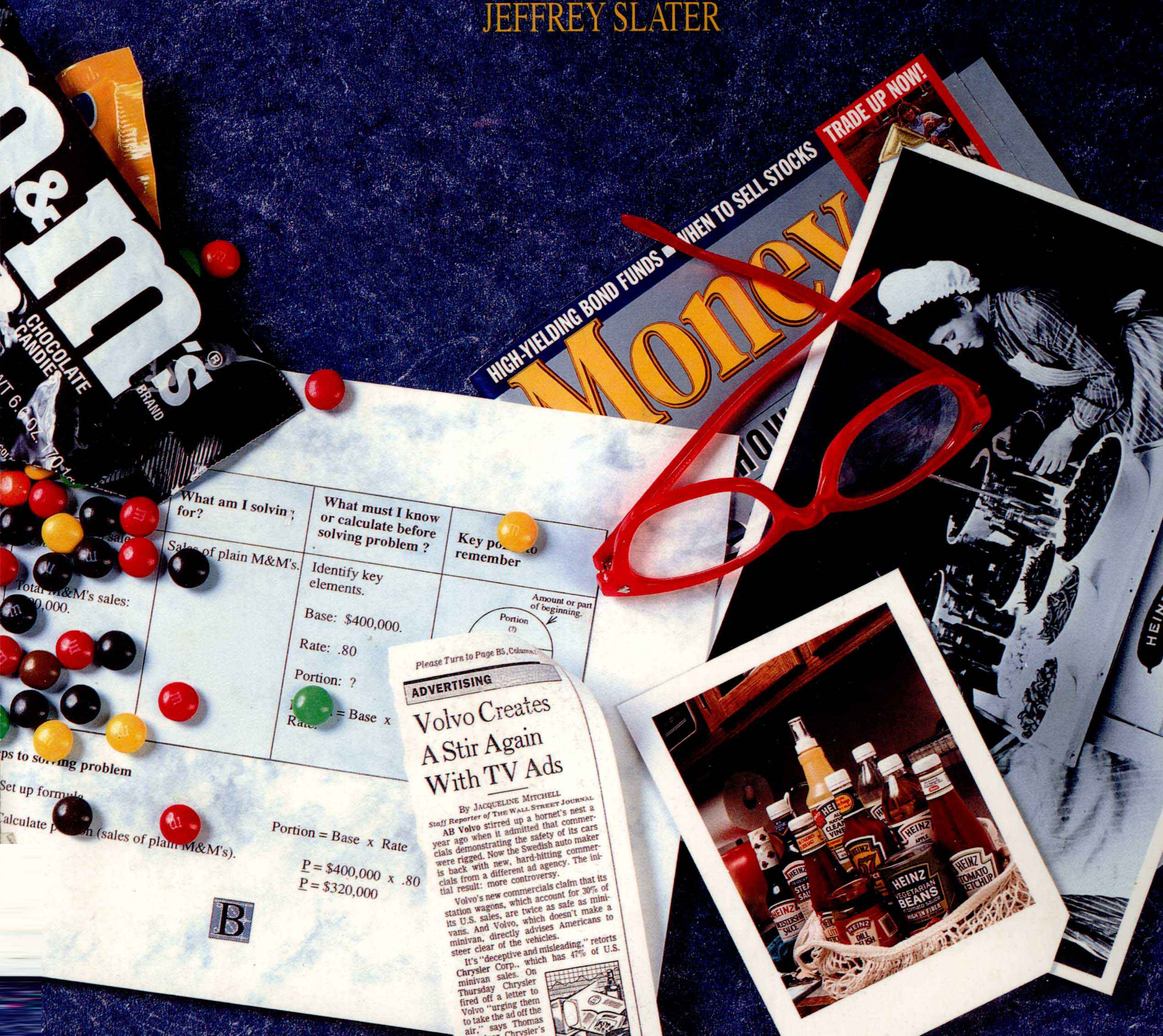
PRACTICAL BUSINESS MATH PROCEDURES

FOURTH EDITION

JEFFREY SLATER



PRACTICAL BUSINESS MATH PROCEDURES

FOURTH EDITION

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To Loretta Scholten
who helps untwist those twisted words
"A true one-of-a-kind collectible."

