FN452: Asset management and portfolio analysis
Introduction: Asset class, investment policy statements, and investor types

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Content

- Financial assets
- Financial markets and economy
- Investment management process
- Investor types
- Mutual funds

Financial assets

- Investment instruments
  - Debt or bond securities
    - Money market instruments
    - Government bonds and Central bank bonds (e.g. BOT bonds)
    - Corporate bonds
  - Equity securities
    - Common stocks
    - Preferred stocks
  - Derivative securities

Money market instruments

- Treasury bills and Central bank bills
  - Issuer: Ministry of Finance or Bank of Thailand
  - Liquidity: High
  - Maturity: Less than one year
  - Default risk: None
  - Interest type: Discount
    - For example: US Treasury maturing in 6 months has a face value of $10,000. It is being sold at $9,877.25.
    - What is the earning from investment in this security?
- Other money market instruments: commercial paper, interbank loan, savings or fixed deposit

Long-term debt instruments

- Government bonds
  - No default risk but still have interest rate risk
  - Interest type: most semi-annually
- State own enterprise (SOE) bonds
- Corporate bonds
  - Investment grade vs. speculative grade
  - The riskiness depends on each company's financial situation
  - The interest on these bonds will vary depending on risk

Equity markets

- Common stocks
  - Have voting rights and may receive dividends
  - Residual claim – Stockholders are the last in line of all those claim on the assets and income of the corporation
  - Limited liability – The most shareholders can lose in event of the failure of the corporation is their original investment
- Preferred stocks
  - Similar to bond but no voting rights
  - Similar to stock but firms have no obligation to pay dividends
  - Priority over common stock

Investment management process

- Objectives and constraints of investment
- Investor risk profile
- Strategic asset allocation
- Capital market expectations
- Tactical asset allocation, security selection, and portfolio construction
- Monitoring, portfolio rebalancing, portfolio performance evaluation, and portfolio adjustment

Investment objectives and constraints

- **Investment objectives**
  - Return requirements
  - Risk tolerance
- **Investment constraints**
  - Liquidity
  - Investment horizon
  - Laws and regulations
  - Tax considerations
  - Unique needs

Risk profile

- **SEC investor survey**

  https://market.sec.or.th/EVENTS/investorSurvey.aspx

- **Vanguard investor questionnaire**

  https://retirementplans.vanguard.com/VGApp/pe/PubQuizActivity?
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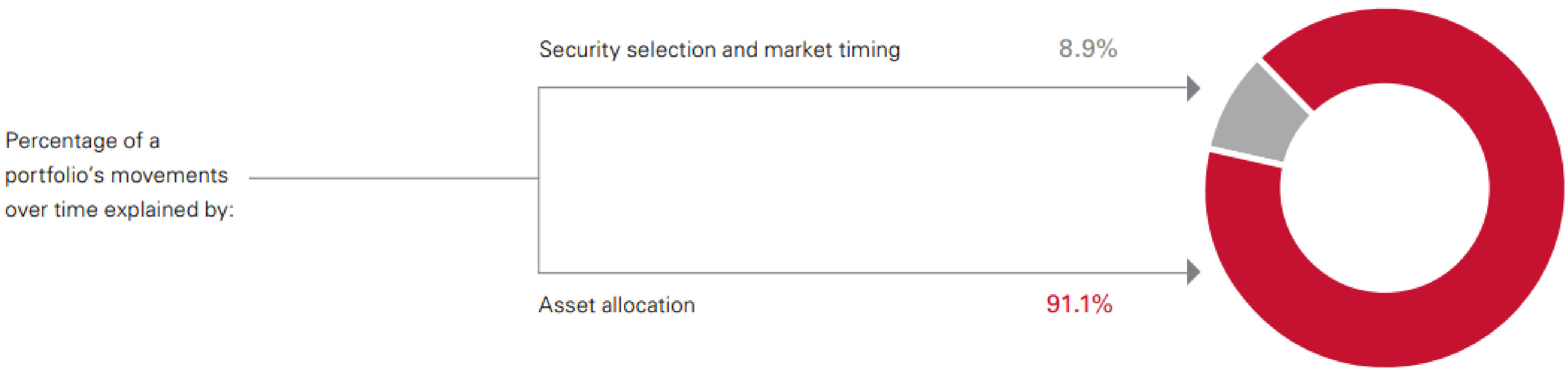
Strategic asset allocation

