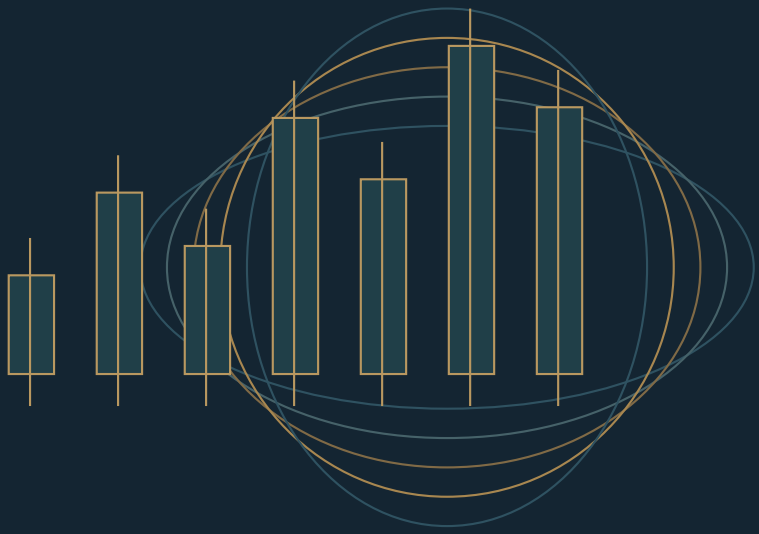
GREEK TRADING FX / G&G CAPITAL

MARKET DECODING

Read the evidence.
Understand the market.



100 PAGES / 24 LESSONS / PRACTICAL WORKBOOK

Macroeconomics - Forex - Gold - Risk - Investing

Expanded English edition / October 2026

A guide for independent thinking

This learning edition develops the themes of the original Market Decoding guide into a structured workbook. It explains how to read information, challenge a narrative, calculate risk and study a business. It does not supply trade signals, individual investment advice or a promise of returns.

HOW TO READ THE NUMBERS

Worked examples and scenario tables are invented for learning. They are not historical performance. Decimal points are used consistently in formulas. Risk percentages illustrate arithmetic, not a recommendation.

Language and sources

CPI, NFP, FOMC and other technical terms stay in English in both editions. The glossary explains them in the edition language. References R01-R24 link chapters to further reading. Institutions listed as sources do not endorse this book.

Revised learning edition prepared for Greek Trading FX and G&G Capital Management. Reference review: 31 October 2026.

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Learn in three passes

01 Understand

Read the concept and explain the diagram in your own words. Identify the units, timeframe and assumptions.

02 Work it through

Recalculate the example without copying. Change one input and explain which conclusion changes and which does not.

03 Test your reasoning

Answer before reading the reasoning box. Use the research checklist on one saved release, contract or company filing.

TWO READING ROUTES

Forex and gold: build the macro foundation, then focus on execution, risk and testing. Long-term investing: keep the same foundation, then emphasize business quality, valuation, portfolio construction and comparison. Both routes need risk and review.

Five habits that protect learning

01

Save the source and its publication time. Later revisions must not rewrite what you knew.

02

Name the unit. Percent, percentage points, basis points, jobs and index points are different.

03

Use conditional explanations. A useful relationship can fail in a different context.

04

Keep execution and research separate. A chart observation is not a guaranteed fill.

05

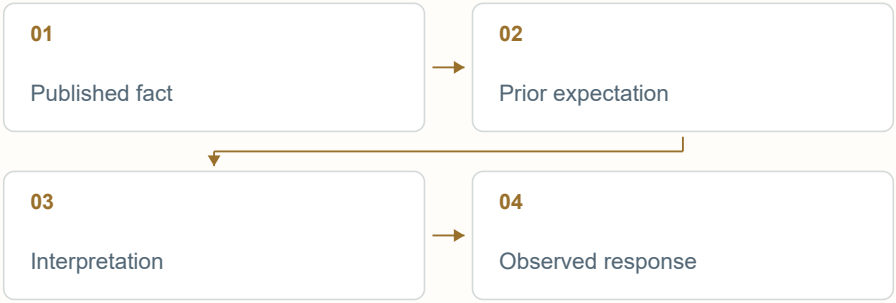
Review the process as well as the outcome. A lucky result can hide a weak decision.

CHAPTER 01 / UNDERSTAND

What actually changes a price?

Expectations / Surprise / Evidence

A price reflects the interaction of buyers and sellers, including their expectations and constraints. A release can improve while an asset falls: the improvement may already have been expected, or another part of the report may matter more. Separate three layers: the published fact, your interpretation and the price response. None is a substitute for the others. A useful hypothesis states what new information would change it. Saying that a market "must rise" after good news removes the very uncertainty you need to study.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

A causal story should survive alternatives. If the same explanation can justify both rising and falling prices after the fact, ask what observation could ever show it was wrong.

Reference R01

CHAPTER 01 / WORK IT THROUGH

What actually changes a price?

Expectations / Surprise / Evidence

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional survey rises from 49 to 51. Its consensus forecast was 53. The level improved, but the surprise was negative. That distinction describes the information; it does not prove the direction of the next price move.

Measure	Previous	Consensus	Actual
Survey index	49	53	51
Actual - consensus			-2 points

WHAT THE EXAMPLE DOES NOT PROVE

A consensus is an estimate, not the private expectation of every participant. Revisions, positioning and trading costs can change the interpretation.

Reference R01

CHAPTER 01 / TEST YOUR REASONING

What actually changes a price?

Expectations / Surprise / Evidence

Try it before reading the answer.

A report beats consensus but price falls. Write two explanations that do not assume manipulation. What evidence would help distinguish them?

REASONING / ANSWER KEY

One possibility is that a more optimistic outcome was priced in. Another is that revisions or guidance outweighed the headline. Compare the full release, contemporaneous rate changes and the timing of the response. A chart alone cannot establish the cause.

Put it into your research

01 Record the expectation before the event.

02 Distinguish fact from explanation.

03 Write what could disprove your view.

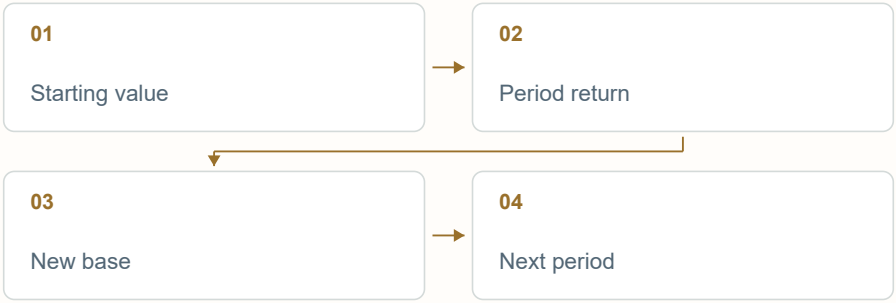
Reference R01

CHAPTER 02 / UNDERSTAND

Returns, percentages and compounding

Return / Percentage points / Compound return

A return compares a change with its starting value. A change from 100 to 110 is +10%; a fall from 110 back to 100 is about -9.09%. Equal percentage gains and losses do not cancel because the base changes. Percentage points compare two percentage rates directly. Keep price return separate from total return, which includes distributions under a stated reinvestment assumption. Before comparing portfolios, identify dates, currency, cash flows and costs. A balance increase can include deposits and is not automatically an investment return.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Arithmetic averages describe observations; compounded returns describe a changing capital base. Mixing them can exaggerate the experience of holding an investment through several periods.

Reference R02

CHAPTER 02 / WORK IT THROUGH

Returns, percentages and compounding

Return / Percentage points / Compound return

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A hypothetical portfolio gains 20%, then loses 20%. Its value moves from 100 to 120 to 96. The two-period return is -4%, not zero.

Step	Calculation	Value
Start	Base	100
Period 1	100 x 1.20	120
Period 2	120 x 0.80	96
Total	96 / 100 - 1	-4%

WHAT THE EXAMPLE DOES NOT PROVE

For successive periods, multiply growth factors. Do not add returns unless using an explicitly defined approximation.

Reference R02

CHAPTER 02 / TEST YOUR REASONING

Returns, percentages and compounding

Return / Percentage points / Compound return

Try it before reading the answer.

A 10% loss is followed by a 10% gain. What is the total return? If a yield moves from 3% to 4%, how many percentage points did it rise?

REASONING / ANSWER KEY

0.90 x 1.10 - 1 = -1%. The yield rose by 1 percentage point, equivalent to 100 basis points. Its relative increase was about 33.33%, which answers a different question. Always name the unit.

Put it into your research

01 Check the denominator.

02 Separate deposits from performance.

03 Match the comparison period.

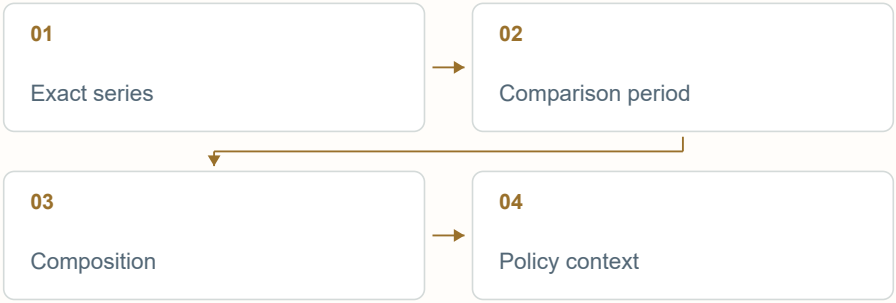
Reference R02

CHAPTER 03 / UNDERSTAND

Inflation beyond the headline

CPI / Core CPI / PCE / PPI / MoM / YoY

CPI tracks consumer price changes for a defined population and basket. Core CPI excludes food and energy; it does not mean these costs disappear from household budgets. MoM and YoY use different comparison periods. A slower inflation rate means prices are rising more slowly, not necessarily falling. PCE and CPI differ in coverage and methods, while PPI concerns producer prices. Read the exact series and seasonal-adjustment basis before comparing releases. No single inflation print automatically determines a currency or gold move.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

A household can experience price changes different from an aggregate basket. That does not by itself make the index wrong; the spending weights and population definitions differ.

