Principles of Personal Investing

Aspects of Financial Health

- Budgeting
- Saving
- Charitable Contributions
- Banking
- Insurance
- Debt Management
- Retirement Planning
- Investing

Typical Question

I have some extra money to invest.

Where should I invest it and when?

What is Investing?

Investing is the act of allocating funds to an asset or committing capital to an endeavor (a business, project, real estate, etc.), with the expectation of generating an income or profit.


SAVE
INVEST
SPECULATE
Money Market Accounts
Savings Accounts
Certificates of Deposit
Slow Growth
Stocks
Real Estate
Bonds
Increased Risk
Day trading
Currencies
Very High Risk

Investment vs Speculation

"An investment operation is one which, upon thorough analysis, promises safety of principal and a satisfactory return. Operations not meeting these requirements are speculative."

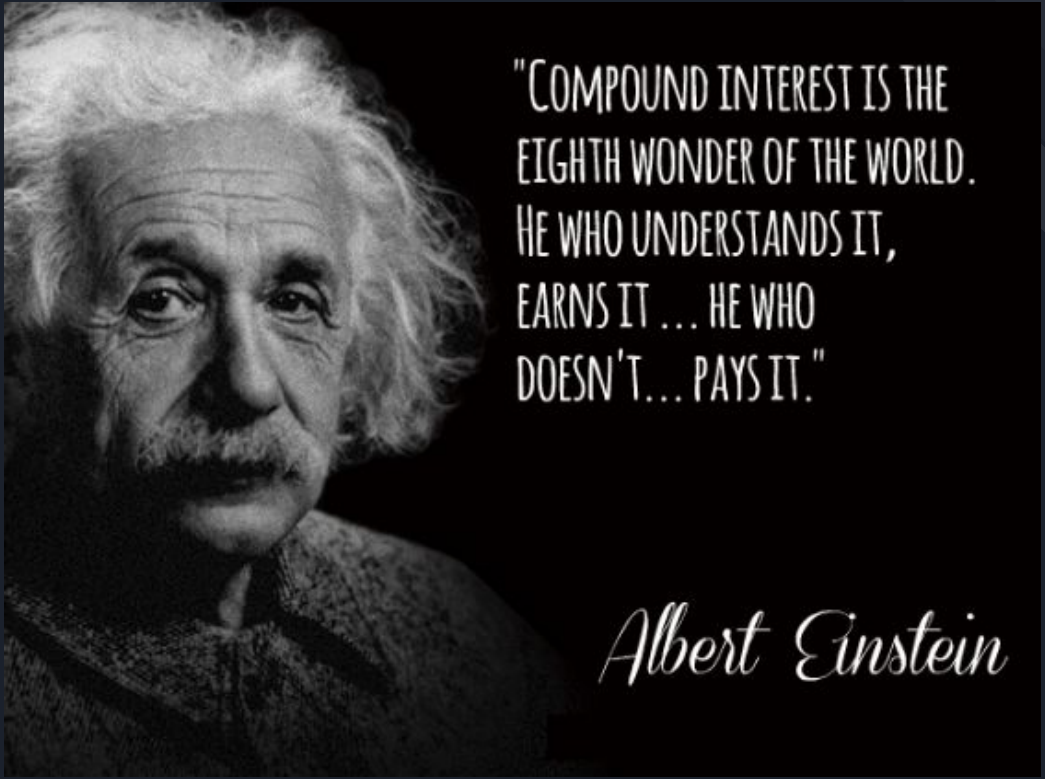
Benjamin Graham, *Security Analysis* (1934)

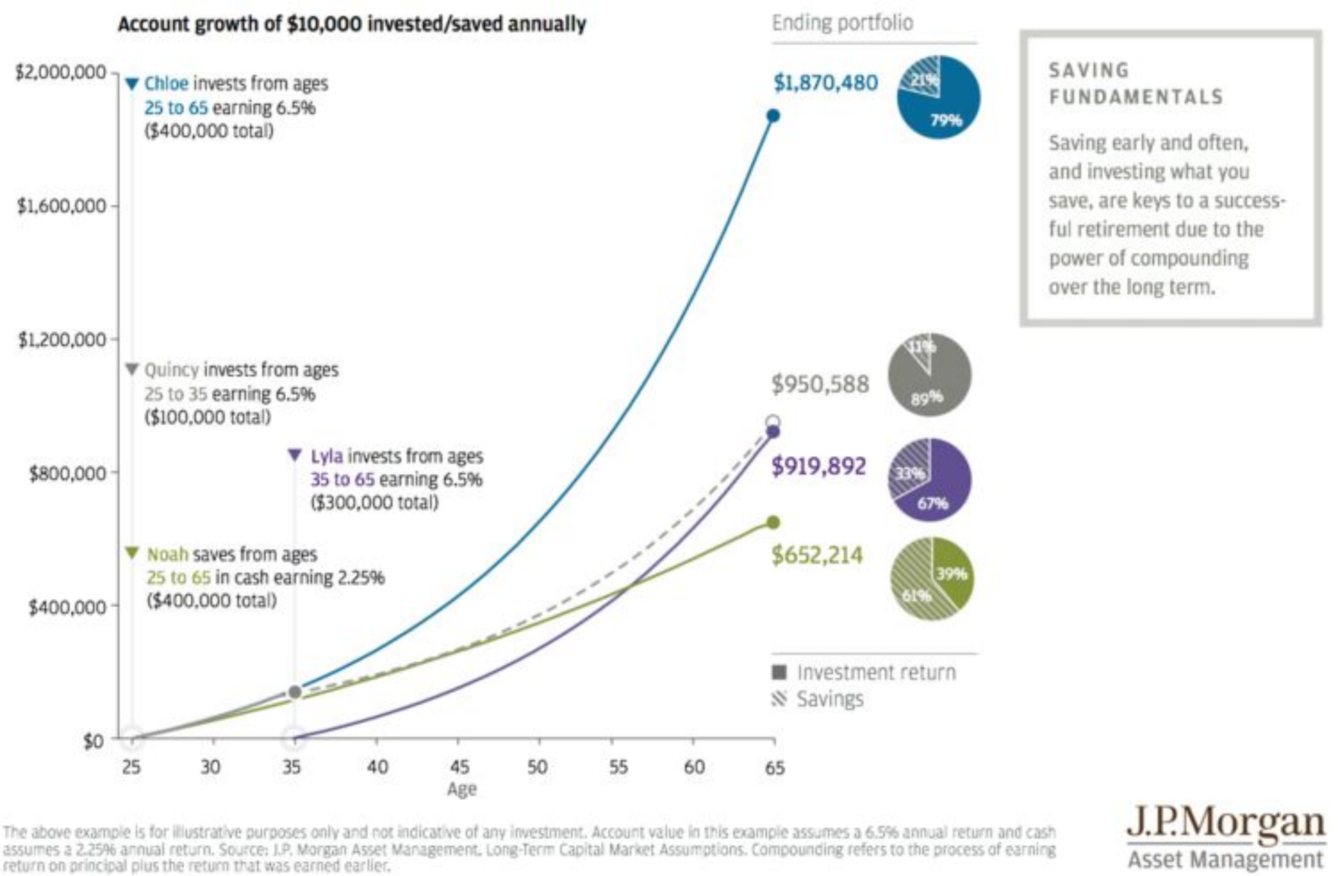
"Speculation may be defined as the purchase or sale of securities or commodities in expectation of profiting by fluctuations in their prices."

Philip Carret, *The Art of Speculation* (1930)

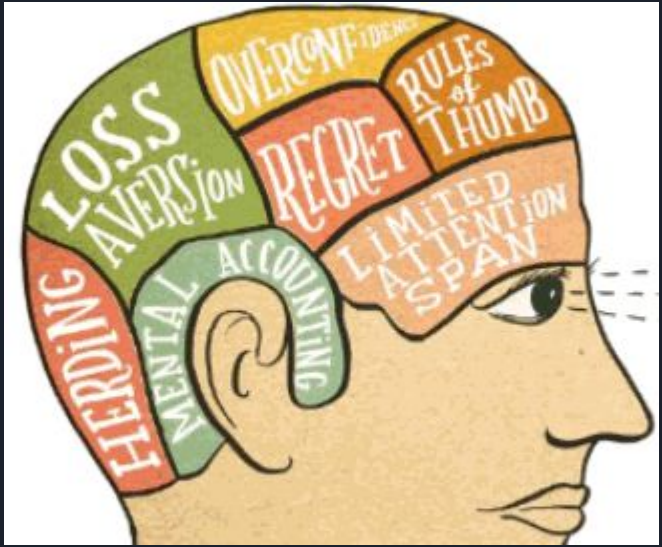
Why invest?

You want to invest in order to create wealth


"COMPOUND INTEREST IS THE EIGHTH WONDER OF THE WORLD. HE WHO UNDERSTANDS IT, EARNS IT … HE WHO DOESN'T… PAYS IT."
Albert Einstein


Account growth of $10,000 invested/saved annually
Ending portfolio
$2,000,000
$1,600,000
$1,200,000
$800,000
$400,000
$0
Chloe invests from ages 25 to 65 earning 6.5% ($400,000 total)
Quincy invests from ages 25 to 35 earning 6.5% ($100,000 total)
Lyla invests from ages 35 to 65 earning 6.5% ($300,000 total)
Noah saves from ages 25 to 65 in cash earning 2.25% ($400,000 total)
25
30
35
40
45
50
55
60
65
Age
$1,870,480
21%
79%
$950,588
11%
89%
$919,892
33%
67%
$652,214
39%
61%
Investment return
Savings
SAVING FUNDAMENTALS
Saving early and often, and investing what you save, are keys to a successful retirement due to the power of compounding over the long term.
The above example is for illustrative purposes only and not indicative of any investment. Account value in this example assumes a 6.5% annual return and cash assumes a 2.25% annual return. Source: J.P. Morgan Asset Management, Long-Term Capital Market Assumptions. Compounding refers to the process of earning return on principal plus the return that was earned earlier.
J.P.Morgan
Asset Management

Behavioral Biases and Investing



What is a Behavioral Bias

- Behavioral biases are irrational beliefs or behaviors that can unconsciously influence our decision-making process.
- They are generally considered to be split into two subtypes – emotional biases and cognitive biases.
- Emotional biases involve taking action based on our feelings rather than concrete facts, or letting our emotions affect our judgment.
- Cognitive biases are errors in our thinking that arise while processing or interpreting the information that is available to us.

Anchoring

We rely too much on the first piece of information we came across when making a decision.

Availability Heuristic

- A mental shortcut by which one overestimates the importance or likelihood of something based on how easily an example or instance comes to mind.
- This bias is important because of its impact on how well we perceive risk. Of course, what we remember or how easily something comes to mind will be influenced by many things but media coverage is usually a big factor.

Confirmation Bias (Cognitive)

- Also called confirmatory bias or myside bias, this is the tendency to search for, interpret, and remember information in a way that confirms our existing preconceptions.
- This unconscious bias makes it possible to miss findings or ignore evidence that could otherwise change our view.

Loss Aversion (Emotional)

- Loss aversion is an emotional bias that involves taking action (or failing to take action) to avoid a loss. It is rooted in the fact that humans tend to feel the pain of a loss twice as intensely as the joy of an equivalent gain.
- It leads to a tendency to lock in losses after a sharp fall in the market to prevent any further losses.
- It also causes an unwillingness to accept a loss on an investment – or in other words, not knowing when to cut your losses

Mental Accounting Bias

Also known as the “two-pocket theory”, this is when we divide our money into separate categories according to subjective criteria, such as where the money came from, or what we intend to use it for.

