IQIC - Portfolio Construction

#8: Diversification & Correlation

What is Diversification?

- **Definition:** Diversification means spreading a portfolio across different investments to reduce dependence on any one sort of risk.

Instead of: 100% on Stock A

An investor might hold: Stocks + Bonds + Other Assets

Why Diversify?

If one investment performs poorly, other investments may respond differently and reduce the impact on the overall portfolio

More Investments ≠ More Diversification

Imagine portfolio A owns:

- 5 semiconductor stocks
- 5 software stocks
- 5 technology ETFS

That's **15 investments**, but they may respond similarly to:

- Technology-sector weaknesses
- Interest-rate changes
- Changes in growth expectations

However, portfolio B owns 8 investments **across different sectors & asset types**

Thus. Portfolio B May be actually **more diversified** despite owning fewer investments

Understanding Correlation

- **Definition:** Correlation describes how closely the returns of two investments move in relation to each other

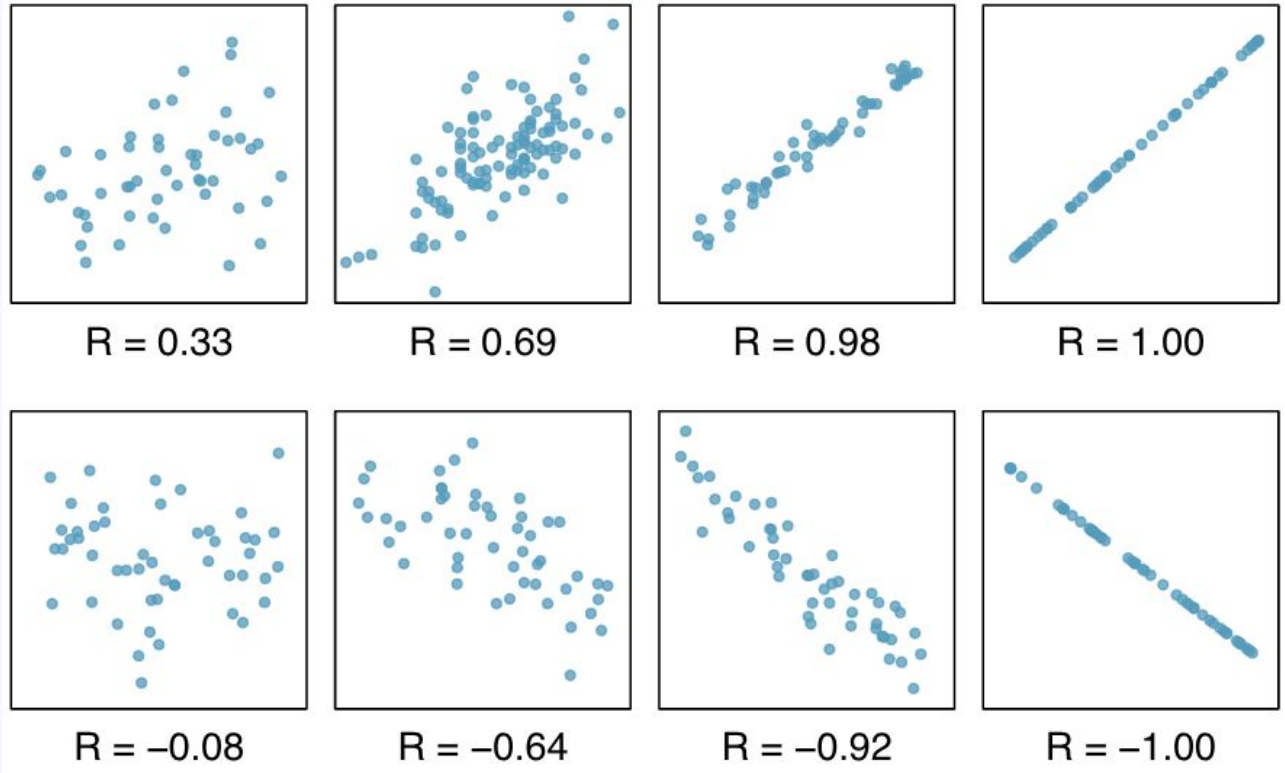
- **Positive Correlation:** Assets tend to move in the same direction
- **Negative Correlation:** Assets tend to move in opposite directions
- **Low Correlation:** Assets movements have little consistent relationship

Correlation ranges from **-1 to +1**:

-1 = move opposite | 0 = little linear relationship | + 1 = together

Correlation helps investors understand how investments behave relative to one another

Correlation Visual



Why Correlation Matters

- **Different Movements can reduce portfolio risk**
  - If two assets always fall at the same time, their losses reinforce each other
  - If they behave differently, one investor may remain stable or rise while another falls

E.g.

	High Correlation	Low Correlation
Asset A	↓ 10%	↓ 10%
Asset B	↓ 9%	↑ 2%

Key Takeaway: Combining investments w/ different behaviors can make portfolio performance more stable

Concentrated vs. Diversified

Ex:

Concentrated Portfolio	Diversified Portfolio
70% Technology	30% Technology
20% Communications	20% Healthcare
10% Consumer	20% Industrials
	15% Consumer
	15% Bonds

Concentrated: Tech downturn → affect most of portfolio

Diversified: Weakness in one area has less influence on entire portfolio

But **diversification has tradeoffs** – it can also reduce benefit of one investment performing exceptionally well.

Think: As you build your portfolio, consider the trade-offs between greater concentration and greater diversification.

Additional Resources

1. **Investor.gov - Beginner's Right to asset allocation, diversification, and rebalancing:** Guide link
   a. A beginner-friendly guide explaining how diversification and asset allocation can help manage portfolio risk
2. **Investor.gov - Asset Allocation & Diversification:** article link
   a. A short article explaining diversification across asset classes, sectors, and individual investments