Reference R03

CHAPTER 03 / WORK IT THROUGH

Inflation beyond the headline

CPI / Core CPI / PCE / PPI / MoM / YoY

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional price index moves from 120 to 123.6 over a year. That is 3% YoY. The prior year was 5% YoY. Inflation slowed, but the price level still increased.

Item	Prior	Current
Price index	120	123.6
YoY rate	5%	3%
Change in rate		-2 percentage points

WHAT THE EXAMPLE DOES NOT PROVE

An annual rate can change because an unusual month leaves the comparison window: the base effect. Look at several observations and components.

Reference R03

CHAPTER 03 / TEST YOUR REASONING

Inflation beyond the headline

CPI / Core CPI / PCE / PPI / MoM / YoY

Try it before reading the answer.

CPI YoY falls from 4% to 3%. Does this prove prices fell? Core CPI MoM is above consensus. What else should you read?

REASONING / ANSWER KEY

It proves slower annual price growth, not a lower price level. Read the headline and core detail, shelter and services, revisions where applicable, and the comparison basis. The market reaction also depends on what policy path was expected.

Put it into your research

01 Label MoM and YoY separately.

02 Use the same series and adjustment.

03 Separate disinflation from deflation.

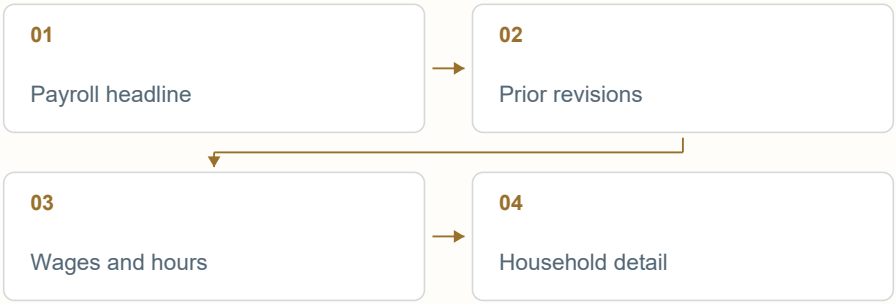
Reference R03

CHAPTER 04 / UNDERSTAND

Reading the labour report

NFP / CES / Unemployment rate / AHE / Revisions

NFP is commonly used for the monthly change in nonfarm payroll employment measured by the establishment survey. It includes government jobs; it is not a count of unique employed people. The household survey supplies the unemployment rate, so the two series can differ without one being fraudulent. Average Hourly Earnings, hours worked, participation and revisions add context. A large headline gain can coexist with weaker details. Read the official release and its notes before turning a labour statistic into a market narrative.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Participation changes can alter the unemployment rate independently of payroll gains. Average wages can also change with the mix of jobs, so read measures together.

Reference R04

CHAPTER 04 / WORK IT THROUGH

Reading the labour report

NFP / CES / Unemployment rate / AHE / Revisions

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

Hypothetical NFP is +180k versus +150k consensus. The preceding two months are revised down by 50k in total. The new headline surprise is +30k, while revisions weaken the recent history.

Component	Expectation	Actual
NFP	+150k	+180k
Headline surprise		+30k
Prior revisions		-50k
AHE MoM	+0.3%	+0.2%

WHAT THE EXAMPLE DOES NOT PROVE

Adding headline surprise and revisions can be a quick summary, but it is not a complete model of labour strength or a price forecast.

Reference R04

CHAPTER 04 / TEST YOUR REASONING

Reading the labour report

NFP / CES / Unemployment rate / AHE / Revisions

Try it before reading the answer.

Why can payroll jobs rise while the unemployment rate rises? Does a strong ADP release guarantee a strong NFP release?

REASONING / ANSWER KEY

The surveys measure different things; labour-force participation and sampling can change the unemployment rate. ADP is a distinct measure with different coverage and methods. It can inform a hypothesis but cannot guarantee the NFP result.

Put it into your research

01 Read both survey sections.

02 Save the original release vintage.

03 Do not ignore hours and revisions.

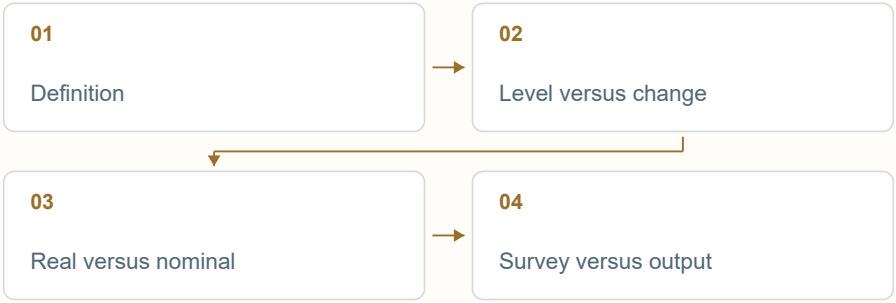
Reference R04

CHAPTER 05 / UNDERSTAND

Growth: levels, rates and surveys

GDP / Real GDP / PMI / Retail sales

GDP measures production over a period. Nominal GDP includes price changes; Real GDP adjusts for them. A quarterly annualized growth rate is not the same as the quarter-on-quarter rate. PMI-style diffusion indexes describe the balance of survey responses, not the percentage growth rate of GDP. A reading above 50 can suggest expansion relative to the prior month within that survey, while a fall from 55 to 51 signals a slower pace. Check each provider and methodology instead of treating all indexes as interchangeable.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Survey components such as new orders, employment and prices can diverge. A stronger headline does not mean every part of the economy accelerated.

Reference R05

CHAPTER 05 / WORK IT THROUGH

Growth: levels, rates and surveys

GDP / Real GDP / PMI / Retail sales

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

Suppose real output rises 1% in one quarter. If that pace repeated for four quarters, the annualized rate would be (1.01^4 - 1), about 4.06%. This is a conversion, not a forecast.

Series	Earlier	Later	Reading
PMI	55	51	Slower expansion
PMI	48	49	Slower contraction
Quarterly output	100	101	+1% QoQ

WHAT THE EXAMPLE DOES NOT PROVE

Retail sales in current prices may rise partly because prices rose. Ask whether the series is nominal, real, seasonally adjusted or revised.

Reference R05

CHAPTER 05 / TEST YOUR REASONING

Growth: levels, rates and surveys

GDP / Real GDP / PMI / Retail sales

Try it before reading the answer.

PMI is 49 after 47. Is that necessarily an expanding economy? Why should a Real GDP revision be recorded?

REASONING / ANSWER KEY

Within that survey it suggests a slower contraction, not expansion above the 50 reference. GDP is an estimate updated as information arrives. Recording revisions prevents you from evaluating an old decision with information unavailable at the time.

Put it into your research

01 Check units and annualization.

02 Separate survey and hard data.

03 Keep a timestamped source.

Reference R05

CHAPTER 06 / UNDERSTAND

Central banks and the expected path

FOMC / ECB / Forward guidance / QE / QT

A policy decision has several parts: the rate decision, the statement, projections where released and the press conference. Markets can respond to the expected future path more than the current change. The FOMC normally has eight scheduled meetings a year, but policy is not limited to those dates. The Dot Plot represents conditional participant projections, not a guaranteed timetable. QE and QT concern balance-sheet policy; they are not synonyms for rate cuts and hikes. Distinguish the central bank's decision from your interpretation of its consequences.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

A policy response depends on why conditions changed. Rate cuts associated with lower inflation and cuts associated with financial stress can carry very different information.

Reference R06

CHAPTER 06 / WORK IT THROUGH

Central banks and the expected path

FOMC / ECB / Forward guidance / QE / QT

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional central bank cuts by 25 basis points. Traders had expected 50. The decision is a cut, but relative to that expectation it is less dovish. Guidance may still reverse the interpretation.

Component	Expected	Announced
Rate change	-50 bp	-25 bp
Relative difference		+25 bp
Future path	Conditional	Still uncertain

WHAT THE EXAMPLE DOES NOT PROVE

Avoid a mechanical "cut equals weaker currency" rule. Relative expectations, the reason for the cut and other countries' policy paths matter.

Reference R06

CHAPTER 06 / TEST YOUR REASONING

Central banks and the expected path

FOMC / ECB / Forward guidance / QE / QT

Try it before reading the answer.

Why is the median Dot Plot not a promise? What distinguishes a current rate decision from forward guidance?

REASONING / ANSWER KEY

Projections depend on assumptions and future information. A median also hides disagreement. The current decision changes policy now; guidance communicates conditions and possible future policy. Both can surprise, and neither supplies a certain trade direction.

