Harvard
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financial wellness

Wintersession
Investing 101

BUILDING YOUR CASE FOR WEALTH:

A Practical Guide To Investing

Shahar Ziv

Acing Your Finances

DRAFT

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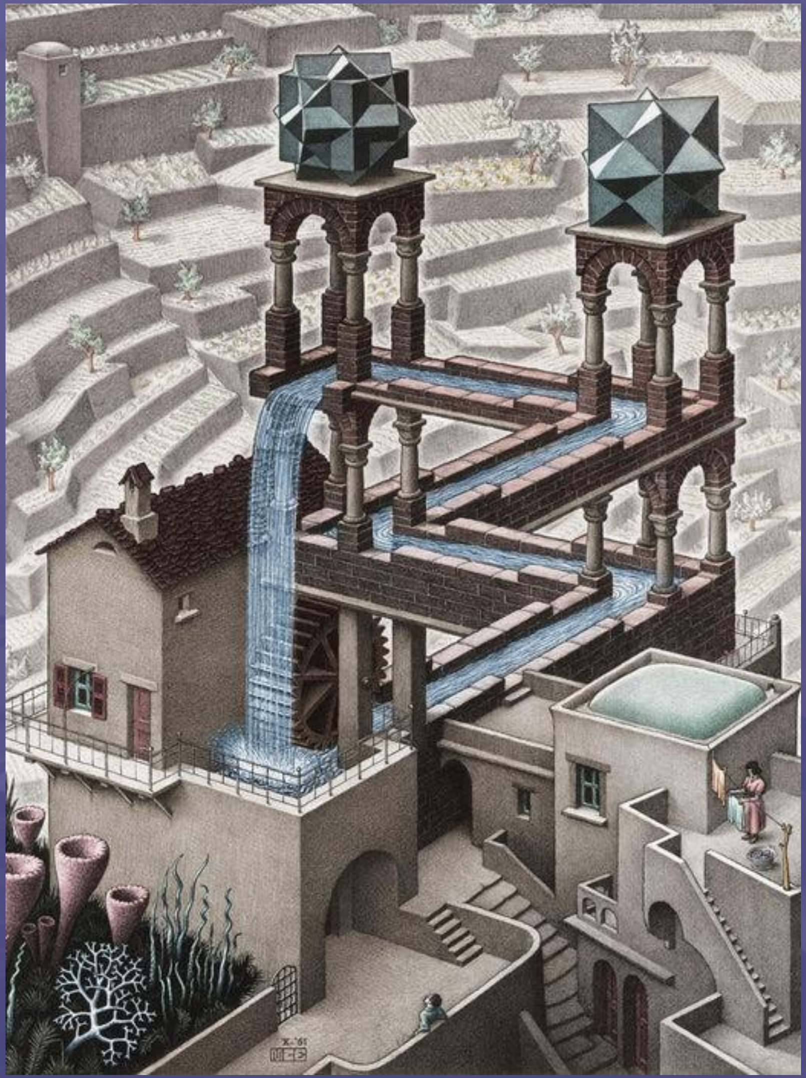
The Secret To Building Sustainable Wealth

BE AVERAGE

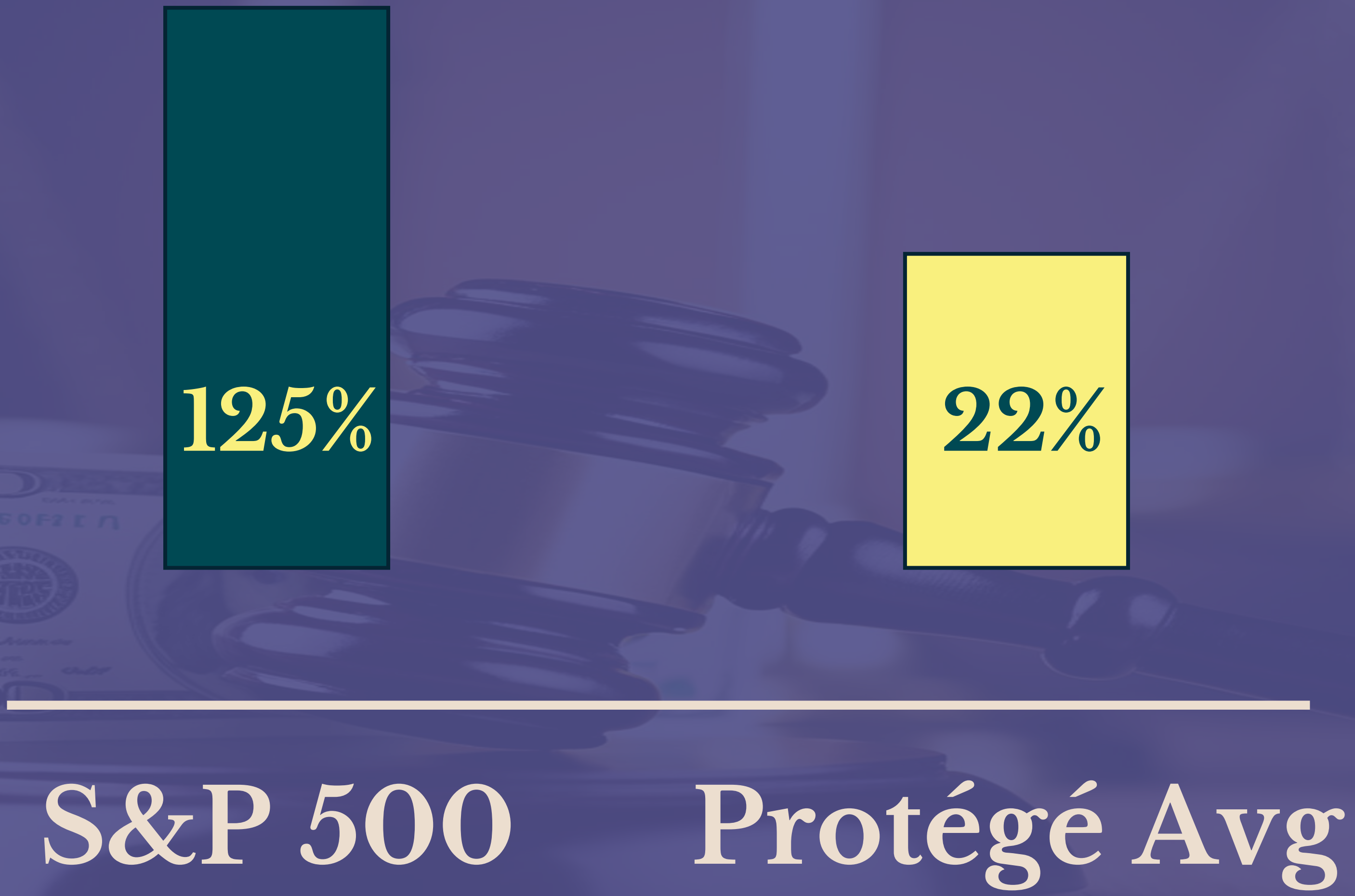
The Paradox Of Average



The Bet

protégé partners

The Results



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Not An Anomaly

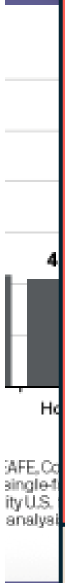
THE JOURNAL OF FINANCE • VOL. LV, NO. 2 • APRIL 2000

Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors

BRAD M. BARBER and TERRANCE ODEAN*

ABSTRACT

Individual investors who hold common stocks directly pay a tremendous performance penalty for active trading. Of 66,465 households with accounts at a large discount broker during 1991 to 1996, those that trade most earn an annual return of 11.4 percent, while the market returns 17.9 percent. The average household earns an annual return of 16.4 percent, tilts its common stock investment toward high-beta, small, value stocks, and turns over 75 percent of its portfolio annually. Overconfidence can explain high trading levels and the resulting poor performance of individual investors. Our central message is that trading is hazardous to your wealth.



6.5%

Lower Returns Than Market

Why Should You Listen To Me?

Experience	❑ Co-Founder and Teacher of Harvard Personal Financial Management Program in 2010 ❑ Partner with universities, employers, and organizations on personal finance workshops
Background	❑ Moved to US when I was 3; most of family still outside US ❑ Came to US for dad to pursue PhD; money was tight ❑ English is my second language
Expertise	❑ Forbes: Personal Finance Contributing Writer ❑ Financial Wellness Keynote Speaker
Objectivity	❑ Unaffiliated and unbiased ❑ No conflicts of interest ❑ Do not market, sell, or receive compensation from other products or services

I've Worked With

Wachtell, Lipton, Rosen & Katz
Harvard University
Mount Sinai Hospital
DoorDash
Skadden
NYCRA New York City Recruitment Association
Davis Polk
Columbia University
Wharton University of Pennsylvania
Debevoise & Plimpton
Johns Hopkins University

My Background

Harvard Business School	*MBA*
Cornell University	*BA – Economics (Distinction in all subjects; Phi Beta Kappa)*

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Setting Expectations

FACTS — INSIGHTS — STRATEGIES

Why Invest?

