

Preface

This is one of enumerable self-help or how-to books with an emphasis on financial matters that you might browse through at your local bookstore. Why should you buy this one and not one of the others? There are an unending supply of books that teach you how to: save your money, invest your money, stay or get out of debt, minimize the taxes you pay, buy a house, finance a car, choose between insurance policies, win the lottery, beat the market, or retire rich. Most books focus on one, or at most a few, of these highly desirable goals. This book will discuss all of them.

Moreover, the emphasis in this book is different from most in the genre. There will be no grand strategies for guaranteeing you a 12% return in the market over a decade. Nor will there be a foolproof plan that you can follow to build an annual income of \$200,000. And finally, you will not find any instructions for keeping your creditors at bay. Rather, I will argue that in order for you to navigate the financial shoals of your life, you need to understand a few basic arithmetic concepts, and how to do some simple arithmetic computations. Furthermore, recognizing that the overwhelming majority of the population is math-phobic, I will explain the concepts in the simplest possible layman's terms, and provide you with an electronic tool for actually doing the computations. If you want to get a preliminary look at it, put down the book, crank up your wireless web, and tune into

<http://ww.math.umd.edu/~rll/cgi-bin/finance.html>

If you don't have a gadget in your pocket that will transport you to the Internet, then read on and log in when you return home or to the office—with this book in hand of course.

The basic premise of this book

The basic premise of the book is that there are certain simple computations, involving no more than rudimentary arithmetic and the very basic laws of chance, that the average American Joe and Jane should be doing in the course of their life. But these computations are often not done, for several reasons. First, people don't realize how easy they are to do. Second, and more fundamental, they are not done because it does not occur to people to do them. Finally, and tragically, no one in their elementary, middle, or high school educational experience has stressed the importance of doing them, and of course neither did they teach Joe and Jane *how* to do them. This is particularly ironic since modern calculators and computers make the computations very easy to do.

What this book is

The goals of the book are to reveal to you what the computations are, make them readily understandable, and by means of a very easy-to-use companion web site, enable you to do them effortlessly and informatively. For example, I will explain compound interest, and how to compute it. There will also be simple explanations of: after-tax income versus before-tax income (on investments as well as salary); how an automobile lease works financially; the odds against winning your state lottery; and the difference between credit card debt and the balance due on your home mortgage. Moreover, in every case, I will explain in lay terms the math behind the issues, and then, with the aid of the web

site, lead you through instructive and representative computations of the numbers and answers you long to know.

What this book is not

It is not a recipe for financial success. I do not claim that after reading this book you will know how to become a millionaire. In fact, all of us are subject to the fickle whims of fate and the constraints of our own financial circumstances: recessions arise through no fault of our own, job opportunities fail to materialize, parents and children turn out to be more needy than anticipated, illness can strike unexpectedly, and so for that matter can extreme good fortune. The point is that life is hard, and often unpredictable. What is certain is that we are constantly faced with decisions to make, many of which have financial content and implications. We ought to equip ourselves with the best possible ammunition for making those decisions. That is my prime goal here, namely, to provide you with some of that ammo. Therefore, the main thing you should expect from this book is the arithmetic tools—more precisely, the electronic tools to do the arithmetic—that will help you to make those decisions. It may not be as good as guaranteeing you a million, but it is more realistic and in the end, I believe, extremely helpful.

Who should read this book

My guess is that the older you are and the more experience you have had in dealing with life's financial vicissitudes, the more of this book you will already know. So my intended audience is first and foremost young people. Young people: pay attention! They are not teaching you this stuff in school. And you desperately need to know it. There are a ton of traps out there waiting for you to fall into them. Having the financial tools I intend to impart in this book will help you to avoid those traps.

Others who will likely profit (pun intended) from this book include: young adults who are no longer in school, but who have already encountered some of the early needs for the arithmetical wisdom to be found in these pages; thirty-somethings with young families and not enough time or energy to think through financial matters; middle-aged folks who suspect that maybe they have not learned the lessons I would hope they should have by this point in life; aging boomers who have been too busy leading the good life to notice that father time is bearing down on them; and finally elderly folks who, despite the fact that they know this stuff, have not figured out how to teach it to their adult children and young grandchildren. In short: EVERYONE.

What you will get out of it

You will get a rudimentary understanding of the basic concepts behind the arithmetic that governs the fundamental financial questions that challenge us in life. Your math skills may not improve. Sorry about that. This is because my goal is not to teach you any math, but rather to help you put some newly understood arithmetical concepts to work for you in making financial decisions. As for the arithmetic computations, that is what the companion web site is for. You can defer all the math skills you do or don't have to the wizardry of the software that underlies the workings of the web site. In summary, you get two things: some basic understanding of the arithmetical concepts that underlie the financial questions of your life; and a tool for answering those questions.

Why I'm the one to write it

I am not a stockbroker, not an insurance agent, don't work in a financial institution, nor am I an accountant. I am a university professor of mathematics and an academic administrator in the science college of my university. Moreover, like many people my age, although I have none of the "formal" qualifications listed above, I do have many years experience buying and selling stocks and mutual funds, buying and canceling insurance policies, paying college tuitions, paying taxes (lord help me, I am REALLY experienced at that one), spending my salary, hurling epithets at my credit card company, obtaining and disposing of cars and homes, and worrying about how I can retire comfortably. I am also good with numbers, very good with numbers. They don't frighten me the way they do such a substantial portion of the population. I actually like them, enjoy working with them. And so when it comes to the arithmetic behind the decisions one confronts in doing all the things that I just mentioned, I don't mind "crunching the numbers." I like to examine the numerical alternatives, investigate how different choices lead to different outcomes, speculate on possibilities, and act on past performance. I also have some experience in writing technical help books (I've written six of them). And finally, I have the training and experience of an educator. Therefore, all I have to do to fulfill the goals outlined in this preface is to distill the math into numbers and concepts simple and transparent enough for you to understand. That, and design a simple to use web site. When you are done breezing through this book and navigating the web site, you can send me an email and tell me how well I succeeded.