Put it into your research

01 Compare decision with pricing.

02 Read conditions, not only adjectives.

03 Separate rates from balance-sheet policy.

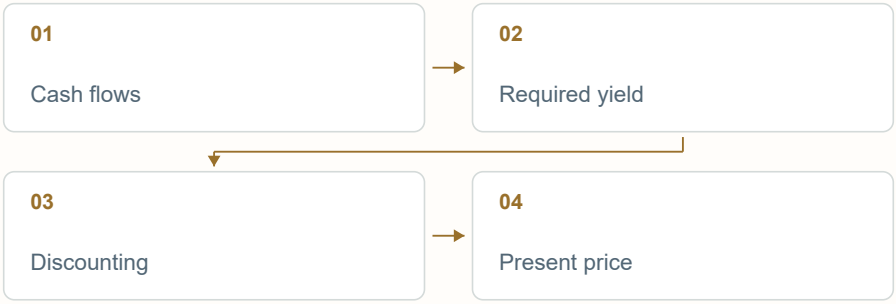
Reference R06

CHAPTER 07 / UNDERSTAND

Bonds, yields and duration

Bond price / Yield / Duration / Yield curve

A bond is a stream of promised payments subject to its terms and credit risk. For a fixed stream, a higher required yield generally means a lower price. Yield is not the same as the coupon. Duration estimates sensitivity to a small yield change; it is an approximation, not a loss limit. The Yield curve compares yields across maturities. Its shape contains information about expectations and risk premia, but an inversion does not give a certain recession date or a guaranteed market trade.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Treasury auctions supply another observation about demand and financing. Compare like maturities and auction conventions instead of turning one auction statistic into a complete market forecast.

Reference R07

CHAPTER 07 / WORK IT THROUGH

Bonds, yields and duration

Bond price / Yield / Duration / Yield curve

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A hypothetical bond has modified duration 5. A 0.50 percentage-point rise in yield gives an approximate price effect of -5 x 0.005 = -2.5%, before convexity and other changes.

Maturity	Yield
2Y	4.0%
10Y	3.6%
10Y - 2Y	-0.4 percentage points

WHAT THE EXAMPLE DOES NOT PROVE

Do not apply duration blindly to large moves, embedded options or changing credit spreads. A bond fund also changes holdings over time.

Reference R07

CHAPTER 07 / TEST YOUR REASONING

Bonds, yields and duration

Bond price / Yield / Duration / Yield curve

Try it before reading the answer.

A coupon is unchanged while the bond price falls. Can yield rise? What is the difference between a -40 bp curve slope and a 40% decline?

REASONING / ANSWER KEY

Yes: investors pay less for the same promised cash flows. A -40 bp slope is a difference of -0.40 percentage points between two yields. It is not a percentage loss in a bond portfolio. Units prevent serious interpretation errors.

Put it into your research

01 Distinguish coupon from yield.

02 Name maturity and currency.

03 Treat duration as an approximation.

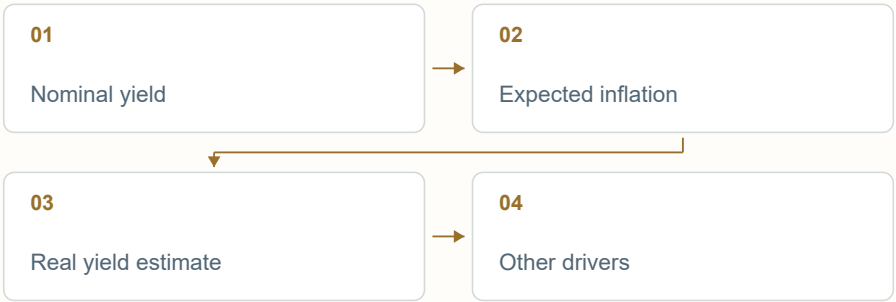
Reference R07

CHAPTER 08 / UNDERSTAND

Real yields and gold

Nominal yield / Real yield / Inflation expectations / Gold

Real yield concerns purchasing power after inflation. A simple approximation subtracts expected inflation from a nominal yield of similar maturity. For a one-period calculation with known inflation, the exact relation uses growth factors. Gold produces no contractual coupon, so the opportunity cost of holding it can change with real yields. That is one possible influence, alongside the dollar, demand, positioning and uncertainty. It is a relationship to investigate, not a stable inverse rule or a complete valuation model for gold.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Gold quoted in EUR can differ from gold quoted in USD because exchange rates contribute to the local-currency result. Always name the currency before comparing charts.

Reference R08

CHAPTER 08 / WORK IT THROUGH

Real yields and gold

Nominal yield / Real yield / Inflation expectations / Gold

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

If a hypothetical nominal return is 5% and inflation is 3%, the exact real return is 1.05 / 1.03 - 1 = 1.94%. The subtraction shortcut gives 2%.

Scenario	Nominal yield	Expected inflation	Approx. real
A	4.0%	2.0%	2.0%
B	4.0%	3.0%	1.0%

WHAT THE EXAMPLE DOES NOT PROVE

Using current CPI YoY with a ten-year nominal yield mixes horizons. Market inflation compensation can also include risk and liquidity premia.

Reference R08

CHAPTER 08 / TEST YOUR REASONING

Real yields and gold

Nominal yield / Real yield / Inflation expectations / Gold

Try it before reading the answer.

Gold rises while real yields rise. Is the observation impossible? Name two other factors worth checking.

REASONING / ANSWER KEY

It is possible because the relationship is not an identity. Check the currency basis, dollar changes, demand developments and event timing. Avoid selecting only observations that support a preferred inverse relationship.

Put it into your research

01 Match inflation and yield horizons.

02 Separate expected and realized inflation.

03 Test relationships across regimes.

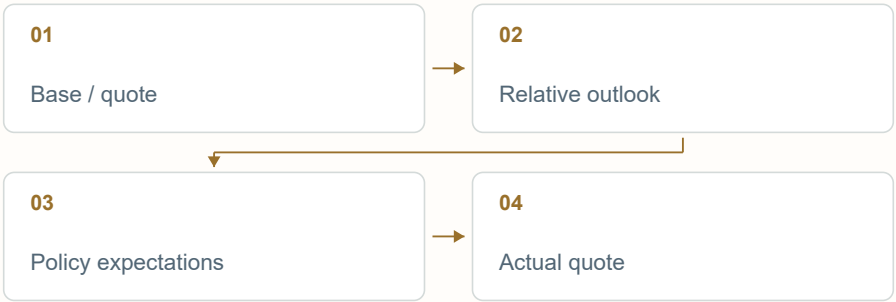
Reference R08

CHAPTER 09 / UNDERSTAND

Forex is a relative price

Base currency / Quote currency / EURUSD / DXY

A currency pair expresses one currency in units of another. EURUSD at 1.10 means one euro buys 1.10 US dollars before costs. A rise in EURUSD means the euro strengthened relative to the dollar, not that both currencies became stronger against everything. Compare the two economies and their expected policy paths. DXY is a particular currency basket with specific weights; it is not a universal measure of every dollar exchange rate. Always establish which instrument and quote convention a chart uses.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Carry trade combines financing and exchange-rate exposure. A positive interest differential can be outweighed by an adverse currency move or funding costs; it is not free income.

Reference R09

CHAPTER 09 / WORK IT THROUGH

Forex is a relative price

Base currency / Quote currency / EURUSD / DXY

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A hypothetical EURUSD quote moves from 1.1000 to 1.1110. That is a 1% rise in the pair. Its inverse moves from about 0.9091 to 0.9001, a roughly 0.99% decline.

Quote	Start	End
EURUSD	1.1000	1.1110
USD per EUR	1.1000	1.1110
EUR per USD	0.9091	0.9001

WHAT THE EXAMPLE DOES NOT PROVE

A pair can rise because its base strengthened, its quote weakened or both. An isolated headline cannot identify their separate contributions.

Reference R09

CHAPTER 09 / TEST YOUR REASONING

Forex is a relative price

Base currency / Quote currency / EURUSD / DXY

Try it before reading the answer.

If EURUSD falls, which currency strengthened relative to the other? Does a stronger DXY require every dollar pair to move the same percentage?

REASONING / ANSWER KEY

The dollar strengthened relative to the euro. No: basket composition, weights and the other currencies differ. A basket index and a single bilateral exchange rate answer different questions.

Put it into your research

01 Name base and quote.

02 Compare both sides of the pair.

03 Check the broker contract specification.

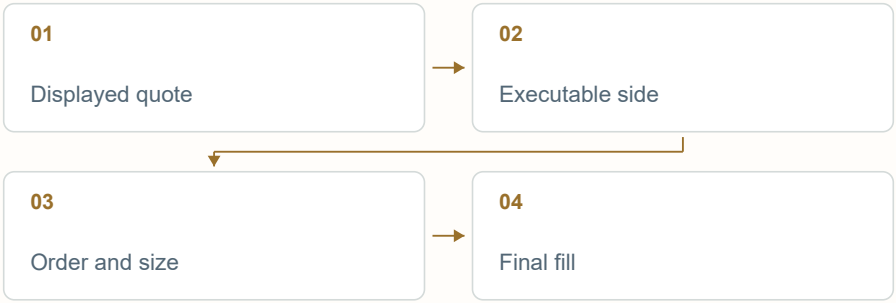
Reference R09

CHAPTER 10 / UNDERSTAND

Liquidity and the cost of execution

Bid / Ask / Spread / Slippage / Market order / Limit order

Liquidity describes how readily an order can be executed without a large price impact. It varies by instrument, size and time. A chart's displayed price may not be your executable price. A Market order prioritizes execution, while a Limit order sets a price condition but may not fill. Stop orders can execute away from their trigger during gaps or fast markets. A visible level does not reveal all orders or prove anyone's intentions. Execution quality belongs in the research, not only in the final trade.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Fixing flows, holidays and rollover can change execution conditions. Their clock times and contract treatment need verification. A familiar session label is not an execution guarantee.

Reference R10

CHAPTER 10 / WORK IT THROUGH

Liquidity and the cost of execution

Bid / Ask / Spread / Slippage / Market order / Limit order

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional quote is 1.1000 Bid / 1.1002 Ask. Buying at Ask and immediately selling at unchanged Bid loses 0.0002 per unit before commissions. At 10,000 units, this is 2 USD.

