Market Talks
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STOCKS · BEGINNER · LESSON 14 OF 15

Risk and Diversification

The two kinds of investment risk, why owning many stocks matters, the math of losses, position sizing, asset allocation and investing a little at a time

13 min read 8 quiz questions with answer key

STOCKS · BEGINNER · LESSON 14 OF 15

Risk and Diversification

IN ONE SENTENCE

Every stock carries company-specific risk, which diversification can mostly remove, and market risk, which it cannot. Long-term studies show that a small share of companies created all of the stock market's net wealth, so owning only a few stocks risks missing them. Losses need larger gains to recover, so traders limit the risk on each trade, and investors manage risk through asset allocation, rebalancing and steady investing.

Two kinds of risk

In investing, **risk** means that the result can be different from what you expect, and in particular that you can lose money. A stock you own faces two different kinds of risk:

- **Company-specific risk**: things that hit one company, such as a failed product, a lawsuit, a fraud or a bad earnings report. Bright Bean could lose its biggest customer while the rest of the market rises.
- **Market risk**: things that hit almost every stock at once, such as a recession, a jump in interest rates or a financial crisis. The bear markets in Lesson 12 are market risk.

The two behave very differently when you add more stocks. Company problems do not all happen at the same time, so a bad surprise in one company is often balanced by good news in another. This is **diversification**, and it can remove most company-specific risk.

Market risk cannot be removed by owning more stocks, because all of them are affected together. That is why Figure 1 flattens out: after a few dozen stocks from different sectors, adding more barely lowers the risk. The remaining market risk is the price investors pay for the long-term return of stocks.

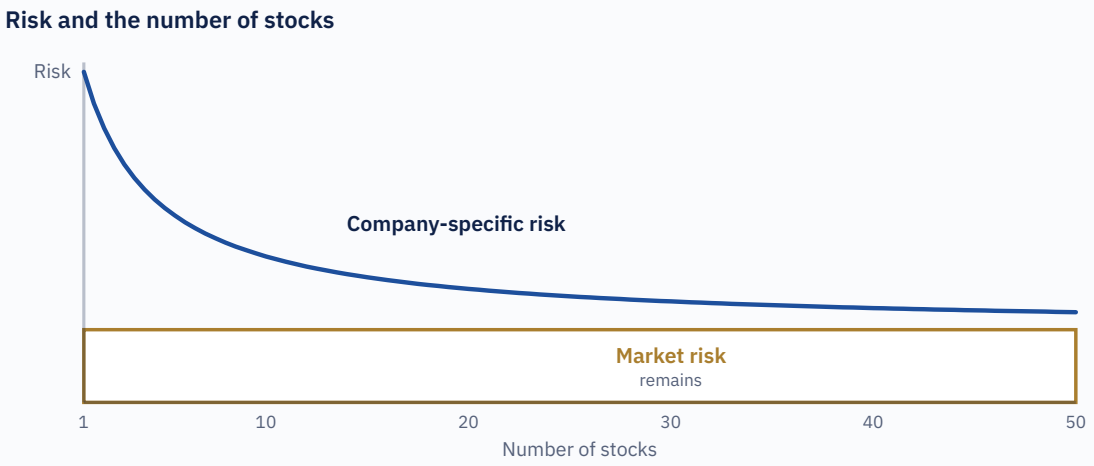

Figure 1. Adding stocks from different sectors removes most company-specific risk, but market risk remains. Illustration only.

Why a few stocks are not enough

A famous study by finance professor Hendrik Bessembinder of Arizona State University looked at every US stock from 1926 to 2016. The results surprised many people:

- About **58%** of all stocks earned less over their lifetimes than one-month US Treasury bills, the safest short-term investment.
- Just **4.3%** of companies, 1,092 out of more than 25,000, created all of the net wealth of the US stock market, about $35 trillion.