How to use it

The book is divided into three parts and thirteen chapters. In the first part, I discuss one of the most elementary monetary decisions that confronts a parent upon the birth of a child—namely, how am I going to afford to educate this child? In that vein, we will investigate routine bank accounts, a phenomenon that involves the simplest and most fundamental arithmetic concept that we consider: *compound interest*. After that we will discuss inflation, and then explore the simplest aspects of taxes. Although taxes are one of the most painful and unpleasant features of our financial existence, the arithmetic required to understand them runs (for most taxpayers) no deeper than simple percent computations. In addition to compound interest, and inflation (which is nothing more than a special kind of compound interest), the third fundamental topic of Part I is tax-deferred income. I will explain how it differs from income subject to normal income taxes, and why it plays such a vital role in your quest for financial success.

In Part II of the book, I will discuss the seemingly routine, but often challenging, financial obstacles normally faced by American adults: your salary—how the taxman pillages it and what you can do about that; buying and selling houses and cars—loans (mortgages) and leases; the gamut of insurance vehicles and how to evaluate them; and finally credit. Then, in the third part, we advance to the most sophisticated issues that we shall explore in this book: gambling, stocks and bonds, and retirement.

I will employ various formatting styles to help you through the narrative. In particular, there are six special types of paragraphs that you will encounter. Here are samples, with

the special symbols (or dingbats) that we use in their headings so that you can identify them easily. The paragraphs that follow in each instance describe their use.



Paragraphs following this symbol contain a basic monetary principle. The principles are often self-evident, but I set them off like this so you will pay special attention and endeavor to remember and implement them. A simple example is: If you must choose between two bank accounts paying the same interest rate, the one that compounds most often is the better choice.



Paragraphs following this symbol contain important cautionary notes, indicating financial traps and hazards that may not be evident at first glance, and so places where you need to be very careful in financial decision-making. For example: Even if you open an account for Baby Jones, you will have to pay taxes on it at *your* marginal rate, unless you open it in some special way (like a Uniform Gifts to Minors Account).



Paragraphs following this symbol contain fundamental questions that you should ponder, and hopefully answer using the wisdom and resources found in this book and the companion web site. An example might be: When you take out a mortgage on your first home, should you try to make your down payment as large as possible in order to keep your monthly payments as low as possible; or should you borrow as much as the bank will lend you, counting on your increasing paycheck and inflation to diminish the burden of your monthly payment as the years go by?



Paragraphs following this symbol contain useful tips or asides that may not be critical to the story, but which may prove useful or handy after you have mastered the fundamentals. For example: the marriage penalty (to be explained later) should not stop you from getting married, but you ought to compute what it will cost you before you walk down the aisle—so that you can be prepared.



Paragraphs following this symbol point you toward a spot on the companion web site where you can do a computation. The URL is <http://www.math.umd.edu/~rll/cgi-bin/finance.html>



Finally, paragraphs following this symbol contain personal experiences or reminiscences that are germane to the topic at hand.

Each chapter concludes with a summary statement of the primary new computation that you learned to do, even if only with the help of the web page. A synopsis of what is

covered in each of the chapters can be found in the *Outline* section immediately after the *Introduction*.

A confession

You will notice as soon as you start reading that there are some *formulas* in the body of the book. Please do not be taken back by them. At no point will I ask you to do any algebra or mathematics of any kind more advanced than relatively simple arithmetic. In fact, you can understand the book's contents even without doing any arithmetic as any calculation that appears is easily checked or replicated with a basic hand calculator. Those of you who are mathematically inclined will find some interesting crumbs to pick up and explore. For the vast majority of you who are not, I have provided explanations in English where the symbols might confuse, and I have presented the results of all calculations in the book. You do not have to do any of them by yourself—you can either take my word or check with your calculator. So in summary, you don't need any special math background or ability to profit from this book. However, I would be less than honest if I didn't say that I do expect you, as you progress through the discussion, to recognize patterns, think logically, and appreciate coherent reasoning.

Acknowledgments

I would like to thank my wife of 40 years, Shelly, for reminding me periodically that my opinion is, after all, just my opinion. If indeed there is any financial wisdom in these pages, it has been distilled and purified by her sage advice and counsel. My children, Kenny and David, and their families have provided a wonderful window for me into the world of young people, just as my parents, aunts and uncles have helped me to see the world through the eyes of the generation prior to me. I am grateful to Arnie Lerman of Ferris, Baker, Watts who has been my broker for more than 20 years, during which time I managed to soak up a small part of his financial acumen. I've been inspired by the books of Ric Edelman, whom I met one time and found him as sharp and witty in person as he is in his books and on TV. My agent, John Willig, has been extremely helpful and solicitous of my interests, and my editor, Nick Philipson of Praeger Publishers has been extraordinarily attentive. Finally, my hat's off to all the folks over the years who tried, sometimes successfully, to fool me, trick me, deceive me, cheat me, and generally relieve me of my money—as well as the folks who were helpful, informative, generous, and gracious with their time, advice, and even their money.