Component	Example
Bid	1.1000
Ask	1.1002
Spread	0.0002
Round-trip spread cost	2 USD on 10,000 units

WHAT THE EXAMPLE DOES NOT PROVE

Avoid counting the spread twice if the backtest already uses Bid/Ask fills. Check how commissions, financing and slippage are represented.

Reference R10

CHAPTER 10 / TEST YOUR REASONING

Liquidity and the cost of execution

Bid / Ask / Spread / Slippage / Market order / Limit order

Try it before reading the answer.

Why can a stop loss lose more than the planned amount? Is an unfilled limit order necessarily a software error?

REASONING / ANSWER KEY

A gap, spread expansion or insufficient liquidity can produce a worse fill. A limit order may legitimately remain unfilled if its conditions cannot be met. Check timestamps, quote sides, contract rules and order logs before concluding that something malfunctioned.

Put it into your research

01 Use the correct Bid/Ask side.

02 Model costs once and explicitly.

03 Study fills, not only candles.

Reference R10

CHAPTER 11 / UNDERSTAND

An event plan before the event

Consensus / Scenario / Invalidation / No-trade condition

Preparation is a decision tree, not a prediction contest. Identify the release, timezone, relevant components and existing expectations. Write several plausible outcomes and specify what observation would support or weaken each interpretation. Separately define execution conditions: spread, market availability and maximum acceptable exposure. A valid outcome can be no action. Record the plan before the event so your review measures a real decision rather than a story rewritten afterward. This is a research exercise; practising on historical or demo data avoids turning uncertainty into an immediate financial commitment.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

A release may matter less when another risk dominates attention. Record the competing narrative before the event rather than adding it only after a surprising response.

Reference R11

CHAPTER 11 / WORK IT THROUGH

An event plan before the event

Consensus / Scenario / Invalidation / No-trade condition

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

For a fictional CPI release, prepare three cases: above, near and below consensus. Add a separate rule that unusually wide spreads invalidate an execution test regardless of the headline.

Case	Information	Research response
A	Above consensus	Check composition and rates
B	Near consensus	Inspect revisions and details
C	Below consensus	Compare with prior pricing
Any	Execution unreliable	Do not force a trade

WHAT THE EXAMPLE DOES NOT PROVE

Timezone conversions and daylight-saving changes can move the local clock time of releases. Verify the publisher calendar rather than memorizing a permanent local hour.

Reference R11

CHAPTER 11 / TEST YOUR REASONING

An event plan before the event

Consensus / Scenario / Invalidation / No-trade condition

Try it before reading the answer.

Write a no-trade condition unrelated to whether your forecast is right. Why should the plan include a review time?

REASONING / ANSWER KEY

Examples include unreliable data, an execution cost above the test limit or an unverified contract specification. A scheduled review separates the first reaction from later information and reduces selective memory about when the thesis worked or failed.

Put it into your research

01 Save the plan before release.

02 Check the official calendar.

03 Allow a no-action outcome.

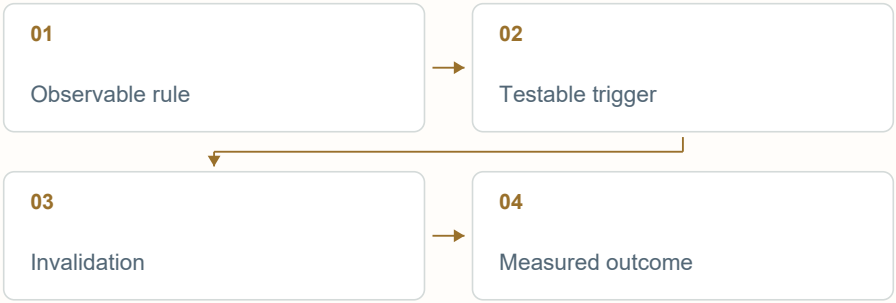
Reference R11

CHAPTER 12 / UNDERSTAND

Structure, breakouts and volatility

Trend / Range / Breakout / ATR / Invalidation

A technical pattern is a description of prices under chosen rules. It is not proof of an economic cause. Define a trend or range precisely enough for another person to identify it. A breakout can continue, reverse or never produce an executable opportunity after costs. ATR summarizes recent ranges under its formula; it does not predict direction or guarantee a future maximum move. Combine context and clearly defined invalidation rather than treating a visually attractive pattern as evidence of an edge.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

A sweep above a previous high is observable. Claiming that a particular institution deliberately hunted stops is a separate causal claim requiring evidence beyond the candle shape.

Reference R12

CHAPTER 12 / WORK IT THROUGH

Structure, breakouts and volatility

Trend / Range / Breakout / ATR / Invalidation

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A hypothetical range is 100-105. A rule might require a completed bar above 105, then an executable fill under a specified cost cap. A brief quote at 105.1 is a different event.

Observation	Meaning
High touches 105.1	Intrabar observation
Close at 105.2	Completed-bar observation
Next fill at 105.8	Actual execution assumption
Return below range	Possible rule invalidation

WHAT THE EXAMPLE DOES NOT PROVE

Using the final high of a bar to decide an entry earlier in that same bar can introduce look-ahead bias.

Reference R12

CHAPTER 12 / TEST YOUR REASONING

Structure, breakouts and volatility

Trend / Range / Breakout / ATR / Invalidation

Try it before reading the answer.

Why does a smaller ATR not prove a large move must happen next? What makes a breakout rule reproducible?

REASONING / ANSWER KEY

ATR summarizes the measured past; quiet conditions can persist. A reproducible rule defines data, timeframe, bar completion, trigger, execution assumptions and invalidation. Someone using the same inputs should obtain the same classification.

Put it into your research

01 Define the exact observation time.

02 Use executable prices.

03 Test failures as well as successes.

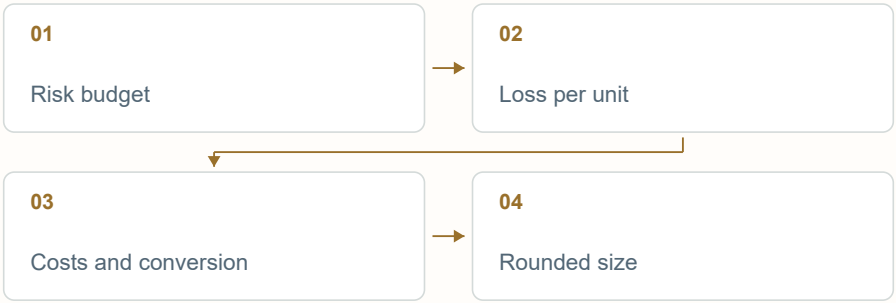
Reference R12

CHAPTER 13 / UNDERSTAND

Position sizing before leverage

Risk budget / Position size / Leverage / Margin

Position sizing links a defined risk budget to a loss assumption per unit. Margin is collateral required to hold exposure; it is not the maximum possible loss. Leverage increases exposure relative to capital and magnifies both gains and losses. Contract sizes, tick values, currency conversion and minimum order increments differ across products and brokers. A calculated stop-based budget is a planning estimate because gaps and execution can exceed it. Verify the instrument specification before applying any formula. The percentages in this chapter demonstrate arithmetic, not a recommended risk level.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Several small positions can create one large shared exposure. A common currency, issuer or event may make the combined risk much larger than each ticket suggests.

Reference R13

CHAPTER 13 / WORK IT THROUGH

Position sizing before leverage

Risk budget / Position size / Leverage / Margin

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A hypothetical risk budget is 50 EUR. The assumed stop loss plus allocated costs is 2 EUR per unit. The arithmetic size is 25 units. If only increments of 10 are allowed, 20 units stays below that assumed budget.

Input	Hypothetical value
Capital	10,000 EUR
Risk budget	50 EUR
Estimated loss per unit	2 EUR
Calculated units	25
Rounded-down units	20

WHAT THE EXAMPLE DOES NOT PROVE

Do not round upward just to use available margin. Independent trades can still share the same underlying risk factor.

Reference R13

CHAPTER 13 / TEST YOUR REASONING

Position sizing before leverage

Risk budget / Position size / Leverage / Margin

Try it before reading the answer.

If a broker requires 200 EUR margin, does that cap the loss at 200 EUR? Why include currency conversion in sizing?

REASONING / ANSWER KEY

No. Margin and loss are different quantities; contract terms and protections vary. Currency conversion matters when account currency differs from the instrument profit currency. Calculate loss in account currency and verify the broker specification rather than assuming a universal lot value.

Put it into your research

01 Verify contract size and tick value.

02 Include realistic execution costs.

03 Review combined exposure.

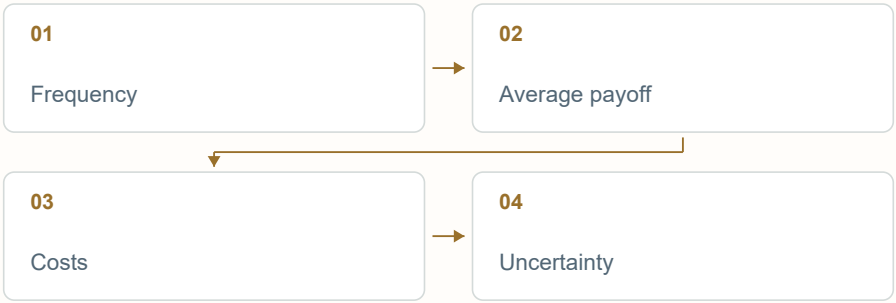
Reference R13

CHAPTER 14 / UNDERSTAND

Expectancy and uncertain samples

Win rate / Payoff / Expectancy / Drawdown

Win rate alone does not describe a strategy. A system can win often and still lose if occasional losses are large. Expressing outcomes in R, the initially planned risk unit, makes different position sizes easier to compare, provided you define R consistently. Expectancy combines the frequency and size of wins and losses after costs. A historical positive estimate is not a promise. Small samples, changing conditions and dependence between trades can make apparent precision misleading. Study the distribution, worst episodes and sample construction alongside the average.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

A profitable average can coexist with an unacceptable loss path. Study losing streaks, drawdowns and dependence between outcomes before deciding what an average means.