Investment outcomes are largely determined by the long-term mixture of assets in a portfolio



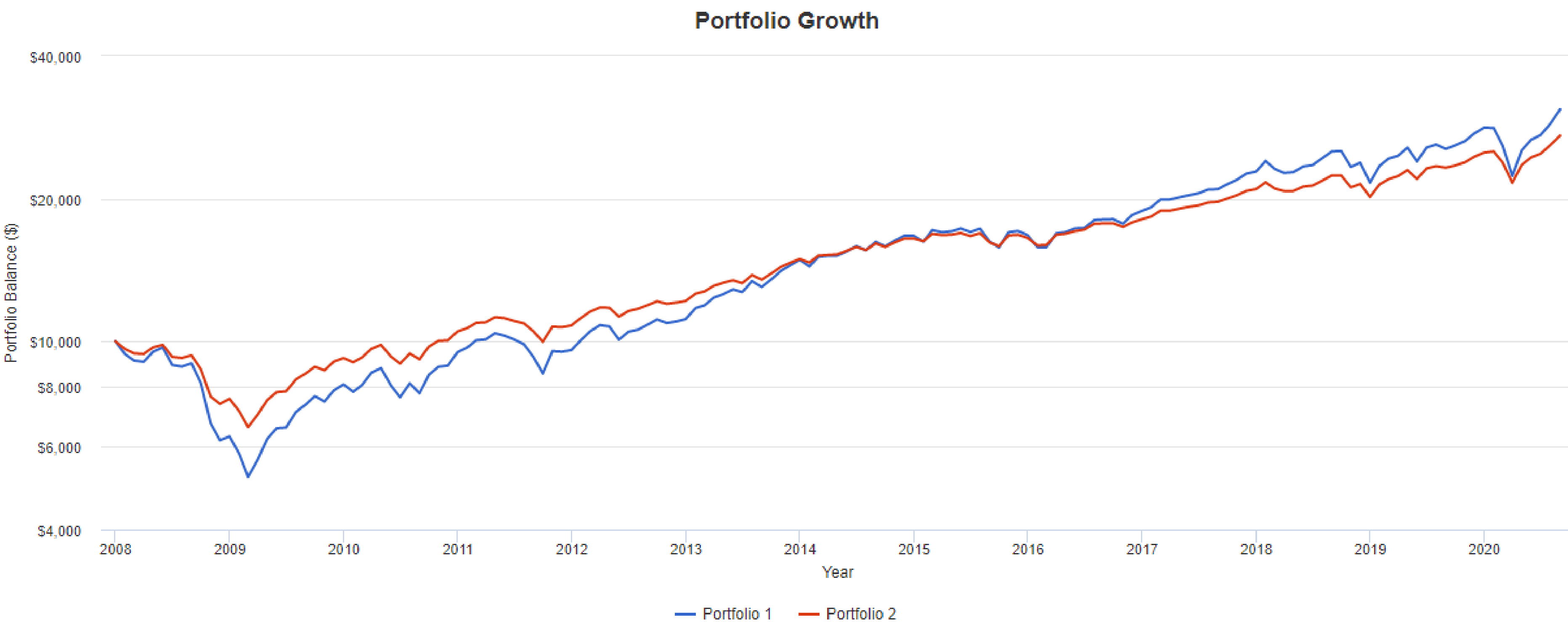
Notes: Calculations are based on monthly returns for 709 American funds from January 1990 to September 2015. More details of the methodology were presented in Scott et al. (2017).

