



# Outsmart the System: How Psychology Hacks Your Money Decisions

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## Introduction

My name is Raghavendra Rau, and I'm a professor at the University of Cambridge. This is the final lecture in our series on the human side of finance—and my last lecture as Gresham Professor of Business.

Over the past year, we've taken a journey through the less rational corners of the financial world. We began by looking at hidden conflicts of interest: how banks, managers, insurers, and fund managers don't always act in the best interests of the people they're supposed to serve. We explored how information asymmetries and incomplete contracts leave investors exposed to costly mistakes—even outright fraud.

Then, in the last lecture, we shifted the focus inward. We asked: why do smart people make bad financial decisions, even when they have the facts? And we saw that the real danger often lies not in the market—but in our own minds. Cognitive biases like overconfidence, anchoring, and loss aversion lead us to misread information and make emotional choices. Worse, they make us easier to manipulate.

So now we come to the final question: what can we do about it?

This lecture is about solutions. It's about how to design systems—not just policies and products, but personal routines—that help us make better decisions in the face of our own limitations. If you can't trust yourself to act optimally in the moment, what can you do *in advance* to improve the odds?

We'll talk about behavioral tools like defaults, framing, and commitment devices. We'll see how governments use these insights to improve retirement savings, tax compliance, and healthcare enrollment. And we'll explore what individuals can learn from these interventions—because you don't need to wait for a policy change to design your own financial environment.

At the core of this lecture is a simple idea: knowing your biases is not enough. To outsmart the system—and sometimes to outsmart yourself—you have to build in friction, guardrails, and structure. Because good intentions fade. But a well-designed system can keep working, even on your worst day.

## Part I: Behavioral Tools That Work

Let's start with a difficult truth: most financial advice doesn't work the way it's supposed to. That's not because the advice is wrong. In fact, the basic principles—diversify your portfolio, avoid high fees, invest for the long term—are well-supported by decades of data. The problem is that we often don't follow it.

We ignore it, delay it, or twist it into something more convenient. And even when we know what we *should* do, we don't always do it. This is where the standard model of rational behavior breaks down.

Traditional economics assumes that once people have the right information and the right incentives, they'll make the right decisions. That's the logic behind most financial education programs: if people just understood compound interest, or risk-adjusted returns, or how fees erode wealth, they'd act accordingly. But in practice, knowledge alone isn't enough.

Take retirement saving. For years, governments ran education campaigns to encourage people to join pension plans. They explained the benefits, provided calculators, and ran seminars. Participation barely moved. Then some firms changed the system. Instead of asking employees to opt in, they automatically enrolled them and gave them the option to opt out. Participation rates jumped, often doubling overnight. Why? Because the default changed. And people stick with defaults - not because they've done a careful cost-benefit analysis, but because inertia is powerful. Because the path of least resistance often wins.

You see the same thing in health insurance. In one study, 90% of uninsured children in the U.S. were already in families that filed tax returns. The information was there. The programs existed. But because applying required paperwork, phone calls, and follow-up, many families never enrolled. When programs started connecting enrollment directly to tax filing, take-up increased significantly.

These examples reveal something important. Bad decisions aren't always the result of bad intentions or ignorance. Often, they're the result of poor design. That is the core insight of behavioral finance: if you want people to act differently, change the environment they're making decisions in, not just the content of the brochure.

In the next section, we'll look at what those design tools actually look like—and how they can be used to steer people toward better financial outcomes.

## Defaults, Framing, and Commitment Devices

If we accept that people often struggle to act on good intentions, the next step is to redesign the environment. Behavioral economists call this **choice architecture**—the way choices are presented to people, which shapes how they behave.

Here are a few of the most powerful tools we've seen in the research, and how they work in practice.

### 1. Defaults: The Power of Doing Nothing

As we saw with pension plans, defaults matter. When firms switched from opt-in to opt-out enrollment, participation shot up. Why? Because most people stick with the default—whether out of inertia, confusion, or just a desire to avoid more paperwork.

The classic example is from Madrian and Shea (2001), who studied 401(k) plans in the U.S. Before automatic enrollment, about 49% of employees participated. After automatic enrollment, that number jumped to 86%. Nothing else changed—not the benefits, not the matching contributions. Just the default.