In other words, the market's long-term gains came from a small group of huge winners. An investor who owned only a handful of stocks had a good chance of missing most of them. An index fund owns all the companies, so it is sure to own the winners too.

Real failures happen even to famous companies. Lehman Brothers was one of the largest investment banks in the US until it went bankrupt in 2008, and its shareholders lost almost everything. An investor who held it as one stock among hundreds felt a small loss. One who held mostly Lehman was wiped out.

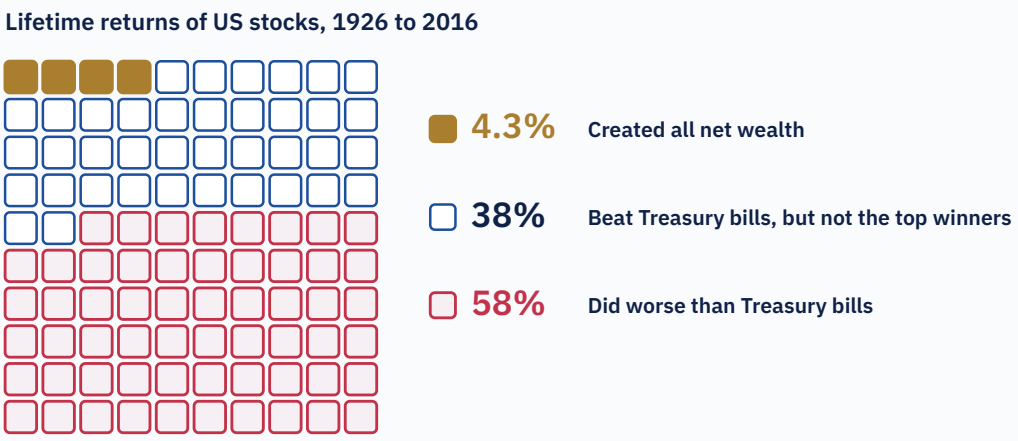

Figure 2. US stocks from 1926 to 2016, according to Hendrik Bessembinder. Each square is about 1% of all stocks.

The math of losses

Losses and gains are not symmetrical. If a stock falls by a percentage, it needs a bigger percentage gain just to get back to where it started, because the gain is measured from a smaller base.

- A **10%** loss needs an 11.1% gain to recover.
- A **20%** loss needs a 25% gain.
- A **50%** loss needs a **100%** gain. $1,000 falls to $500, and $500 must double to get back to $1,000.
- A **75%** loss needs a 300% gain.

This is the main reason careful traders and investors try hard to avoid very large losses. Small losses are part of every strategy and are easy to recover from. Big losses can take years to repair, as the recoveries in Lesson 12 showed, and some never recover at all.

The fall from a peak to a low is called a **drawdown**. When you look at any fund or strategy, check its largest drawdown as well as its average return, and ask yourself honestly whether you could have lived through it without selling.

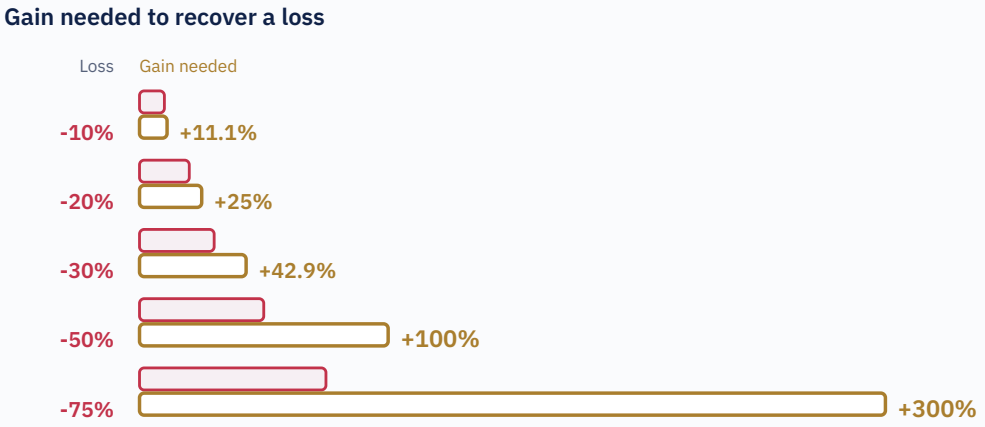

Figure 3. The gain needed to recover from a loss grows faster than the loss itself.

