and learn from him at the Merriman Foundation. Paul puts up with us patiently when we head down rabbit holes chasing technical topics. What fun!

Several of our Merriman Foundation listeners and followers have also contributed. Many of their questions helped develop the story. Jeff Mattice deserves special thanks for his early review of the manuscript and detailed feedback.

I’ve also received generous help from many experts. Larry Swedroe has answered several questions about his book *Your Complete Guide to Factor-Based Investing*. Tuomo Lampinen also patiently answered numerous questions regarding his wonderful website, *Portfolio Visualizer*. Wes Gray at Alpha Architect provided interesting insights regarding momentum and factor-based investing. Craig Israelsen stands out for introducing me to the importance of calming investors down and finding good Thai food in Utah. Meb Faber provided a wealth of information through his podcasts and financial education service, *The Idea Farm*. I especially appreciate his observation that diversifying into almost anything other than a cap-weighted portfolio is likely to help.

The last shout-out goes to you. Thank you for reading this book. Many of you have provided questions, corrections, and observations that have helped shape the story. This voyage may be over, but the Beagle Backtester is safely docked and ready to sail again.
Chapter 1

Introduction — The Quest for Simplicity

We’re on a quest to find simple, effective, long-lived investing strategies — the kind we can adopt with confidence and live with for a lifetime.
Most of us know we need to invest for the future, but it’s hard to know where to start.

Investment choices are as old as life itself. For billions of years, all living things have made conscious or unconscious choices about how much risk to take and energy to expend foraging, hunting, reproducing, and nurturing. So why does figuring out how to invest for our future feel like an unnatural and befuddling challenge?

Investing feels unnatural because our cultural innovations have outpaced our biological evolution. Our brains evolved over millions of years to find food, shelter, safety from predators, and to nurture family and tribal connections — not to understand the ups and downs of financial markets, choose between thousands of investment options, and make sense of the waves of information that bombard us daily. The good news is that investing doesn’t have to be complex to be effective, and we don’t have to follow the markets to succeed.

Academic researchers have shown that even the most expert investors struggle to predict when markets will go up or down. They also find stock-picking skills among professionals to be rare, and expensive. According to them, the success of many famous stock pickers can be explained by the riskiness of the companies they invested in, and similar results could have come from investing broadly in comparable stocks through funds. And those with genuine skill often keep the benefits of higher returns for themselves through the higher fees they charge. If neither market timing nor stock picking is the solution, what is?

I’m sure many of you have already heard today’s conventional wisdom that we should simply buy and hold low-cost index funds. It’s sound but incomplete advice. With literally thousands of indexes and possible combinations, what sounds simple is actually complex.

We’re also told that we should combine stock funds with bond funds to manage our risk. This raises more questions: What is meant by “risk”? How much risk can we tolerate? What percentage of bonds should we hold? Does it change over time? If so, how should we adjust the mix over time?
It’s easy to see why many people become quickly confused and throw up their hands. It’s also easy to see why many of those same people just accept it when their employer auto-enrolls them in a retirement savings plan that invests 100% of their retirement savings in a target-date fund.

Target-date funds are one of the greatest financial innovations of our time. They are today’s default retirement savings vehicle for good reason: They are simple, low-cost, broadly diversified, age-appropriate, automatic, and ubiquitous. Most of them are essentially a collection of index funds, but there’s a clever twist: Target-date funds are customized to fit a particular retirement year. The Vanguard Target Retirement 2060 Fund (VTTSX), for example, is built to lower risk for investors as they near retirement around the year 2060. Beyond selecting the date, target-date funds are one-size-fits-all. They must be. There is no way for those who manage them to know whether the investors using them have higher or lower risk tolerances. Consequently, they build them conservatively, preferring to err on the side of lower volatility and lower returns to avoid exceeding the risk tolerance of the most skittish investors. So, what should the investor who can tolerate higher volatility in hopes of higher returns do?

