

## Preface

This book is meant for more than reading. It should be put to use for the rest of your life. In it I will address many common questions that confound and frustrate people in their financial lives, such as the following:

- Why is it so difficult to get out of debt?
- What is the best approach to take when negotiating a car purchase?
- Should you purchase extended warranties?
- How can women be treated “equally” and still lag behind men on the company pay scale?
- What are the conditions necessary to make money gambling?
- Why do the rich get richer?

Surprisingly, the answers to these questions originate in financial math and once you understand why you will be able to make the math work for you. But this book goes beyond just being an exposé. Along with general questions like these, this book will also address more specific questions such as these:

- Do you have any way of knowing how truthful the lender is when you sign a loan agreement?
- Should you take the 0% financing offer or the rebate on a new car purchase?
- Can you save money on credit cards by chasing introductory teaser rates?
- If you know the monthly payment you can afford on a house or car, what is the highest purchase price you can pay?
- How much do you need to save each month to meet your retirement goals?

These are just some of the many questions we encounter in our day-to-day financial decision-making. This book provides the tools you need to answer these questions and others like them. If you are shopping for a car or house, negotiating your salary, deciding on credit card offers, or considering a potential investment, the information I present will allow you to make an informed decision and avoid costly pitfalls. You will be able to do your own financial planning. Just grab a calculator, read one of the examples, fill out one of the worksheets provided in the Appendix, and look up the answer in one of the book's tables.

Along the way to understanding the answers to all these questions we will also gain some behavioral insights, such as the answers to these questions:

What behavior do teachers, corporate accountants and real estate salespeople share?

Why does the average investor do so much worse than the market averages?

Why do different presentations of the same choice affect the decision people make?

The answers to these questions might surprise you but they relate to conflicts between psychological needs and requirements for mathematical truth.

Math is a subject most people prefer to avoid, but the banks, finance companies and retailers are math savvy. They have become creative at mathematical deception, which I define as *making claims that satisfy the conditions for mathematical truth but at the same time are intentionally misleading*. To the mathematically naïve, an exact number or equation carries a prestige that is difficult to challenge. The idea that mathematical claims can be both true and deceptive is difficult to grasp. But a recurring theme throughout this book is that individuals and corporations use meaningless and deceptive mathematical truths to avoid responsibility for intentionally misleading claims and practices.

Since I have studied, taught, and used math my entire life, I see deceptive mathematics every day. I see people misled into making costly choices that could have been avoided. Over the years I've collected examples and included them in this book. Many of these examples are calculations I performed so that I could make informed choices on my own finances. To use this book you need to know how to do arithmetic with a calculator. No other math expertise is needed. I explain the technical terminology—each term, each concept, and its relevance. I have also peppered the book with example stories, many from my own life and many from current events. I hope that you will find this book useful, informative, and entertaining.

—Joseph Ganem  
Baltimore, Maryland  
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