Defaults work not because they override free will, but because they respect it *passively*. People still have a choice—but the easier choice becomes the one that's in their long-term interest.

### 2. Framing: It's Not Just What You Say, It's How You Say It

We don't just respond to facts—we respond to how facts are presented.

Take tax cuts. In one experiment, people were more likely to spend a tax benefit when it was labeled a **bonus** than when it was called a **rebate**—even though the amount of money was identical (Epley, Mak & Idson, 2006). A "bonus" feels like found money. A "rebate" feels like something you're owed, or something you should save.

The same logic applies to saving. Label an account as a "**holiday fund**" or "**child education fund**," and people are more likely to leave the money untouched. Framing taps into mental accounting—how we categorize money in our heads—and uses it to reinforce self-control.

### 3. Mental Accounting: A Bias You Can Use

We talked in the last lecture about the downsides of mental accounting—how people treat £1,000 from a bonus differently than £1,000 from their paycheck.

But the same quirk can be turned into a tool. Many apps now allow users to “bucket” savings into different goals: rent, emergencies, travel, long-term investment. Even though all the money is in the same bank account, just giving it separate names makes people more likely to stick to their plan.

In a field experiment, employees who were allowed to allocate their tax refunds across multiple accounts (a feature called “split refunds”) saved more than those who received it as a lump sum. No change in the amount—just in how it was mentally and logistically separated.

#### 4. Salience and Reminders: Make the Good Choice Obvious

A good financial habit often dies because we forget—not because we disagree. Reminders can have surprisingly large effects.

In one randomized trial in the Philippines, people who received text message reminders to save money increased their savings by over 6%. The message wasn’t complicated. It just nudged them back toward a choice they already intended to make.

Making a good choice **more visible**, **more timely**, or **more immediate** can dramatically improve follow-through. Automatic alerts before bill due dates, calendar-based prompts to check investments, or visual dashboards showing progress toward a savings goal are all simple tools that work.

#### 5. Pre-Commitment: Making Decisions for Your Future Self

People often say, “I’ll start saving next month.” Behavioral economists know that **now** is the only moment with real power.

Pre-commitment means making decisions now that bind you in the future. It might be setting up automatic transfers to a retirement account. It might be enrolling in a plan to increase your savings rate every year on your birthday (the “Save More Tomorrow” program pioneered by Thaler and Benartzi).

One especially effective example is using windfalls (like tax refunds or bonuses) for saving. These aren’t built into the monthly budget, so committing them in advance creates less psychological pain.

#### 6. Reduce Friction for Good Decisions; Add Friction for Bad Ones

Good systems make it easier to do the right thing—and harder to do the wrong thing.

Want to reduce spending? Don’t rely on willpower. Remove credit cards from online shopping accounts. Add a 24-hour waiting period for purchases over £100. If you’re trying to invest regularly, set up auto-deposits and hide the investing app on your phone.

In behavioral design, this is called **strategic friction**. It’s not about removing choice—it’s about tilting the field slightly in your own favor.

These tools aren’t silver bullets. But they work because they acknowledge how people actually behave—not how we wish they would. In the next section, we’ll look at how individuals can take these same ideas and build systems that support better financial behavior over time—not with perfect discipline, but with smart design.

## Part II: Personal System Design

So far, we’ve looked at how behavioral tools can help policymakers nudge better outcomes. But what about individuals—people trying to manage their own money in the real world?

Most of us aren’t going to rewrite pension laws or redesign tax forms. But we *can* take those same behavioral principles and apply them at the personal level. Think of it as building a system around yourself—one that compensates for your weaknesses and makes good choices more likely.

Let’s look at a few practical ways to do that.

#### 1. Automate Everything You Can

In personal finance, **friction is the enemy of follow-through**. If saving requires a conscious decision every month, it’s easy to delay—especially when life gets busy or expenses pile up.

That’s why automation is so powerful. Set up automatic transfers to your savings account or investment

plan on payday—before the money even hits your current account. You’ll adapt to the lower spending level without thinking about it. This works for bill payments too. Avoiding late fees isn’t about better memory—it’s about removing the possibility of forgetting.