Growth in stocks vs bonds 1920 to 2019

	Average Nominal Returns	Average Real* Returns	Real growth from $100,000** 1 Year	5 Years	10 Years	15 Years	20 Years
Stocks	10.9%	8.2%	$8,214	$53,086	$117,037	$217,046	$372,364
Bonds	4.9%	2.3%	$2,278	$9,790	$19,254	$30,190	$41,351
Inflation	2.6%						
Difference in growth (real $)			+$5,936	+$43,296	+$97,783	+$186,856	+$331,013
Difference in growth	2.2x	3.6x	3.6x	5.4x	6.1x	7.2x	9.0x

Source: Siegel, Cdn Institute of Acutaries, TSX, Bank of Canada.

* "Real" returns are nominal returns after subracting inflation

** "Real growth from $100,000" is the median real growth over different time periods, showing the effect of compounding.

A Penny For Your Thoughts

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Time Value Of Money

Day	Start Day 1	Start Day 2	Start Day 10
1	$0.01		
2	$0.02	$0.01	
3	$0.04	$0.02	
4	$0.08	$0.04	
10	$5.12	$2.56	$0.01
20	$5,242	$2,621	$10.24
29	$2,684,354	$1,342,177	$5,424
30	$5,368,709	$2,684,354	$10,485
31	$10,737,418	$5,368,709	$20,971

COMPOUND INTEREST IS A SUPERPOWER

It's Not Timing The Market; It's Time In The Market

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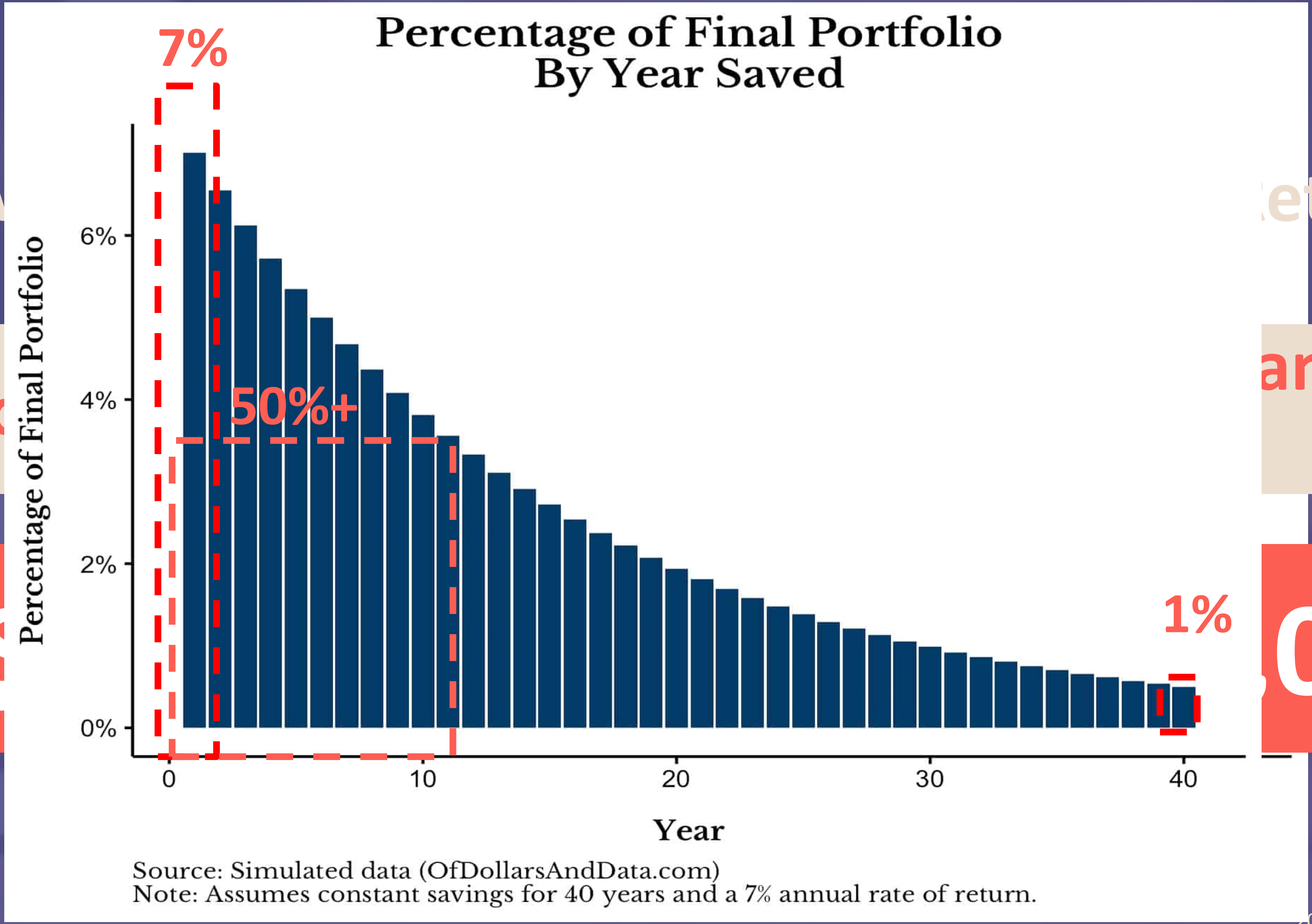
To ... ance

$ ... ,000



TIME IS YOUR MOST VALUABLE ASSET;

START SAVING EARLY & SAVE CONSISTENTLY

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Account Types And Examples

Checking	Daily Spending	Banks/ Credit Unions
High Yield Savings/ Money Market	Emergency Fund	Capital One, Ally, Vanguard (VMFXX), Fidelity (SPAXX), Schwab (SWVXX)
Employer-Sponsored *(401k, Roth 401k)*	Retirement Savings (incl. Match)	Fidelity, Vanguard, Schwab
Individual Retirement *(Traditional/ Roth IRA)*	Tax-Advantaged Retirement	Fidelity, Vanguard, Schwab
Health Savings	Tax-Free Medical Expenses	HealthEquity, Fidelity, Optum
529/Custodial *(UTMA, Roth IRA)*	Tax-Free Education Expenses/Generational Wealth	CA, NY, IL, UT
Brokerage	Long-Term Investing	Fidelity, Vanguard, Schwab

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Kid's Roth (IRA Pre-fund) 529 Accounts ding

count e
784
214
469

Tax Optimization Strategy Too: Many states also provide a state income tax deduction for 529 contributions

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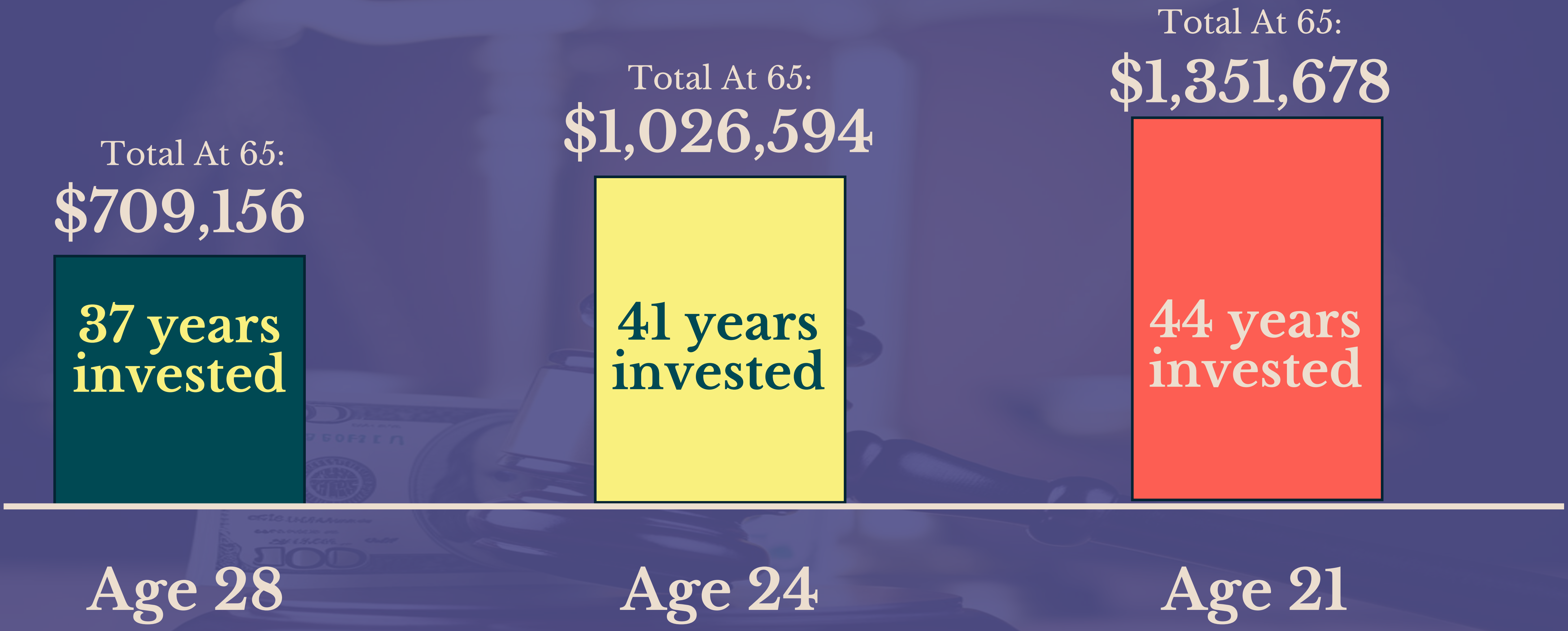
The Power Of Investing In Your 20's



All 3 individuals contribute $200 monthly, earn 9% annual returns, but started investing in early, mid, and late 20's

INTRODUCTION TO INVESTING

Themes

- Saving vs. Investing
- Key Terms
- Time Horizon
- Risk Level
- Alignment with Goals
- Alone or Getting Help?