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Note to Students

Preview of Special Features

1. **How to Dissect and Solve Word Problems.** The first eight chapters have a blueprint visual, along with steps on how to dissect and solve a word problem, for each learning unit.
2. **MONEY Magazine Articles.** The articles from MONEY Magazine provide tips and resources on saving money. The articles were chosen by students for students.
3. ***The Wall Street Journal* Newspaper.** *The Wall Street Journal* newspaper (inside front cover) explains how to read *The Wall Street Journal* with an emphasis on business math. An explanation of the Dow Jones Industrial Average is also provided.
4. **Business Math Handbook.** The Business Math Handbook is a 64-page reference guide that contains every table found in the text, along with extra word problems and tables not in the text. The back cover provides a quick reference chart on how to use the pocket calculator.
5. **Videotapes.** There is a complete set of videos that review each practice quiz in the text. Also included is a tutorial on how to dissect and solve word problems.
6. **The Business Math Tutor.** The Business Math Tutor is a comprehensive software tutorial that walks you through each part of the text. It is highly visual and user friendly.
7. **Lotus Templates.** Lotus templates are available for selected problems at the end of each chapter (except Chapter 5). You can run these templates as is or enter your own data. The template disk also includes an interest table feature that enables you to input any percentage rate and terms. The program will then generate table values for you.

How to Read and Use the Book

The colors in this text have a purpose. You should read the description below, then look at several pages to see how it works.

Color key

- **Blue:** Movement, cancellations, steps to solve, arrows, blueprints
- **Gold:** Formulas, steps, chapter organizer
- **Green:** Tables, forms, charts
- **Red:** Key items we are solving for

Chapters	Each chapter is broken down into learning units. Each learning unit covers a key concept or small group of concepts.
Learning Objectives	At the beginning of each chapter you'll find a list of learning objectives. Each is page referenced.
Practice Quizzes	At the end of each learning unit is a practice quiz, followed by solutions. These provide you with immediate feedback on your understanding of the unit. These are all solved on videotapes, as well as on audiocasette tapes. Check with your instructor for availability.
Chapter Organizer	At the end of each chapter is a quick reference guide called the chapter organizer. Key points, formulas, and examples are provided. A list of key vocabulary terms is also included. All have page references. (A complete glossary is found at the end of the text.) Think of the chapter organizer as your set of notes.
Problems	At the end of each chapter is a complete set of drill and word problems. Check figures for the odd-numbered problems are located in Appendix II.
Challenge Problem	The last word problem in each chapter tries to let you ''stretch'' your business math skills. These are harder and require more effort.
Additional Homework Assignments by Learning Unit	At the end of the text in Appendix I is a complete set of drill and word problems arranged by learning unit. These can be used for additional reinforcement. Your instructor may ask you to turn these in. Check figures for the odd-numbered problems are in Appendix II.
Summary Practice Test	This is a test before the test. All questions are page referenced back to the topic so you can check your methods. The test is a combination of drill and word problems. Check figures for *all* practice tests are in Appendix II.
Business Math Scrapbook	At the end of each chapter you will find actual clippings from *The Wall Street Journal* and various other publications. These articles will give you a chance to use the theory provided in the chapter to apply to the real world.
Cumulative Reviews	At the end of Chapters 3, 8, and 13 are word problems that test your retention of business math concepts and procedures. Check figures for *all* cumulative review problems are in Appendix II.

Jeffrey Slater

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Money-Saving Tips from MONEY Magazine

The following articles from MONEY Magazine were selected by business math students for business math students. These reference articles demonstrate that business math is not static, but dynamic with real-life applications.

"Where to Find Free Financial Advice"

"Who Should Own What?"

"Kiss Your Money Worries Good-Bye in Five Years or Less"

Where to Find Free Financial Advice

By Debra Wishik Englander Free advice is not always worth what you pay for it. And here's the proof: The 29 free or nearly so (top cost: $3) brochures, pamphlets and books listed here can provide valuable information on financial topics ranging from resolving credit-card billing disputes to planning your estate. The publications are especially useful if you do your own financial planning. But they can also save you time and money when dealing with professionals by suggesting the right questions to ask and teaching you enough financial jargon to understand the answers.

One of the most prolific purveyors of free facts is the federal government, which produces around 50 personal-finance brochures (we cite two of the best below). For a rundown of what's available from Uncle Sam, or to get the brochures themselves, write to the Consumer Information Center, Pueblo, Colo. 81002. Since most industry-sponsored handbooks are little more than thinly disguised sales pitches, we included only the publications we judged to be both accurate and reasonably unbiased. When requesting a publication, be sure to enclose a self-addressed, stamped envelope. When organizations appear more than once, we give the address or phone number at the first mention.