Present Bias (Cognitive)

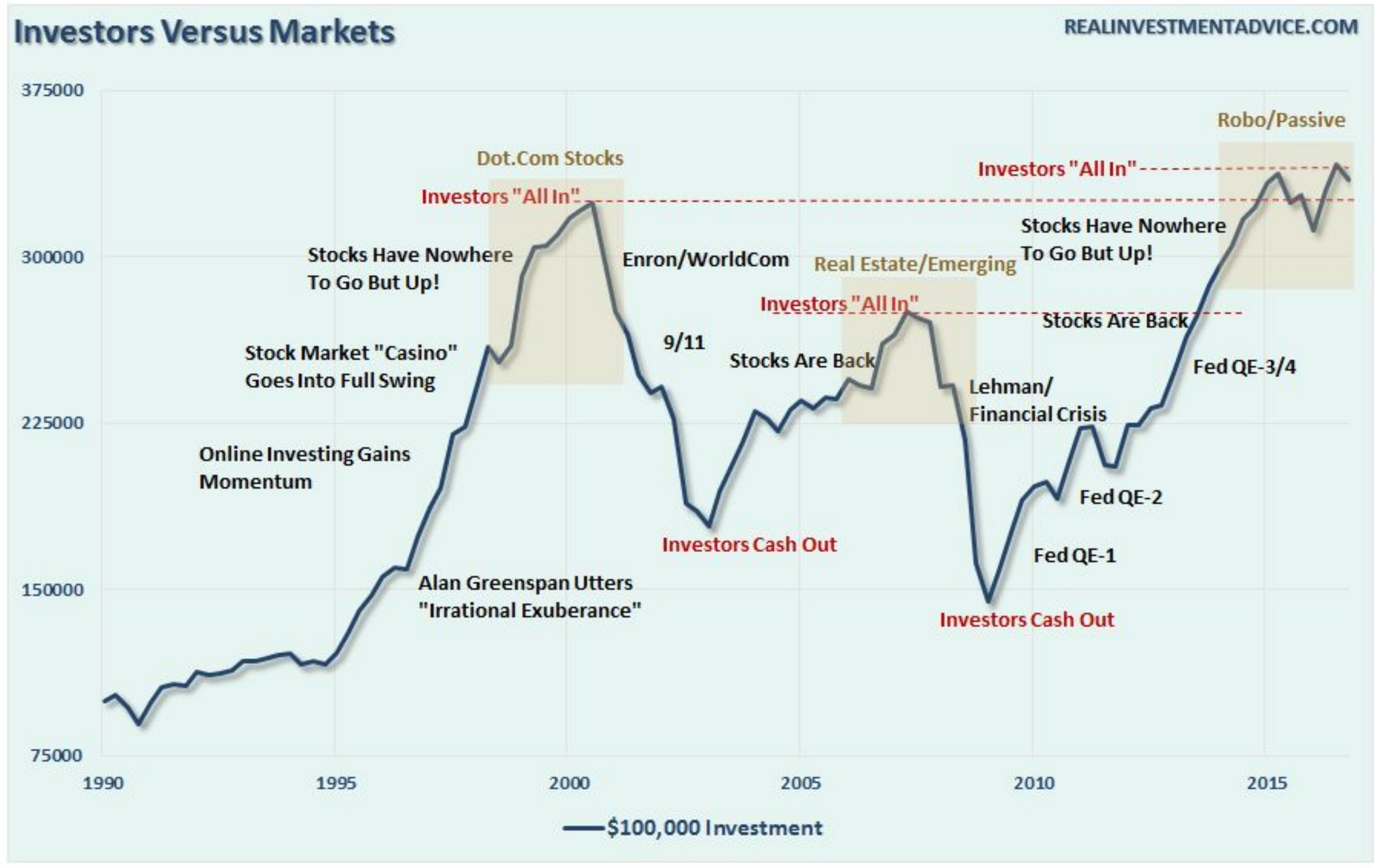
- The present bias refers to the tendency of people to give stronger weight to payoffs that are closer to the present time when considering trade-offs between two future moments.
- For example, a present-biased person might prefer to receive ten dollars today over receiving fifteen dollars in a week, but wouldn't mind waiting an extra week if the choice were for the same amounts one year from today versus one year and one week from today.
- The concept of present bias is often used more generally to describe impatience or immediate gratification in decision-making.

Status Quo Bias (Emotional)

- Status Quo bias is an emotional preference for the current situation.
- The current baseline (or status quo) is taken as a reference point, and any change from that baseline is perceived as a loss.
- In economics, status quo bias can cause individuals to make seemingly non-rational decisions to stay with a sub-optimal situation.
- Examples:
  - Choosing the default option
  - Preference for old plans
  - Brand allegiance

Sunk Cost Fallacy (Emotional)

- Individuals commit the sunk cost fallacy when they continue a behavior or endeavor as a result of previously invested resources (time, money or effort).
- This fallacy, which is related to loss aversion and status quo bias, can also be viewed as bias resulting from an ongoing commitment.
- If the costs outweigh the benefits, the extra costs incurred (inconvenience, time or even money) are held in a different mental account than the one associated with the original transaction.



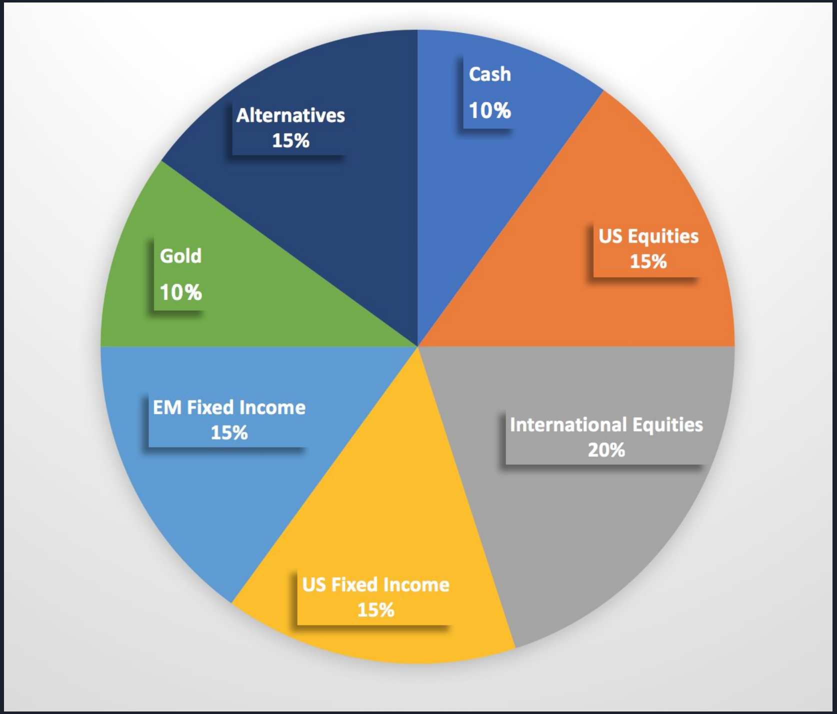
Investors Versus Markets
REALINVESTMENTADVICE.COM
375000
300000
225000
150000
75000
1990
1995
2000
2005
2010
2015
Dot.Com Stocks
Investors "All In"
Stocks Have Nowhere To Go But Up!
Stock Market "Casino" Goes Into Full Swing
Online Investing Gains Momentum
Alan Greenspan Utters "Irrational Exuberance"
Enron/WorldCom
9/11
Investors Cash Out
Stocks Are Back
Real Estate/Emerging
Investors "All In"
Lehman/ Financial Crisis
Investors Cash Out
Fed QE-1
Fed QE-2
Stocks Are Back
Fed QE-3/4
Stocks Have Nowhere To Go But Up!
Investors "All In"
Robo/Passive
$100,000 Investment

Books on Behavioral Economics

- Thinking, Fast and Slow — Daniel Kahneman
- Predictably Irrational - Dan Ariely
- Misbehaving: The Making of Behavioral Economics - Richard Thaler
- The Undoing Project: A Friendship That Changed Our Minds - Michael Lewis


Principles of
Investing

1. Asset Allocation



2. Investment Cost

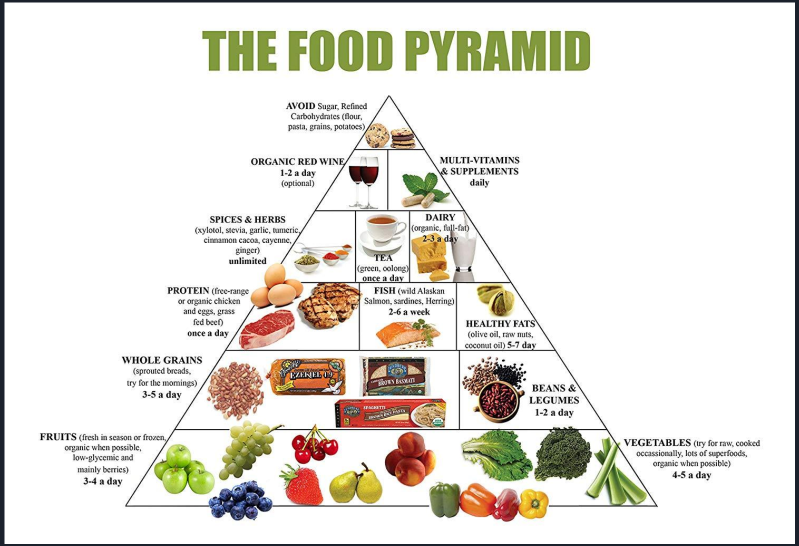
3. Investment Performance

Investment Principles Applied to Your Diet

Asset Allocation

is similar to

Food Variety



Investment Principles Applied to Your Diet

Investment Cost

is similar to

Cost of Food

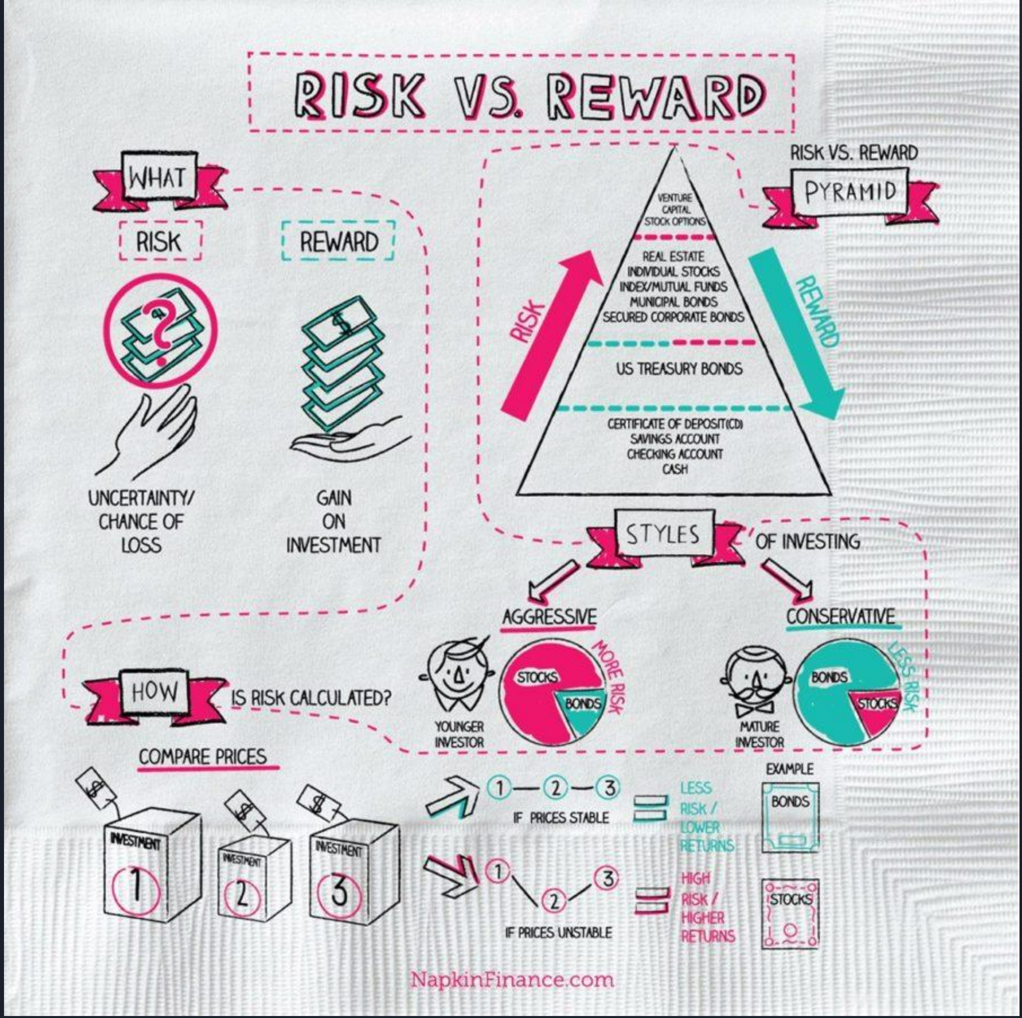
Investment Principles Applied to Your Diet

Investment Performance

is similar to

Quality of Food

Asset Allocation


RISK VS. REWARD
WHAT
RISK
REWARD
UNCERTAINTY/ CHANCE OF LOSS
GAIN ON INVESTMENT
RISK VS. REWARD PYRAMID
VENTURE CAPITAL
STOCK OPTIONS
REAL ESTATE
INDIVIDUAL STOCKS
INDEX/MUTUAL FUNDS
MUNICIPAL BONDS
SECURED CORPORATE BONDS
US TREASURY BONDS
CERTIFICATE OF DEPOSIT(CD)
SAVINGS ACCOUNT
CHECKING ACCOUNT
CASH
RISK
REWARD
STYLES OF INVESTING
AGGRESSIVE
CONSERVATIVE
YOUNGER INVESTOR
STOCKS
BONDS
MORE RISK
MATURE INVESTOR
LESS RISK
HOW IS RISK CALCULATED?
COMPARE PRICES
INVESTMENT 1
INVESTMENT 2
INVESTMENT 3
IF PRICES STABLE
LESS RISK / LOWER RETURNS
IF PRICES UNSTABLE
HIGH RISK / HIGHER RETURNS
EXAMPLE
NapkinFinance.com

RISK TOLERANCE
WHAT KIND OF RIDE DO YOU WANT FROM INVESTING?
CONSIDER THESE FACTORS...
TIME HORIZON
VS
2020
GOALS
VS
RETIREMENT
RISK APPETITE
VS
WHEN CHOOSING YOUR INVESTMENTS...
CASH
FIXED INCOME
DIVERSIFIED PORTFOLIO
STOCKS
LOWER RISK / RETURN
HIGHER RISK / RETURN
powered by Napkin Finance