How much to put in one trade

Position sizing means deciding how much money to put into each stock or trade. It is one of the most important risk tools, and it is decided before you buy.

Many traders follow a simple rule: never risk more than **1% to 2%** of the whole account on a single trade. The risk is not the amount you buy. It is the amount you would lose if the trade went wrong and your stop-loss order from Lesson 7 was filled.

The steps are:

1. Decide the most you will risk: for example 1% of the account.
2. Decide where your stop-loss will be, and work out the loss per share if it is hit.
3. Divide the first number by the second to get the number of shares.

With this rule, even ten losing trades in a row would cost about 10% of the account, which can be recovered. For long-term investors the idea is similar: no single company should be so large that its failure would change your life.

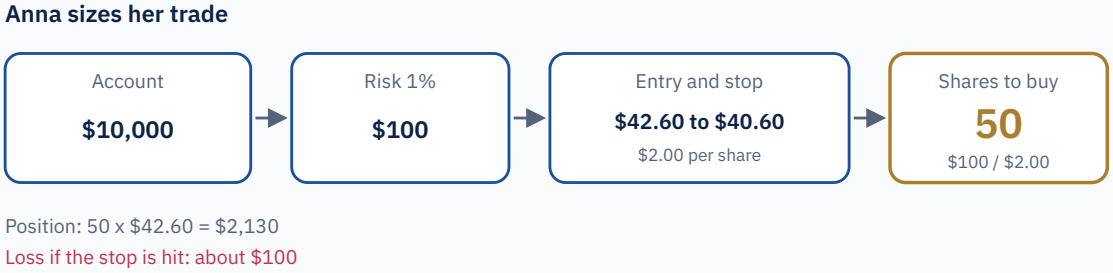

Figure 4. Anna works out her position size from the most she will risk and the distance to her stop.

EXAMPLE: ANNA SIZES A BRIGHT BEAN TRADE

Anna has a **$10,000** account and will risk 1%, which is **$100**. She wants to buy Bright Bean at **$42.60** and will place a stop-loss at $40.60, so she risks $2.00 per share. $100 divided by $2.00 is **50 shares**, costing $2,130. If the stop is hit, she loses about $100, or 1% of her account, plus any slippage. If she had bought $10,000 of Bright Bean with no stop, a bad week could cost her far more.

Things that move differently

Correlation measures how closely two investments move together. It runs from +1, where they always move the same way, to -1, where they always move in opposite directions. Zero means there is no steady link.

Diversification works best with investments that do not move together. Ten technology stocks are less diversified than ten stocks from ten different sectors, because the technology stocks tend to rise and fall at the same time. Owning stocks from different countries, and different kinds of investments such as bonds and cash, spreads the risk further.

Correlations change, though, and often rise in a crisis, when many investors sell everything at once. In 2022, rising interest rates hurt both stocks and bonds: the S&P 500 lost about 19%, and US investment-grade bonds lost about 13%, one of their worst years on record. Diversification reduces risk, but it does not remove it, and it does not guarantee a profit.