BANKING AND CREDIT

- *Consumer Credit Handbook* (Consumer Information Center. Item No. 441Y; 50¢). Tells you how to fix errors on your credit report and what you should do if you're turned down for a credit card.
- *The Consumer's Almanac* (American Financial Services Association, Consumer Credit Education Foundation, 919 18th St. N.W., Suite 300, Washington, D.C. 20006; $2). Includes worksheets that can help you keep track of your monthly expenses. The association also publishes *What You Should Know Before Declaring Bankruptcy*.
- *How to Get Safety Information From Your Financial Institution* (Weiss Research, 2200 N. Florida Mango Rd., West Palm Beach, Fla. 33409; $2). Contains questions to ask your bank, broker or insurer to gauge how much risk they are taking with your money.
- *Managing Family Debt* and *Getting Out of Debt* (Bankcard Holders of America, 560 Herndon Pkwy., Suite 120, Herndon, Va. 22070; 703-481-1110; $1 each). Both offer budgeting strategies and tips on using your credit cards.

FINANCIAL PLANNING

- *Estate Planning: A Guide for the Days After a Loved One Dies* (Aetna Public Service Library, RWAC, 154 Farmington Ave., Hartford, Conn. 06156; 203-273-2843).
- *Money Matters* (AARP-Fulfillment, 60 E St. N.W., Washington, D.C. 20049). Helps you choose a tax preparer, lawyer, financial planner and real estate broker.
- *Selecting a Qualified Financial Planning Professional* (The Institute of Certified Financial Planners, 7600 E. Eastman Ave., Suite 301, Denver, Colo. 80231; 800-282-7526).

FRAUD

- *Avoiding Travel Problems* (The American Society of Travel Agents, The Fulfillment Center, 1101 King St., Alexandria, Va. 22314).
- *Investment Swindles: How They Work and How to Avoid Them* (National Futures Association, 200 W. Madison St., Suite 1600, Chicago, Ill. 60606; 800-621-3570).
- *Phone Fraud, We All Pay* (The National Association of Consumer Agency Administrators, 1010 Vermont Ave. N.W., Suite 514, Washington, D.C. 20005; 202-347-7395). Tells you how to guard against such rip-offs as calling-card abuse and phony third-party charges.

INSURANCE

- *A Personal Property Inventory* (Aetna). Provides forms that guide you in listing and describing your valuables to make it easier for you to file insurance claims.
- *Here Today, Gone Tomorrow* (The Insurance Information Institute, 110 William St., New York, N.Y. 10038; 212-669-9218). Includes a glossary of basic insurance terms and points to remember when you buy renter's insurance. Among the institute's other useful brochures: *Auto Insurance Basics, Tenants' Insurance Basics* and *How to File an Insurance Claim.*
- *Shaping Your Financial Fitness* (The National Association of Life Underwriters, 1922 F St. N.W., Washington, D.C. 20006). Explains the ins and outs of annuities, Medigap insurance and other mystifying products.
- *The Consumer's Guide to Health Insurance* (Health Insurance Association of America, P.O. Box 41455, Washington, D.C. 20018). Provides the basics of private health coverage.

INVESTING

- *A Common Sense Guide to Taking Charge of Your Money* (Fidelity Investments; 800-544-4774). Explains how to handle a lump-sum pension distribution.
- *Investors' Bill of Rights* (National Futures Association). Specifies, among other useful facts, the pertinent information a broker must disclose to you before selling you an investment.
- *Nine Tax Tips for Mutual Fund Investors* (GIT Investment Funds, 1655 Fort Myer Dr., Suite 1000, Arlington, Va. 22209; 800-336-3063).

MORTGAGES

- *Home Buyer's Vocabulary* (Consumer Information Center, Item No. 121Y; $1). Helps you master such mortgage jargon as escrow, earnest money and points.
- *How to Shop for a Loan* and *How to Shop for a Home* (Great Western Financial; 800-492-7587).
- *Refinance Kit* (HSH Associates; 1200 Rte. 23, Butler, N.J. 07405; $3). Explains how to calculate the cost of various mortgage refinancing deals.
- *Your Money & Your Home* (Countrywide; 800-669-6064). Discusses all aspects of taking out a mortgage, from application to appraisal to closing.

RETIREMENT

- *A Single Person's Guide to Retirement Planning* (AARP). Serves up guidance on investing, insurance, and other financial topics as well as tips on nutrition, relationships and housing.
- *Can You Afford to Retire?* (Life Insurance Marketing and Research Association, P.O. Box 208, Hartford, Conn. 06141; 800-235-4672; $1.50). Covers various sources of retirement income. Most helpful feature: worksheets to calculate your current and future net worth.