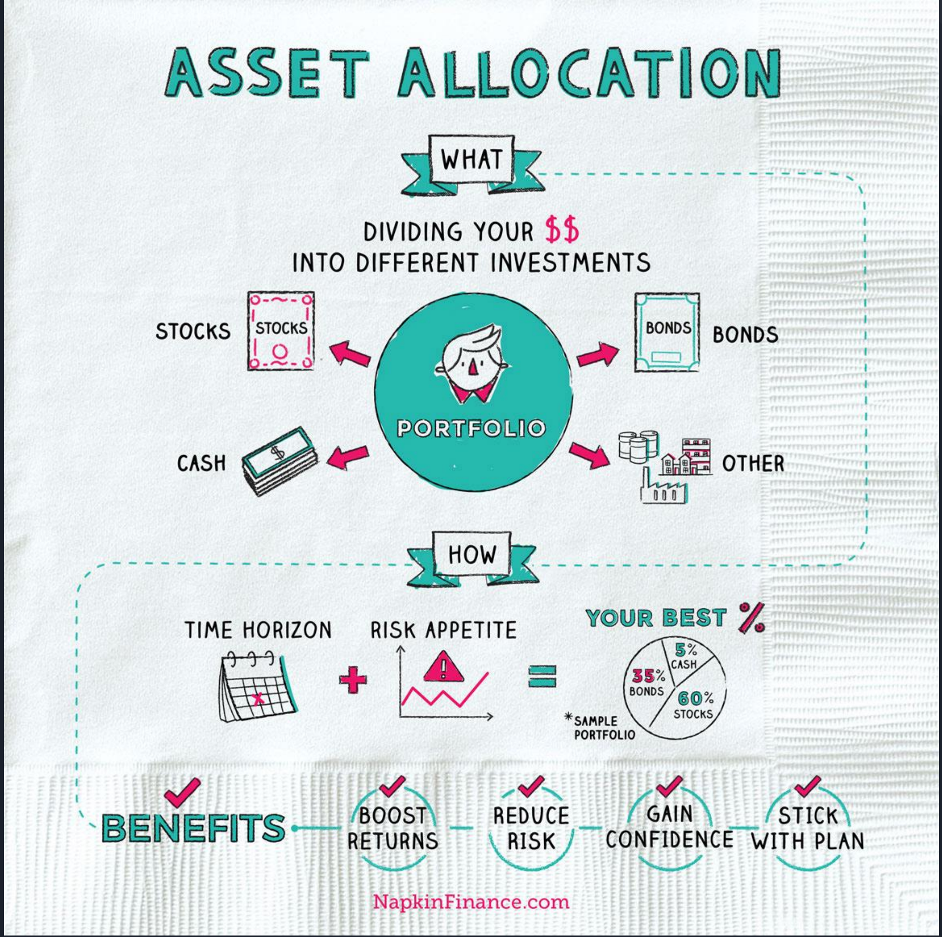
What is Asset Allocation?

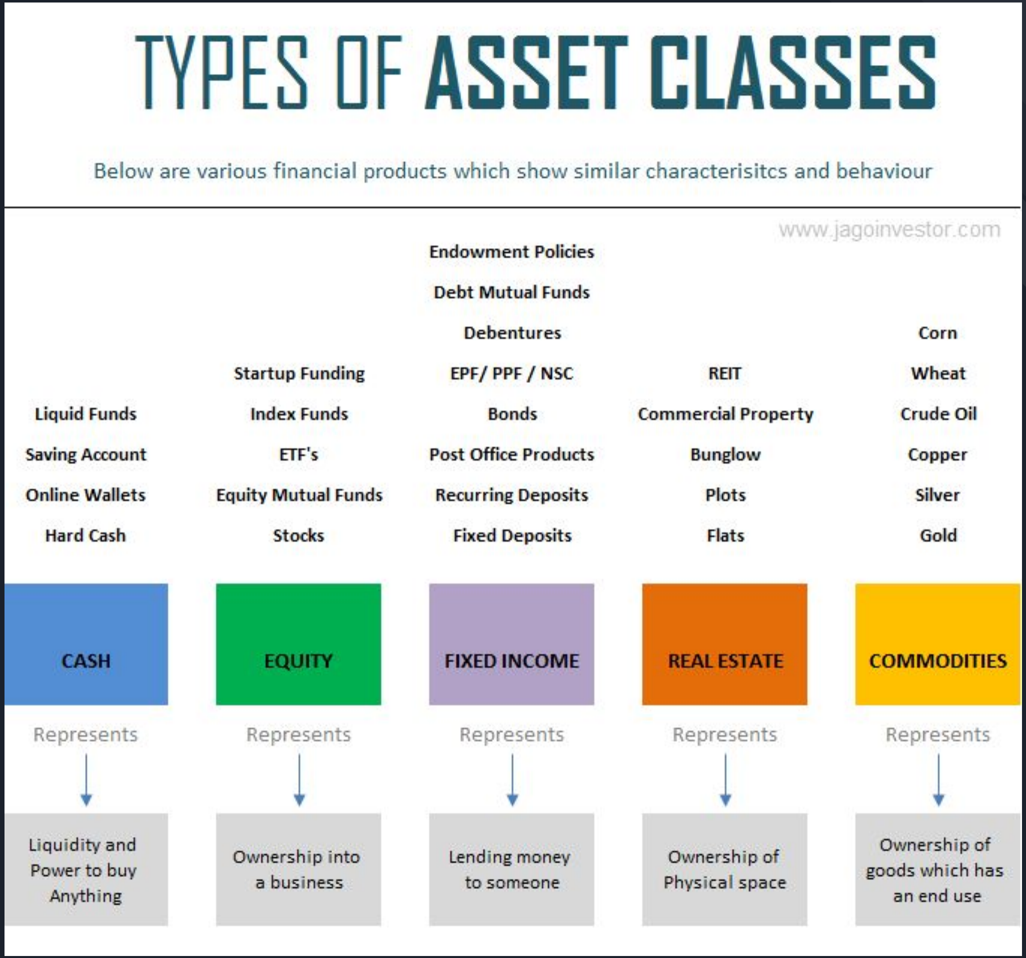
- Asset allocation is an investment portfolio technique that aims to balance risk by dividing assets among major asset classes such as cash, bonds, stocks, real estate, etc.
- Each asset class has different levels of return and risk, so each will behave differently over time.
- The goal of asset allocation is to maximize returns in your investment portfolio for the given level of risk.
- Asset allocation is one of the most important decisions that investors make.