Terminology To Know

Checking/ Savings Account	• Principal contributions are protected from loss • Guaranteed interest on money you put in
Money Market	• Certificates of Deposit • Short-term government loans
Bonds	• Loans made to a company or the government. • A bond is an IOU from a company/gov't
Stocks/Equities	• Ownership in a company • Price appreciation and dividend payments
Index Fund	• Invest in a basket of securities (stocks and/or bonds, other asset classes)
ETF	• Invest in a basket of securities, but unlike mutual funds ETFs can be traded whenever the markets are open

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Index Mutual Funds Versus ETFs

	ETF	...nds
Tr... I...		...after the ...sset Value)
Co...		...pense ratios ... managed); .../other fees
Tax		...ent in ...pital gains annually
M... Inv...		...imum
Au... Investing		...omatic, ...ts, which is great for dollar-cost averaging

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Building A Portfolio

1. Mix (Stocks/ Bonds/Other)
2. Passive Vs Active
3. Domestic Vs International
4. Large/Small + Value/Growth
5. Individual Characteristics

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Goals Establish Investment Time Horizon

Savings	Debt Payoff	Impact
Emergency Fund	Pay Off Student Loans	Support Extended Family
Down Payment	Pay Off Credit Card Debt	Donate To Charity
Retire at 40	Pay Off Mortgage Early	Take 2 Vacations Each Year
Pay College For Kids In Full	Pay Off Car Loan	Create Scholarship At Alma Mater

For each goal: 1) Define Time Horizon 2) Quantify $$$ Required

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Investment Options Define Risk Tolerance

	Real (Inflation-Adjusted) Annualized Returns (Dec '24)				
Category	1 Year	5 Year	10 Year	20 Year	30 Year
S&P 500	21.5%	11.1%	9.7%	7.6%	8.0%
US Small Cap	7.8%	3.9%	4.4%	5.8%	6.4%
3 Month T Bill	2.2%	-1.7%	-1.1%	-0.9%	-0.1%
10 Year Treasury	-1.4%	-5.8%	-1.6%	0.5%	1.8%
Real Estate (REIT)	5.9%	0.8%	3.2%	5.1%	7.0%
Gold	23.1%	6.8%	4.9%	7.2%	3.8%

Source: Damodaran, Aswath. "Historical Returns on Stocks, Bonds and Bills: 1928-2024." NYU Stern School of Business. Available at: pages.stern.nyu.edu/~adamodar/

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Align Risk Allocation With Time Horizon

RISK LEVEL

LOWER — HIGHER

SAVINGS ACCT	IND. BONDS	BOND MUTUAL FUNDS	IND. STOCKS	STOCK MUTUAL FUNDS	CRYPTO

Down Payment (in 2 Years)	Kid's College (in 18 Years)	Retirement (in 40 years)

SHORTER — LONGER

TIME HORIZON

Why Important To Align Risk/Time?

You invest $1000 in stocks....

In 1 Year +52% OR... -37%

Why Important To Align Risk/Time?

You invest $1000 in stocks....

In 20 Years +18% OR... 6%

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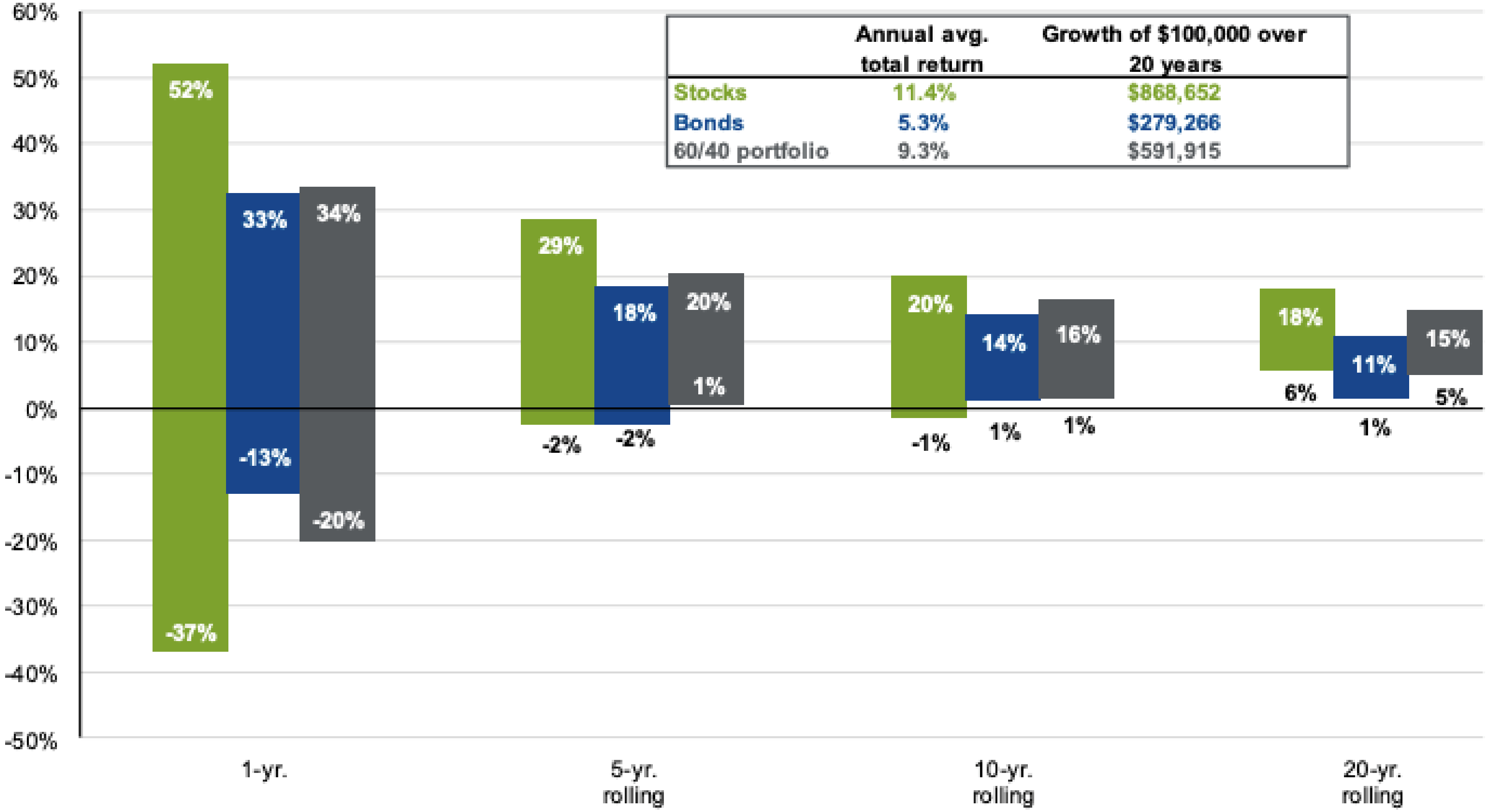
Range of stock, bond and blended total returns

Annual total returns, 1950-2023



	Annual avg. total return	Growth of $100,000 over 20 years
Stocks	11.4%	$868,652
Bonds	5.3%	$279,266
60/40 portfolio	9.3%	$591,915

Source: Bloomberg, FactSet, Federal Reserve, Robert Shiller, Standard & Poor's, Strategas/Ibbotson, J.P. Morgan Asset Management.
Returns shown are based on calendar year returns from 1950 to 2023. Stocks represent the S&P 500 Shiller Composite for periods prior to 1936 and the S&P 500 thereafter. Bonds represent Strategas/Ibbotson for periods prior to 1976 and the Bloomberg Aggregate thereafter. Growth of $100,000 is based on annual average total returns from 1950 to 2023.
Guide to the Markets – U.S. Data are as of September 30, 2024.