Who Should Own What?

The Most Important Financial Decision You and Your Spouse Ever Make Is Who Should Legally Own the Assets You Share.

By Jordan E. Goodman If you're married, you and your spouse most likely hold your house and other major possessions in both your names. You figure, correctly, that when one of you dies the other will become sole owner without having to go through a months-long probate proceeding. What could be more loving or more fair? Who could possibly lose in this situation?

Unfortunately, this last question has an unpleasant answer: your children. The ways you and your spouse hold title to major assets can sock your heirs with all sorts of unnecessary taxes. "Few people pay enough attention to estate tax, which can run as high as 55%," says Robert Clarfeld, a financial planner in New York City.

Those taxes can be avoided if you have a lawyer make sure your property is titled correctly. (Typical cost: about $1,000.) This effort can also be important if you are single and share ownership, say, of a house or a car with a relative or friend.

There are three basic forms of co-ownership. With the most common, **joint tenancy with right of survivorship,** each person owns an equal share of the property and can dispose of it without the approval of the others. When an owner dies, his or her share is divided equally among the other owners.

The second method, **tenancy by the entirety,** is similar to joint tenancy, except that neither partner can sell his or her share without permission from the other. This alternative is available in only about 30 states.

Like joint tenancy, the third form, **tenancy in common,** permits co-owners to dispose of their shares independently. When one owner dies, his or her share goes to the heirs named in a will, rather than automatically to the co-owners.

(If you live in one of the nine **community property** states—Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington and Wisconsin—where assets acquired during a marriage are generally considered to be owned equally by both spouses, it would be wise to consult an estate lawyer about co-ownership.)

Which form should you use? The answer ought to be based mostly on estate-tax considerations, not sentiment. Consider the case of an affluent couple who jointly own $800,000 in assets—a $315,000 house, $100,000 in life insurance on the wife and $80,000 on the husband, a $125,000 vacation retreat, $100,000 in investments, two cars worth a total of $50,000, and $30,000 in jewelry and antiques. After both die, they want the property to go to their two children.

If this happily married couple own their property jointly, here's what will happen: When the first spouse dies, his or her half of the property will pass to the survivor tax-free. But when the second one dies, federal estate taxes on the property, even assuming its value has remained flat at $800,000, will run a hefty $52,200. And that doesn't count state death taxes, which can take as much as 6%, or $23,000, in states such as New York, Michigan and Massachusetts.

Those taxes can be avoided if our couple have their lawyer divide the ownership and draw up wills for each of them that include so-called bypass trusts. Then, when the first spouse dies, as much as $600,000 in property can go into his or her trust. The trustee will manage the property and pay out income to the surviving spouse. After the second spouse dies, the principal will go tax-free to the couple's children. Cost of such wills: about $1,000 each.

With that overall scenario in mind, here's a rundown of the best ways to share ownership of six major assets, discussed in terms of the property held by our hypothetical couple:

- □ **Primary Home.** Set sentiment aside and put the house in one spouse's name. Who should hold the title? Many lawyers and financial planners recommend that it be the spouse with the lower income and the least exposure to lawsuits. "Say the wife is a doctor who may get hit with a malpractice suit one day,'' says Edwin Baker, a senior estate attorney for Epstein Becker & Green in New York City.'' If her husband owns title to the house, creditors won't be able to attach it.''

