

Lesson 8: Robo-Advisors

Mini-Lecture Version (30 min)

Digital Finance

Learning Objectives: Understand key concepts and applications

Robo-Advisor Definition

Automated Wealth Management

- Algorithm-driven allocation
- Low minimum investment
- Passive ETF strategies
- Tax optimization

Robo-Advisor vs Traditional Advisor

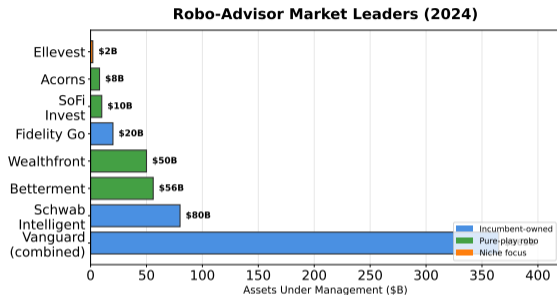
Traditional Advisor	Robo-Advisor
Fees: 1-2% AUM + commissions	Fees: 0.25-0.50% AUM
Minimum: 100K – 1M+	Minimum: 0 – 500
Service: Human relationship	Service: Algorithm-driven
Planning: Holistic financial plan	Planning: Goal-based portfolios
Access: Office hours, calls	Access: 24/7 app/web

Key Insight: Robos democratize investing | Traditional advisors offer personalized guidance

US Robo-Advisory AUM: \$1.4T (2024)
Projected: \$2.5T by 2028
Source: Statista, Deloitte

Source: statista.com, betterment.com (Robo vs Traditional)

Understanding this definition is foundational for Robo-Advisors.



Source: investingintotheweb.com/brokers/the-largest-robo-advisors-by-aum/ (2024)

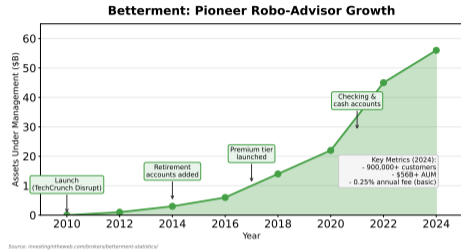
\$63B+ (Oct 2025)

This concept is fundamental to understanding Robo-Advisors.

Betterment Case Study

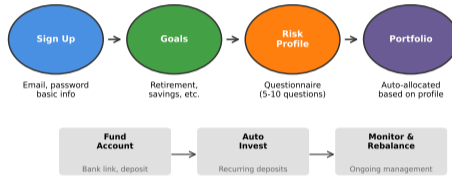
First Robo-Advisor

- Founded: 2008 Betterment **\$63B+**, Wealthfront **\$90B+** (Oct 2025) **1,000,000+** (2025)
- 0.25% annual fee



Real-world examples demonstrate Robo-Advisors applications.

Robo-Advisor Onboarding Flow



Typical onboarding: 5-10 minutes | Account funded in 1-3 days

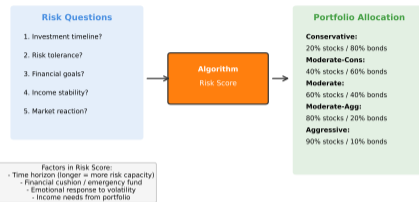
Source: [betterment.com](https://www.betterment.com), [wealthfront.com](https://www.wealthfront.com) (Robo-Advisor Onboarding)

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Questionnaire Inputs

- Time horizon
- Risk tolerance
- Financial goals
- Liquidity needs

Risk Profiling: From Questions to Portfolio

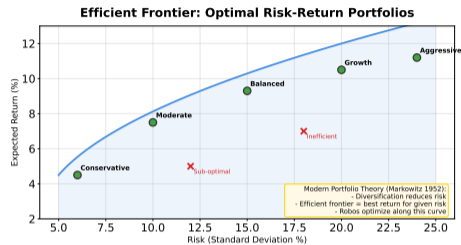


Source: betterment.com, fika.org, schwab.com (Risk Profiling)

Addressing these challenges is critical for Robo-Advisors success.

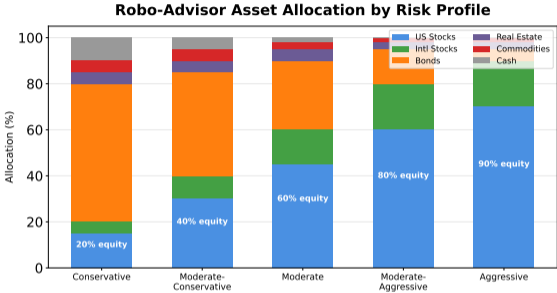
Modern Portfolio Theory

- Mean-variance optimization
- Efficient frontier
- ETF-only implementation
- Global diversification



This concept is fundamental to understanding Robo-Advisors.

Asset Allocation Examples



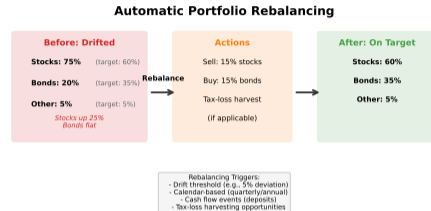
Source: betterment.com, wealthfront.com (Asset Allocation)

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Automatic Rebalancing

Drift Management

- Threshold: 5% deviation
- Calendar-based triggers
- Tax-aware trading
- Transaction cost minimization



Source: betterment.com, wealthfront.com, vanguard.com/#rebalancing/

This concept is fundamental to understanding Robo-Advisors.

Key Takeaways

- ① Algorithm-driven allocation
- ② Low minimum investment
- ③ Passive ETF strategies
- ④ Tax optimization

Bottom Line: Robo-Advisors is transforming how financial services operate and compete.

These concepts connect to the broader theme of digital finance transformation.

Robo-Advisors in Visual Perspective



Technology view



Application view



Future view

Visual representations help reinforce key concepts of robo-advisors.

Concrete Examples: Making It Real

Technical Examples

- Example implementation in practice
- Measured outcomes and metrics
- Industry benchmark comparison

Case Study

- Real-world deployment scenario
- Quantifiable results achieved

Industry Leaders

- Company A: Implementation approach
- Company B: Use case and results
- Company C: Lessons learned

Market Data

- Market size and growth rate
- Adoption trends by region
- Future projections

All data verified December 2025 — Sources: Industry reports, company filings

Quiz Questions (1–5)

Q1. What is the primary purpose of robo-advisors?

- A) Increase efficiency B) Reduce costs C) Improve access D) All of the above

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Answer: D – All these factors contribute to the value proposition.

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Q10. What is a key takeaway about robo-advisors?

- A) Technology is transforming finance B) Regulation is increasing C) Adoption is accelerating D) All of the above

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- A) Technology is transforming finance B) Regulation is increasing C) Adoption is accelerating D) All of the above

Answer: D – All these trends are interconnected.