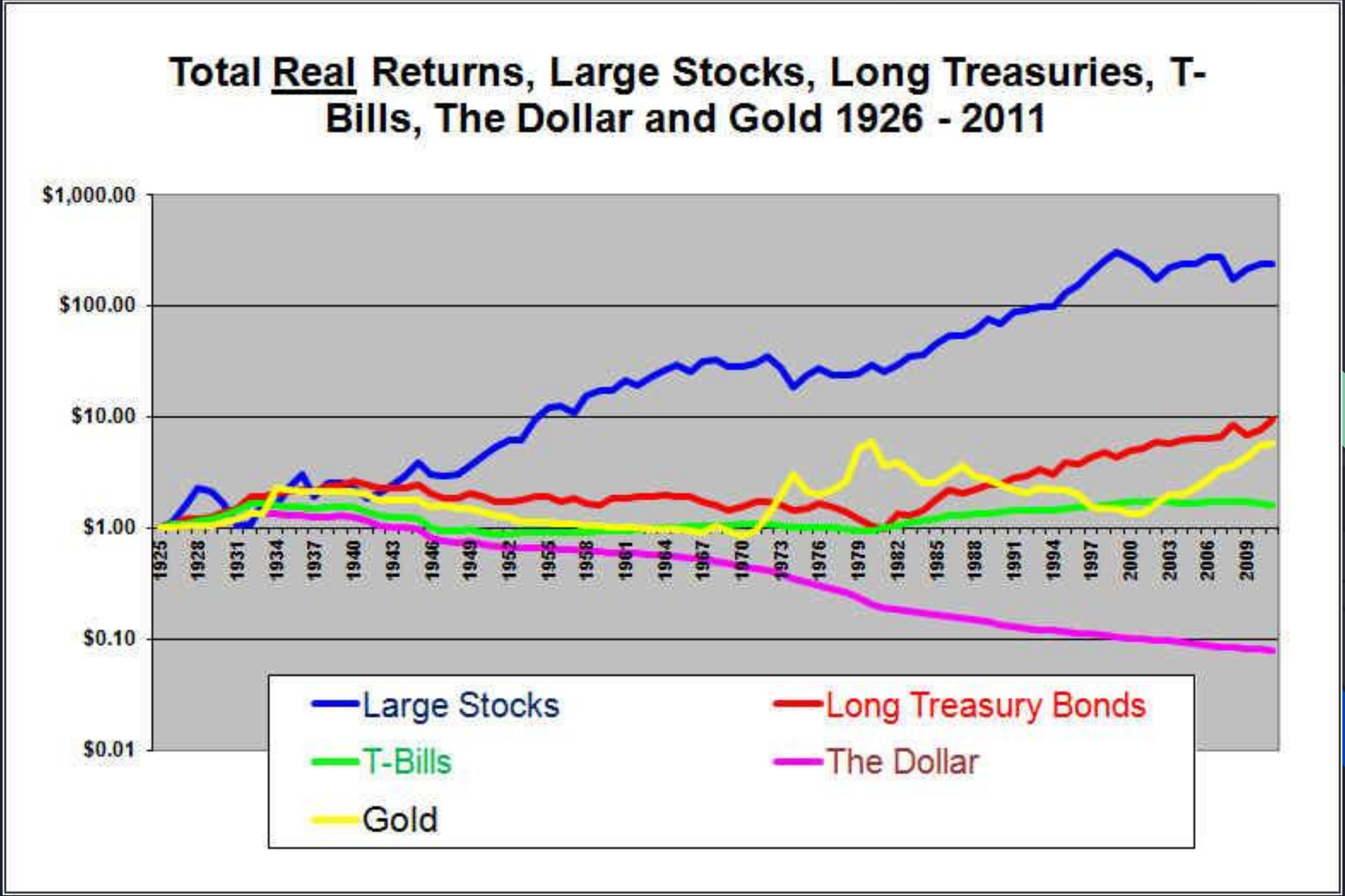
Why Asset Allocation

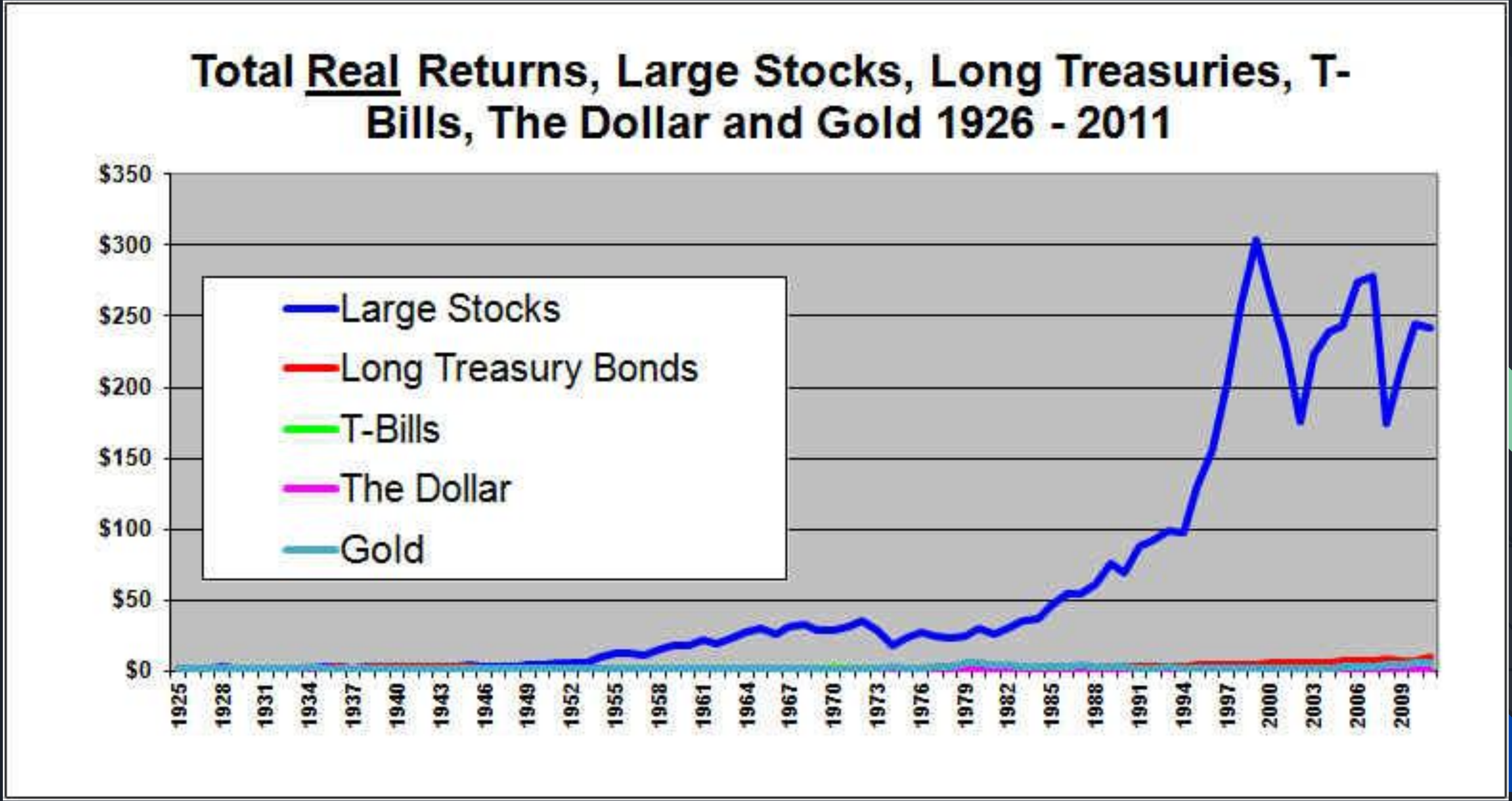
Proper asset allocation

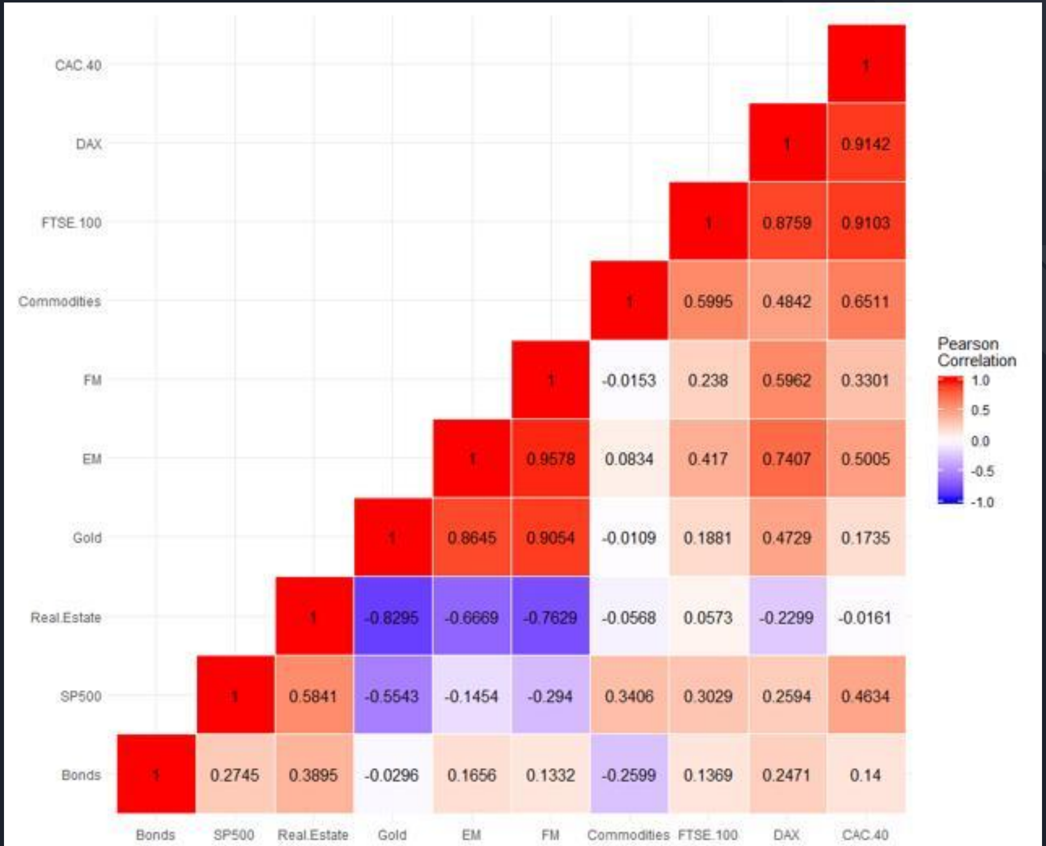
- one of the major determinant of your investment performance;
- will make you sleep better at night and make it less likely to have a knee-jerk reaction to market declines;
- makes it unnecessary to time the market;
- reduces the risk of your portfolio without sacrificing returns;
- allows to adjust portfolio risk over time.


ASSET ALLOCATION
WHAT
DIVIDING YOUR $$
INTO DIFFERENT INVESTMENTS
STOCKS
STOCKS
PORTFOLIO
BONDS
BONDS
CASH
OTHER
HOW
TIME HORIZON
RISK APPETITE
YOUR BEST %
5% CASH
35% BONDS
60% STOCKS
*SAMPLE PORTFOLIO
BENEFITS
BOOST RETURNS
REDUCE RISK
GAIN CONFIDENCE
STICK WITH PLAN
NapkinFinance.com


TYPES OF ASSET CLASSES
Below are various financial products which show similar characterisitcs and behaviour
www.jagoinvestor.com
Liquid Funds
Saving Account
Online Wallets
Hard Cash
CASH
Represents
Liquidity and Power to buy Anything
Startup Funding
Index Funds
ETF's
Equity Mutual Funds
Stocks
EQUITY
Represents
Ownership into a business
Endowment Policies
Debt Mutual Funds
Debentures
EPF/ PPF / NSC
Bonds
Post Office Products
Recurring Deposits
Fixed Deposits
FIXED INCOME
Represents
Lending money to someone
REIT
Commercial Property
Bunglow
Plots
Flats
REAL ESTATE
Represents
Ownership of Physical space
Corn
Wheat
Crude Oil
Copper
Silver
Gold
COMMODITIES
Represents
Ownership of goods which has an end use


Total Real Returns, Large Stocks, Long Treasuries, T-Bills, The Dollar and Gold 1926 - 2011
$1,000.00
$100.00
$10.00
$1.00
$0.10
$0.01
1925
1928
1931
1934
1937
1940
1943
1946
1949
1952
1955
1958
1961
1964
1967
1970
1973
1976
1979
1982
1985
1988
1991
1994
1997
2000
2003
2006
2009
Large Stocks
Long Treasury Bonds
T-Bills
The Dollar
Gold


Total Real Returns, Large Stocks, Long Treasuries, T-Bills, The Dollar and Gold 1926 - 2011
$350
$300
$250
$200
$150
$100
$50
$0
Large Stocks
Long Treasury Bonds
T-Bills
The Dollar
Gold
1925 1928 1931 1934 1937 1940 1943 1946 1949 1952 1955 1958 1961 1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994 1997 2000 2003 2006 2009



	Bonds	SP500	Real.Estate	Gold	EM	FM	Commodities	FTSE.100	DAX	CAC.40
CAC.40										1
DAX									1	0.9142
FTSE.100								1	0.8759	0.9103
Commodities							1	0.5995	0.4842	0.6511
FM						1	-0.0153	0.238	0.5962	0.3301
EM					1	0.9578	0.0834	0.417	0.7407	0.5005
Gold				1	0.8645	0.9054	-0.0109	0.1881	0.4729	0.1735
Real.Estate			1	-0.8295	-0.6669	-0.7629	-0.0568	0.0573	-0.2299	-0.0161
SP500		1	0.5841	-0.5543	-0.1454	-0.294	0.3406	0.3029	0.2594	0.4634
Bonds	1	0.2745	0.3895	-0.0296	0.1656	0.1332	-0.2599	0.1369	0.2471	0.14

Asset Correlation Matrix

Asset Class Returns

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
REIT 31.6%	EM 34.5%	REIT 35.1%	EM 39.8%	HG Bnd 5.2%	EM 79.0%	REIT 28.0%	REIT 8.3%	REIT 19.7%	Sm Cap 38.8%	REIT 28.0%	REIT 2.8%	Sm Cap 21.3%	EM 37.8%	Cash 2.0%
EM 26.0%	Int'l Stk 14.0%	EM 32.6%	Int'l Stk 11.6%	Cash 1.4%	HY Bnd 57.5%	Sm Cap 26.9%	HG Bnd 7.8%	EM 18.6%	Lg Cap 32.4%	Lg Cap 13.7%	Lg Cap 1.4%	HY Bnd 17.5%	Int'l 25.6%	HG Bnd 0.0%
Int'l Stk 20.7%	REIT 12.2%	Int'l Stk 26.9%	AA 7.6%	AA -22.4%	Int'l Stk 32.5%	EM 19.2%	HY Bnd 4.4%	Int'l Stk 17.9%	Int'l Stk 23.3%	AA 6.9%	HG Bnd 0.6%	Lg Cap 12.0%	Lg Cap 21.8%	HY Bnd -2.3%
Sm Cap 18.3%	AA 8.9%	Sm Cap 18.4%	HG Bnd 7.0%	HY Bnd -26.4%	REIT 28.0%	HY Bnd 15.2%	Lg Cap 2.1%	Sm Cap 16.4%	AA 11.5%	HG Bnd 6.0%	Cash 0.1%	EM 11.6%	Sm Cap 14.7%	REIT -4.0%
AA 14.1%	Lg Cap 4.9%	AA 16.7%	Lg Cap 5.5%	Sm Cap -33.8%	Sm Cap 27.2%	Lg Cap 15.1%	AA 0.3%	Lg Cap 16.0%	HY Bnd 7.4%	Sm Cap 4.9%	Int'l Stk -0.4%	REIT 8.6%	AA 14.6%	Lg Cap -4.4%
Lg Cap 10.9%	Sm Cap 4.6%	Lg Cap 15.8%	Cash 4.4%	Lg Cap -37.0%	Lg Cap 26.5%	AA 13.5%	Cash 0.1%	HY Bnd 15.6%	REIT 2.9%	HY Bnd 2.5%	AA -1.3%	AA 7.2%	REIT 8.7%	AA -5.6%
HY Bnd 10.9%	Cash 3.2%	HY Bnd 11.8%	HY Bnd 2.2%	REIT -37.7%	AA 24.6%	Int'l Stk 8.2%	Sm Cap -4.2%	AA 12.2%	Cash 0.1%	Cash 0.0%	Sm Cap -4.4%	HG Bnd 2.7%	HY Bnd 7.5%	Sm Cap -11.0%
HG Bnd 4.3%	HY Bnd 2.7%	Cash 4.7%	Sm Cap -1.6%	Int'l Stk -43.1%	HG Bnd 5.9%	HG Bnd 6.5%	Int'l Stk -11.7%	HG Bnd 4.2%	HG Bnd -2.0%	EM -1.8%	HY Bnd -4.6%	Int'l Stk 1.5%	HG Bnd 3.5%	Int'l Stk -13.4%
Cash 1.4%	HG Bnd 2.4%	HG Bnd 4.3%	REIT -15.7%	EM -53.2%	Cash 0.2%	Cash 0.2%	EM -18.2%	Cash 0.1%	EM -2.3%	Int'l Stk -4.5%	EM -14.6%	Cash 0.3%	Cash 1.0%	EM -14.3%

Abbr.	Asset Class – Index	Annual	Best	Worst
Lg Cap	Large Cap Stocks – S&P 500 Index	7.77%	32.4%	-37.0%
Sm Cap	Small Cap Stocks – Russell 2000 Index	7.49%	38.8%	-33.8%
Int'l Stk	International Developed Stocks – MSCI EAFE Index	5.22%	32.5%	-43.1%
EM	Emerging Market Stocks – MSCI Emerging Markets Index	8.26%	79.0%	-53.2%
REIT	REITs – FTSE NAREIT All Equity Index	8.52%	35.1%	-37.7%
HG Bnd	High Grade Bonds – Barclay's U.S. Aggregate Bond Index	3.87%	7.84%	-2.0%
HY Bnd	High Yield Bonds – BofAML US High Yield Master II Index	7.13%	57.5%	-26.4%
Cash	Cash – 3 Month Treasury Bill Rate	1.25%	4.7%	0.0%
AA	Asset Allocation Portfolio*	6.67%	24.6%	-22.4%

Past performance does not guarantee future returns. The historical performance shows changes in market trends across several asset classes over the past fifteen years. Returns represent total annual returns (reinvestment of all distributions) and does not include fees and expenses. The investments you choose should reflect your financial goals and risk tolerance. For assistance, talk to a financial professional. All data are as of 12/31/18.

*Asset Allocation Portfolio is made up of 15% large cap stocks, 15% international stocks, 10% small cap stocks, 10% emerging market stocks, 10% REITs, 40% high-grade bonds, and annual rebalancing.