J.P.Morgan ASSET MANAGEMENT

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Asset Allocation: Equity Vs Bonds

Practical Finance: An Approximate Solution to Lifecycle Portfolio Choice

James J. Choi
Yale University and NBER

Canyao Liu
Hudson River Trading

Pengcheng Liu
Yale University

November 7, 2025

Inputs	
Risk aversion (1-10)	1
Adult #1 current age (20-99)	35
Adult #2 current age (20-99)	32
Investable net worth (> $0)	$1,000,000
Expected stock market real return	5.0%
Real risk-free interest rate	2.0%
Outputs	
Equity portfolio share	100%
Human capital value	$ 28,947,036
Equity portfolio share w/o human capital	85%

- If you’re saving for other medium - long t goals, weighted more towards stocks

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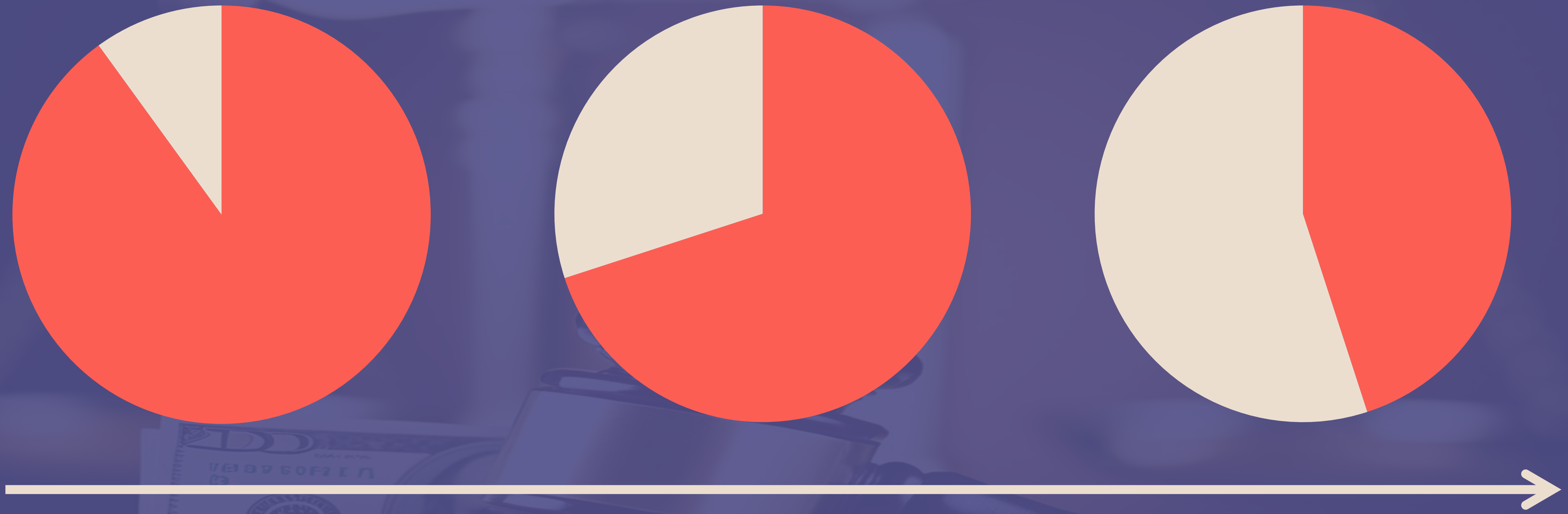
What Is A Target Date Fund?



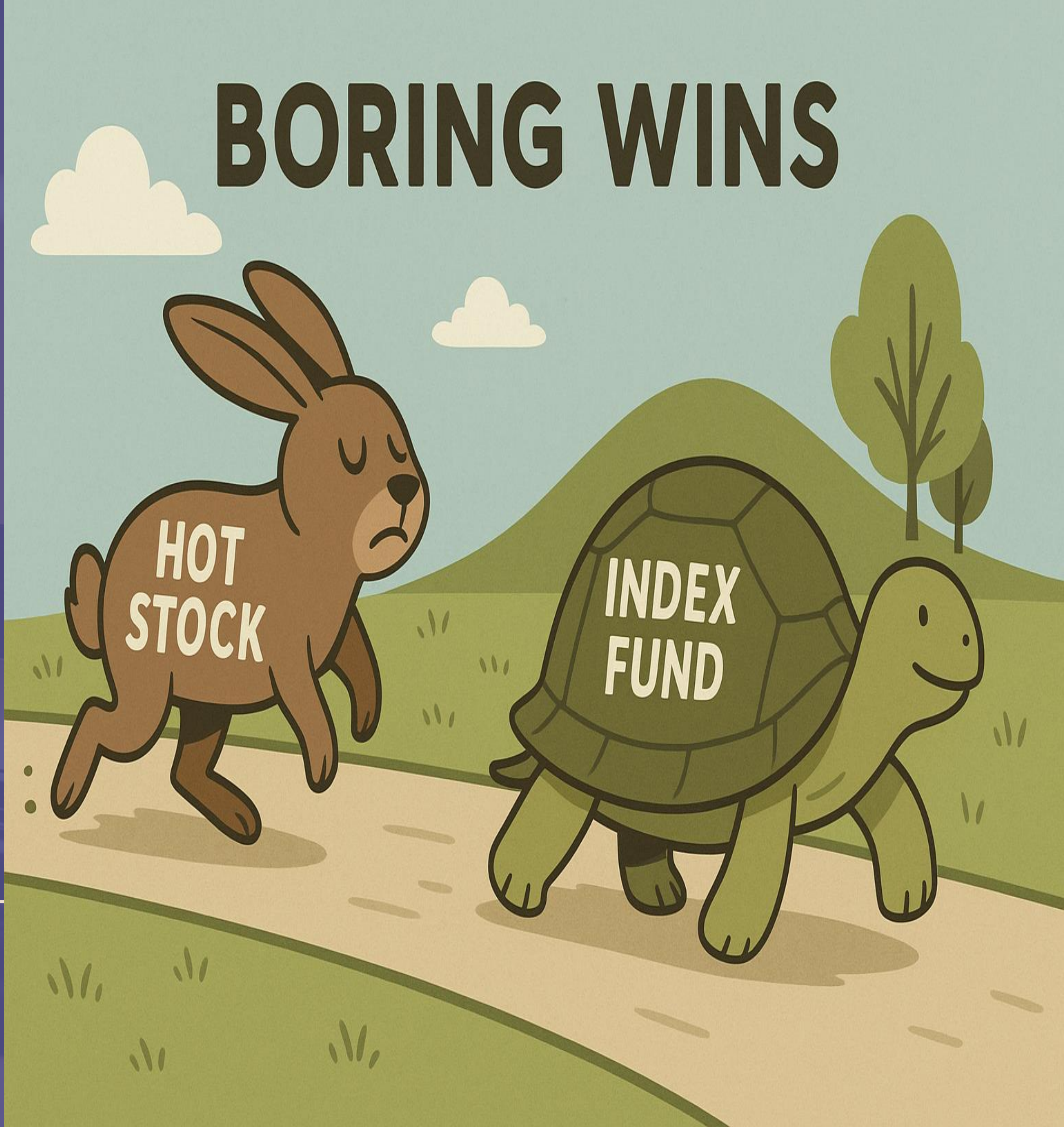
Far from retirement

Closer to retirement

% of portfolio in <u>stock</u>-based funds

% of portfolio in <u>bond</u>-based funds

BE A BORING INVESTOR



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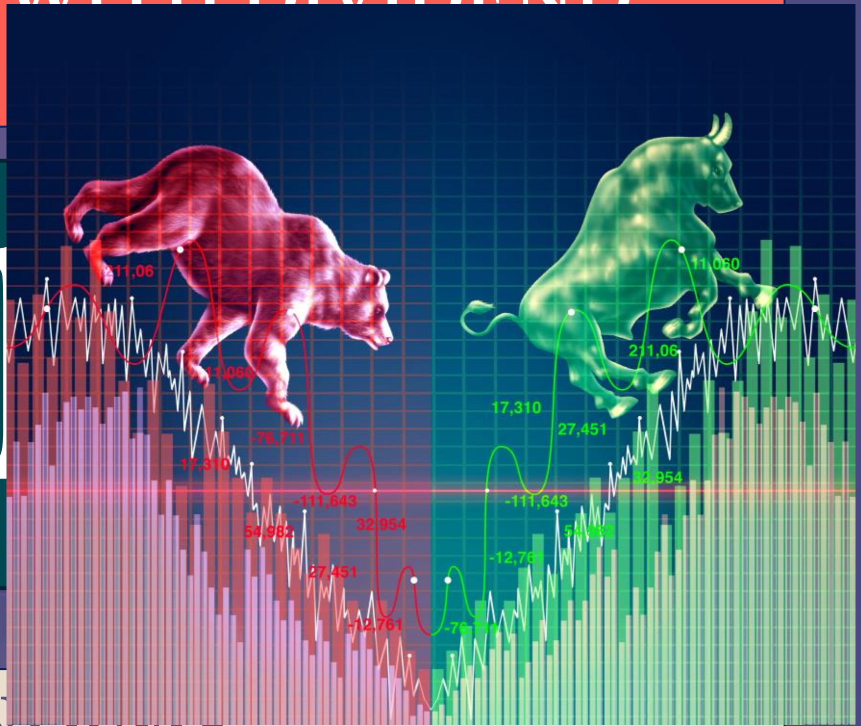
Favor Low-Cost Index Funds

S&P 500 Annual Return: 1976 - 2023

Incorporates 7 bear markets including 2007-2009 crash (market fell 56.8%) and pandemic bear market in early 2022

WITH DIVIDEND



$161,454 in 2023

Beware Allure Of Actively Managed Funds

% of active stock managers who <u>beat</u> the market over[1]:

1 year	28%
5 years	27%
10 years	10%
20 years	7%

1) as of middle 2023; Source: S&P Dow Jones Indices Report

Morningstar: Low Mutual Fund Fees Trump Our Star Ratings

"If there's anything in the whole world of mutual funds that you can take to the bank, it's that expense ratios help you make a better decision. In every single time period and data point tested, low-cost funds beat high-cost funds."