Reference R14

CHAPTER 14 / WORK IT THROUGH

Expectancy and uncertain samples

Win rate / Payoff / Expectancy / Drawdown

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

In a hypothetical model, wins occur 40% of the time with average +2R; losses occur 60% with average -1R. Gross expectancy is 0.20R. Costs of 0.10R reduce it to 0.10R.

Component	Calculation	R
Wins	0.40 x 2.00	+0.80
Losses	0.60 x -1.00	-0.60
Costs	Per trade	-0.10
Net expectancy	Sum	+0.10

WHAT THE EXAMPLE DOES NOT PROVE

A run of wins does not erase the possibility of a loss streak. The estimate must include failed, open and excluded observations under stated rules.

Reference R14

CHAPTER 14 / TEST YOUR REASONING

Expectancy and uncertain samples

Win rate / Payoff / Expectancy / Drawdown

Try it before reading the answer.

A strategy wins 80% at +0.2R and loses 20% at -1R. What is gross expectancy? Is a 10-trade sample persuasive evidence?

REASONING / ANSWER KEY

0.80 x 0.20 - 0.20 x 1 = -0.04R before costs. Ten trades provide limited information about the underlying distribution. Seek more representative data, uncertainty estimates and an untouched test instead of judging by win rate alone.

Put it into your research

01 Use net, not only gross results.

02 Show sample size and dates.

03 Inspect the loss distribution.

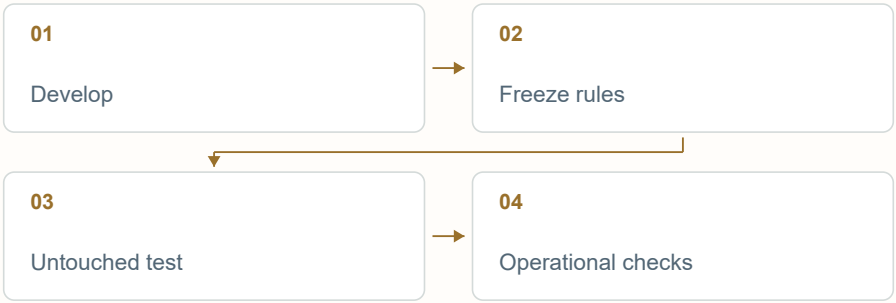
Reference R14

CHAPTER 15 / UNDERSTAND

Backtests that can be challenged

In-sample / Holdout / Overfitting / Look-ahead bias

A backtest is an experiment under assumptions. It is vulnerable to data errors, unrealistic fills and selecting a winner after many trials. Separate development data from an untouched holdout before making choices. Repeatedly examining the holdout turns it into development data. Include trading costs and adverse assumptions. For an automated bot, research quality and operational readiness are separate: order handling, disconnects and risk limits need their own tests. A persuasive report explains what could make its result fail rather than hiding unsuccessful candidates.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Survivorship bias appears when failed or delisted assets disappear from the sample. The data universe should reflect what could actually have been selected at each time.

Reference R15

CHAPTER 15 / WORK IT THROUGH

Backtests that can be challenged

In-sample / Holdout / Overfitting / Look-ahead bias

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

Imagine testing 100 parameter sets and publishing only the best. Even noise may produce an attractive winner. A later untouched period is useful precisely because it did not choose the parameters.

Stage	Allowed action
Development	Change and compare rules
Validation	Select using predefined criteria
Final holdout	Evaluate frozen candidate
Deployment test	Verify execution and controls

WHAT THE EXAMPLE DOES NOT PROVE

A three-month holdout may contain few trades or a narrow regime. A label such as Champion is not a statistical guarantee.

Reference R15

CHAPTER 15 / TEST YOUR REASONING

Backtests that can be challenged

In-sample / Holdout / Overfitting / Look-ahead bias

Try it before reading the answer.

You change a rule after seeing the final holdout. Is the same period still untouched? Name one execution assumption to stress-test.

REASONING / ANSWER KEY

No. The period has influenced the model, so its role must be reclassified and a new evaluation plan stated. Stress tests can examine higher spread, slippage, missed orders or delayed fills. Keep these scenarios documented before interpreting the outcome.

Put it into your research

01 Keep a record of every trial.

02 Freeze the final test protocol.

03 Separate research and live readiness.

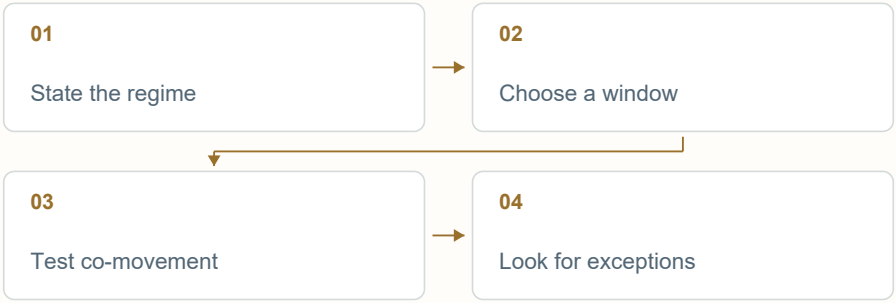
Reference R15

CHAPTER 16 / UNDERSTAND

Regimes and intermarket reasoning

Regime / Correlation / Risk-on / Risk-off

A regime is a useful classification of conditions, not a permanent law. Growth, inflation, policy and funding conditions can change how assets respond. Correlation summarizes co-movement in a chosen sample; it does not establish causation and can change during stress. Risk-on and Risk-off are shorthand descriptions that can hide important differences. Define the data, window and instruments before drawing conclusions. Looking at several markets can test a narrative, but a collection of similar charts is not independent evidence if the assets share the same driver.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Oil and currencies can interact through trade, inflation and funding. Their relationship depends on context; a commodity-exporter label does not supply a permanent exchange-rate rule.

Reference R16

CHAPTER 16 / WORK IT THROUGH

Regimes and intermarket reasoning

Regime / Correlation / Risk-on / Risk-off

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional sample shows stock and bond returns moving together in one period and oppositely in another. A single full-sample correlation conceals that change.

Window	Stock/bond correlation
Period A	-0.30
Period B	+0.45
Interpretation	Relationship changed

WHAT THE EXAMPLE DOES NOT PROVE

Choose the window before seeing the preferred result. Searching many windows for a desired correlation is another form of selection bias.

Reference R16

CHAPTER 16 / TEST YOUR REASONING

Regimes and intermarket reasoning

Regime / Correlation / Risk-on / Risk-off

Try it before reading the answer.

Three USD-sensitive instruments confirm your view. Are these necessarily three independent signals? Why can diversification weaken during stress?

REASONING / ANSWER KEY

They may reflect one common dollar exposure. During stress, shared funding needs or common risk factors can make assets move more similarly. Study exposures and stressed scenarios, not only the number of tickers.

Put it into your research

01 Define the regime objectively.

02 Compare returns, not price levels blindly.

03 Count common factors.

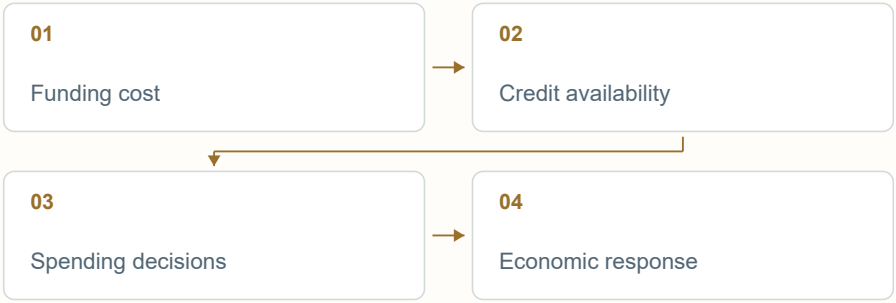
Reference R16

CHAPTER 17 / UNDERSTAND

Credit and financial conditions

Credit spread / Lending standards / QE / QT / FCI

Credit availability affects how households and businesses finance activity. A Credit spread compares yields after specifying maturity, credit quality and the benchmark. Wider spreads can indicate greater required compensation for risk, but can also reflect liquidity and market structure. Financial Conditions indexes combine several measures using particular methods. They are summaries, not complete descriptions of the economy. Avoid treating a central-bank balance sheet, a bank loan and market liquidity as the same thing just because all are sometimes called liquidity.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Credit conditions affect behavior with uneven lags. A lag is not a fixed countdown. Different borrowers refinance at different times and on different terms.

Reference R17

CHAPTER 17 / WORK IT THROUGH

Credit and financial conditions

Credit spread / Lending standards / QE / QT / FCI

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional corporate bond yields 6% while a comparable government benchmark yields 4%. The spread is 2 percentage points, or 200 bp. If both rise equally, the spread can stay unchanged.

Scenario	Corporate	Benchmark	Spread
Start	6.0%	4.0%	200 bp
Both +0.5 pp	6.5%	4.5%	200 bp
Credit reprices	7.0%	4.5%	250 bp

WHAT THE EXAMPLE DOES NOT PROVE

A wider spread is a risk observation, not a countdown to a crash. Check duration, composition and data changes.

Reference R17

CHAPTER 17 / TEST YOUR REASONING

Credit and financial conditions

Credit spread / Lending standards / QE / QT / FCI

Try it before reading the answer.

Can borrowing costs rise without credit spreads widening? Why does the methodology of an FCI matter?