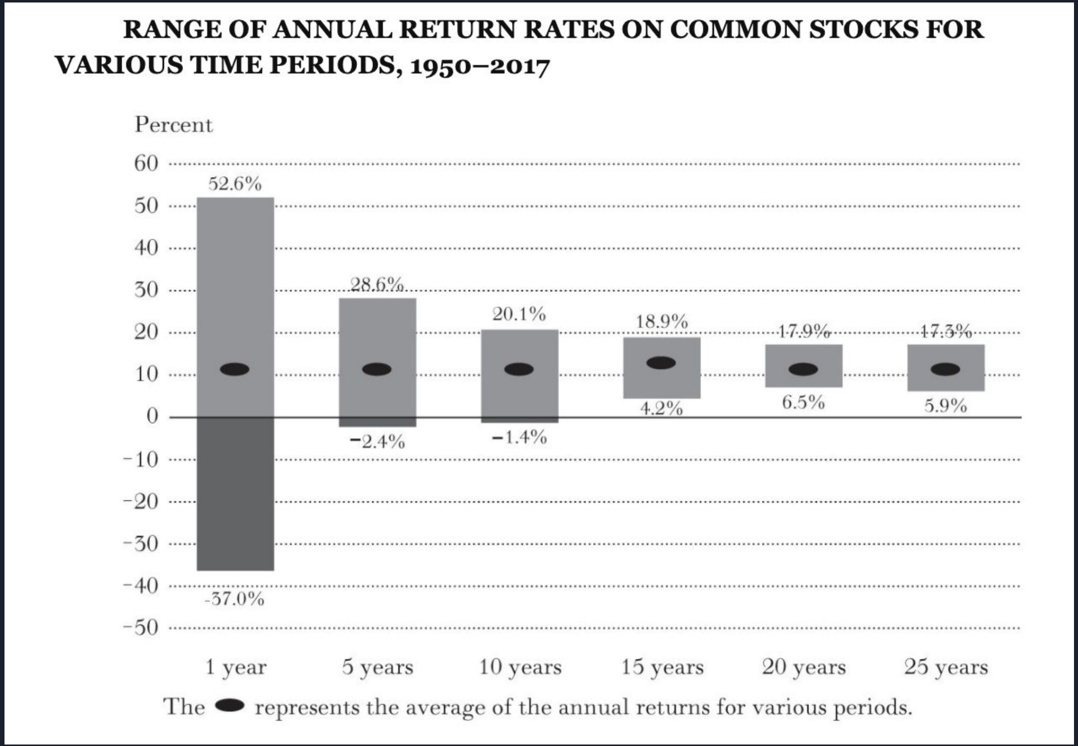
Allocating Assets to Equities

- Large vs. medium vs. small companies
- Growth vs. value companies
- U.S. vs. international stocks
- Developed markets vs. emerging markets
- By sector (technology, health care, telecommunications, financial)

Allocating Assets to Fixed Income

- U.S Government vs. U.S Corporate bonds
- Long vs. medium vs. short term bonds
- Domestic vs. International bonds
- Taxable vs. tax-free bonds

Time and Risk Relationship for Common Stocks



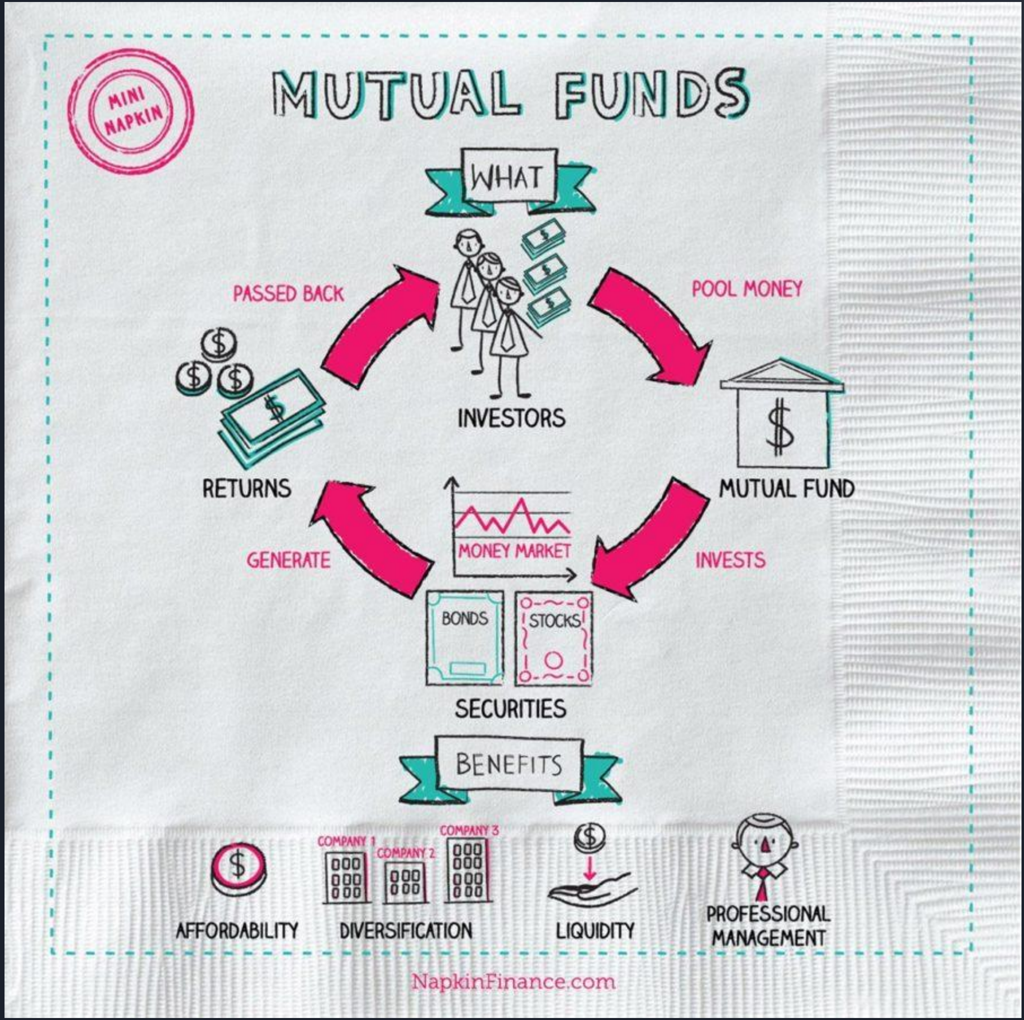
Time and Risk: Stocks vs Bonds

PROBABILITY THAT STOCKS OUTPERFORM BONDS (PERCENTAGE OF PERIODS SINCE 1802 WHEN RETURNS OF STOCKS EXCEED THE RETURN FROM BONDS)

Investment Period	*Percentage of periods when stocks have outperformed bonds*
1 Year	60.2
2 Years	64.7
5 Years	69.5
10 Years	79.7
20 Years	91.3
30 Years	99.4

Investment Vehicles

- Individual stocks and bonds
- Mutual funds
- Exchange-traded funds
- Advisor-managed portfolios
- Robo-advisors


MINI NAPKIN
MUTUAL FUNDS
WHAT
INVESTORS
POOL MONEY
MUTUAL FUND
INVESTS
MONEY MARKET
BONDS
STOCKS
SECURITIES
GENERATE
RETURNS
PASSED BACK
BENEFITS
AFFORDABILITY
COMPANY 1
COMPANY 2
COMPANY 3
DIVERSIFICATION
LIQUIDITY
PROFESSIONAL MANAGEMENT
NapkinFinance.com

Investment Costs

Mutual Fund Expense Ratio

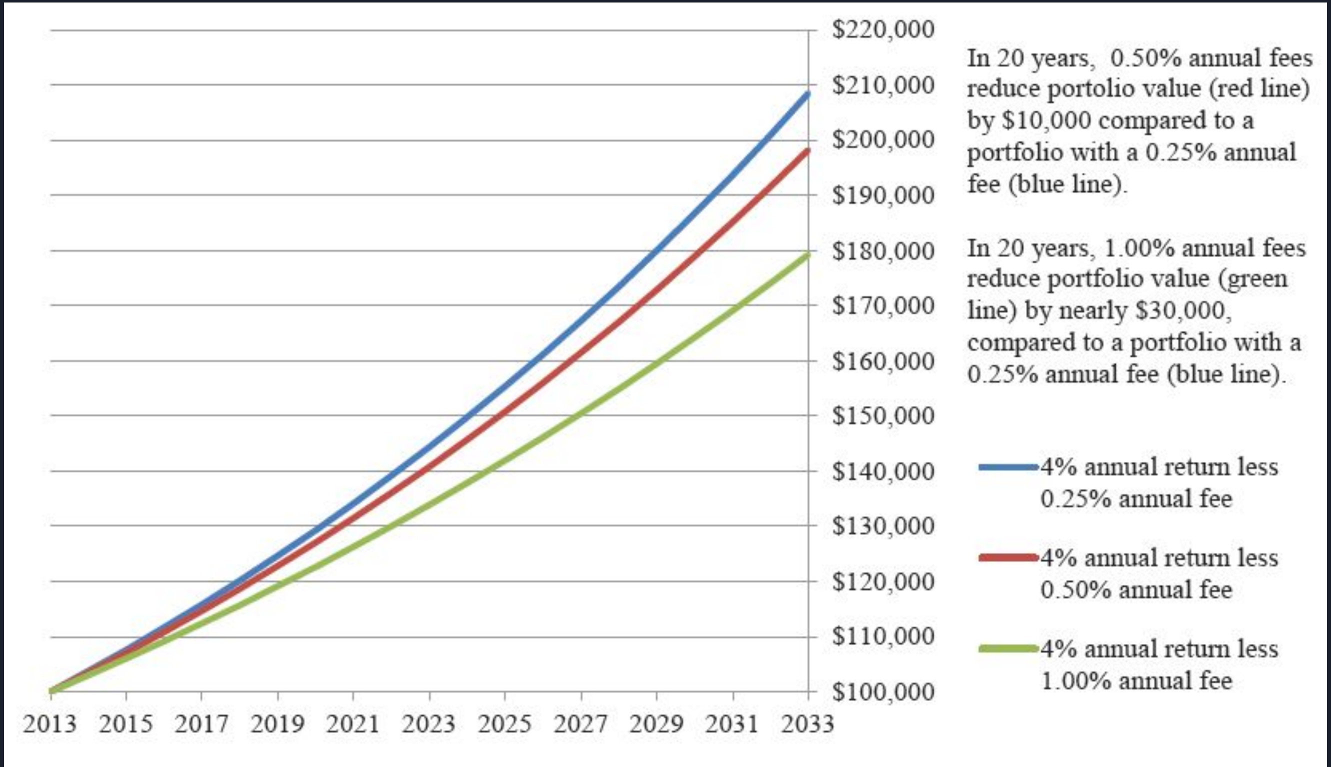
An expense ratio is an annual fee expressed as a percentage of your investment — or, like the term implies, the ratio of your investment that goes toward the fund's expenses.

Investment Cost Example

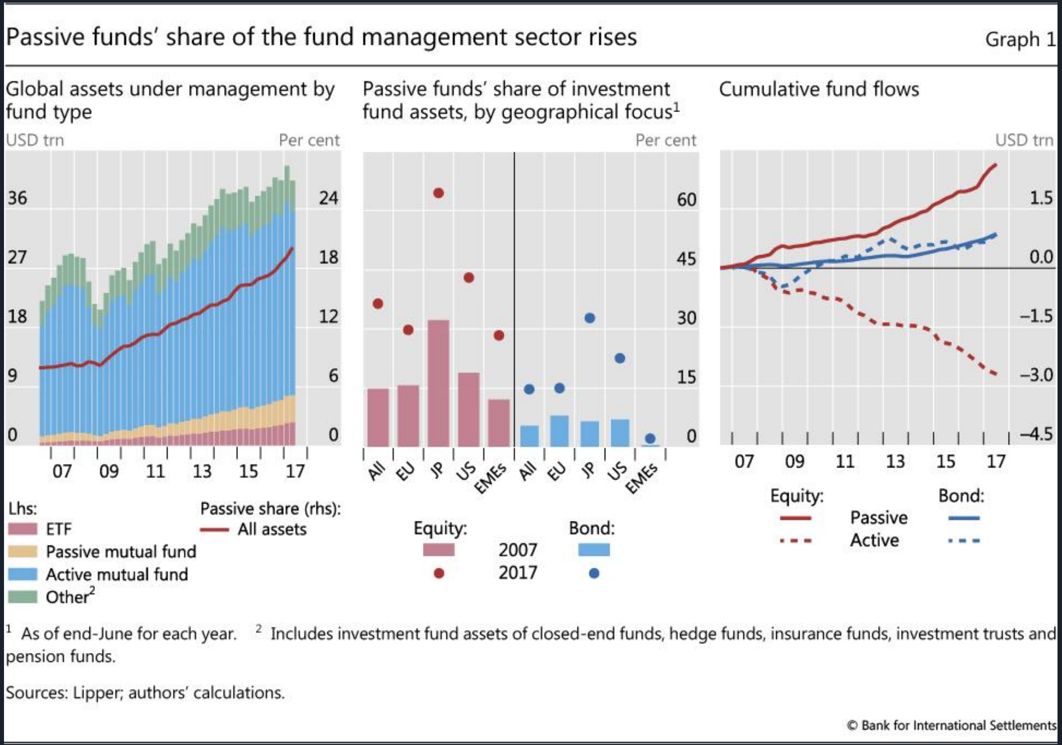
A \$10,000 portfolio in a mutual fund that has 1% expense ratio that grows 10% in 1 year:

\$10,000 + (10% - 1%) * \$10,000 = \$10,900

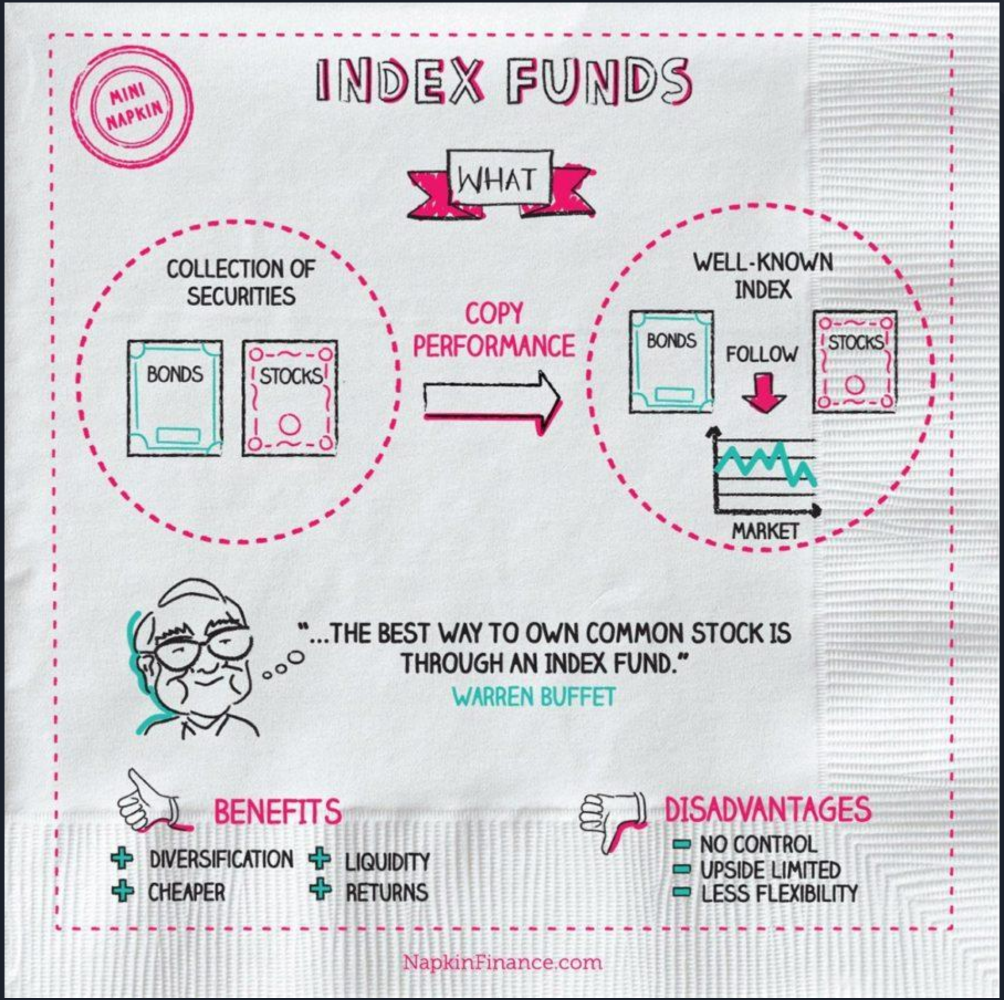
Impact of Fees on Performance



Passive vs Active Investing



Passive Investing



Financial Indexes

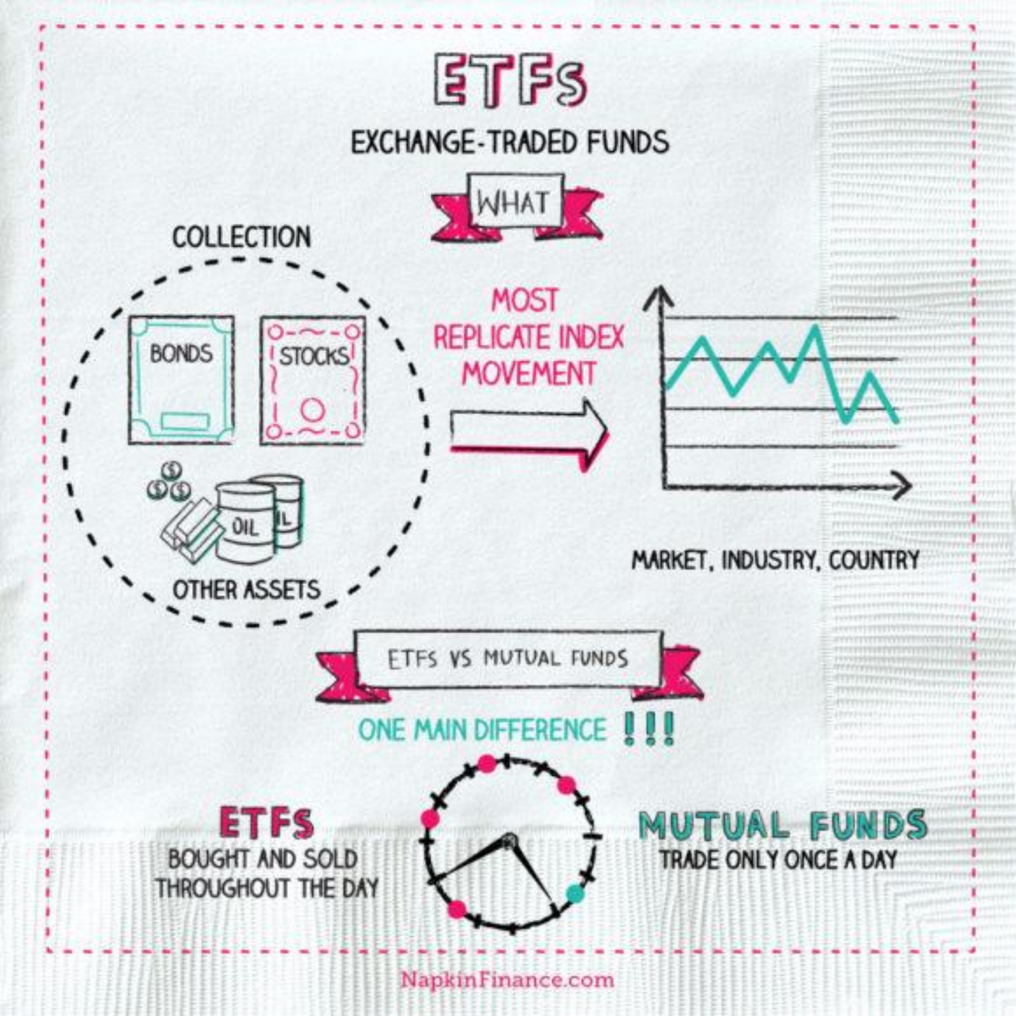
- There are approximately 5,000 U.S. indexes.
- The three most widely followed indexes in the U.S. are the S&P 500, Dow Jones Industrial Average, and Nasdaq Composite.
- The Wilshire 5000 includes all the stocks from the U.S. stock market.

S&P 500 Index

- The S&P 500 is an “index,” or collection of 500 widely held stocks on the New York Stock Exchange (NYSE) and NASDAQ.
- Companies based in countries outside the U.S. can be included in the index, but they must be listed on the NYSE or NASDAQ; in practice, though, the vast majority of S&P 500 companies are based in the U.S.
- It does not include private companies, so giants like Saudi Aramco, Ikea, and Cargill could never be there.
- Standard & Poor’s created the index to track overall stock market performance across a broad set of industries and companies.
- S&P first created an index to track a smaller number of stocks in 1923, and eventually expanded it to 500 stocks in 1957.


finviz
S&P 500 • 1 DAY PERFORMANCE • Sun FEB 28 2016 8:02 PM EST
TECHNOLOGY
INTERNET INFORMATION PR
GOOGL -0.58%
FB
YHOO +0.03
AKAM
TELECOM SERVICES - DOME
T
VZ
APPLICATION SOFT
CRM +0.43%
ORCL -0.89%
ADBE -0.09%
INTU -4.32
INFORMATION T
IBM
ACN +0.21%
FIS
NETWORKING &
CSCO -0.71%
COMMUNICA
QCOM -0.04%
DATA S
EMC +0.46%
DIVERSIFIE
TEL
SEMICO
BUSINESS SOFTWARE & SERV
MSFT -1.54%
CTSH -0.35%
ADP -0.30%
CA
SEMICONDUCTOR
INTC +0.61%
TXN +0.36%
AVGO +0.48%
WDC -0.23
STX
SEMICO
BRCM
ADI
HPQ +2.90%
DIVER
CCI -1.09
AMAT
MU
EA
ATVI
NLSN
SERVICES
ENTERTAINMENT - DIV
DIS -0.35%
CMCSA -1.06%
TWX 0.00%
FOXA -1.10%
CBS
VIAB
HOME IMPROVE
HD -0.47%
LOW +0.58
RESTAURANT
MCD -1.11%
YUM +0.65%
CMG
BUSINESS SE
PCLN -0.72%
MHFI
FISV
MCO
ADS
AIR DELIVERY &
UPS -0.29%
FDX +1.03%
RAILROADS
UNP +0.86%
CSX
NSC
CATV SYSTE
TWC -0.50
NFLX +0.28%
DISCOUNT, VARIETY S
WMT -2.25%
COST -3.26%
TGT -0.30%
DG
DRUG STO
WBA -0.44%
SPECIALTY
SBUX -0.70%
APPAREL
LB
JWN
GPS
ROST
DEPARTM
TJX +0.75%
M
KSS
DRUGS W
MCK +0.91
CAH +0.43
ABC
RESORTS
CCL -0.35%
RCL
LODGIN
EXPE
HOT
GROCE
KR -0.03%
LUV
SPECIALTY
EBAY 0.00
TYC
CATALOG & MAIL ORD
AMZN +0.01%
MAJOR AI
DAL -2.72
AAL
UAL
AUTO PA
BBY
SNI
HRB
SYY
BASIC MATERIALS
MAJOR INTEGRATED
XOM -0.32%
CVX
INDEPENDENT
COP +3.21%
OXY +0.21%
EOG -1.46%
APC +1.01%
PXD +2.39
HES
NBL
DVN
APA
OIL & GAS E
SLB
HAL +0.95
BHI
NOV
CHEMICALS -
DOW +1.33
PX
APD
OIL & GAS
KMI +0.06%
WMB -2.43
SE
AGRICU
DD +1.80%
MON +0.82
CF
SPECIALTY
LYB +2.54%
SHW +2.85
PPG
SIAL
OIL & GAS RE
PSX +0.43
VLO
MPC 0.00
TSO
FCX
NEM
HEALTHCARE
DRUG MANUFACTURERS - MAJOR
JNJ -0.56%
MRK -0.71%
BMY -1.24%
PFE -1.18%
ABBV -0.36%
LLY -1.63%
HEALTH CARE PLANS
UNH +0.11%
CVS -0.75%
ESRX +2.35%
AET +0.47%
ANTM +0.20
CI +0.66
MEDICAL APPLIANCE
MDT -0.48%
SYK -0.43%
BSX
ZBH +0.66
STJ +0.52
MEDICAL L
TMO +0.11%
A
MEDICAL I
BAX
BDX
BCR
BIOTECHNOLOGY
GILD -2.29%
AMGN +0.58%
CELG +1.00%
BIIB +0.82%
REGN +0.06%
ALXN -0.27%
VRTX +1.72
ABT
ISRG
EW
DRUGS - GENERIC
AGN +0.58%
MYL -0.59%
ZTS
HOSPITALS
HCA
DVA
ENDP
FINANCIAL
MONEY CENTER BANKS
WFC +0.67%
BAC +3.08%
JPM +0.93%
C
PNC +1.24%
STI
CREDIT SERVICES
V
AXP
MA
PYPL +2.04%
COF +1.17%
DFS -0.02
EFX
WU
INVESTMENT
GS
MS +2.15%
CME
ASSET MANA
BLK +0.10%
BK +2.24%
STT +1.22
AMP
BEN +1.18
NTRS
IVZ
REIT - RETAIL
SPG -0.80%
GGP
O
REGIONAL -
USB +0.38%
FITB
KEY
REIT - RE
AVB
ESS
REIT -
AMT +0.66%
INSURA
PROPERTY & CASUALTY INSURANCE
BRK-B -0.29%
AIG -0.55%
ACE
TRV -0.74%
ALL -0.14
HIG
CB
L
XL
LIFE INSURA
MET +1.70%
PRU
LNC
REIT - HE
BBT +2.49
ICE -2.08
REIT - IN
PSA
AFL -0.27
MTB
CBG
HST
CONSUMER GOODS
ELECTRONIC EQUIPMENT
AAPL +0.15%
BEVERAGES - SOFT DRINK
KO -2.31%
PEP -2.29%
MNST
DPS
PERSONAL PRODUCT
PG
CL -1.69%
KMB -1.65%
EL
CIGARETTES
PM
RAI
MO
PROCESSED &
GIS -1.90
CAG -0.94
CPB
MJN
K
SJM
FOOD - MAJ
KHC
TEXTILE - AP
VFC
UA
PVH
HBI
TEXTILE - AP
NKE +0.35%
CONFECTI
MDLZ -2.14%
BEVERA
STZ
AUTO MANUF
F
GM +0.44%
AUTO PA
JCI
ECL +2.51
ADM
CLX
NWL
PCAR +0.25
PACKAGIN
IP
BF-B -3.17
INDUSTRIAL GOODS
DIVERSIFIED MACHINERY
GE
MMM -0.45%
HON -1.11%
DHR +0.92%
ITW -0.05
ETN -0.02
ROP -0.39
IR
CMI -0.04
ROK
AME
AEROSPACE/DEFENSE PROD
BA +1.15%
UTX -0.39%
GD -0.10%
LMT
RTN -0.43
FARM &
CAT +0.60
DE
AEROS
NOC
GENER
EMR +1.54
DHI
PH
SWK
WASTE
WM
RSG
SRCL
METAL
PCP
WY
UTILITIES
ELECTRIC UTILITIES
DUK -3.15%
NEE -2.87%
D -2.52%
SO -2.37%
PPL -4.21
EIX -2.22
ED -2.90
XEL
FE
ETR
AEP
WEC
PCG
DTE
DIVERSIFIED UTI
EXC -0.78
SRE
ES