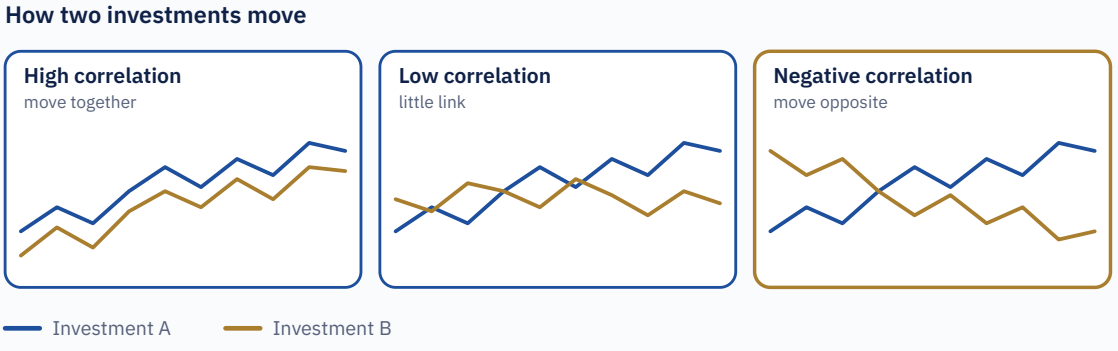

Figure 5. Investments with high correlation move together. Low or negative correlation gives better diversification. Illustration only.

Asset allocation and rebalancing

Asset allocation is how you divide your money between kinds of investment, mainly stocks, bonds and cash. It has a bigger effect on how bumpy your results will be than almost any single stock you pick.

- More stocks means higher expected growth over the long term, with deeper falls along the way.
- More bonds and cash means smaller falls, with lower expected growth.

The right mix depends on your goals, how long until you need the money and how much of a fall you can live with. Money you need within a few years usually does not belong in stocks at all.

Over time, prices move and your mix drifts. If stocks do well, they become a bigger part of your portfolio than you planned, and your risk quietly rises. **Rebalancing** means bringing the mix back to your target, for example once a year, by selling some of what has grown and buying what has fallen behind. It forces you to sell high and buy low, in a calm, planned way.

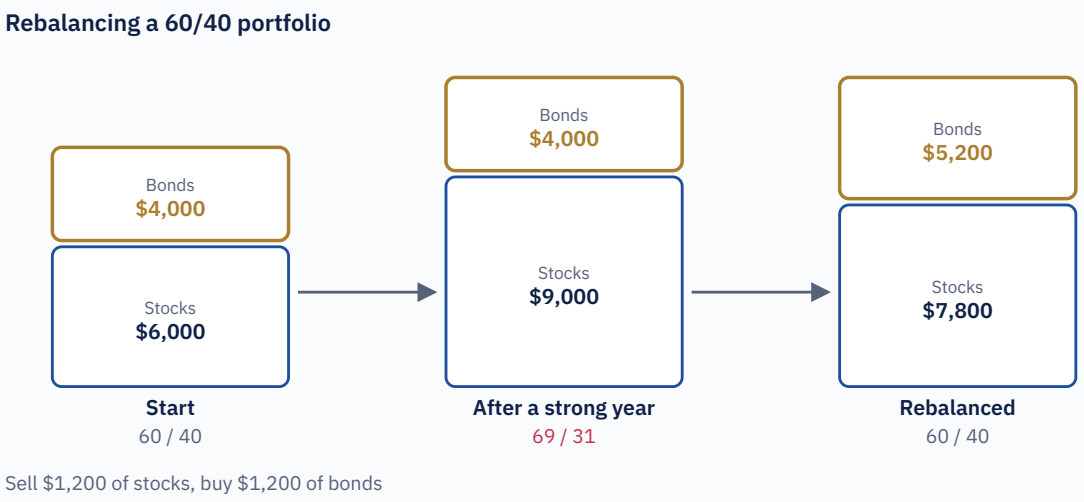

Figure 6. After a strong year for stocks, a 60/40 portfolio drifts to about 70/30. Rebalancing brings it back.

Investing a little at a time

Dollar-cost averaging means investing the same amount of money at regular times, such as every month, whatever the price. When the price is low, your money buys more shares. When it is high, it buys fewer.