- **Life Insurance.** When either of the spouses in our example dies, the proceeds of his or her life insurance policy will go tax-free to the survivor. But what happens when the second spouse dies and the $180,000 in total benefits is left to the children? You guessed it: The money will be hit with estate taxes. To avoid that, have your lawyer set up an irrevocable life insurance trust. Such a trust cannot be changed after it has been created. When you die, the insurance money will go into the trust, and the trustee will pay income from it to the beneficiaries, including your spouse, for the rest of their lives. When the surviving spouse dies, the money will go to your children or other beneficiaries tax-free. Cost of such a trust: about $1,000.
- **Vacation Home.** The best solution here is the old standby: You and your spouse should hold the property jointly with right of survivorship. If one of you owns the retreat outright and it's in a state other than the one in which you reside, you could be complicating your estate unnecessarily. The reason: If the spouse who is sole owner of vacation property dies first, the property will have to go through probate in the state in which it is located. By contrast, if the property is owned jointly, attorney Edwin Baker explains, ''the surviving spouse inherits it automatically and probate is delayed until that spouse dies.'' There is also a way that you can pass the property to your children while avoiding probate (although not escaping estate taxes). Have your lawyer place the house in a revocable trust, which costs about $1,000 to set up and can be modified later.
- **Securities.** Assets in employee-benefit plans such as 401(k) accounts may be your largest investments, but the only decision you get to make is whom to name as the beneficiary to receive them when you die. For mutual funds, stocks and bonds held outside of such accounts, you can avoid taxes by splitting ownership. Separately titled assets can be readily transferred to a bypass trust to shelter them from estate taxes.
- **Automobiles.** Cars are the only asset that should *never* be owned jointly, even if your estate is so small that it couldn't possibly trigger estate taxes. The reason is legal liability. ''I like to call cars pending lawsuits on wheels,'' says Baker. ''Think of them more as liabilities than as assets.'' If one spouse has an accident and the car is owned jointly, both spouses' assets could be at risk if the driver is sued. Thus automobiles should be held in separate names. If you have a hot-rodding teenager 18 or older, register the car in the child's name and get a separate insurance policy for it. That way, your own assets are not on the line.
- **Valuables.** Here's the best way to bequeath art, antiques, jewelry or collectibles to your heirs with minimum taxes and squabbles: Put each item in either your name or your spouse's. Then, insert letters of instruction in each of your wills and write letters to your executors specifying who should inherit what. Says E. Deane Kanaly, a financial planner and president of the Kanaly Trust Co. in Houston: ''The last thing you want is to have your children bickering over who is going to get which painting or diamond ring.''

Kiss Your Money Worries Good-Bye in Five Years or Less

Wouldn't it be a relief to have all of your big financial concerns under control? If you follow these painless steps, you'll be able to sleep well soon.

By Penelope Wang These days, Americans are more tense about their financial well-being than they've been in years. The most recent MONEY/ABC Consumer Comfort Index sagged near its all-time low in March, as 55% of those surveyed said the condition of their own finances was "not so good" or "poor." Little wonder. The unemployment rate has been hovering at an eight-year high of 7.5%, personal income shrank 0.5% in August, and the cost of living climbed 0.3%. "We live in the Nervous Nineties," notes Irwin Kellner, chief economist at Chemical Bank in New York City. "Despite the election, consumer money worries will continue with the weak economy."

But take heart. You don't have to win the lottery to end your financial jitters. In fact, you can kiss off most of your money problems in just five years or less—or at least get them under control in that time. The key is to follow a disciplined month-by-month savings and investing program that addresses your individual problems. "With a monthly savings plan, you can make the impossible become possible," says financial planner Richard Bergen of Westbury, N.Y. For example, you can build up $10,000 in cash in five years by investing only $133 each month—or less than a typical car payment.

Putting away every cent you'll need to finance college or retirement may of course require a decade or more. But by establishing a plan, you can assure your ultimate success in as little as three years. (The worksheets will help you figure out how much you should be saving each month.) Just knowing that you're on track toward reaching your goals will lower your stress level sharply. (And knowing you are *ahead* of schedule can reduce your stress levels even more.) For example, to amass $100,000 in 15 years for college, you must invest $271 a month, assuming a 9% average annual return. But if you can afford to put aside $350 a month, you can reach your goal in 13 years, or you can lower your monthly payments by about a third, to only $197, after the first five years.

To help make your finances worry-free in five years, MONEY interviewed more than two dozen financial planners, investment advisers and consumer advocates for advice on how to put to rest five of the most common money concerns. We start with solutions for the short-term problems that prey on people's minds and finish with advice for reaching your long-term goals worry-free.

Worry No. 1: *I'm Losing Control of My Credit Cards and Other Debt.* These days, anxiety-ridden consumers are wisely trying to unload their enormous debt burdens with the determination of born-again sinners. Per capita installment debt, for instance, dropped sharply in June to $3,825, vs. $3,939 in 1990, despite inflation. Notes financial planner Ken Shapiro of Garwood, N.J.: "In these uncertain times, reducing your debt should be your first priority."

To find the money to pay down debts, begin by reviewing the past six months of your canceled checks and credit-card receipts to figure out exactly where your funds go each month. Then look for ways to cut back and to sell extra items lying around that can raise cash. Stick with your deficit-reduction program until you clean up your balance sheet. For many families, that can take as long as three years, according to Flora Williams, an associate professor of consumer science at Purdue University. Williams has found that the average middle-class family of four making $40,000 a year can save about $270 a month through some simple economies, such as eating out less often and postponing nonessential purchases.