Morningstar Analysis

- Investors would <u>have substantially improved their odds of success by favoring inexpensive funds</u>, as evidenced by the higher success-ratios of the lowest-cost funds in all but one category.
- On the flip side of the coin, investors choosing funds from the highest-cost quartile of their respective categories reduced their chances of success in all cases.
- The large-value category is the most poignant example.
  - The lowest-cost funds in this segment had a success rate that was 28 percentage points higher than the category average over the trailing 10 years through December 2014.
  - Meanwhile, their high-cost peers had a dismal success rate of just 19% during this same span.
- <u>Odds of success generally decreased over longer time periods</u>, with value-oriented funds being the notable exception.
- Value managers had a higher long-term success rate than other types of active funds.
- The lowest-cost mid-value funds enjoyed the greatest long-term success rate (68%) and the highest-cost mid-blend funds the lowest (5%).


Cali Chicken Bacon Ranch™ Pizza

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US Versus International

- The average US investor does not have enough exposure to international stocks

Vanguard Guidance: 20% - 40% of your portfolio should be allocated to international securities

We have demonstrated that domestic investors should allocate part of their portfolios to international securities and that a 20% allocation is a reasonable starting point.

While adding an allocation of 20% to 40% has historically been beneficial, adding too much can increase portfolio risks without the commensurate benefits.

Although no absolute answer exists for all investors, it should be clear that an allocation range of 20% to 40% is reasonable given the historical benefits of diversification.

Allocations closer to 40% may be suitable for those investors less concerned with the potential risks and higher costs of international equities. Allocations closer to 20% may be viewed as offering a greater balance among the benefits of diversification, the risks of currency volatility and higher correlations, investor preferences, and costs.

- Vanguard Research

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Illustrative ETF Categories/Expense Ratios

Category	Vanguard		Schwab		Fidelity/iShares	
All US	VTI	0.03%	SCHB	0.03%	ITOT	0.03%
S&P 500	VOO	0.03%	SWPPX	0.02%	IVV	0.03%
Global	VT	0.07%	-		URTH	0.24%
International (no US)	VXUS	0.08%	SCHF	0.06%	IXUS	0.07%
Growth	VUG	0.04%	SCHG	0.04%	IVW	0.18%
Dividend	VYM	0.06%	SCHD	0.06%	DGRO	0.08%
Value	VTV	0.04%	SCHV	0.04%	IVE	0.18%
Small Cap	VB	0.05%	SCHA	0.04%	IJS	0.18%
Mid Cap	VO	0.05%	SCHM	0.04%	IJH	0.05%
Tech	VGT	0.09%	-		IYW	0.38%

Notes: Expense Ratio: 100 basis points (bps) = 1%

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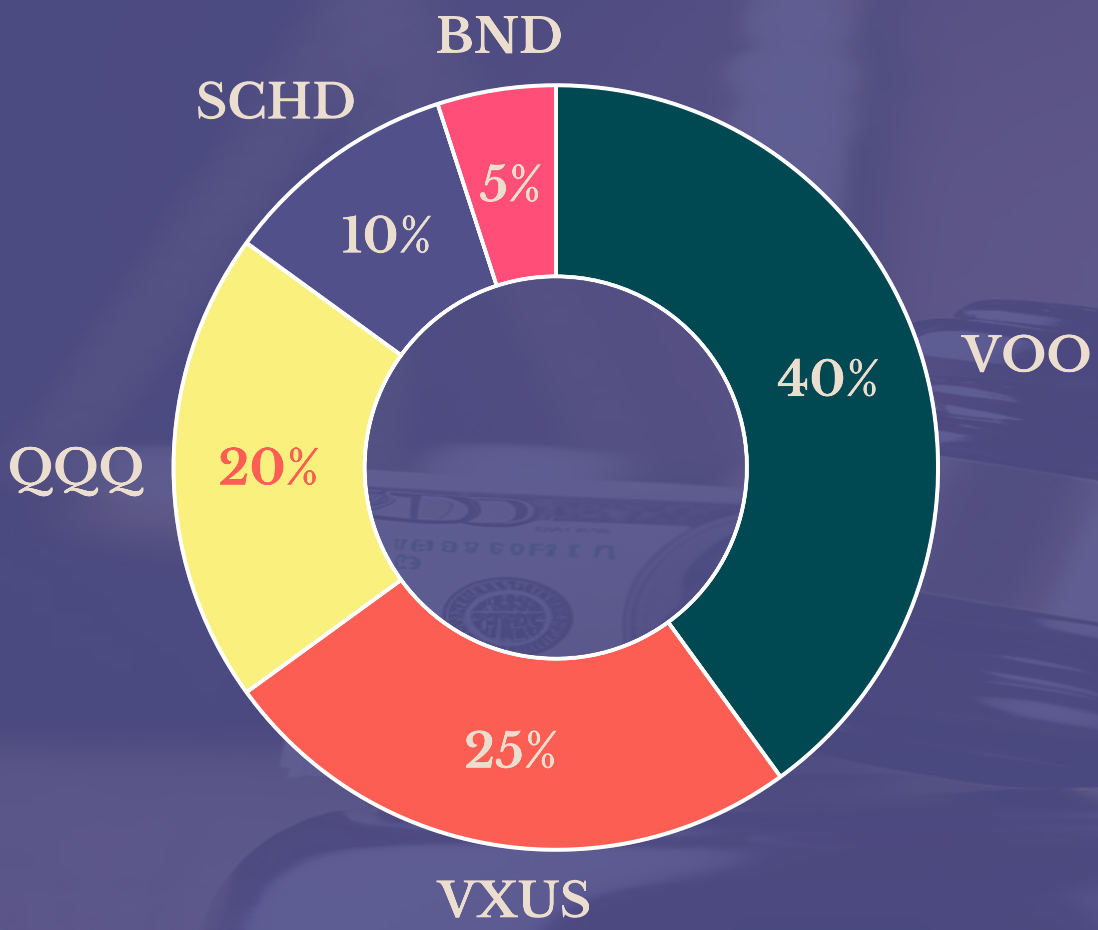
Illustrative Starter ETF Portfolio



RATIONALE	
VOO	Long Term Growth; own a piece of US economy
VXUS	Long Term Diversification; adds global balance
QQQ	High Growth Upside; Nasdaq 100 packed with tech and innovation
SCHD	Cash Flow (Dividends); steady passive income
BND	Smooth Out Volatility

Acing Your Finances

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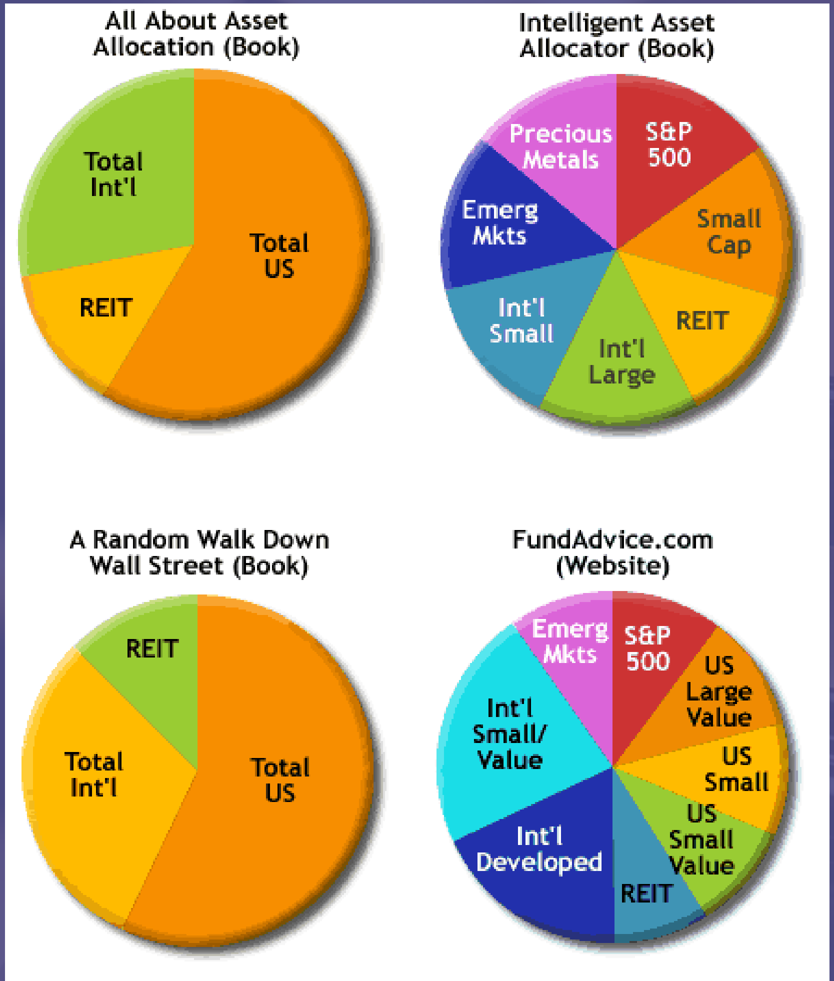
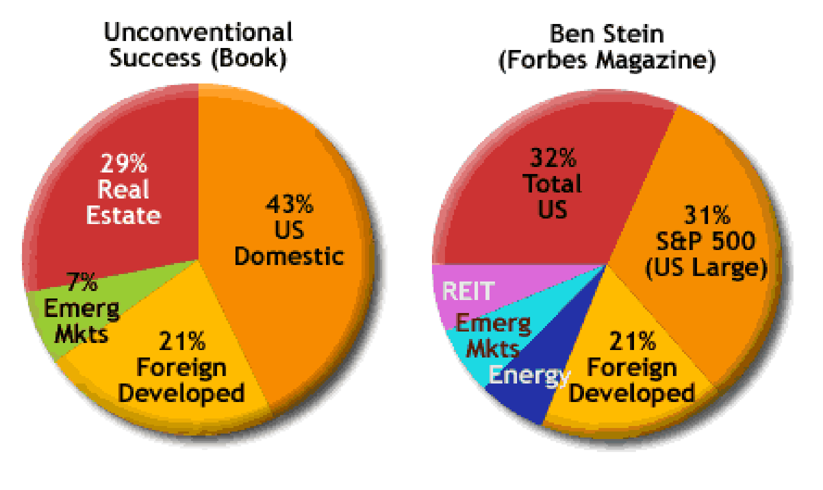
Illustrative ETF Portfolios

