Global Macro Investing

Interview preparation summary · HF track

IN THIS SUMMARY

- From a macro view to a rates trade
- Currencies, commodities, risk and the pitch

INT.HG.1.a · From a macro view to a rates trade

Describe the global macro process: form a view on growth, inflation, policy and flows, compare it with what the market prices, express the gap in a trade, and say how discretionary and systematic macro differ.

A global macro fund trades rates, currencies, equity indices and commodities on views about the economy and policy. The process has five steps. First, form a view on growth, inflation, central bank policy and capital flows. Second, find what the market already prices, because the forward curve, option prices and positioning show the consensus, and a correct view that is already in the price earns nothing. Third, measure the gap between your path and the priced path. Fourth, choose the instrument that expresses the gap most directly and cheaply. Fifth, size the trade against a loss limit and name the evidence and the dates that will prove or disprove it. Discretionary macro relies on judgement about regimes, events and politics and can skip or resize a trade. Systematic macro applies tested rules across many markets with sizes set by a model, which gives breadth and discipline but can fail when the regime that produced the backtest changes. The usual mistakes are trading a story that is consensus, expressing a view in a market where the link to the view is weak, and sizing by conviction instead of by the loss if wrong. See Markets, Macro and Current Affairs for the background on data and central banks.

WORKED EXAMPLE: TURNING A VIEW ON POLICY INTO A RATES TRADE

A central bank in an invented economy has a policy rate of 4.00%. Markets price three cuts of 25bp over 12 months, to 3.25%. You think inflation is sticky and expect only one cut, to 3.75%. The 2-year note has a modified duration of 1.9 and a yield of 3.40%. You can short 50m of the note. If you are right, the 2-year yield rises about 40bp; if the market is right, it falls about 30bp. Is the trade worth doing?

Answer: The gap is 50bp of cuts. Short 50m of the 2-year gains 380,000 if yields rise 40bp and loses 285,000 if they fall 30bp, a reward to risk of 1.33 to 1, so it is a reasonable trade of moderate size, provided the view has a reason and dated evidence.

> **Interview tip:** Say what is priced before you say what you think, give the gap in basis points, and turn it into a profit and loss in numbers. An interviewer will ask what would prove you wrong.

INT.HG.1.b · From a macro view to a rates trade

Explain a central bank's reaction function, use a simple policy rule as a guide, and show how guidance, balance sheet policy and market pricing together shape a rates view.

A reaction function is the pattern that links a central bank's decisions to the data it watches and to its stated aims. For most banks the main inputs are inflation relative to target, the size of the output gap and the labour market, with attention to inflation expectations, financial conditions and the exchange rate. A simple guide is a Taylor-type rule: the policy rate equals the neutral real rate plus inflation plus half the inflation gap plus half the output gap. The rule is a reference point and not a forecast, because the neutral rate cannot be observed, the output gap is measured with error and banks often look through temporary shocks. A rate that is well below the rule suggests risk of tightening and one well above suggests room to cut. Guidance matters as much as the rate: the market prices the expected path, so a bank that holds the rate but changes its wording moves yields. Balance sheet policy, such as buying or selling bonds, adds a second tool that affects long-dated yields. Macro managers compare the rule, the bank's words and the market's pricing, and trade the difference. A move that was fully priced is a non-event; the trade is in the surprise.

WORKED EXAMPLE: USING A POLICY RULE AS A REFERENCE POINT

In an invented economy the neutral real rate is 1.0%, the inflation target is 2.0%, inflation is 3.5% and the output gap is minus 1.0%. The policy rate is 4.00% and the market prices no change for a year. Using a rule with weights of 0.5 on the inflation gap and on the output gap, what does the rule suggest, and what happens if inflation falls to 2.5%?

Answer: The rule gives 4.75% at 3.5% inflation and 3.25% at 2.5%, so it points to a firm hold or a rise in the first case and cuts in the second. It is a reference point, and the trade comes from comparing it with guidance and pricing.