When you must take out a loan, try your credit union or a 401(k) savings plan at work if you have either, says financial planner Ben Coulter of North Palm Beach, Fla. Both typically offer loans at below-market rates—usually a percentage point or two over the prime rate, now 6%. Credit unions typically don't lend more than $10,000 or so, however. With a 401(k) plan, you can't borrow more than half of the vested balance, and the loan must generally be repaid within five years. But you usually pay the interest to yourself—and that's certainly better than having to give it to a bank.

If your debt problems are at a crisis level now, call the National Foundation for Consumer Credit (800-388-2227), a nonprofit credit counseling service. Usually within a few days, a staffer at one of the service's 750 local offices will negotiate with your creditors and put you on a debt-repayment plan for a nominal fee of $10 or so.

Worry No. 2: *I'm Going to Get a Medical Bill I Can't Handle.* You may well have a group health plan at work that picks up some of your medical expenses. But with health-care costs rising by about 10% a year—more than three times the overall inflation rate—companies everywhere are slashing their employees' coverage. To shield yourself against unreimbursed medical bills and rising insurance co-payments (the percentage of the bill that you pay out of your own pocket), first build an emergency reserve fund of about $2,500. For this and other short-term goals, you can guarantee the money will be there by putting it in a bank money-market account or a money-market mutual fund.

If you're one of the 35 million Americans without any health insurance, however, you need to get coverage before you do anything else. It won't come cheaply. Annual premiums normally run between $80 and $180 a month for an individual, $350 to $750 a month for a family. Boosting your co-payment from the standard 20% to 50% and raising your annual maximum out-of-pocket costs from $1,000 to $2,500 can slash your premiums by 40%, though.

You may also be able to get insurance for 5% to 20% less than a standard policy by buying coverage through a group plan, such as one offered by a college alumni organization or a professional trade association. For instance, Don Porter, 40, got coverage for his Montclair, N.J. family last summer, after rejecting policies costing more than $700 a month, by buying a $610-a-month policy from the American Institute of Architects.

Young, healthy people can frequently buy individual policies for even less than group rates, since insurers know they're good risks. Before purchasing individual coverage, talk to at least three independent agents, and make sure they compare appropriate policies with similar coverage sold by several insurers. If you can't find agents to do the research, you might want to hire Wilkinson Benefit Consultants, of Towson, Md. (800-296-3030). For $270, it will give you an analysis of the coverage and the cost of at least three health policies available to you.

Health maintenance organizations, or HMOs, can also be a money-saving way to relieve your worries about big medical bills. While annual premiums are comparable to private insurance, you usually pay no deductibles and there are rarely co-insurance costs.

If you can't find any insurer or HMO that will accept you because of a medical condition, call your state insurance department. Your state may be one of 24* with a high-risk pool, which provides health coverage for the otherwise uninsurable. Rates can be exorbitant, though; monthly premiums for a family of four sometimes exceed $1,200.

Worry No. 3: *I May Never Be Able to Buy My Own House.* Oh, yes, you will, if you work at it. It's certainly true that thousands of young people are locked out of the housing market these days because they lack the necessary savings for a down payment and closing costs. And banks, burned by their horrendous real estate lending in the 1980s, have grown conservative and are often requiring buyers to put down 10% to 20% of a house's

* California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa, Louisiana, Maine, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oregon, South Carolina, Tennessee, Texas, Utah, Washington, Wisconsin and Wyoming

What to Save for a Five-Year Goal

Use this worksheet to determine how much you need to set aside each month to meet a short-term goal, such as getting out of debt or buying a house. The calculations assume a 4% annual inflation rate and that your savings will earn 4% a year. The amount required for a down payment and closing costs will equal roughly 16% of the price of a house.

1. Amount you will need $______

2. Amount of your ready savings, minus enough to cover three months of your current living expenses $______

3. Amount you must save over five years, before inflation (line 1 minus line 2) $______

4. Amount you must save over five years, taking inflation into account (multiply line 3 by 1.22) $______

5. Amount you must save monthly (divide line 4 by 66.4) $______

price. That amounts to a hefty $8,810 to $17,620 for the $88,100 median home price for first-time buyers, according to the National Association of Realtors. With closing costs, figure you'll really need $10,000 to $20,000 in cash.

You *can* amass that much money over a short period of five years or less, but doing so will demand a full-court-press savings plan. The best, and easiest one to start, is an automatic investing program with a mutual fund. By filling out just one form, you can authorize most fund companies to transfer a regular amount—usually $50 or more a month—straight from your checking account. Since this is money you'll need soon, choose a liquid investment such as a short-term bond fund, which pays yields that are about two percentage points higher than those of money-market funds but carry minimal risks. Financial planner Steven Enright of River Vale, N.J. suggests two no-loads: **Neuberger & Berman Limited Maturity Bond** (currently yielding 4.9%; 800-877-9700), or, if you're in the 28% bracket or higher (taxable income over $21,450 for individuals, $35,800 for married couples), **Dreyfus Short-Intermediate Tax Exempt Bond** (now yielding 4.23%; 800-782-6620).