John invests $200 in Bright Bean at the start of each month for five months, while the price moves from $40 down to $25 and back to $40. His $1,000 buys **30.5 shares**, at an average cost of about **$32.79**, lower than the average price over those months of $33.80. When the price returns to $40, his shares are worth $1,220, even though the price is only back where it started.

Dollar-cost averaging does not guarantee a profit, and if prices rise steadily, investing everything at once would have done better. Its real strength is behavioural: it builds a habit, it removes the need to guess the right moment and it turns falling prices into a chance to buy more instead of a reason to panic. It is how most people invest from their monthly pay anyway.

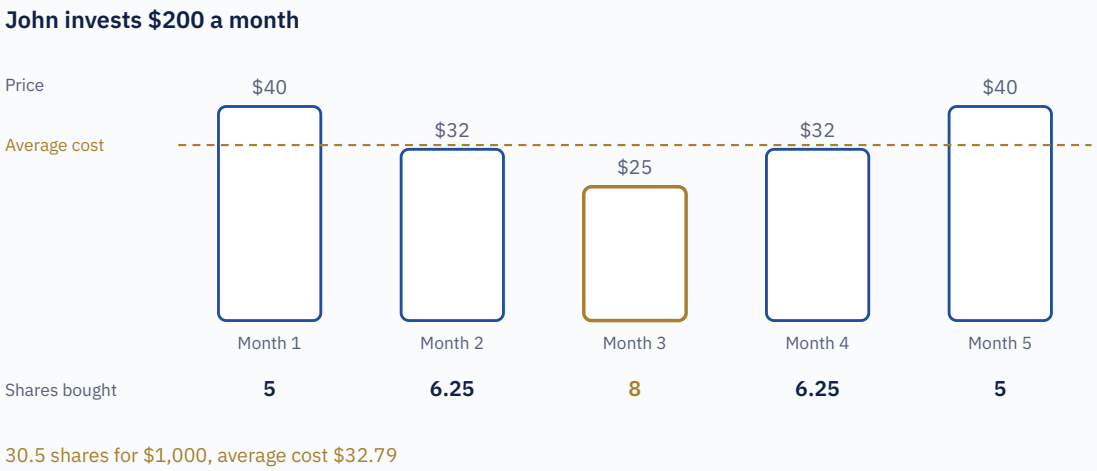

Figure 7. John invests $200 a month. Lower prices buy more shares, so his average cost is below the average price.

Before you invest

Some of the most important risk decisions are made before you buy a single share:

- **Keep an emergency fund.** A common rule of thumb is three to six months of living costs in a safe, easy-to-reach savings account. Without it, a job loss or a large bill could force you to sell stocks at the worst moment.
- **Deal with expensive debt first.** Paying off a credit card that charges 20% a year is a guaranteed return that stocks cannot match.
- **Match the money to the time.** Money for the next few years should not be in stocks. Money for ten years or more can ride out bear markets.
- **Only invest what you can leave alone.** The biggest risk for many beginners is not the market. It is selling in a panic after a fall, and buying back after the recovery.

Lesson 15 puts all of this together into a first plan.

Why this matters for traders

- **Risk first, profit second.** Professional traders decide how much they could lose before they think about how much they could make.
- **Size every trade.** Using a fixed 1% to 2% risk per trade keeps a losing streak from destroying the account.
- **Watch hidden concentration.** Five trades in five chip stocks are really one big bet on one industry.
- **Know your drawdown.** A 50% drawdown needs a 100% gain to recover. Many traders stop and review their method after a set loss, such as 10% of the account.

Key terms

Risk	The chance that results differ from what you expect, especially the chance of losing money.
Company-specific risk	Risk that affects one company, such as a failed product or fraud. Diversification can reduce it.
Market risk	Risk that affects almost all stocks together, such as a recession. Diversification cannot remove it.
Diversification	Spreading money across many investments so that one bad result has a small effect.
Drawdown	The fall in value from a peak to a later low, usually shown as a percentage.
Position sizing	Deciding how much money to put into each investment or trade.
Correlation	A measure from -1 to +1 of how closely two investments move together.
Asset allocation	How money is divided between kinds of investment, such as stocks, bonds and cash.
Rebalancing	Bringing a portfolio back to its target mix by selling what has grown and buying what has fallen behind.
Dollar-cost averaging	Investing the same amount at regular times, whatever the price.