Goal	Risk Tolerance	Time Horizon	Illustrative Mix
Just Starting	Low	10+ Years	40% VOO; 25% VXUS; 20% QQQ; 10% SCHD; 5% BND
Simplicity	Low	Any	80% VTI; 20% VT
Slow and Steady	Low-Moderate	7+ Years	40% VOO; 40% SCHD; 20% VXUS
Passive Income	Low-Moderate	5+ Years	50% SCHD; 30% VYM; 10% VTI; 10% SPAXX
Retirement Prep	Moderate	5 – 10 Years	50% VOO; 30% SCHD; 20% SPAXX
Max Growth	High	10+ Years	50% QQQM; 40% VTI; 10% SCHD

Sources include Bogleheads, Steve Chen, and others

There Is No Right Answer





More Funds ≠ More Diversification

- VOO and VTI → different names, but nearly identical top holdings
- Buying both is essentially doubling down on same big companies
- If buying multiple ETF's, check how much overlap exists
- Top 10 holdings usually drive the ETF's performance the most
- Tool to check: ETFRC (ETF Research Center

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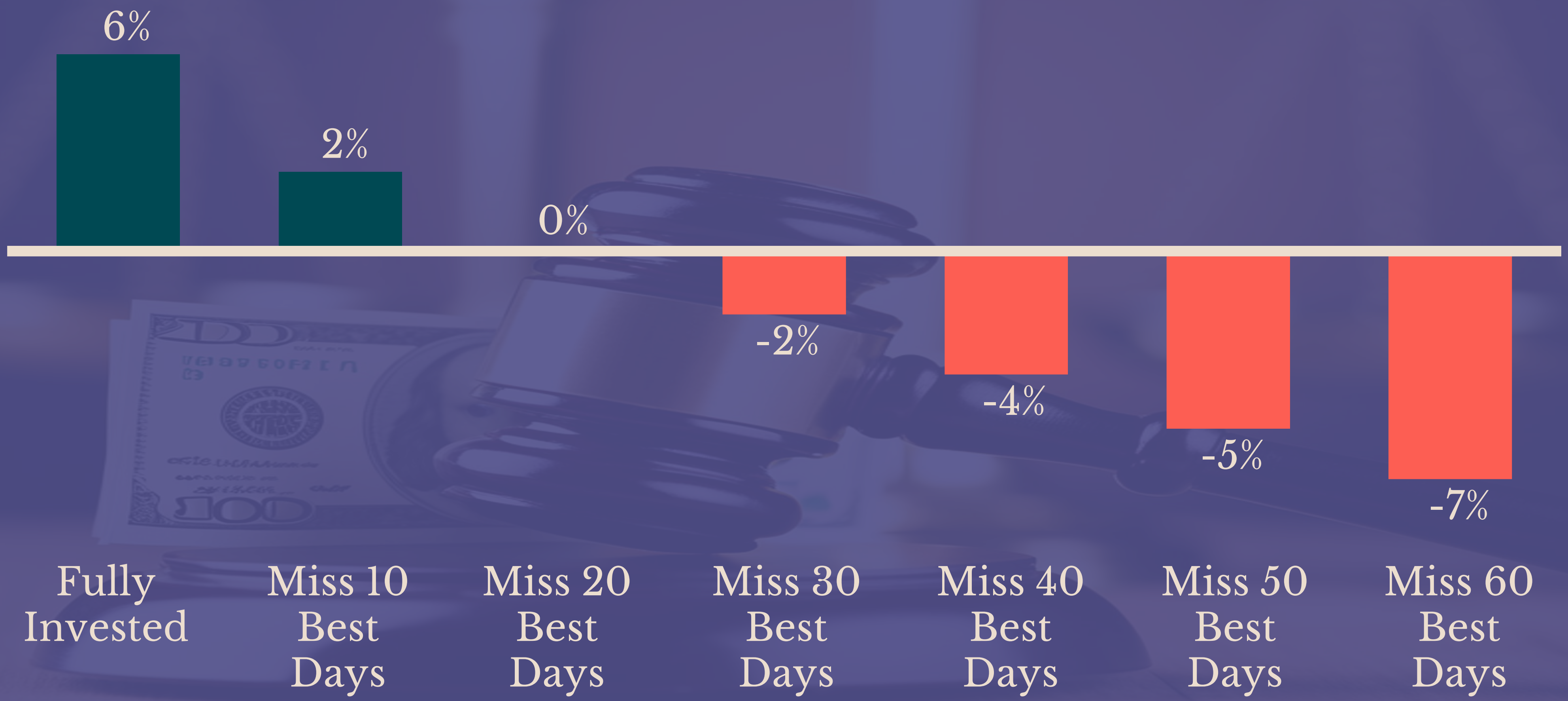
Don’t Ignore Tax Efficiency

Tax Deferred Accounts (401k, IRA)	Tax Inefficient Investments	Bonds, REITs (give off income and/or dividends)
Tax-Free Accounts (Roth 401k, Roth IRA, HSA, 529	Highest Growth/ Most Volatile	VSIAX, QQQM
Taxable Accounts	Tax Efficient Investments	Total Market or S&P (few dividends)

Trying To Time The Market. . . Backfires

Annualized Performance (2000 – 2019)



The Market Has Had a Fabulous Run, but This Peak Doesn't Really Matter

Compound returns that grow as stocks rise over the decades are far more important than the latest high, our columnist says.

By Jeff Sommer

Jeff Sommer writes Strategies, a weekly column on markets, finance and the economy.

Jan. 20, 2024

16

"Staying in the market for decades, and reaping the full rewards of compound returns, including reinvested dividends, is a far surer road to prosperity than trying to time the market's peaks and valleys."

"That's why the amount of time you stay in the market — not whether you buy and sell at opportune moments — is likely to be what really matters."

Acing Your Finances

Robo-Advisors

Betterment

wealthfront

charles SCHWAB INTELLIGENT PORTFOLIOS

Vanguard

WiseBanyan

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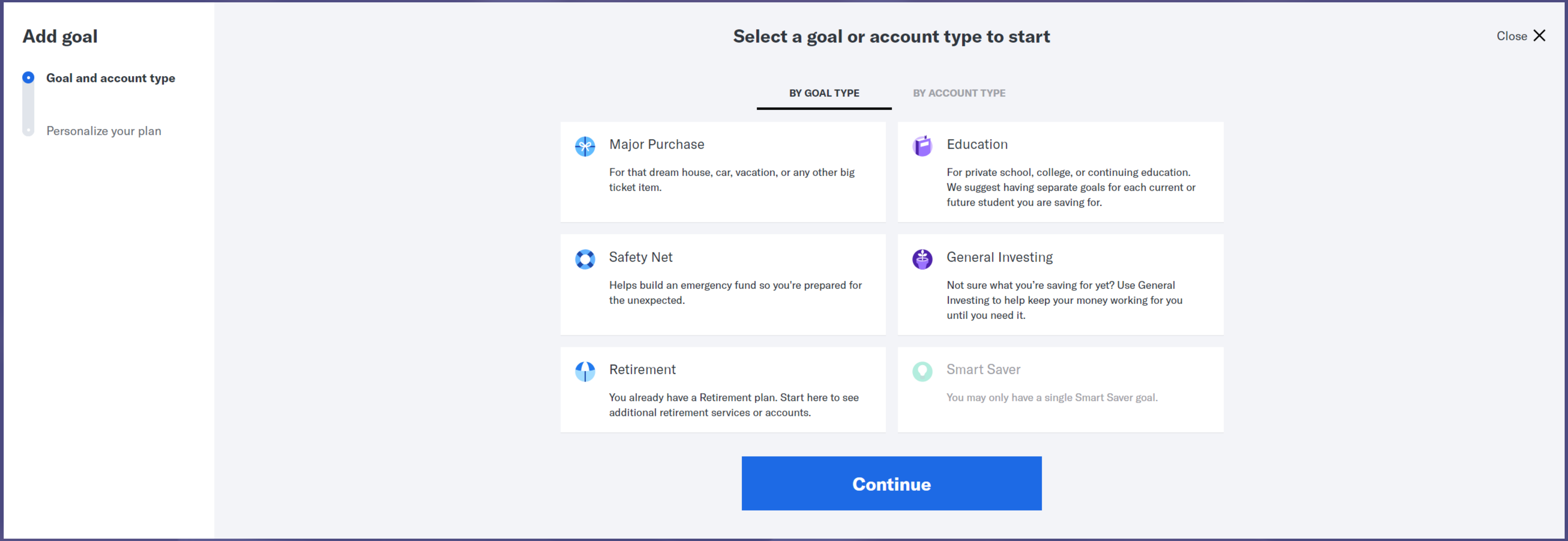
Robo Advisor Example: Select Goal