Source: Vanguard's principles for investing success (2020)

Strategic asset allocation

Portfolio Returns

Portfolio	Initial Balance	Final Balance	CAGR	Stdev	Best Year	Worst Year	Max. Drawdown	Sharpe Ratio	Sortino Ratio	US Mkt Correlation
Portfolio 1	$10,000	$30,870	9.31%	16.37%	33.35%	-37.04%	-48.27%	0.59	0.85	1.00
Portfolio 2	$10,000	$27,164	8.21%	11.29%	24.04%	-24.41%	-34.11%	0.70	1.03	1.00

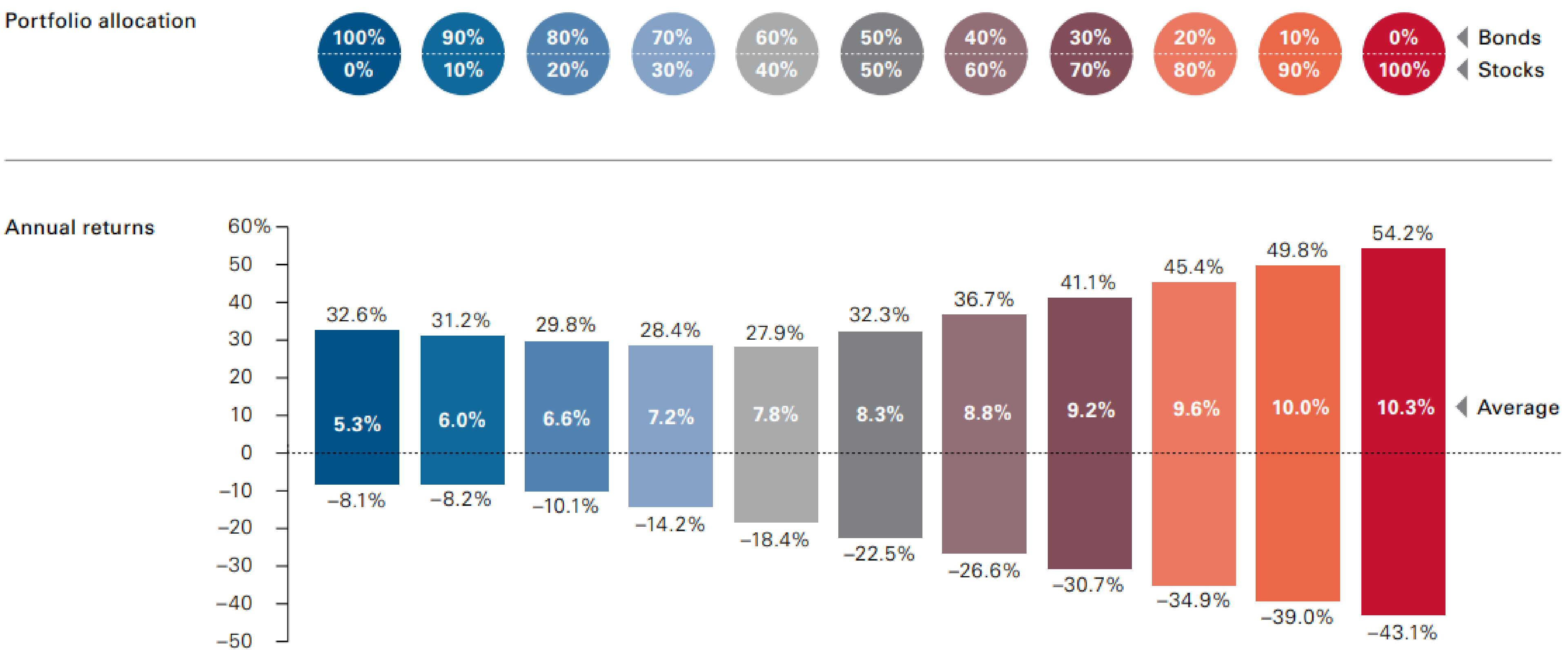


Source: https://www.portfoliovisualizer.com/backtest-portfolio#analysisResults

Strategic asset allocation

The mix of assets defines the spectrum of returns

Best, worst, and average returns for various stock/bond allocations, 1926–2019



Notes: Stocks are represented by the Standard & Poor's 90 Index from 1926 to March 3, 1957; the S&P 500 Index from March 4, 1957, through 1974; the Wilshire 5000 Index from 1975 through April 22, 2005; and the MSCI US Broad Market Index thereafter. Bonds are represented by the S&P High Grade Corporate Index from 1926 through 1968; the Citigroup High Grade Index from 1969 through 1972; the Bloomberg Barclays U.S. Long Credit AA Index from 1973 through 1975; and the Bloomberg Barclays U.S. Aggregate Bond Index thereafter. Data are through December 31, 2019.