Key takeaways

1. Diversification can remove most company-specific risk, but market risk remains however many stocks you own.
2. From 1926 to 2016, just 4.3% of US companies created all the net wealth of the stock market, so owning only a few stocks risks missing the big winners.
3. Losses need bigger gains to recover: a 50% loss needs a 100% gain.
4. Many traders risk no more than 1% to 2% of the account on one trade, and set the position size from the stop-loss distance.
5. Choose an asset allocation that fits your goals and time, rebalance it, keep an emergency fund and invest only money you can leave alone.

Test yourself

Circle one answer for each question. The answer key with explanations is on the next page. You can also take this quiz online at markettalks.info and see your score instantly.

1. Which kind of risk can diversification remove?

- A Market risk
- B Most company-specific risk
- C All risk
- D Interest rate risk only

2. According to Bessembinder's study, what share of US companies created all the net wealth of the stock market from 1926 to 2016?

- A About 4%
- B About 25%
- C About 58%
- D About 90%

3. A stock falls 50%. What gain does it need to get back to its starting price?

A 50%
B 75%
C 100%
D 150%

4. Anna has $10,000 and risks 1% per trade. Her stop is $2 below her entry. How many shares should she buy?

A 5
B 20
C 50
D 100

5. What does a correlation of -1 mean?

A Both investments always lose money
B There is no link at all
C The two investments always move together
D The two investments always move in opposite directions

6. What happened to stocks and bonds in 2022?

A Both rose strongly
B Stocks fell and bonds rose
C Neither changed
D Both fell, as interest rates rose

7. A 60/40 portfolio has drifted to 70% stocks after a strong year. What does rebalancing do?

A Buys more stocks
B Sells some stocks and buys bonds to return to 60/40
C Sells everything
D Changes the target to 70/30

8. What is the main benefit of dollar-cost averaging?

A It builds a habit and buys more shares when prices are low

B It guarantees a profit

C It always beats investing all at once

D It removes market risk

Answer key

1 B

Most company-specific risk

Spreading money across many companies removes most company-specific risk. Market risk affects all stocks together and remains.

2 A

About 4%

Just 4.3% of companies, 1,092 out of more than 25,000, created all the net wealth, about $35 trillion.

3 C

100%

$1,000 falls to $500. To get back to $1,000, $500 must double, which is a 100% gain.

4 C

50

1% of $10,000 is $100. $100 divided by $2 per share is 50 shares.

5 D

The two investments always move in opposite directions

Correlation runs from +1, always together, to -1, always opposite. Zero means no steady link.

6 D

Both fell, as interest rates rose

Rising interest rates hurt both. The S&P 500 lost about 19% and US investment-grade bonds lost about 13%.

7 B

Sells some stocks and buys bonds to return to 60/40

Rebalancing brings the mix back to its target by selling what has grown and buying what has fallen behind.

8 A

It builds a habit and buys more shares when prices are low

Investing the same amount regularly buys more shares at low prices and removes the need to guess the right moment. It does not guarantee a profit.

SOURCES

- Arizona State University, W. P. Carey School of Business, Do stocks outperform Treasury bills? (Hendrik Bessembinder): https://blogs.wpcarey.asu.edu/20180917-do-stocks-outperform-treasury-bills
- AARP, What retirees can learn from 2022's miserable markets: https://www.aarp.org/money/personal-finance/bear-market-surprises-lessons-learned/
- Hartford Funds, 10 Things You Should Know About Bear Markets: https://hartfordfunds.com/practice-management/client-conversations/managing-volatility/bear-markets.html

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