Since target-date funds usually include a mix of the total stock market and bonds, you might think there’s no way to be more diverse, but you’d be wrong. History shows that different parts of the stock market don’t always move together and can have higher or lower long-term returns. The most widely available and affordable example of this is the part of the market occupied by smaller companies that are out of favor, also called “small-cap value.” Funds made up of these stocks tend to perform better at different times from the overall market and have historically delivered significantly higher long-term returns. Consequently, they are a useful tuning tool for investors looking to get more out of a target-date fund. Yes, they can increase volatility, but the increase in returns can be more than worth it. So, the
question is, how to combine them and how much difference do they make? That’s what we’ll explore in this book, but here’s a teaser summary:

![TDF & 2 Funds for Life Strategies](image)

Figure 1. Target-date fund and 2 Funds for Life strategies risk and reward

By adding just one fund to a target-date fund, we can increase the total real (inflation-adjusted) withdrawals and end balance an investor might expect over a lifetime by about 25% to more than 130%. For someone who invests $10k/year, increasing for inflation each year for 40 years, then takes out a “fixed” 4% for 30 years, that’s an increased real lifetime benefit of over $1M to over $6M. To get that, they might have to tolerate 44% to 56% declines in the balance of their account instead of 42% declines, but they would also have a lower expected risk of running out of money before running out of life. In fact, the resilience of their portfolio in retirement would likely be better. So, what are these “Easy,” “Moderate,” and “Aggressive” 2 Funds for Life strategies?

The gist of the 2 Funds for Life strategies is this: (1) The Easy strategy is simply a 90% target-date fund, 10% US small-cap value fund allocation with no rebalancing; (2) the Moderate strategy invests 1.5 times the number of years to retirement (YTR) as a percentage in the US small-cap value fund, so it’s 100% in the target-date fund in retirement; (3) the Aggressive strategy invests 2.5 times the YTR plus 20% in the
US small-cap value fund. You can see year-by-year allocation percentages for all three approaches in Appendix 12. These three portfolio glide paths (asset allocations over time) look like this:

![Glide Paths Diagram](image)

*Figure 2. 2 Funds for Life strategy glide paths*

The top area of the glide paths represents the target-date fund asset allocation. The bottom area is the investment in the second fund. Annual rebalancing means buying and selling some of the funds annually, so they get back to their desired allocations. Nudge withdrawals (WDs) mean taking the entire annual withdrawal from the fund that’s bigger than its intended allocation.

If it’s that simple, why did I write a whole book?

It’s one thing to learn about a new investing approach and adopt it. It’s another to invest with conviction and stick with it. The rest of the book will help investors choose the plan that’s best for them and develop the conviction to follow it consistently over time. Here are some of the questions this book aims to address:

- How much should one save and when?
- Why does risk capacity change with age?
- How does a target-date fund work?
- What’s the real difference between stocks and bonds?
- Why do some stocks perform differently than others?
• Why choose small-cap value over other diversifiers, such as momentum or low volatility?
• How much is enough international diversification?
• Can simple approaches be as effective as more complex ones?
• How long might a 2 Funds for Life approach lag the market?
• Wouldn’t it be better to use an international small-cap value fund too?
• Which funds work best with these approaches?
• How did we do the analysis, and how likely is it the future will be like the past?
• How resilient are these approaches to surprises?
• How do things change for super savers planning to retire early?
• What happens if we tweak the age multiplier or minimum allocations?

I realize that not all of us learn the same way. Some of you just need the words and story. Some of you love tables of numbers. Some of you need to see all the charts and graphs. I’ve tried to offer something for all of you throughout this book. It might look intimidating, but there’s no reason to dwell on the parts you don’t need. Feel free to skip to what helps you most.

My dream is that this book will help you find a simple way to invest that’s right for you. And if you do, I hope you learn enough to put that plan to work and stick with it through thick and thin. Since the approaches are simple, I hope they leave you more time to enjoy life and thrive along the way. In short, I hope this book improves your life and helps you improve the lives of those around you.

At the beginning of every chapter, I’ll use images of long-lived plants and animals to help motivate and inspire our journey.

Throughout the book, I’ll also highlight key messages like this:
Funds for Life strategies can improve retirement saving, retirement spending, retirement resilience, free time, and the wealth you pass on to others.

Here’s the outline of the book: Chapters 2 through 9 cover foundational ideas; Chapters 10 through 13 develop and test the 2 Funds for Life strategies and variations; Chapter 14 provides a dose of humility; and Chapter 15 is the summary. Finally, the Appendices cover questions that more curious readers might have.

I’ve tried to avoid jargon, but it would be a disservice not to use the words readers will need to know when they begin to invest. To help readers with terms and phrases that might be less familiar, there’s a glossary at the back of the book.

Hopefully, you’re still with me and ready for our quest.

Just like great explorers of the past, we need to collect our tools before setting off. Since what we really want to know is how different investing approaches will work in the future, a crystal ball would be nice. Sadly, they’re in short supply. The next best thing is to see how they would have done in the past and thus better understand how they might do in the future. The tool to do that is a backtester.

Continue reading!

Buy this book at Amazon in **print** or **Kindle** or at other booksellers.

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