Source: Vanguard's principles for investing success (2020)

Strategic asset allocation

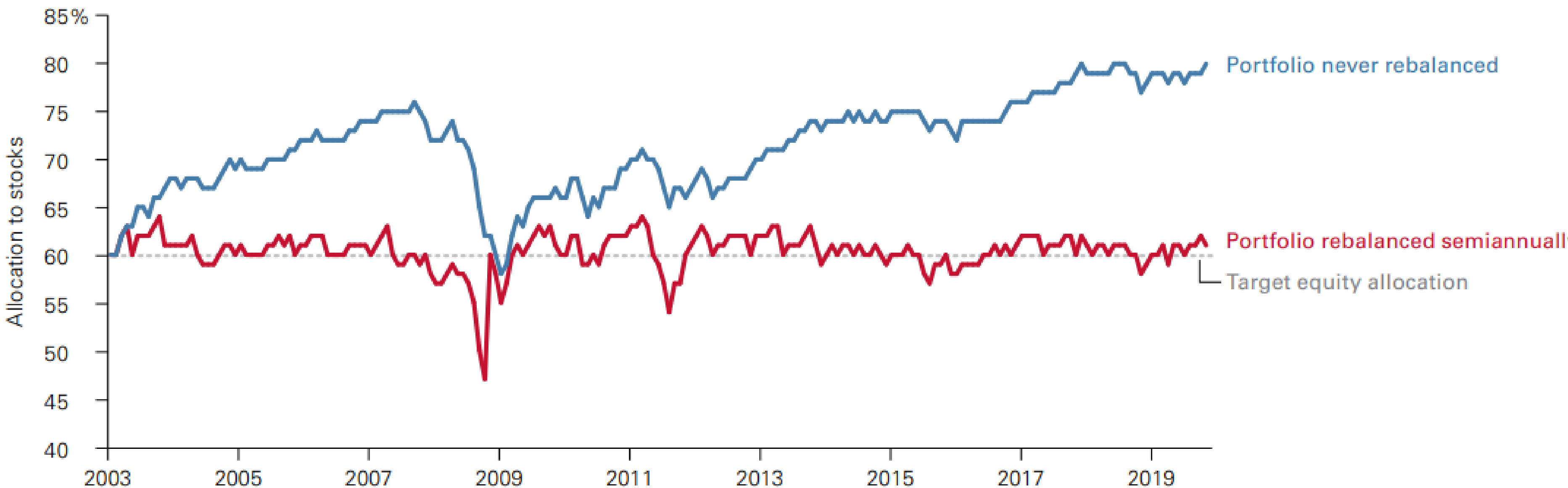
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
REIT 35.1%	EM 39.8%	HG Bnd 5.2%	EM 79.0%	REIT 28.0%	REIT 8.3%	REIT 19.7%	Sm Cap 38.8%	REIT 28.0%	REIT 2.8%	Sm Cap 21.3%	EM 37.8%	Cash 1.8%	Lg Cap 31.5%	Sm Cap 20.0%
EM 32.6%	Int'l Stk 11.6%	Cash 1.7%	HY Bnd 57.5%	Sm Cap 26.9%	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%	REIT 28.7%	EM 18.7%
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 25.5%	Lg Cap 18.4%
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 0.0%	EM 11.6%	Sm Cap 14.7%	REIT -4.0%	Int'l Stk 22.7%	AA 9.8%
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%	AA 18.9%	Int'l Stk 8.3%
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%	EM 18.9%	HY Bnd 7.5%
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%	HY Bnd 14.4%	HG Bnd 6.1%
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%	HG Bnd 8.7%	Cash 0.6%
HG Bnd 4.3%	REIT -15.7%	EM -53.2%	Cash 0.1%	Cash 0.1%	EM -18.2%	Cash 0.1%	EM -2.3%	Int'l Stk -4.5%	EM -14.6%	Cash 0.3%	Cash 0.8%	EM -14.3%	Cash 2.2%	REIT -5.1%