> **Interview tip:** Name the rule's inputs, give the number, and then list its weaknesses in one sentence. Candidates who treat the rule as a forecast lose marks.

INT.HG.1.c · From a macro view to a rates trade

Build and size interest rate and curve trades using duration and DV01, including steepeners and flatteners, carry and roll-down, and the choice between nominal and inflation-linked bonds.

Rates trades are the core of most macro books. Duration measures how much a bond's price moves for a change in yield, and DV01 is the change in value for one basis point, so positions in different maturities are compared by DV01 and not by face amount. An outright trade is long or short duration, a view on the level of yields. A curve trade is a view on the gap between two maturities and is built so that the DV01 of the legs is equal, which removes the exposure to parallel moves. A steepener is long the short maturity and short the long maturity and gains when the gap widens; a flattener is the opposite. Carry is the yield earned less the funding cost, and roll-down is the price gain as a bond ages along an upward-sloping curve if the curve does not change. Together they are the return from waiting, and dividing by the duration gives the rise in yield that would erase it. A breakeven inflation trade compares a nominal bond with an inflation-linked bond of the same maturity: the difference in yields is the inflation the market prices. Futures, bonds, swaps and options can all express these views, and the choice depends on cost, funding and the size of the move. Check which leg is the source of the profit.

WORKED EXAMPLE: A DV01-NEUTRAL STEEPENER

You expect the 2s10s curve to steepen. A 2-year bond has a DV01 of 190 per 1m of face and a 10-year bond has a DV01 of 850 per 1m. You short 10m of the 10-year and buy the 2-year in an amount with the same DV01. How large is the 2-year leg, and what do you earn if the 2-year yield falls 10bp and the 10-year yield rises 10bp? What happens if both yields rise 30bp?

Answer: The 2-year leg is 44.74m and the trade earns 170,000 when the curve steepens by 20bp, and nothing when both yields rise 30bp, so it is a pure bet on the shape of the curve.

> **Interview tip:** Quote DV01 and not face amount, and say what the trade makes in a parallel move as well as in the view case.

INT.HG.2.a · Currencies, commodities, risk and the pitch

Explain how currency trades are built from carry, fundamentals and positioning, calculate carry and its risk, and say why carry trades fail suddenly.

Currency views draw on three families of evidence. Carry is the interest rate earned on the currency you hold less the rate you pay on the one you fund with, and it is earned if the exchange rate does not move. Theory says high-yield currencies should fall to offset the carry, so the trade is a bet that this does not happen on average, and the evidence is that it often does not, though with occasional sharp losses. Fundamentals include inflation differentials, the current account, the real exchange rate relative to its long-run level and the pace of growth, which are slow signals that need a catalyst. Positioning shows how crowded a trade is: survey data, futures positions and option prices that show demand for protection. A crowded long in a high-yield currency can be unwound in days when risk appetite falls, and the loss can exceed a year of carry. A useful summary is the ratio of carry to volatility: a carry of 5% with volatility of 10% gives 0.5, so one standard move erases two years of carry. Forwards, spot and options can express the view, and the forward rate embeds the interest differential, so a spot view must beat the forward to earn money. See Risk and Portfolio Construction for the limits that govern such trades.

WORKED EXAMPLE: THE CARRY AND THE RISK OF A HIGH-YIELD CURRENCY

A fund invests 200m in Currency A, which yields 6.0%, funded in Currency B, which costs 1.0%. A has annual volatility of 8% against B. What is the carry, what move does the forward imply, what is the profit if A falls 4%, and what is the carry to volatility ratio?

Answer: The carry is 10m, the forward implies a fall of about 4.7%, a 4% fall leaves 2m of profit and an 8% fall a loss of 6m, with a carry to volatility ratio of 0.625.

> **Interview tip:** Always compare the carry with the forward and with volatility, and mention positioning. A carry trade is a short volatility trade in disguise.