## 2. Create Commitment Devices

We often make better plans than we execute. Commitment devices help us act on those plans *in advance*, before temptation or fatigue sets in.

For example, use “windfall rules”: any time you receive unexpected income—a bonus, gift, or tax refund—commit to saving a fixed portion before you even see it. You can also create artificial rules, like not checking your investment portfolio more than once a quarter to reduce emotional trading.

Some people go further and use blocking tools: freezing credit cards in ice (literally), removing trading apps from their phones, or creating separate bank accounts with no ATM access. It sounds extreme, but if you know you’re tempted, structure can be your ally.

## 3. Pre-Decide While You're Calm

Many of our worst financial decisions happen in moments of stress, excitement, or panic. But the best time to plan is *before* those moments arrive.

Think about market volatility. If you write down in advance how you’ll respond to a market drop—say, by rebalancing your portfolio or staying the course—you’re more likely to stick with that plan later. This kind of behavioral rehearsal helps override panic.

The same applies to major purchases. If you know you’re prone to impulse buying, create a personal rule: wait 24 hours before making any purchase over a certain amount. You don’t need better discipline. You just need a waiting period.

## 4. Use Mental Buckets—Deliberately

Earlier we talked about **mental accounting** as a bias. But if you use it deliberately, it can become a feature rather than a bug.

Set up separate “buckets” for different goals: emergency fund, travel, home deposit, long-term investments. Even if they all sit in the same account, labelling them gives you a clearer sense of purpose—and makes you less likely to raid long-term savings for short-term wants.

Apps like Monzo, YNAB (You Need A Budget), and others are built around this idea. They turn mental accounting into a digital routine.

## 5. Build Slack into the System

Not every month goes as planned. That’s why good systems include **buffer zones**.

Build a small cash cushion to cover unexpected expenses. Don’t budget every pound to the last decimal. Leave room for life to be messy — because it will be. If your system only works when everything goes perfectly, it’s not a system, it’s a gamble.

## 6. Maintain Optionality: The Role of “Screw-You Money”

One of the most underrated tools in financial decision-making is **liquidity**. Having cash—or access to it—gives you freedom. It lets you walk away from bad deals, say no to bad bosses, or avoid financial traps that prey on desperation.

People sometimes refer to this as “screw-you money.” It’s not about being reckless—it’s about not being trapped. Even a small emergency fund can dramatically improve your ability to act with integrity and clarity.

The core idea here is simple: if you know you’re not always going to make the right decision in the moment, **build a system that does it for you**. Automate what you can. Pre-commit where possible. Separate your money by purpose. Create barriers to bad behavior, and smooth the path to good ones.

You don’t need perfect willpower. You need good scaffolding.

In the next section, we’ll widen the lens again—and look at how institutions and policymakers use these same ideas to design financial systems that improve behavior at scale.

## Part III: Policy Design and Public Nudges

Behavioral tools aren't just useful at the individual level. In fact, some of the most powerful applications happen when governments and institutions build behavioral insights directly into the **design of systems**—from tax collection to pension saving to healthcare enrollment.

Let's look at a few examples.

### 1. Tax Withholding and Refund Framing

Take tax refunds. From a purely financial perspective, overpaying your taxes just to get a refund is irrational—you're giving the government an interest-free loan. But many people prefer the forced saving and the psychological reward of a lump sum.

Policymakers realized this and began experimenting with how refunds are framed. Labeling part of the refund as "savings" or encouraging split deposits into savings accounts increased the likelihood that people kept some of the money aside, rather than spending it immediately. The behavioral goal here wasn't to change the amount—it was to change how people *felt* about it.

### 2. Enrollment Defaults: Pensions and Healthcare

In the U.K. and elsewhere, automatic enrollment in workplace pensions has dramatically improved participation rates. When people are automatically enrolled and must actively opt out, most stay in. This simple change has done more to increase retirement savings than decades of financial education campaigns.

A similar principle works in public health. In Massachusetts, state tax forms were used to verify health insurance status. This made it easier to identify uninsured individuals and link them to available coverage, boosting take-up rates without requiring new application processes. In some countries, organ donation systems shifted from opt-in to opt-out, leading to far higher donor registration rates.

These are examples of choice architecture at scale: the system is designed to produce better default outcomes without removing individual choice.