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Robo Advisor: Define $ and Time Horizon

Goal name

Safety Net

Target amount

$10000

Term years

2

Goal icon and name

Choose

Major Purchase 2

Target amount

$100000

Term years

5

Goal name

Education

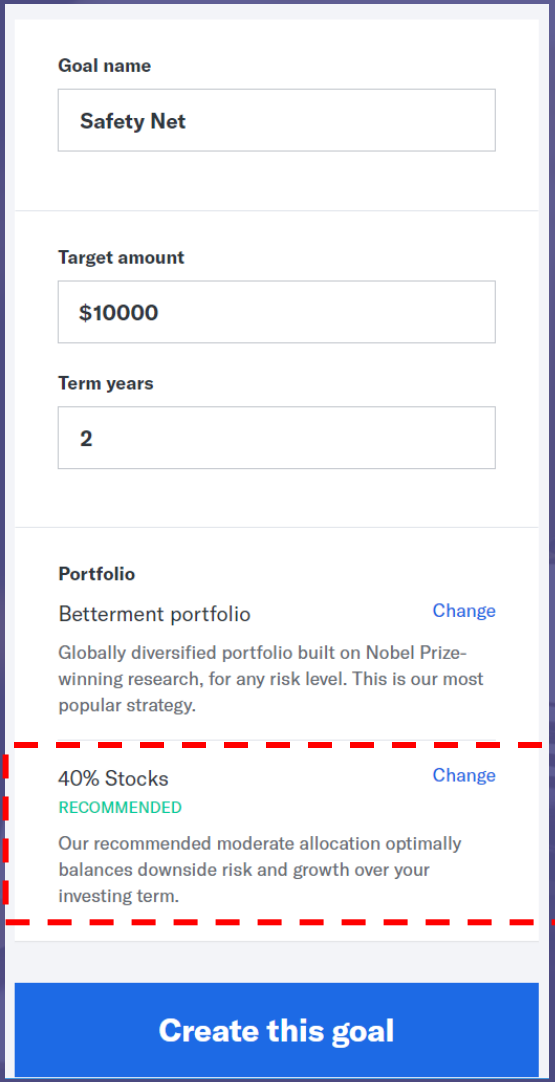
Target amount

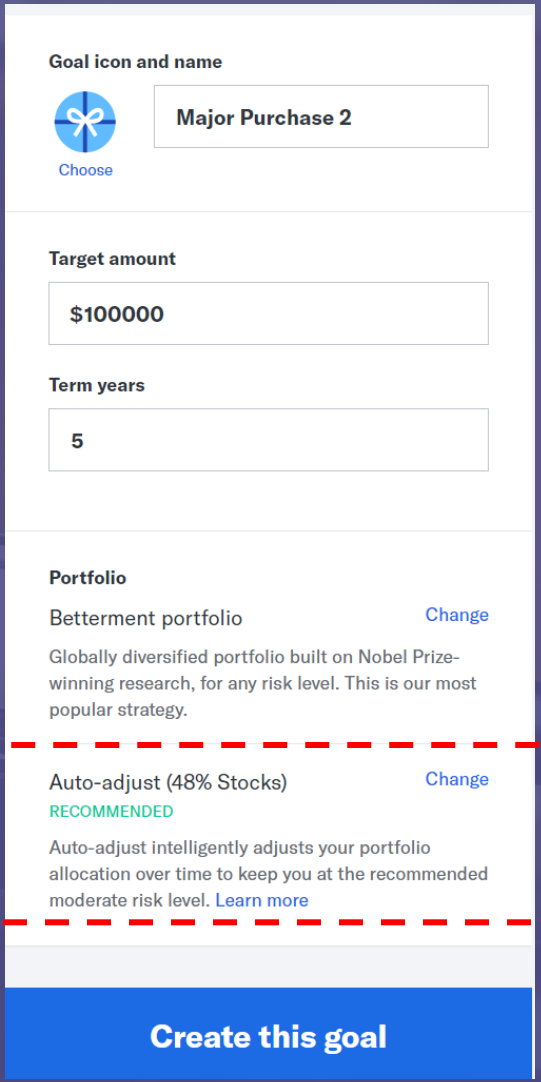
$250000

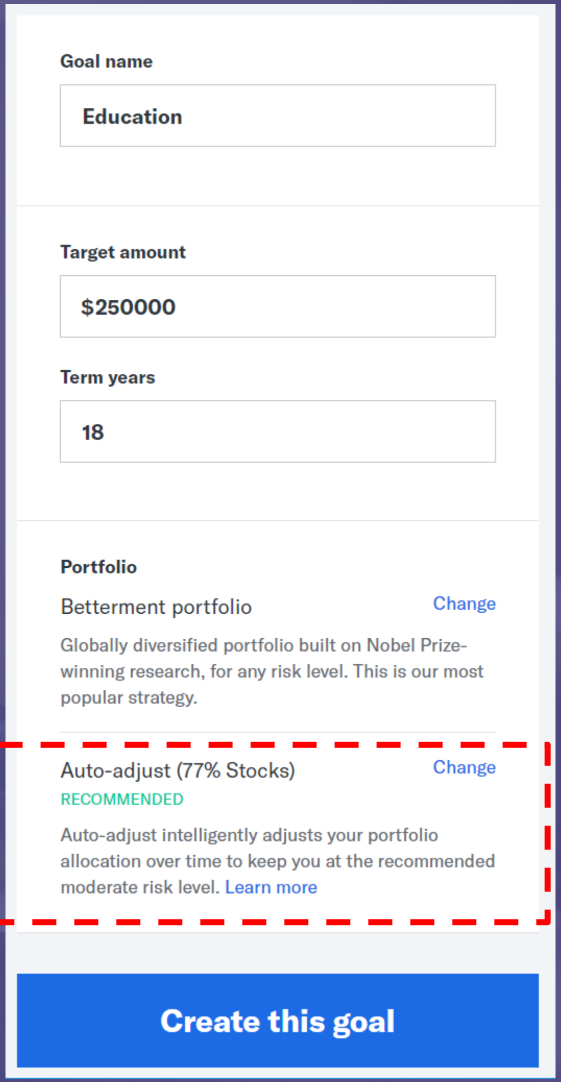
Term years

18

Robo Advisor: Select Investment Mix





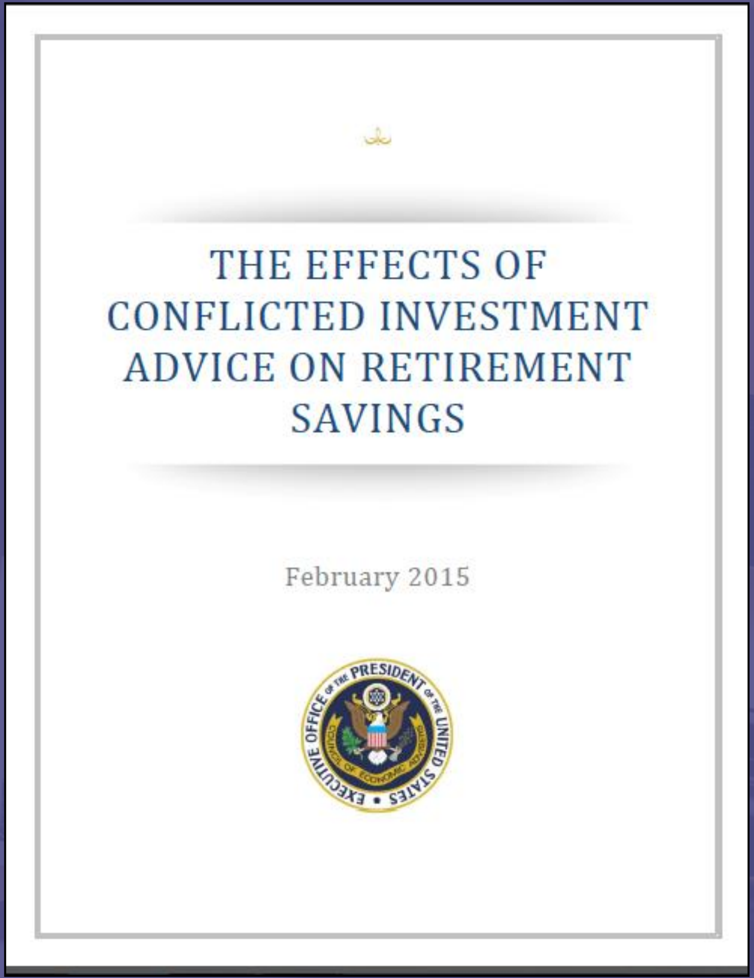


Working With An Advisor?