Source: https://novelinvestor.com/asset-class-returns/

Portfolio rebalancing

The importance of maintaining discipline: Failure to rebalance can increase an investor's exposure to risk

Changes in stock exposure for a rebalanced portfolio and a "drifting portfolio," 2003–2019



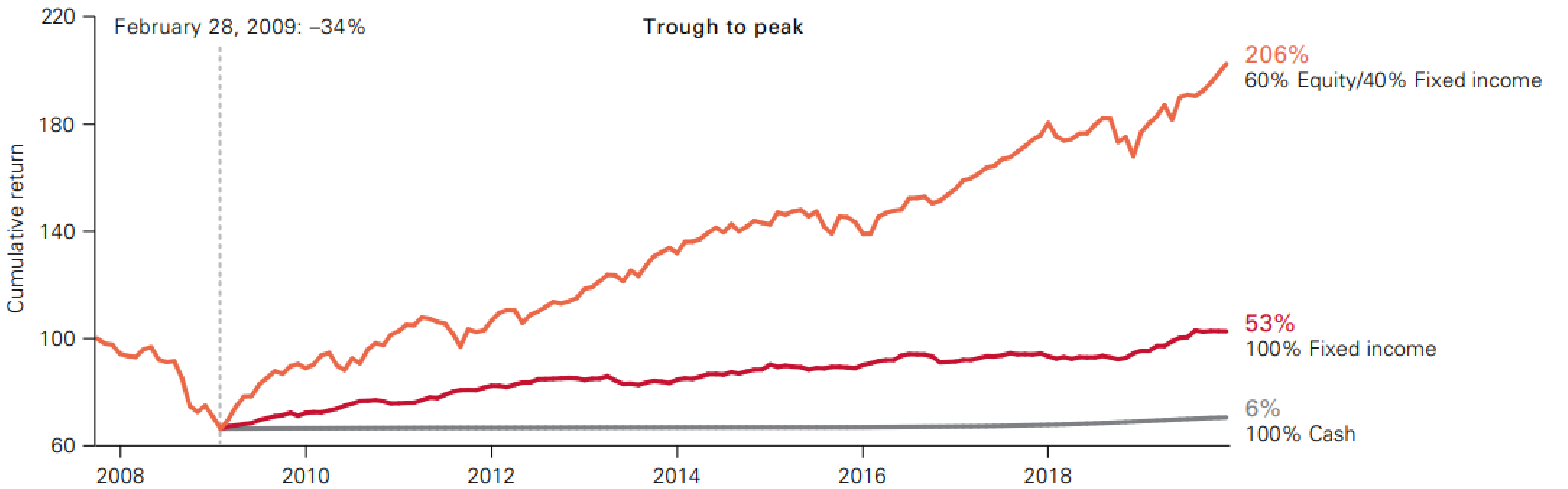
Notes: The initial allocation for both portfolios is 42% U.S. stocks, 18% international stocks, and 40% U.S. bonds. The rebalanced portfolio is returned to this allocation at the end of each June and December. Returns for the U.S. stock allocation are based on the Dow Jones U.S. Total Stock Market Index. Returns for the international stock allocation are based on the MSCI All Country World Index ex USA, and returns for the bond allocation are based on the Bloomberg Barclays U.S. Aggregate Bond Index.