Passive Investing



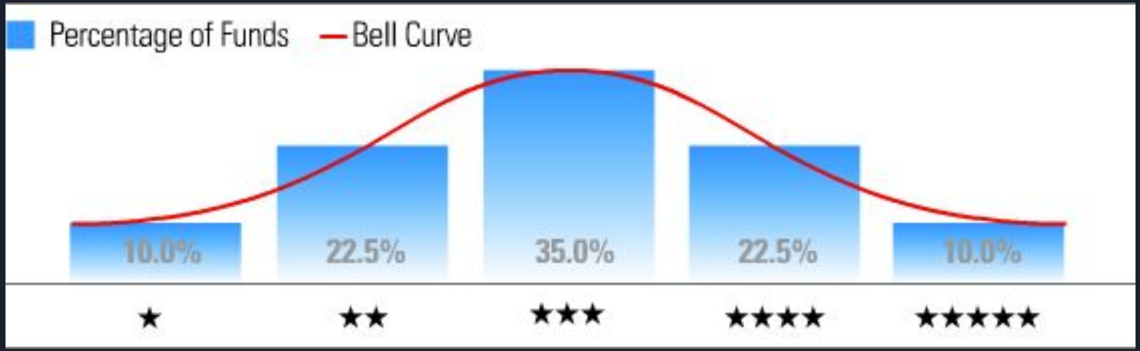
Active vs. Passive Investing

	PASSIVES	ACTIVES
PROS	**Pros of PASSIVE investments** • Returns are in-line with the index and minimise the risk of underperforming • Generally lower fees than active funds • Simplicity: investors know what they are getting • No reliance on the fund manager's ability and decision making	**Pros of ACTIVE investments** • Opportunity to outperform index • The ability to take defensive measures with the aim to limit downside risk if a market downturn is expected • Informed investment decisions based on experience, judgement and analysis of markets • Fund manager can be unconstrained, nimble and conviction-led
CONS	**Cons of PASSIVE Investments** • Unlikely to outperform index • In a downturn, the fund will be exposed to all of the index's downside • Buy/sell decisions based on index, not research, so managers cannot move out or avoid stocks that are out of favour	**Cons of ACTIVE investments** • Potential to underperform index if stock selection doesn't work out • Generally higher fees than passive funds • Investment style may be out of favour and adversely impact performance

Biggest Advantages of Index Investing

- Super low cost (0.05 % - 0.2% compared to 0.5% - 1.5% for active funds)
- Predictability (the fund will closely match index performance)

Measuring Investment Performance



Measuring Investment Performance

More information from T. Rowe Price

T. Rowe Price Growth Stock Fund PRGFX | ★★★★

FF Fund Family Data | Add to Portfolio | Get E-mail Alerts | Print This Page | PDF Report | Dat

Quote | Chart | Fund Analysis | Performance | **Ratings & Risk** | Management | Stewardship

Compare

Morningstar Risk & Rating Statistics PRGFX

05/31/2019	3-Year	5-Year	10-Year
Morningstar Return			
PRGFX	Above Average	Above Average	Above Average
Morningstar Risk			
PRGFX	Average	Above Average	Above Average
Morningstar Rating			
PRGFX	★★★★	★★★★	★★★★
# of Funds in Category	1229	1097	811

Rating, risk, and return values are relative to each fund's Morningstar Category. Click here to see our methodology.

Recipe for Long-Term Investment Success

Use asset allocation appropriate to the desired level of risk through quality low-cost investments.

Implementation Steps

1. Determine your level of risk based on the time horizon of your investment and your personal risk tolerance.
2. Find investment vehicle which can provide asset allocation based on your risk tolerance at low cost.
3. Use it for making regular investments.

Legendary Investors' Wisdom

“A Random Walk Down Wall Street”

by Burton Malkiel, a Princeton economist

- If you were to read one book on investing, read this one.
- The history of Market Bubbles starting with the Tulip Craze.
- Fundamental and Analysis Techniques practiced by the Wall Street
- Modern Portfolio Theory
- Behavioral Finance
- Efficient Market Theory
- Solid Advice for Long-Term Investing

“Common Sense on Mutual Funds: New Imperatives for the Intelligent Investor”
by John Bogle, founder of Vanguard Group

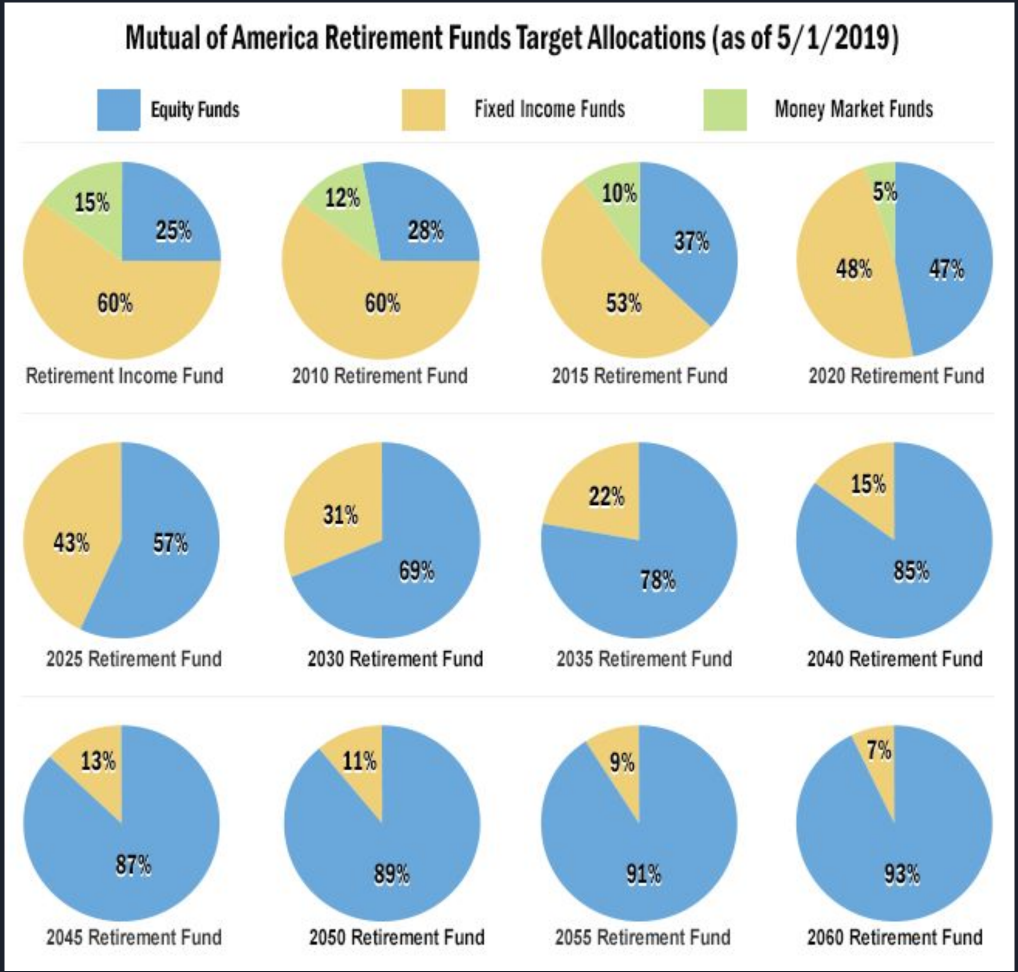
- Argues for investing in Mutual Funds instead of Individual Stocks
- Talks about importance of investment costs and asset allocation
- Argues for benefits of simplicity in investing
- Presents the case for Index Mutual Funds
- Discusses the notion of “Reversion to the Mean”
- A shorter version of this book is John Bogle’s “The Little Book of Common Sense Investing”

Warren Buffett on Investing

- In the 2013 Berkshire Hathaway shareholder letter, he had this to say about where he would suggest the trustee of his estate put his money when he died, "10% of the cash in short-term government bonds and 90% in a very low-cost S&P 500 index fund (I suggest Vanguard's)."
- When asked what advice he would give to investors, Buffett had this to say: "lethargy bordering on sloth remains the best investment style. The correct holding period for the stock market is forever."

Investment Vehicles for Asset Allocation

Target Date Mutual Funds



Pros and Cons of Target Date Funds

1. Pros
   a. One-stop shop
   b. Do asset allocation for you
   c. Asset allocation changes as you age
2. Cons
   a. Watch for high annual costs (e.g. T.Rowe Price target date funds charge ~0.7%)
   b. Watch for transaction fees (fee you pay when buying the fund)
   c. No tax optimization (like tax loss harvesting)

Life Strategy Mutual Funds

Which LifeStrategy Fund is best for you?

	LifeStrategy Income Fund	LifeStrategy Conservative Growth Fund	LifeStrategy Moderate Growth Fund	LifeStrategy Growth Fund
For investors who:	Care most about current income. Accept the limited growth potential that comes with limited exposure to stock market risk. Get details on LifeStrategy Income Fund	Care more about current income than long-term growth. Want some growth potential but with less exposure to stock market risk. Get details on LifeStrategy Conservative Growth Fund	Care more about long-term growth than current income. Want more growth potential and accept added exposure to stock market risk. Get details on LifeStrategy Moderate Growth Fund	Care most about long-term growth. Accept significant exposure to stock market risk in exchange for more growth potential. Get details on LifeStrategy Growth Fund
Investment time horizon	3 to 5 years	More than 5 years	More than 5 years	More than 5 years
Risk	1 **2** 3 4 5 Low to moderate	1 2 **3** 4 5 Moderate	1 2 **3** 4 5 Moderate to high	1 2 3 **4** 5 High
Target allocation	20% stocks 80% bonds	40% stocks 60% bonds	60% stocks 40% bonds	80% stocks 20% bonds

Do It Yourself

Investing on the Cheap | Four sample portfolios without commissions

The Wall Street Journal asked Rick Ferri, founder of investment adviser Portfolio Solutions LLC and author of "The ETF Book," to create model balanced portfolios using only no-commission ETFs at these four firms. Here's what he came up with.

Asset class		Schwab > 13 no-fee ETFs		Ameritrade > 101 no-fee ETFs		Vanguard > 64 no-fee ETFs		Fidelity > 31 no-fee ETFs	
Equity 60% / U.S. Equity 40%	U.S. broad market	Schwab U.S. Broad Market (SCHB)	25%	Vanguard Total Stock Market (VTI)	25%	Vanguard Total Stock Market (VTI)	25%	iShares Russell 3000 (IWV)	25%
	U.S. small-cap	Schwab U.S. Small-Cap (SCHA)	10%	iShares S&P SmallCap 600 (IJR)	10%	Vanguard S&P Small-Cap 600 (VIOO)	10%	iShares S&P SmallCap 600 (IJR)	10%
	U.S. real estate	Schwab U.S. REIT (SCHH)	5%	Vanguard REIT (VNQ)	5%	Vanguard REIT (VNQ)	5%	iShares Dow Jones U.S. Real Estate (IYR)	5%
International 20%	Int'l broad market	Schwab International Equity (SCHF)	10%	Vanguard Total International Stock (VXUS)	10%	Vanguard Total International Stock (VXUS)	10%	iShares MSCI ACWI ex US (ACWX)	10%
	Int'l small-cap	Schwab International Small-Cap Equity (SCHC)	5%	Vanguard FTSE All-World ex-US Small-Cap (VSS)	5%	Vanguard FTSE All-World ex-US Small-Cap (VSS)	5%	iShares MSCI EAFE Small Cap (SCZ)	5%
	Emerging markets	Schwab Emerging Markets Equity (SCHE)	5%	Vanguard MSCI Emerging Markets (VWO)	5%	Vanguard MSCI Emerging Markets (VWO)	5%	iShares MSCI Emerging Markets (EEM)	5%
Fixed Income 40%	Investment-grade			Vanguard Total Bond Market ETF (BND)	30%	Vanguard Total Bond Market ETF (BND)	40%	iShares Barclays Aggregate (AGG)	30%
	Inflation-protected	Schwab U.S. TIPS (SCHP)	10%	iShares Barclays TIPS Bond (TIP)	10%			iShares Barclays TIPS Bond (TIP)	10%
	Treasury bond	Schwab Intermediate-Term U.S. Treasury (SCHR)	30%						
	Portfolio annual expense	Weighted Schwab ETF expense ratio	0.13%	Weighted Ameritrade ETF expense ratio	0.15%	Weighted Vanguard ETF expense ratio	0.13%	Weighted Fidelity ETF expense ratio	0.27%
	Which trades are free?	Online only (phone, $5; broker-assisted, $25)		Online, phone and broker-assisted		Online, phone and broker-assisted		Online only (phone, $12.95; broker-assisted, $32.95)	

Note: Scottrade also offers no-commission ETFs, but it doesn't have international or bond funds.