REASONING / ANSWER KEY

Yes, the benchmark yield itself can rise. FCI weights and components determine which conditions dominate the result. Two indexes can disagree because they measure different combinations, frequencies or baselines. Read their construction before using them as evidence.

Put it into your research

01 Name the benchmark.

02 Separate level from spread.

03 Check the index construction.

Reference R17

CHAPTER 18 / UNDERSTAND

Positioning without mind-reading

COT / Open interest / Net position / Crowding

COT reports summarize reported futures and options-on-futures positions by category. They are not a live map of every Forex or gold position. Standard weekly releases reflect earlier observation dates, so distinguish observation time from publication time. A category may contain different motives, and a net figure can hide large gross long and short positions. Extreme positioning can persist. Use positioning to formulate questions about concentration or potential adjustment, not to claim that a particular group must lose or that a reversal is inevitable.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Compare positioning with its own historical context and definitions. An apparent extreme can change when categories, contracts or the sample period change.

Reference R18

CHAPTER 18 / WORK IT THROUGH

Positioning without mind-reading

COT / Open interest / Net position / Crowding

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional category holds 120,000 long and 90,000 short contracts. Net position is +30,000. Another category could have the same net with much smaller gross exposure.

Category	Long	Short	Net
A	120,000	90,000	+30,000
B	35,000	5,000	+30,000

WHAT THE EXAMPLE DOES NOT PROVE

The same net does not imply the same leverage, participants or exit behavior. The report does not reveal a universal intended trade.

Reference R18

CHAPTER 18 / TEST YOUR REASONING

Positioning without mind-reading

COT / Open interest / Net position / Crowding

Try it before reading the answer.

Why should a Friday publication not be treated as a live Friday position? Does a crowded long position guarantee a fall?

REASONING / ANSWER KEY

The underlying observation can precede publication; verify the report dates and holiday exceptions. Crowding describes concentration, not the timing or certainty of a reversal. Price can continue while positioning remains extreme.

Put it into your research

01 Record both dates.

02 Read category definitions.

03 Avoid inferring hidden intentions.

Reference R18

CHAPTER 19 / UNDERSTAND

Options and what VIX can tell you

Option / Premium / Delta / Gamma / Implied volatility / VIX

An option gives its holder a contractual right under specified conditions. Its premium reflects more than the current underlying price: time, volatility assumptions and other inputs matter. Delta and Gamma describe model sensitivities, not guaranteed hedging behavior by every dealer. VIX is derived from S&P 500 option prices to express an annualized measure of expected near-term volatility. It is not a prediction of market direction and is not directly purchasable as the index itself. Related products can behave differently because their structures and costs differ.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Gamma exposure estimates depend on assumptions about who holds positions. Open interest alone does not reveal every participant's side, hedge or future response.

Reference R19

CHAPTER 19 / WORK IT THROUGH

Options and what VIX can tell you

Option / Premium / Delta / Gamma / Implied volatility / VIX

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A hypothetical cash-settled call has strike 100 and premium 4 per unit. At expiry with underlying 110, intrinsic payoff is 10 and net payoff before fees is 6. At 103, net payoff is -1.

Underlying at expiry	Intrinsic payoff	Net after premium
95	0	-4
103	3	-1
110	10	+6

WHAT THE EXAMPLE DOES NOT PROVE

These are expiry payoffs, not prices before expiry. Exercise, settlement, contract multipliers and transaction costs require separate checks.

Reference R19

CHAPTER 19 / TEST YOUR REASONING

Options and what VIX can tell you

Option / Premium / Delta / Gamma / Implied volatility / VIX

Try it before reading the answer.

Does VIX rising mean stocks must fall? Why can a correct directional view still lose on an option?

REASONING / ANSWER KEY

No. Volatility concerns the size of moves, not a certain direction. A move may be too small, too late or accompanied by lower implied volatility relative to the premium paid. Understanding the contract matters as much as the underlying narrative.

Put it into your research

01 Distinguish index and tradable product.

02 Separate payoff from pre-expiry price.

03 Do not infer dealer books from a chart.

Reference R19

CHAPTER 20 / UNDERSTAND

Researching a business, not a ticker

Revenue / Margin / Cash flow / Balance sheet / Blue chip

A stock is an ownership claim, not merely a moving chart. Begin with what the business sells, who pays and why customers might stay. Then connect the income statement, balance sheet and cash-flow statement. Profit is not the same as cash generated. Debt maturities, dilution, capital needs and competitive change can alter the investment case. Blue chip is a descriptive label for an established company; it does not remove business or valuation risk. Use filings and their notes rather than relying only on presentation slides or adjusted headlines.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Buybacks can change per-share figures without improving operating performance. Study the purchase price, funding source and resulting share count rather than treating every buyback as value creation.

Reference R20

CHAPTER 20 / WORK IT THROUGH

Researching a business, not a ticker

Revenue / Margin / Cash flow / Balance sheet / Blue chip

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional business reports revenue 100 and operating profit 15. Operating cash flow is 10 and capital expenditure 4. A simple free-cash-flow proxy is 6, with definitions and limitations to investigate.

Measure	Value
Revenue	100
Operating profit	15
Operating margin	15%
Operating cash flow	10
Capital expenditure	4
Simple FCF proxy	6

WHAT THE EXAMPLE DOES NOT PROVE

One good year does not establish durable quality. Study several periods, accounting changes, working capital and the notes behind unusual items.

Reference R20

CHAPTER 20 / TEST YOUR REASONING

Researching a business, not a ticker

Revenue / Margin / Cash flow / Balance sheet / Blue chip

Try it before reading the answer.

Can revenue rise while cash flow weakens? What would you check if EPS rises while net profit stays flat?

REASONING / ANSWER KEY

Yes: collection timing, inventory and other cash needs can differ from recorded sales. Flat profit with higher EPS may reflect a lower share count. Check buybacks, dilution, debt funding and whether the underlying business improved.

Put it into your research

01 Read filing notes and risk factors.

02 Reconcile profit with cash.

03 Treat reputation as a starting question.

Reference R20

CHAPTER 21 / UNDERSTAND

Valuation as a range of assumptions

P/E / EPS / Discount rate / DCF / Margin of safety

A good business can be a poor purchase at an excessive price. Valuation connects expected cash flows, risk and the price paid. A multiple is a shortcut that embeds assumptions about growth, margins, capital needs and uncertainty. DCF makes assumptions more explicit, but cannot make them certain. A range is often more informative than a highly precise target. Margin of safety describes room for error relative to an estimate; it is not insurance against permanent loss. Write down which assumptions drive the result before comparing it with the market price.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Terminal assumptions can dominate a DCF. Test how much estimated value comes from distant cash flows and whether your conclusion survives less favorable assumptions.

Reference R21

CHAPTER 21 / WORK IT THROUGH

Valuation as a range of assumptions

P/E / EPS / Discount rate / DCF / Margin of safety

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A fictional stock has EPS 5 and a P/E of 20, implying price 100. EPS later rises to 6, but the market multiple falls to 15. The implied price is 90 despite higher earnings.

Case	EPS	P/E	Implied price
Initial	5	20	100
Lower multiple	6	15	90
Alternative	6	20	120

WHAT THE EXAMPLE DOES NOT PROVE

A low P/E may reflect low expectations or genuine problems. It is not automatically a bargain. Different accounting and cycles can distort comparisons.

Reference R21

CHAPTER 21 / TEST YOUR REASONING

Valuation as a range of assumptions

P/E / EPS / Discount rate / DCF / Margin of safety

Try it before reading the answer.

Discount a hypothetical 110 received in one year at 10%. Why test more than one growth and discount-rate assumption?

REASONING / ANSWER KEY

110 / 1.10 = 100. Future growth and required returns are uncertain, so a single input pair can hide sensitivity. A scenario table shows which changes would materially alter the estimated value and whether the conclusion is robust.

Put it into your research

01 Separate quality from price.

02 Test assumptions, not only the output.

03 State what could impair value.

Reference R21

CHAPTER 22 / UNDERSTAND

Portfolio thinking and diversification

Asset allocation / Weight / Diversification / Correlation

A portfolio is a set of combined exposures. Owning many tickers does not guarantee diversification if they depend on the same sector, currency or economic factor. Asset allocation begins with purpose, horizon, liquidity needs and capacity to bear losses. Weights change as prices move, even without new trades. Rebalancing restores a stated allocation rule but introduces costs and possibly taxes. Diversification can reduce concentration risk; it cannot guarantee profit or eliminate broad market losses. Keep research about an individual company separate from the question of its role in a portfolio.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

An emergency liquidity need can turn a temporary market decline into a forced sale. Portfolio design includes the timing of obligations, not just long-run return expectations.

Reference R22

CHAPTER 22 / WORK IT THROUGH

Portfolio thinking and diversification

Asset allocation / Weight / Diversification / Correlation

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A hypothetical portfolio starts with 50 in asset A and 50 in B. A rises 20% and B is flat. Values become 60 and 50, so A now weighs 54.55%. No new purchase was needed for concentration to increase.

Asset	Start value	End value	End weight
A	50	60	54.55%
B	50	50	45.45%
Total	100	110	100%

WHAT THE EXAMPLE DOES NOT PROVE

The 50/50 mix is an arithmetic example, not an allocation recommendation. Real portfolios have costs, cash flows and changing relationships.

Reference R22

CHAPTER 22 / TEST YOUR REASONING

Portfolio thinking and diversification

Asset allocation / Weight / Diversification / Correlation

Try it before reading the answer.

Five technology funds hold many of the same companies. What should you inspect before calling this diversified?

REASONING / ANSWER KEY

Look through to holdings, sector and country weights, currency exposure and shared risk factors. Fund count is not exposure count. Review overlap and possible stressed behavior as well as normal-period correlation.