Source: Vanguard's principles for investing success (2020)

Portfolio rebalancing

The importance of maintaining discipline: Reacting to market volatility can jeopardize returns

What if the "drifting" investor fled from equities after the 2008 plunge and invested 100% in either fixed income or cash?



Notes: October 31, 2007, represents the equity peak of the period, and has been indexed to 100. The initial allocation for both portfolios is 42% U.S. stocks, 18% international stocks, and 40% U.S. bonds. It is assumed that all dividends and income are reinvested in the respective index. The rebalanced portfolio is returned to a 60% stock/40% fixed income allocation at month-end. Returns for the U.S. stock allocation are based on the MSCI US Broad Market Index. Returns for the international stock allocation are based on the MSCI All Country World Index ex USA. Returns for the bond allocation are based on the Bloomberg Barclays U.S. Aggregate Bond Index, and returns for the cash allocation are based on the Bloomberg Barclays 3 Month US Treasury Bellwethers.

Source: Vanguard's principles for investing success (2020)

Example of an investment plan

Objective	Save $1 million for retirement, adjusted for inflation.
Constraints	30-year horizon.
	Moderate tolerance for market volatility and loss; no tolerance for nontraditional risks.[1]
	Current portfolio value: $50,000.
	Monthly net income of $4,000; monthly expenses of $3,000.
	Effect of taxes on returns.
Saving or spending target	Willing to contribute $5,000 in the first year.
	Intention to raise the contribution by $500 per year, to a maximum of $10,000 annually.
Asset allocation target	70% allocated to diversified stock funds; 30% allocated to diversified bond funds.
	Allocations to foreign investments as appropriate.
Rebalancing methodology	Rebalance annually.
Monitoring and evaluation	Periodically evaluate current portfolio value relative to savings target, return expectations, and long-term objective.
	Adjust as needed.

This example is completely hypothetical. It does not represent any real investor and should not be taken as a guide. Depending on an actual investor's circumstances, such a plan or investment policy statement could be expanded or consolidated. For example, many financial advisors or institutions may find value in outlining the investment strategy, i.e., specifying whether tactical asset allocation will be employed, whether actively or passively managed funds will be used, and the like.

Source: Vanguard's principles for investing success (2020)

Investor types

- Individual investor
- Mutual fund
- Retirement fund
- Foundation fund and Endowment fund (e.g. University fund)
- Life insurer and Non-life insurer
- Commercial bank