As you get closer to your goal, explore ways to cut your cash down payment. "By shopping for the right loan, you can sometimes get into a house with a down payment of just 5% to 10%," says Peter Miller, author of *The Common-Sense Mortgage* (Harper-Collins, $10). For example, Joyce Bordley, a computer programmer in Newark, Del., snared a 5%-down, Federal Housing Administration-insured loan and bought her $85,000, three-bedroom townhouse with only $4,250 in cash plus closing costs. FHA loans are available from 10,000 lenders in amounts of up to $67,500 generally, and $151,752 in high-cost areas like Chicago, Los Angeles and New York City. In addition, the Federal National Mortgage Association, known as Fannie Mae, has just launched a program through lenders around the country that lets minorities who want to buy houses in predominantly non-white areas get mortgages with down payments of 3% to 5%.

Another way to buy a house with a down payment of as little as 5% is by buying private mortgage insurance from your lender. With 5% down, you'll pay an up-front fee of 1% of the mortgage, plus an annual charge included in your monthly payment of 0.5% of the mortgage amount—$35 a month on an $85,000 loan.

Worry No. 4: *I Won't Be Able to Pay My Child's College Costs.* Now here's a concern any parent can relate to. After all, average total expenses at public universities soared 10% this year to $5,841, while costs at private colleges climbed 7% to $15,073, according to the College Board. Assuming college costs rise at a 7% annual rate, when today's babes enter college in 2010, the bill for four years at a public school will be $87,654. A private college will cost a stunning $226,196.

Don't panic. Plenty of schools offer top-quality educations for less than the averages today, and others will in the future. At the University of North Carolina–Chapel Hill, for example, in-state costs this year are only $5,246. (For the best college values in America, get the *MONEY Guide: Best College Buys,* P.O. Box 30626, Tampa, Fla. 33630-0626; $4.50.)

Still, the sooner you start putting money aside for tuition bills, the easier it will be for you to cast away this worry. Most advisers say that parents whose children are still 10 years away from college should stash at least 70% of their college-savings portfolios in mutual funds weighted toward growth. That's because over the long term, stocks have offered average returns of 9%, compared with 6% for Treasury bonds. Robert Bingham, an investment adviser with Bingham Osborn & Scarborough in San Francisco, favors steady growth and income funds, such as **American Mutual** (5.75% load; up 54.3% for the five years ended Sept. 30; 800-421-9900) and **Neuberger & Berman Guardian** (no load; up 65.1% over five years). To cushion your college portfolio from stock market drops, invest the balance in stable, high-grade fixed-income funds, such as **Fidelity Intermediate Bond** (no load; now yielding 5.7%; 800-544-8888). As your child reaches age 12 or so, start shifting out of stocks and into bonds. This way, you'll avoid the risks of a market crash just when your child's bill for Wossamotta U. is due. By the time he or she enters college, no more than 20% of your portfolio should be in stocks.

Worry No. 5: *I Won't Be Able to Afford a Comfortable Retirement.* Ah, retirement! A cabana on the beach, an umbrella drink in your hand, and nothing but time to watch the waves roll in. However, to keep a steady income rolling in after you stop working—say,

What to Save For a Long-Term Goal

This worksheet will show you how much you need to save each month to get you on track to cover your kid's college education or your retirement in later years. The calculations assume a higher rate of inflation—5%—than the previous worksheet, since inflation is likely to rise over time. This worksheet also assumes a 9% average annual return because these savings can go into stocks. Figure that a third of your retirement income will come from savings; pensions and Social Security will provide the rest.

1. Amount you think you will need to save, expressed in today's dollars

$______

2. Amount you should save each month (divide line 1 by the appropriate number from the box below)

$______

3. How much you will have saved toward your ultimate goal in five years (multiply line 2 by 75.3)

$______

Years until funds are required	Divisor
15	178
20	243
25	315
30	397
35	492
40	604

$35,000 a year in 20 years, in today's dollars—you'll need (gasp!) $920,000.