INT.HG.2.b · Currencies, commodities, risk and the pitch

Assess commodity curves, emerging market sovereign risk and cross-asset themes, recognise when several positions are one bet, and test a portfolio under different correlation regimes.

Commodity views start from supply, demand and inventories. The futures curve shows the state of the market: backwardation, where later contracts are cheaper than spot, signals tight supply and gives a long position a positive roll yield, while contango does the opposite. Oil, metals and agricultural goods also feed inflation and growth, which links them to rates and currencies. Emerging market sovereign risk is judged by vulnerability to external stress: foreign currency reserves relative to short-term external debt and months of imports, the current account and the financing it needs, the share of debt held by foreigners, inflation and political stability. A bond spread is compared with expected loss, which is the probability of default times loss given default, and what is left is compensation for risk and illiquidity. A cross-asset theme, such as reflation or a growth scare, can be traded in many markets, but positions that share a driver are one bet, not several, and correlations between asset classes are not fixed. Equities and government bonds often fall together when inflation is the shock, and many risk assets fall together in a liquidity squeeze. Test the portfolio in at least two regimes and size to the worst. Name the data that would show the regime has changed.

WORKED EXAMPLE: AN EMERGING MARKET BOND: SPREAD AGAINST LOSS AND STRESS

An invented emerging market sovereign has a 5-year dollar bond with a spread of 450bp and a modified duration of 4.3. You estimate an annual default probability of 4% and a loss given default of 60%. How much of the spread is expected loss, what is the one-year result if the spread widens 150bp, and how much widening wipes out the spread? Ignore the base rate.

Answer: Expected loss is 2.4%, leaving 2.1% of compensation; a 150bp widening gives minus 1.95% and a widening of about 105bp breaks even, so the trade pays only if spreads stay stable or the shock is small.

> **Interview tip:** Show spread, expected loss and stress in one line and say what else in the book falls in the same scenario.

INT.HG.2.c · Currencies, commodities, risk and the pitch

Choose how to express a macro view (outright, spread or option structure), size it from a loss limit and a stop, set portfolio scenario limits, and present the pitch with the risks and the evidence that would prove it wrong.

A view can be expressed outright, as a spread between two instruments, or with options. An outright trade is simple and liquid but exposed to gaps through the stop. A spread isolates the part of the view you hold and removes market-wide risk, at the cost of basis risk. An option structure, such as a call spread, caps the loss at the premium and survives gaps, but costs premium and decays if the move is slow. Size from the loss, not from conviction: the position is the loss limit divided by the loss per unit if the stop or the premium is hit. A stop-loss is a pre-agreed exit, and its weaknesses are gaps, whipsaws and the risk of selling at the low. Portfolio limits are set by scenario: add the losses of all trades in a shock, such as a reflation surge or a growth scare, assuming correlations rise, and compare with the limit. A good macro pitch states the view and what is priced, the evidence and the catalyst dates, the instrument and why it is the cleanest expression, the size, the stop and the scenarios, the cost of waiting, and what would prove the view wrong. Use Risk and Portfolio Construction for the language of limits.

WORKED EXAMPLE: OUTRIGHT OR OPTION, AND HOW BIG

A fund with 2,000m of capital has a loss budget of 0.4% of capital for one trade. The view is that a currency will rise 8% in six months. As an outright, the stop is a 3% fall. As a call spread, the cost is 2.0% of notional and the maximum payoff is 8% of notional. Compare the reward to risk and the notional each allows. Then find the scenario loss of three trades that lose 20m, 15m and 10m in a reflation shock.

Answer: The outright allows 266.7m at 2.67 to 1, the call spread 400m at 3.0 to 1 with a fixed loss, and the three-trade shock loss is 45m, 2.25% of capital, not the 26.9m that independence suggests.

Interview tip: Size from the loss, compare expressions on reward to risk and gap risk, and say how the book behaves when correlations rise.

Summary of the Charta interview-preparation topic. Companies and figures in the examples are invented. Draft content, not yet expert reviewed.