Mutual fund types

Mutual fund types by policy or asset class

- Money market fund
- Bond fund
- Mixed fund and flexible fund
- Equity fund

Mutual fund types by specific classification

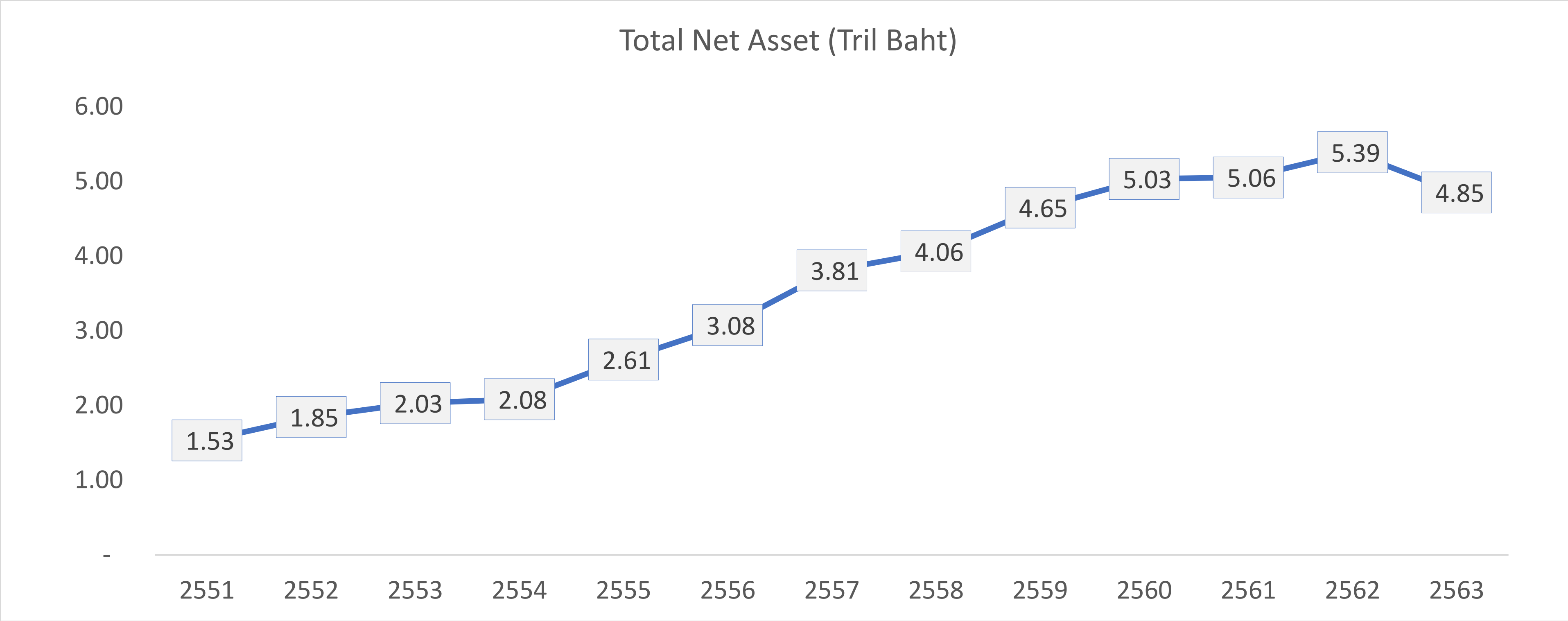
- Sector fund
- Foreign investment fund
- Alternative investment fund
- Index fund
- Exchange-traded fund (ETF)

Mutual fund types

Retirement fund

- Social security fund
- Provident fund (PVD)
- Government pension fund)
- Retirement mutual fund (RMF)
- Super saving fund (SSF) and Long-term equity fund (LTF)