Put it into your research

01 Map underlying exposures.

02 Separate need from willingness to risk.

03 Define a review rule in advance.

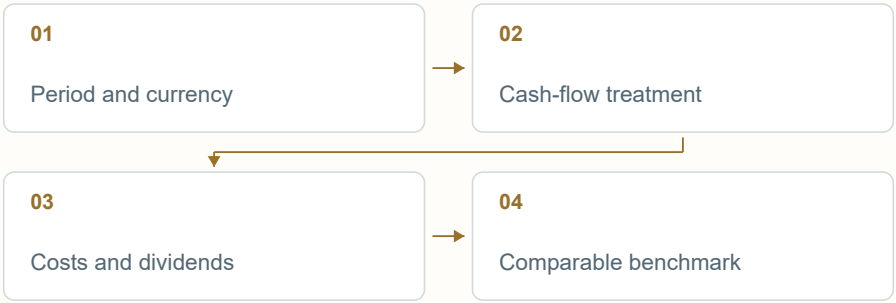
Reference R22

CHAPTER 23 / UNDERSTAND

Performance after fees and cash flows

Total return / Fees / Benchmark / TWR / MWR

A fair performance comparison needs the same period, currency and return basis. A price index excludes dividends; a Total return index includes them under its stated method. Fees, financing and taxes can change what an investor keeps. Deposits and withdrawals alter account value without being profits or losses. Time-weighted return aims to remove external cash-flow timing; money-weighted return reflects the timing and size of cash flows. They answer different questions. Label gross, net, estimated and verified numbers clearly instead of comparing attractive percentages with incompatible bases.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Annual fee differences compound. Compare the full cost structure, including spreads, commissions, financing and fund charges, while avoiding double counting.

Reference R23

CHAPTER 23 / WORK IT THROUGH

Performance after fees and cash flows

Total return / Fees / Benchmark / TWR / MWR

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

An account begins at 100. A deposit of 50 arrives immediately before the final valuation of 155, with no other changes assumed. The 55% balance increase is not a 55% investment return.

Component	Value
Starting account	100
External deposit at end	50
Final account	155
Investment gain in this setup	5
Return on initial capital	5%

WHAT THE EXAMPLE DOES NOT PROVE

With cash flows at other times, use a suitable cash-flow-aware method. Do not infer investment returns from chart axis limits or screenshot balances alone.

Reference R23

CHAPTER 23 / TEST YOUR REASONING

Performance after fees and cash flows

Total return / Fees / Benchmark / TWR / MWR

Try it before reading the answer.

Can a fund beat a price index but trail its total-return version? Why distinguish a reconstructed screenshot curve from verified performance?

REASONING / ANSWER KEY

Yes, distributions can change the benchmark comparison. A screenshot may omit cash flows, dates, fees and calculation rules. A reconstruction describes the visible shape under assumptions; verified performance requires the underlying records and a defined method.

Put it into your research

01 Match return definitions.

02 Disclose missing information.

03 Compare net outcomes where possible.

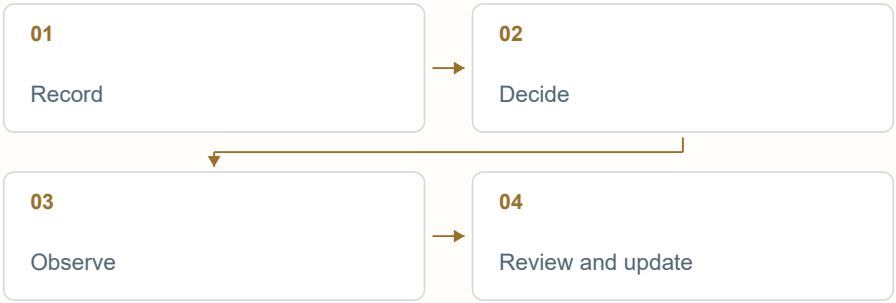
Reference R23

CHAPTER 24 / UNDERSTAND

A research process you can improve

Decision journal / Base rate / Confirmation bias / Review

Good process and a good single outcome are different. A sensible decision can lose, while a weak decision can win by chance. A Decision journal preserves the information, assumptions and alternatives available at the time. Schedule reviews and use the same questions for winners and losers. Seek disconfirming evidence and compare the outcome with plausible alternatives, including doing nothing. A process improves when errors can be classified and corrected; rewriting the story after every outcome prevents learning. The goal is better reasoning and risk awareness, not certainty.



Study the links. None of the arrows guarantees a price direction.

TAKE THE IDEA FURTHER

Reflexivity is a useful question: can prices themselves change funding, confidence or investment behavior? Document a proposed mechanism rather than using the word as a universal explanation.

Reference R24

CHAPTER 24 / WORK IT THROUGH

A research process you can improve

Decision journal / Base rate / Confirmation bias / Review

HYPOTHETICAL DATA / NOT A TRADE RECOMMENDATION

A hypothetical forecast was wrong, but the prewritten cost limit prevented an unreliable execution. The review should record both the forecast error and the successful control instead of calling the entire process either perfect or useless.

Review dimension	Question
Information	Was the source accurate and available?
Reasoning	Were alternatives considered?
Execution	Were stated controls followed?
Outcome	What changed, and over what horizon?

WHAT THE EXAMPLE DOES NOT PROVE

Change one research rule for a stated reason, then evaluate it on new evidence. Constant improvisation makes it hard to know what actually improved.

Reference R24

CHAPTER 24 / TEST YOUR REASONING

A research process you can improve

Decision journal / Base rate / Confirmation bias / Review

Try it before reading the answer.

A trade wins after breaking your risk rule. What belongs in the journal? Write one falsifiable improvement for the next review cycle.

REASONING / ANSWER KEY

Record the win and the rule breach separately. The result does not validate uncontrolled exposure. An improvement might require a completed contract-specification checklist before every simulated execution; later review whether compliance and error rates improved.

Put it into your research

01 Use the same review questions.

02 Record what was known at the time.

03 Measure process changes on new evidence.

Reference R24

REFERENCE / 01

Keep the term. Understand the meaning.

English term	Meaning
Actual	Published outcome for the specified release.
Consensus	A surveyed expectation; not every participant shares it.
Surprise	Difference between actual and a stated expectation.
Revision	An update to a previously published estimate.
MoM	Change against the preceding month.
YoY	Change against the same period a year earlier.
Basis point	One hundredth of a percentage point.
Disinflation	Slower inflation; the price level may still rise.
Deflation	A decline in the general price level.
Base effect	Impact of the comparison-period value on a rate.

REFERENCE / 02

Keep the term. Understand the meaning.

English term	Meaning
CPI	Consumer Price Index; defined consumer-price measure.
Core CPI	CPI excluding food and energy.
PCE	Personal Consumption Expenditures; includes a price measure.
PPI	Producer Price Index; producer-price measure.
NFP	Nonfarm payroll employment, commonly its monthly change.
AHE	Average Hourly Earnings in the employment report.
GDP	Gross Domestic Product; production over a period.
PMI	Purchasing Managers Index; survey-based diffusion measure.
FOMC	Federal Open Market Committee of the US Federal Reserve.
Forward guidance	Communication about conditional future policy.

REFERENCE / 03

Keep the term. Understand the meaning.

English term	Meaning
QE	Quantitative Easing; central-bank asset-purchase policy.
QT	Quantitative Tightening; balance-sheet reduction policy.
Yield	Return measure implied by price and promised payments.
Coupon	Contractual interest payment defined by a bond.
Duration	Approximate bond-price sensitivity to yield changes.
Real yield	Yield adjusted for a specified inflation measure.
Credit spread	Yield difference against a defined benchmark.
DXY	A specific weighted US-dollar currency basket.
Base currency	First currency in a currency-pair quotation.
Quote currency	Currency used to price one unit of the base.

REFERENCE / 04

Keep the term. Understand the meaning.

English term	Meaning
Bid	Quoted price at which the quoting side buys.
Ask	Quoted price at which the quoting side sells.
Spread	Difference between the Ask and Bid.
Slippage	Difference between expected and actual execution price.
Liquidity	Ability to transact size without large price impact.
Market order	Order prioritizing execution over a fixed price.
Limit order	Order constrained by a specified price condition.
Stop order	Order activated under stated trigger conditions.
Leverage	Exposure relative to the capital supporting it.
Margin	Collateral requirement, not a maximum-loss promise.

REFERENCE / 05

Keep the term. Understand the meaning.

English term	Meaning
R	A consistently defined initial planned risk unit.
Expectancy	Average outcome implied by frequency and payoff.
Drawdown	Decline from a preceding equity peak.
Holdout	Data reserved for evaluation rather than selection.
Overfitting	Fitting noise or sample-specific details as an edge.
Look-ahead bias	Using information unavailable at the decision time.
COT	Commitments of Traders; reported position categories.
Open interest	Outstanding contracts under the report definition.
Implied volatility	Volatility inferred under an option-pricing model.
VIX	S&P 500 option-based expected-volatility index.

REFERENCE / 06

Keep the term. Understand the meaning.

English term	Meaning
EPS	Earnings per share under a stated calculation.
P/E	Price divided by a defined earnings-per-share measure.
FCF	Free cash flow; definition must be stated.
DCF	Discounted Cash Flow; assumption-based valuation method.
Diversification	Spreading exposures; it cannot remove all risk.
Rebalancing	Restoring a portfolio to a stated allocation rule.
Price return	Return from price changes without distributions.
Total return	Return including distributions under stated rules.
TWR	Time-weighted return; links cash-flow-separated periods.
MWR	Money-weighted return; reflects cash-flow timing and size.

FORMULA DESK / 1

Returns and compounding

Simple return

(Ending value / Starting value) - 1

Compound return

(1+r1) x (1+r2) x ... - 1

Basis points

1 percentage point = 100 bp

Example: 100 x 1.10 x 0.90 = 99. The compound return is -1%. This assumes no external cash flows. With deposits or withdrawals, use an appropriate cash-flow-aware calculation.