### 3. Strategic Complexity (and Its Limits)

Sometimes complexity can even be used *deliberately*. In cases where certain tax credits or subsidies should only go to the most motivated or informed participants, such as education tax credits, governments may intentionally make the process complex as a screening tool.

But this approach can easily backfire. As behavioral research shows, even small barriers, like form-filling, delays, or vague instructions, can disproportionately discourage participation among the very groups that need the support most.

### 4. Ethical Trade-offs: Nudging vs. Manipulation

There's an important ethical line here. Behavioral policy works because it respects autonomy *while shifting outcomes*. But if not carefully designed, nudges can become manipulations, steering people toward choices that benefit the institution, not the individual.

Transparency matters. So does intent. The best behavioral policy is clear about its goals: to help people save more, avoid debt traps, access benefits, and make choices that align with their long-term interests.

In short, behavioral design isn't just about correcting mistakes. It's about designing systems that recognize how humans actually behave—and make it easier for them to succeed.

In our final section, we'll wrap up the series with some reflections on what we've learned—and what it means for the future of finance.

## Final Reflections – Designing Finance for Real People

As we bring this lecture—and this series—to a close, I want to come back to the core theme that's run through every session: finance is human.



At its heart, finance is about promises. Promises to repay, to deliver returns, to protect against risk. But every promise in finance is filtered through human judgment—imperfect, emotional, sometimes self-serving, sometimes just confused. That’s what makes this field both fascinating and fragile.

Over the course of this series, we’ve looked at two major forces that shape financial outcomes: conflicts of interest and cognitive bias. We’ve seen how financial professionals—from CEOs to fund managers to insurance brokers—can act in ways that don’t always align with the people they serve. And we’ve seen how individuals, for their part, are not always the rational agents that classical economics imagines. We hesitate. We panic. We anchor. We follow the crowd. And too often, we don’t push back when we should.

But none of this means the system is hopeless. I think it is quite the opposite. Once we understand where the risks lie — whether in institutional design or in our own behavior — we can build better systems. We can nudge smarter saving. We can automate better investing. We can build routines that protect us from ourselves—and policies that protect people at scale. Behavioral finance isn’t just about explaining mistakes. It’s about helping people avoid them, quietly and systematically, through better design.

This has been my final lecture as Gresham Professor of Business. It’s been a privilege to use this platform not just to talk about asset pricing and capital structure, but to step back and ask bigger questions: What do we get wrong about money? Who gets hurt when that happens? And how do we fix it?

If there’s one thing I hope you take from this series, it’s this: the most important tools in finance aren’t just mathematical — they’re psychological. If we want finance to work for more people, we need to design it with real people in mind.

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## References and Further Reading

- Daniel Kahneman – Thinking, Fast and Slow  
*The foundational text on cognitive biases and decision-making, including Prospect Theory and System 1 vs. System 2 thinking.*
- Richard Thaler – Misbehaving: The Making of Behavioral Economics  
*A personal and entertaining account of how behavioral economics developed and how real human behavior diverges from textbook models.*
- Dan Ariely – Predictably Irrational  
*A readable introduction to common behavioral quirks in everyday and financial decisions.*
- Morgan Housel – The Psychology of Money  
*A short, elegant book on why financial success isn’t just about knowledge—it’s about behavior. Perfect for readers interested in emotional and psychological aspects of money.*
- James Clear – Atomic Habits  
*Not a finance book per se, but an excellent guide to building systems and routines. Very relevant to habit formation in saving, budgeting, and long-term investing.*
- William Bernstein – The Investor’s Manifesto  
*A straightforward, slightly more technical (but still accessible) guide to rational investing—and why most investors need systems to protect them from themselves.*
- Cass Sunstein and Richard Thaler – Nudge: Improving Decisions About Health, Wealth, and Happiness  
*Introduces the idea of "choice architecture" and how small design changes can dramatically shift behavior. Core ideas covered in this lecture come straight from this book.*
- Sendhil Mullainathan and Eldar Shafir – Scarcity: Why Having Too Little Means So Much  
*Explores how scarcity of time, money, or attention alters decision-making. Especially powerful in explaining why even smart, well-meaning people can fall into poor financial habits.*