You need a plan—and some help. For example, if you work for a mid-size or large company, your employer may be prepared to greatly relieve your retirement worries. "If you've got a company pension and a 401(k) plan, you're sitting on the equivalent of a gold mine," notes Watchung, N.J. retirement planner Paul Westbrook. Take a 40-year-old earning $50,000 a year who plans to retire at age 60 and has a typical defined-benefit pension. When he stops working, he'll get about $12,000 annually in today's dollars. If he's lucky enough to be able also to invest 10% of his salary in a 401(k) and the employer will match 3%, in 20 years his 401(k) balance will have grown tax-free to $411,482—or another $12,300 a year for 30 years—assuming a 9% return. All told, those benefits plus Social Security would give him an annual income of $35,650.

Still, you may be forced by your company to retire sooner than you had planned. Or you may work for one of the 43% of private firms that offer neither a pension nor a 401(k) plan (if that's the case, lobby for one). So you can't afford not to save for retirement on your own. If you have no company retirement program, you can invest—and deduct—as much as $2,000 a year in an Individual Retirement Account. Even if you have a plan, you may be able to deduct some or all of your IRA contribution if your adjusted gross income is under $35,000, or $50,000 for couples filing jointly.

As with college savings, if you have at least 10 years to go before retirement, weight your portfolio toward stocks but boost your bond allocation as you near your goal. For example, a 40-year-old woman might keep 60% of her retirement fund portfolio in stocks, say, while a 55-year-old could shrink that amount to 40%. But you shouldn't ever get out of equities entirely. Bergen warns: "Even in retirement, you should keep at least 30% in stocks to protect your portfolio from inflation."

Are You Worrying Too Much About Money?

When it comes to your personal finances, which are you more like: the Alfred E. Neuman (What, me worry?) type, or the neurotic Scrooge McDuck? To find out whether you're worrying too much, too little or just the right amount, take this quiz:

1. **I check my stocks and mutual funds in the financial pages . . .**
   a. every day.
   b. every week.
   c. only once a year or so.
2. **I'll be able to afford a comfy retirement because . . .**
   a. I'm saving to the max right now.
   b. I'm counting on a relative to leave me a pile.
   c. Fat chance! I'm going to end up working till I drop.
3. **When I get my bank statement . . .**
   a. I throw it in the wastebasket.
   b. I go crazy if it doesn't match my checkbook balance.
   c. I give it a once-over to make sure I know roughly how much is in my account.
4. **If I get laid off . . .**
   a. I'll get through the following three months on the money in my emergency fund.
   b. I bet I'll find another, similar job fast.
   c. I'll be a wreck.
5. **I clip cents-off newspaper coupons . . .**
   a. every day.
   b. when I see one for a product I like.
   c. never.
6. **If I buy something I have to stretch to pay for . . .**
   a. I can't sleep for weeks thinking I overpaid.
   b. I'm pleased that I got my money's worth.
   c. I just put it on plastic and forget about it.
7. **When I get cash from a cash machine . . .**
   a. I don't bother to get a record slip.
   b. I always enter the withdrawal in my checkbook.
   c. I always get a queasy feeling that I'm taking out money too often, even when I'm not.

Scoring:
Give yourself 5 points for each of these answers: 1c, 2b, 3a, 4b, 5c, 6c and 7a.
Give yourself 10 points for these: 1b, 2a, 3c, 4a, 5b, 6b and 7b.
Give yourself 20 points for these: 1a, 2c, 3b, 4c, 5a, 6a and 7c.
If your score is 20 to 35, get real! You need to worry a little more.
If your score is 40 to 70, you've got a fine grasp of your financial situation.
If your score is 80 or above, get a life! You're worrying way too much.

You'll get the greatest long-term growth potential by investing in stock funds such as **Fidelity Growth Company** (3% load; up 74.3% over five years) or **Janus 20** (no load; up 119.7%; 800-525-8983), which seek out companies with above-average earnings increases. For your bonds, lower the risk of losing principal by sticking with mutual funds that hold primarily issues rated A or better and with maturities of 12 years or less. A top choice: **Vanguard Bond Market** (no load; current yield: 6.6%; 800-662-7447). When your retirement funds have grown to an amount large enough to let you diversify—say, $25,000 or so—shift 10% of your portfolio into a foreign-stock fund, such as **Harbor International** (no load; up 112.8%; 800-422-1050) and another 10% into a small-stock portfolio, such as **SIT New Beginning Growth** (no load; up 62.7%; 800-332-5580).

Once you have your retirement investment program in place, check your portfolio once a year to be sure your funds are meeting your objectives. If they are, leave the stash on cruise control and watch your savings build. With any luck, in five years, your biggest worry may be keeping track of your growing profits.

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