CHECK THE CALCULATION

Practice: calculate +15% followed by -10%. Answer: 1.15 x 0.90 - 1 = +3.5%.

All inputs are illustrative. State assumptions before using any formula.

FORMULA DESK / 2

Risk and position size

Risk budget

Capital x illustrative risk fraction

Position units

Risk budget / estimated loss per unit

Notional leverage

Gross exposure / supporting capital

Example: a 60 EUR budget divided by an estimated 3 EUR loss per unit gives 20 units. Estimated loss should include the chosen stop-distance assumption, costs and currency conversion. Actual loss can exceed the estimate.

CHECK THE CALCULATION

Practice: if estimated loss rises to 4 EUR per unit, units fall to 15. This is sizing arithmetic, not a suggested exposure.

All inputs are illustrative. State assumptions before using any formula.

FORMULA DESK / 3

Expectancy and break-even

Net expectancy

p x average win - (1-p) x average loss - costs

Break-even win rate

(average loss + costs) / (average win + average loss)

Profit factor

Gross winning P/L / absolute gross losing P/L

For wins of 2R, losses of 1R and cost of 0.1R per trade, break-even win rate is 1.1 / 3 = 36.67%. The formula assumes a fixed cost and comparable observations. No estimate guarantees the next sample.

CHECK THE CALCULATION

Practice: with no costs and a 1R win / 1R loss, break-even is 50%. Costs raise the required rate.

All inputs are illustrative. State assumptions before using any formula.

FORMULA DESK / 4

Drawdown and recovery

Drawdown magnitude

1 - current equity / preceding peak

Required recovery

drawdown / (1 - drawdown)

Real return

(1 + nominal return) / (1 + inflation) - 1

After a 50% loss, capital is half its peak. Doubling the remainder requires a 100% gain. This asymmetry is why the size of losses matters as much as a winning percentage.

CHECK THE CALCULATION

Practice: a 20% drawdown needs 0.20 / 0.80 = 25% recovery. A 10% drawdown needs about 11.11%.

All inputs are illustrative. State assumptions before using any formula.

FORMULA DESK / 5

Valuation arithmetic

Present value

Future cash flow / (1 + discount rate)^periods

P/E relationship

Price = EPS x P/E

Simple FCF proxy

Operating cash flow - capital expenditure

One cash flow of 121 in two years discounted at 10% is worth 121 / 1.10^2 = 100 today in this simplified model. A real business has many cash flows, financing claims and uncertain assumptions.

CHECK THE CALCULATION

Practice: EPS 4 at P/E 18 implies price 72. A lower multiple can offset earnings growth.

All inputs are illustrative. State assumptions before using any formula.

FORMULA DESK / 6

Portfolio and fee arithmetic

Portfolio return

Sum of starting weights x asset returns

Weight

Holding value / portfolio value

Simplified annual fee model

Ending value = start x (1 + gross return - fee)^years

For a fixed-weight one-period example, 60% at +10% and 40% at -5% gives +4% before costs. The fee formula is a simplified annual subtraction model; real charging schedules differ.

CHECK THE CALCULATION

Practice: 100 at assumed gross 6% minus annual fee 1% for five years becomes 100 x 1.05^5 = 127.63. This is not a forecast.

All inputs are illustrative. State assumptions before using any formula.

WORKSPACE / 1

Event research sheet

Use a notebook or print this page. Keep a dated copy.

01 Release / source / observation time

02 Consensus / previous / revisions to watch

03 Scenario A and evidence that supports it

04 Scenario B and evidence that supports it

05 No-action conditions / review time

WORKSPACE / 2

Decision review sheet

Use a notebook or print this page. Keep a dated copy.

01 What did I know before deciding?

02 What alternative did I reject, and why?

03 Which costs and risks did I model?

04 What happened over the stated horizon?

05 One process change and how to evaluate it

WORKSPACE / 3

Company research sheet

Use a notebook or print this page. Keep a dated copy.

01 Business model / customer / competition

02 Profit-to-cash reconciliation

03 Debt / dilution / capital requirements

04 Valuation range / sensitive assumptions

05 Disconfirming evidence / review trigger

WORKSPACE / 4

Backtest audit sheet

Use a notebook or print this page. Keep a dated copy.

01 Data provenance / timezone / missing observations

02 Rule definition and trial history

03 Cost model / fills / contract specification

04 Development and untouched test boundaries

05 Failure scenarios / operational acceptance checks

Capstone A: a mixed release

HYPOTHETICAL CASE

A fictional CPI report has a softer headline but firmer core detail. The previous month is revised. The first price move reverses while spreads remain unusually wide.

Measure	Consensus	Actual
Headline CPI YoY	3.1%	3.0%
Core CPI MoM	0.2%	0.3%
Previous Core MoM	0.2% original	0.3% revised
Execution spread	Normal baseline	3 x baseline

Your task

Separate facts from interpretation. Build two explanations, state missing information and define a no-action condition. Do not invent a certain direction.

Capstone B: good business, uncertain price

HYPOTHETICAL CASE

A fictional established company grows earnings while cash conversion weakens. A portfolio already owns several funds with overlapping exposure to the same sector.

Measure	Value
EPS	5
Illustrative P/E range	14 / 18 / 22
Operating cash flow	70
Capital expenditure	30
Debt due within one year	90

Calculate the price range and simple FCF proxy. List three questions before judging quality or suitability for the portfolio. The numbers alone are insufficient for a recommendation.

Capstone reasoning

A / Keep the conflict visible

Softer headline and firmer core support different interpretations. Revisions weaken a simple one-number story. Check components, prior pricing, rate responses and timestamps. A price reversal does not prove why it happened. The prewritten execution-cost limit can justify no action even if one interpretation later appears correct.

B / Separate quality, price and portfolio role

EPS 5 at multiples 14, 18 and 22 gives 70, 90 and 110. The simple FCF proxy is 70 - 30 = 40. Ask why cash conversion weakened, how near-term debt is funded and whether capital expenditure is sufficient. Check overlap and concentration in the existing funds. These are research questions, not a buy decision.

WHAT COUNTS AS PROGRESS

You can explain units, distinguish facts from assumptions, calculate the examples, name missing evidence and choose not to force a conclusion.

An optional 30-session study route

Use your own pace. A session is a completed learning task, not a fixed number of minutes. Revisit difficult calculations before moving on.

Sessions	Focus
01-06	Chapters 01-06
07	Review macro definitions
08-13	Chapters 07-12
14	Recalculate execution examples
15-20	Chapters 13-18
21	Audit one research record
22-27	Chapters 19-24
28	Review glossary and formulas
29	Capstone A
30	Capstone B and process review

Finish with a dated research note. Better questions are a useful outcome.

Sources and further reading

CHECKED 31 OCTOBER 2026 / NO INSTITUTIONAL ENDORSEMENT

R01 Federal Reserve: policy communication and expectations
https://www.federalreserve.gov/monetarypolicy/fomc.htm

R02 Original arithmetic examples; Investor.gov compound-interest tools
https://www.investor.gov/financial-tools-calculators/calculators/compound-interest-calculator

R03 BLS: CPI FAQ and common misconceptions
https://www.bls.gov/cpi/questions-and-answers.htm

R04 BLS: CES FAQ; establishment and government employment
https://www.bls.gov/web/empsit/cesfaq.htm

R05 BEA: NIPA concepts and methods
https://www.bea.gov/resources/methodologies/nipa-handbook

R06 Federal Reserve: FOMC and conditional SEP projections
https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20260617.htm

R07 TreasuryDirect: marketable securities; original duration example
https://www.treasurydirect.gov/marketable-securities/

R08 TreasuryDirect: inflation-linked securities; original real-return example
https://www.treasurydirect.gov/marketable-securities/tips/

R09 CFTC: Forex education and risk; original quote arithmetic
https://www.cftc.gov/LearnAndProtect/forexfrauds

R10 Investor.gov: order types and execution
https://www.investor.gov/introduction-investing/investing-basics/how-stock-markets-work/types-orders

R11 Original scenario worksheet; official release calendars
https://www.bls.gov/schedule/

R12 Original methodological lesson; illustrative rules, not a tested edge

Sources and further reading

CHECKED 31 OCTOBER 2026 / NO INSTITUTIONAL ENDORSEMENT

R13 CFTC: Eight Things You Should Know Before Trading Forex
https://www.cftc.gov/sites/default/files/2022-08/Must%20Know_Forex_FINAL%20%28002%29.pdf

R14 Original expectancy and probability arithmetic

R15 Original experiment-design lesson; no historical performance claim

R16 Investor.gov: asset allocation and diversification
https://www.investor.gov/introduction-investing/getting-started/asset-allocation

R17 Chicago Fed: National Financial Conditions Index methodology
https://www.chicagofed.org/research/data/nfci/background

R18 CFTC: Commitments of Traders descriptions and limitations
https://www.cftc.gov/MarketReports/CommitmentsofTraders/index.htm

R19 Cboe: VIX methodology and product distinctions
https://www.cboe.com/tradable_products/vix/

R20 SEC: Beginners Guide to Financial Statements
https://www.sec.gov/about/reports-publications/beginners-guide-financial-statements

R21 Original valuation examples; Investor.gov reading a 10-K
https://www.investor.gov/introduction-investing/getting-started/researching-investments/how-read-10-k

R22 Investor.gov: diversification, allocation and concentration
https://www.investor.gov/introduction-investing/getting-started/asset-allocation

R23 Investor.gov: understanding fees; original comparison examples
https://www.investor.gov/introduction-investing/getting-started/understanding-fees

R24 Original decision-journal and review framework