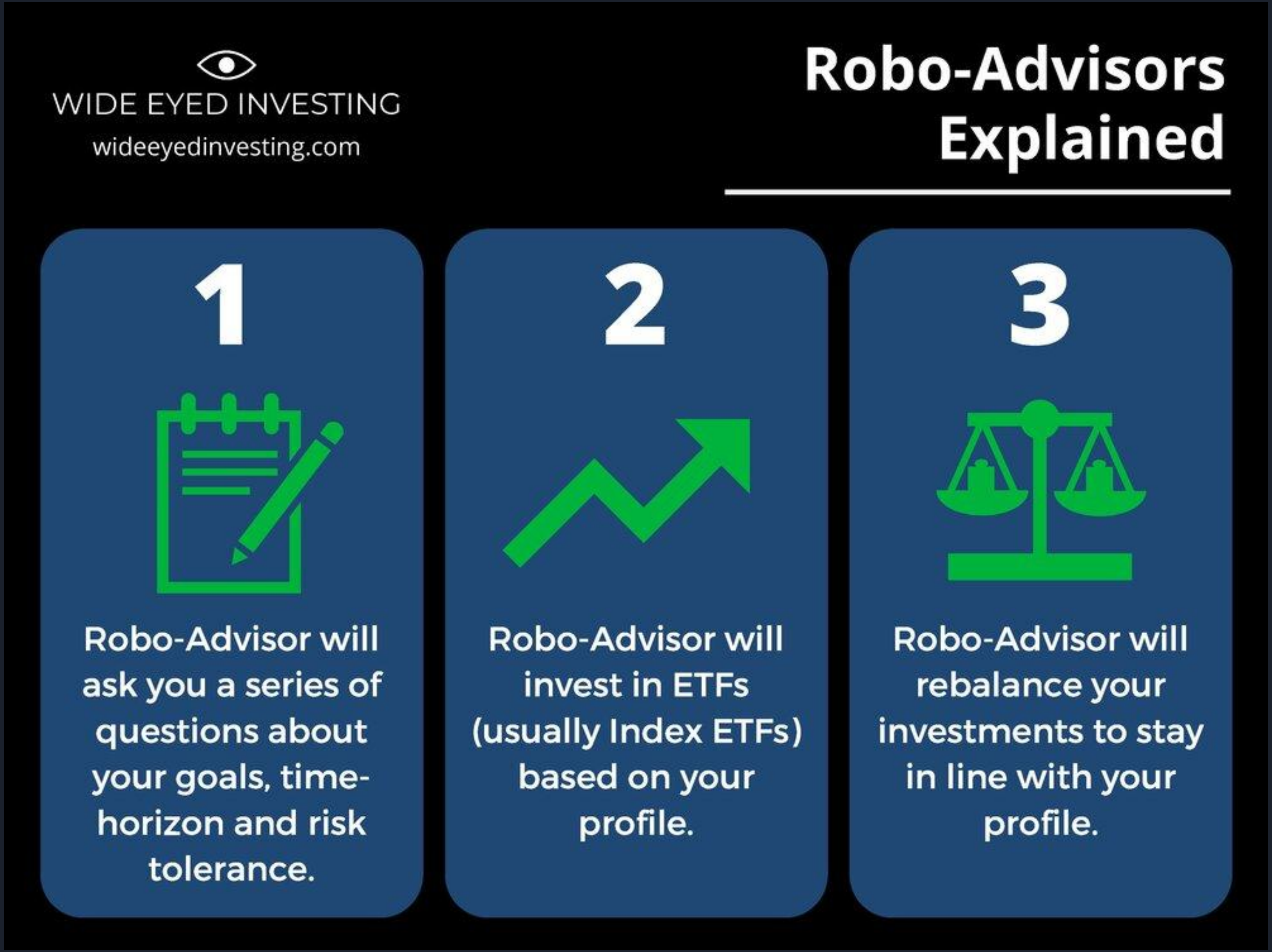
Pros and Cons of DIY Asset Allocation

- Pros
  - Low cost (if using low-cost ETFs like Vanguard)
  - No advisor fees
  - Flexibility to build your own portfolio
- Cons
  - Takes time to plan and execute
  - Hard to build an optimal portfolio by hand
  - Have to rebalance to maintain proper allocation over time
  - Have to watch the transaction costs (buying and selling security)

Robo Advisors

Robo-Advisors

- Robo-advisors are digital platforms that provide automated, algorithm-driven financial planning services with little to no human supervision.
- A typical robo-advisor collects information from clients about their financial situation and future goals through an online survey and then uses the data to offer advice and automatically invest client assets.


WIDE EYED INVESTING
wideeyedinvesting.com
Robo-Advisors Explained
1
Robo-Advisor will ask you a series of questions about your goals, time-horizon and risk tolerance.
2
Robo-Advisor will invest in ETFs (usually Index ETFs) based on your profile.
3
Robo-Advisor will rebalance your investments to stay in line with your profile.

Robo Advisor Comparison

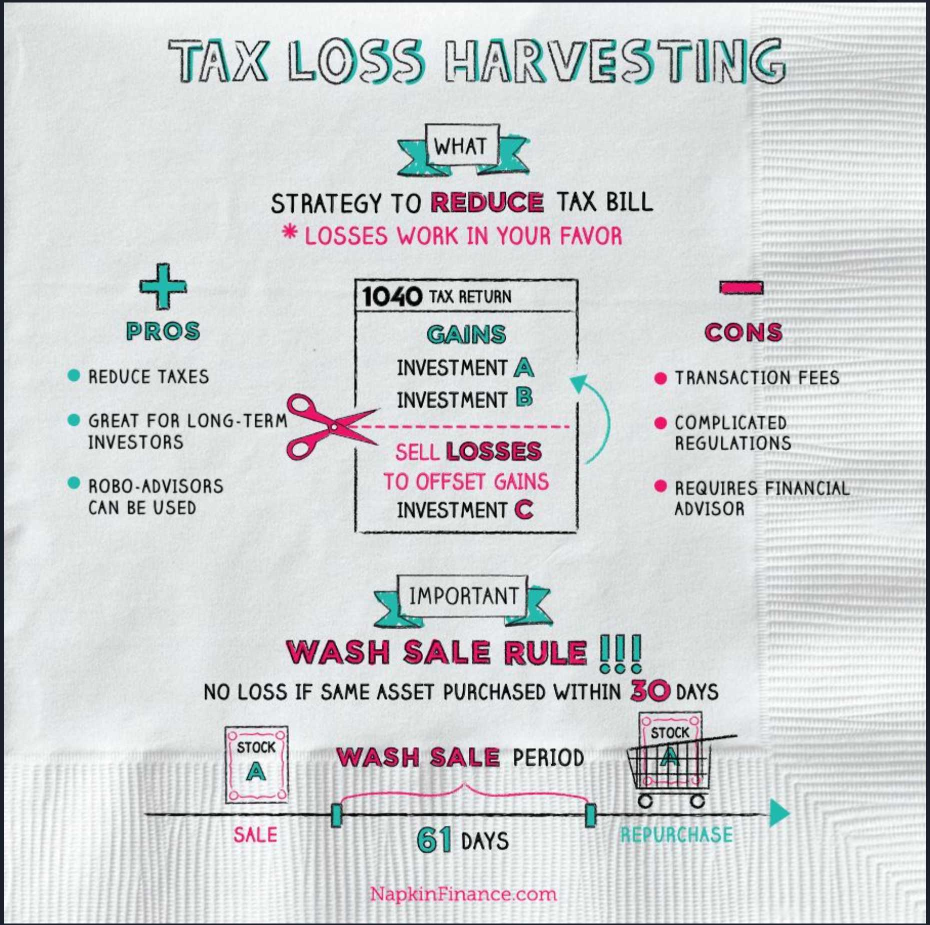
WHAT CAN A ROBO DO FOR YOU?

Among major robo-advisors, the more you have to invest, the more personalized the service you can get.

	NAME	MINIMUM INVESTMENT	HUMAN ADVICE AVAILABILITY	SPECIAL FEATURES AND SERVICES	SAMPLE PORTFOLIO (STOCKS/BONDS/CASH & OTHER)	ANNUAL COST
LEAST AMOUNT OF HUMAN CONTACT	Fidelity Go	$5,000	No investment advice. Account help via phone or online chat	BlackRock iShares ETFs available for taxable accounts	70%/29%/1%	0.35% or 0.38% of assets
	TD Ameritrade Essential Portfolios	$5,000	No investment advice. Account help via phone, chat, or email	Portfolio funds recom-mended by Morningstar	66/33/1	0.37%
SOME HUMAN CONTACT	E*Trade Adaptive Portfolio	$5,000 (IRA); $10,000 (tax-able acct.)	General, via phone, chat, or email	Some actively managed mutual funds	60/39/1	0.50%
	FutureAdvisor	$10,000	General, via phone, chat, or email	--	82/18/0	0.65%
	Schwab Intelligent Portfolios	$5,000	General, via phone, chat, or email	Relatively cash-heavy portfolios	65/21/14	0.17%
	Wealthfront	$500	General, via phone or email	529 plan management	69/17/14	0.37%
	WiseBanyan	$1	General, via phone or email	Tax-minimization strat-egy (0.25%/yr. extra)	77/23/0	0.12%
MORE HUMAN CONTACT	Betterment	0	General (< $100,000); personalized, with single adviser ($100,000+)	Tax minimization (for people w/both IRAs and taxable accounts)	90/10/0	0.38%
	Personal Capital	$25,000	Personalized, via video chat (<$100,000); two dedicated advisers ($100,000+)	Combination of individual stocks and ETFs used in portfolios	76/13/11	0.94%
MOST HUMAN CONTACT	Rebalance IRA	$100,000	Personalized, via an investment adviser and service representative	IRA accounts only	80/20/0	0.70%
	Vanguard Personal Advisor Services	$50,000	Personalized, with an adviser team (<$500,000); single adviser ($500,000+)	Advice, not manage-ment, for 401(k)s and 529 accounts	90/10/0	0.50%

Advantages of Robo Advisors

- One-stop shops
- Asset allocation based on risk tolerance
- Use questionnaires to gauge risk tolerance (personalization)
- Use low-cost ETFs to construct portfolios
- Computer models based on Modern Portfolio Theory
- Relatively low cost of services (0.25% at the low end)
- Human advisors are available at extra cost (0.4% - 0.9%)
- Tax Loss Harvesting included
- Online account management tools



TAX LOSS HARVESTING
WHAT
STRATEGY TO REDUCE TAX BILL
* LOSSES WORK IN YOUR FAVOR
PROS
REDUCE TAXES
GREAT FOR LONG-TERM INVESTORS
ROBO-ADVISORS CAN BE USED
1040 TAX RETURN
GAINS
INVESTMENT A
INVESTMENT B
SELL LOSSES TO OFFSET GAINS
INVESTMENT C
CONS
TRANSACTION FEES
COMPLICATED REGULATIONS
REQUIRES FINANCIAL ADVISOR
IMPORTANT
WASH SALE RULE !!!
NO LOSS IF SAME ASSET PURCHASED WITHIN 30 DAYS
STOCK A
WASH SALE PERIOD
STOCK A
SALE
61 DAYS
REPURCHASE
NapkinFinance.com

Robo-Advisory Perceptions

What clients think they get...

What clients <u>actually</u> get....

Potential Drawbacks of Robo Advisors

- They are not free (0.25%+ fee on top of investment fees of underlying securities, usually under 0.1%).
- If you get a service with human advisors (Betterment, Vanguard, Personal Capital), the cost is even higher.
- Their computer models are not guaranteed to work.
- Online-only robo advisors (Wealthfront) provide little or no human advice.
- Watch for conflicts of interest.

Traditional Advisors

Advantages

- Personalized approach
- Full-service financial planning

Drawbacks

- Expensive (1% - 1.5% of assets under management)
- Unlikely to outperform Robo Advisors charging 0.25%
- May involve conflicts of interest (selling financial and insurance products you do not need, which make the advisor a lot of money).

Recap

I have extra money to invest.

Where should I invest it and when?

Define your risk tolerance

- Investment time horizon
  - the longer, the more risk can be tolerated
- Personal preference
  - how will you take 20% drop in your portfolio over any given year
- Risk level affects how aggressive you portfolio should be
  - determines equity portfolio of your portfolio

Find an Investment Vehicle

- Simplicity (one-stop shop)
- Transparency (you understand where your money is invested)
- Low cost (below 0.5% of assets)
- Reputation (of serving the customers rather than swindling them)

Investment Vehicle Choices

- Robo Advisors (Betterment, Wealthfront)
- Target date mutual funds (Vanguard, Fidelity)
- DIY ETF Portfolios (bought through a brokerage like Schwab, E*Trade)
- Use sites like NerdWallet to read reviews of these types of companies

Investor Behavioral Patterns

- Add to your portfolio on a regular basis
- Do not try to time the market
- If you have a lump sum to invest, use dollar-cost averaging
- Do not let your emotions dictate your investment decisions
- Your emotions will make you buy high and sell low
- Set automatic contributions to avoid emotional decisions
- Buy and hold

“No one pretends that democracy is perfect or all-wise. Indeed it has been said that democracy is the worst form of Government except for all those other forms that have been tried from time to time.”

Winston Churchill