Remember One Word:

FIDUCIARY

The Market For Financial Advice



THE EFFECTS OF CONFLICTED INVESTMENT ADVICE ON RETIREMENT SAVINGS

February 2015

Sample Questions To Ask

In that same email, ask them to write one clear sentence answering this question:

➡️ Are you a fiduciary 100% of the time on ALL the advice you give me?

💡 (Hint: the answer should be YES. It should NOT be three paragraphs of legalese or directing you to 4 pages of disclosures. That's a 🚩)

Many advisors operate under different standards for retirement and non-retirement accounts. They are not obligated to tell you when they ARE a fiduciary and when they ARE NOT.

It is confusir :.

I've worked at these firms (they're called broker-dealers), so I've seen the intentional omission of information behind the curtains. It's built to keep clients uninformed.

If they cannot give you that answer in one simple sentence, RUN.

See: NYTimes: "The 21 Questions You're Going to Need to Ask About Investment Fees"

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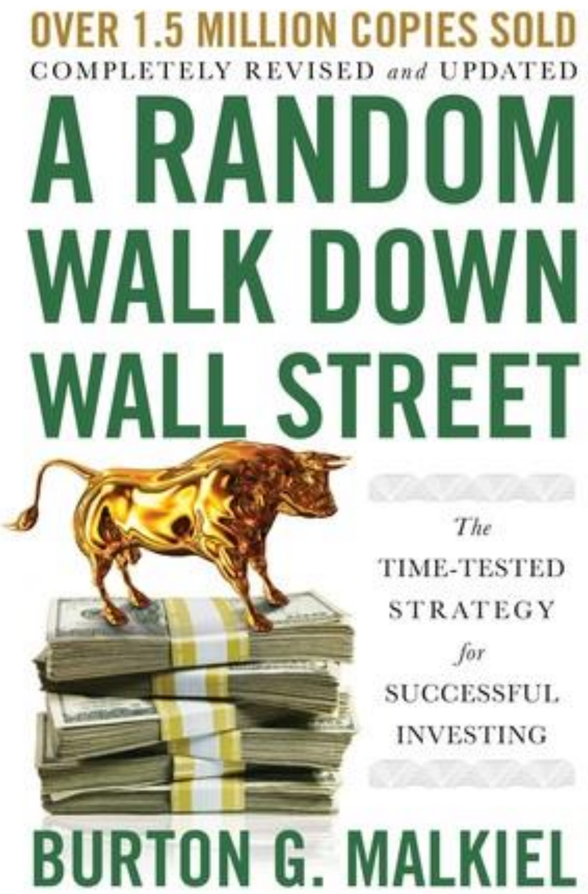
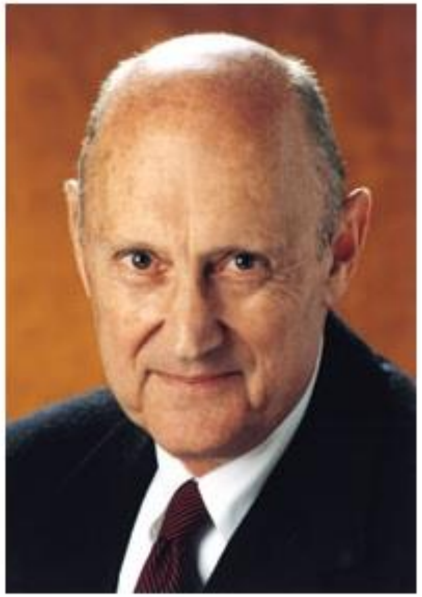
Take The Longer-Term Approach

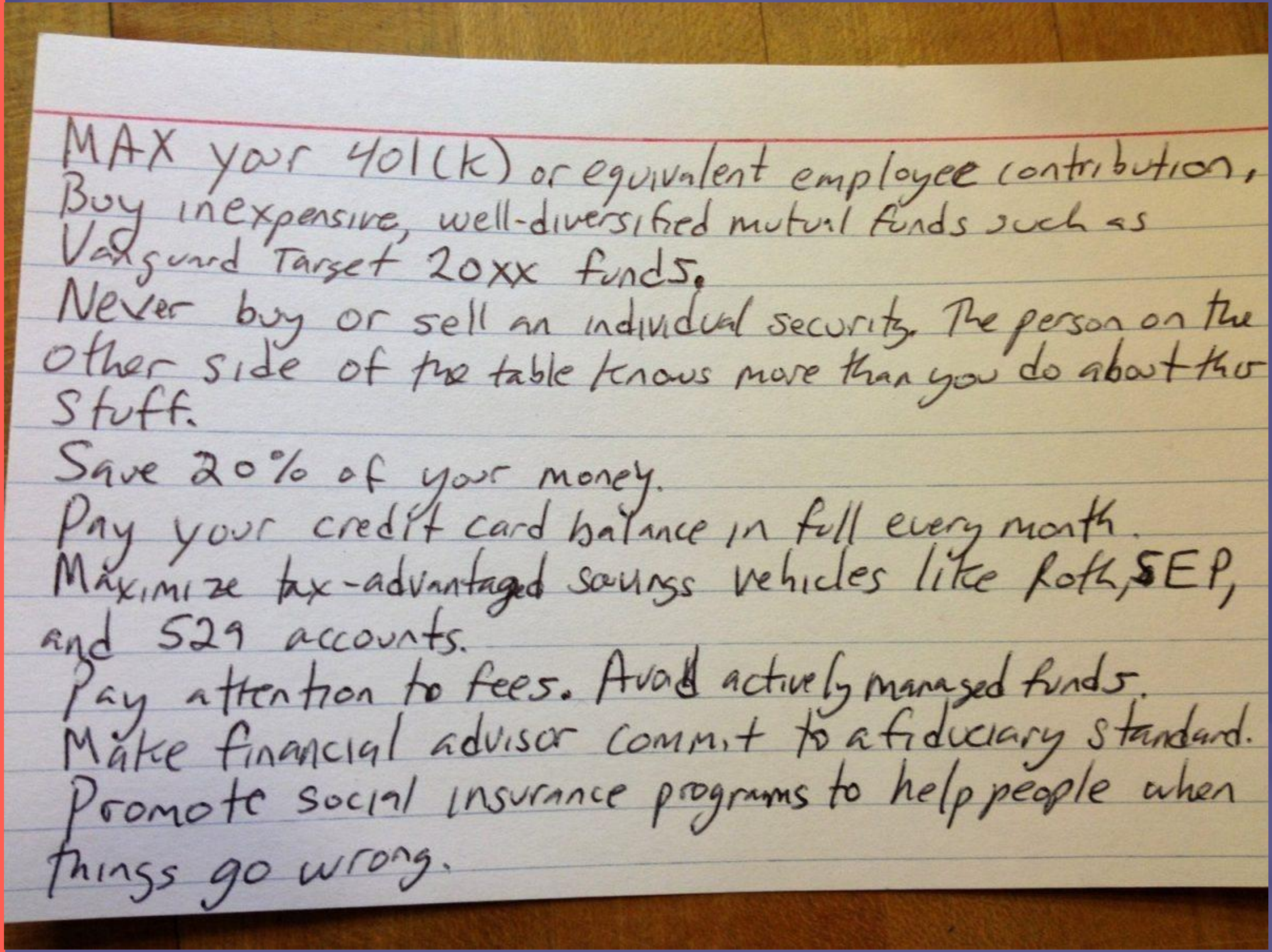
- Set up a solid investing plan:
  - Low-cost index funds
  - Steady purchase of stock- and bond-based mutual funds
  - A risk-based allocation based on your time horizon
- Rebalance portfolio as time horizon gets closer
- Set it and forget it (i.e., do nothing)





“It is not often in life that the easy thing to do is the smart thing to do

All You Need On One Index Card



All You Need To Know on an Index Card

Many Variations

1. Using low cost, index
2. funds
3. Keeping fees low
4. Working with fiduciaries

Finance Reporter)

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Money Is A Tool, Not A Goal

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Money Is A Tool, Not A Goal

The New York Times Magazine

Account

How Nearly a Century of Happiness Research Led to One Big Finding

Decades of wellness studies have identified a formula for happiness, but you won't figure it out alone.

"The clearest message that we get from this 75-year study is this: Good relationships keep us happier and healthier. Period,"

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Suggested Resources

Books	❑ Rich AF by Vivian Tu (aka Your Rich BFF) ❑ The One Page Financial Plan (Carl Richards) ❑ The Millionaire Next Door (Thomas Stanley) ❑ "Guide to Investing" & "Guide to Retirement" (Bogleheads)
Columnist/Blogs	❑ Ron Lieber/Tara Siegel Bernard/Carl Richards (NY Times) ❑ Bogleheads Forum ❑ Big Law Investor ❑ White Coat Investor
Podcasts	❑ Net Worth and Chill (Vivian Tu) ❑ "So Money with Farnoosh Torabi" ❑ Brown Ambition (with Tiffany Aliche and Mandy Woodruff) ❑ Jill on Money
Financial Advisors	❑ XY Planning Network (Fee-Only, Fiduciary) ❑ NAPFA (National Assn of Personal Financial Advisors (Fee-Only, Fiduciary) ❑ Robo-Advisors (Betterment, Wealthfront, Vanguard or Fidelity Digital Advisor)

Harvard FCU
Investment Services

Dennis Sexton

LPL Wealth Advisor

dennis.sexton@harvardfcu-lpl.com

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