Mutual fund types



Source: AIMC

Mutual fund types

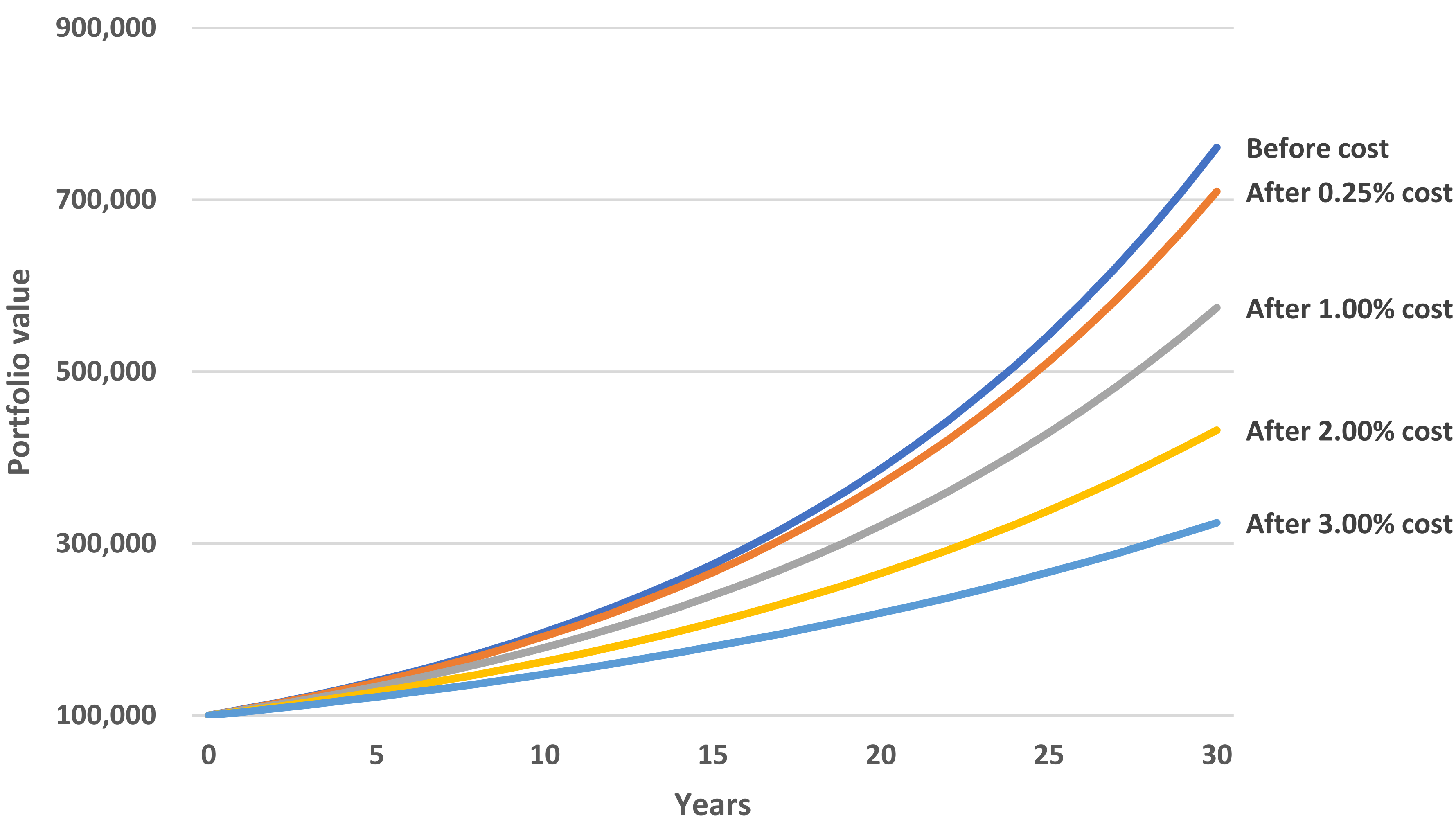
Fund	Total net assets (Mil Baht)
Equity Fund	1,277,055.28
Fixed Income Fund	2,287,023.02
Mixed Fund	411,548.96
Infrastructure fund	401,063.67
Property fund	161,286.78
Real Estate Investment Trust	188,127.86
Others	124,964.64
Total	**4,851,070.20**

Source: AIMC

Mutual fund expense

- Fees charged to the unitholders (% of unit value)
  - Front-end fee
  - Back-end fee
  - Switching fee
- Fees charged to the fund (% of NAV per year)
  - Management fees
  - Other fees, e.g. trustee, registrar, other expenses

Mutual fund expense



Source of investment information

- Fund ranking
- Prospectus
- Fund fact sheet
- Fund summary

Fund fact sheet

- What are you about to invest in?
- Who is suitable for this fund?
- Special risk considerations
- Portfolio of the fund
- Fees
- Fund performance
- Other information