CHARTA LEARNING · INTERVIEW PREPARATION

Underwriting and Risk Selection

Interview preparation summary · IN track

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INT.NU.1.a · Selecting risk

Walk through the underwriting process from submission to bind, say what information you need to price and accept a risk, and say what you do when it is missing.

Underwriting is the job of deciding which risks to accept, on what terms and at what price. It typically runs from a submission, often sent by a broker, through a check against the insurer's appetite, gathering and testing information, assessing and pricing the risk, quoting, negotiating and binding, then monitoring the account. Good underwriters ask for exposure data, such as vehicle years, turnover, sums insured or payroll, and a claims history of around five years showing incurred figures, not only paid ones, because open and late-reported claims can take years to show. They also look for what the numbers miss: management quality, maintenance and controls. When information is missing, the options are to ask for it, to quote subject to stated conditions, to price in the uncertainty, or to decline. The usual mistake is to assume the best. Interviewers ask this to see whether you reason from evidence, notice what is absent, and remember that the proposer usually knows more about the risk than the insurer does.

WORKED EXAMPLE: PRICING A HAULAGE FLEET FROM EXPOSURE, NOT FROM PREMIUM

Corvane Haulage, an invented haulier, asks for fleet motor cover for next year. Its fleet over the last five years was 34, 36, 38, 40 and 42 vehicles, with 5, 7, 6, 8 and 8 claims, and incurred claims (including reserves) of 40,000, 52,000, 48,000, 62,000 and 70,000 dollars. Next year it expects 46 vehicles. Assume claims cost inflation of 5% for one year. The insurer's expenses and brokerage are 22% of premium and its target profit is 5% of premium. The broker asks for a premium of 82,000. Is that adequate? Conventions: ignore tax and investment income, treat the fleet size as vehicle-years of exposure.

Answer: Expected claims cost is about 69,145 and the technical premium about 94,720. The broker's 82,000 is about 86.6% of technical and implies an expected combined ratio near 106%, so it is not adequate without different terms.

> **Interview tip:** Say that you start from exposure and claims per unit of exposure, not from last year's premium, then give the technical price and the gap to the ask, and finish by naming how sure you are of the data.

INT.NU.1.b · Selecting risk

Name the main risk factors for common lines and explain how exclusions, conditions and sums insured shape what an underwriter is really covering.

Each line of business has its own risk factors. For commercial property they are typically construction, occupancy (what is done in the building), fire protection such as sprinklers, location including flood and subsidence exposure, and the accuracy of the sums insured. For motor they are driver, vehicle, use and where it is kept; for liability, turnover or payroll, activities, contracts and claims record; for marine cargo, values, voyage and packing; for cyber, revenue, data held and security controls. The underwriter turns these into price and into terms. An exclusion removes cover for a stated cause or situation. A condition or warranty sets requirements the insured must meet, such as keeping sprinklers working, and a breach can affect a claim, though the outcome depends on the wording and local law. A deductible and a limit shape the amount paid. Underinsurance is a classic trap: if the sum insured is too low, the policy often pays proportionately less. Interviewers want to see that you link factors to terms, not just list them.

WORKED EXAMPLE: WHAT THE AVERAGE CLAUSE DOES TO A FIRE CLAIM

Lowmere Furniture Warehouse, an invented business, insures its building for a sum insured of 2,400,000. Its true rebuilding cost is 3,000,000. A fire causes damage of 600,000. The policy has an average (proportional) clause and a deductible of 25,000. Convention: the average is applied to the loss first, then the deductible is taken off; wordings vary. The premium rate is 0.10% of the sum insured. What does the insurer pay, and what does the underinsurance cost the customer?

Answer: The insurer pays 455,000. The customer bears 145,000, of which 120,000 comes from underinsurance, to save 600 of premium a year.

> **Interview tip:** Say that sums insured are an underwriting question, not only a sales one: you check valuations, suggest index-linking and explain the average clause to the broker, because a low sum insured both underprices the risk and harms the customer.

INT.NU.1.c · Selecting risk

Explain referral and authority limits and how portfolio accumulation controls limit the total exposure to a single event.

Insurers give each underwriter an authority: a limit on the size of line, the premium, or the class of business they can bind alone. Anything above or outside it is referred to someone more senior, which keeps judgement under review and stops one person committing the company to more than it intended. Referral also covers unusual terms, poor claims records or exceptions to guidelines. Separate from authority is accumulation: several policies that can be hit by the same event, such as one flood, storm or earthquake. A risk that is small on its own can still push a zone over its cap, so insurers track total sums insured by zone and peril and set caps, and they manage the net position with reinsurance. An underwriter must check both: is this risk within my authority, and does it fit the accumulation cap? The usual mistake is to assess each risk alone and ignore what else is exposed to the same event. Interviewers use this topic to test whether you think about the portfolio, not only the single policy.

WORKED EXAMPLE: FITTING A NEW WAREHOUSE UNDER A FLOOD ZONE CAP

Ashgrove Insurance, an invented insurer, caps total sums insured in flood Zone 4 at 60.0m. Existing exposure in the zone is 52.5m. A new warehouse in the zone has a sum insured of 10.0m. The underwriter's authority is 15.0m per risk. The rate is 0.30% of sum insured. What is the largest line that fits, and what premium does it earn? Convention: gross sums insured, no reinsurance.

Answer: The largest line within the cap is 7.5m, which is 75% of the risk, earning 22,500, and it uses up the zone's remaining room.

> **Interview tip:** Say that you check authority and accumulation separately because either can bind, and say what the line costs in opportunity: using the last of the room on this risk means saying no to the next one.

INT.NU.2.a · Terms and judgement

Judge whether a price is rate-adequate by building a technical premium from expected claims, expenses and profit, and explain how loadings and discounts move the price.

Rate adequacy asks whether the premium is expected to cover claims, expenses and a target profit. A common build is expected claims cost, divided by one minus the expense ratio and the profit margin, giving the technical premium. Rate adequacy is then the quoted premium divided by technical, so 92% means the quote is 8% light. Underwriters adjust the technical price with loadings for worse than average features and credits or discounts for better ones, often as schedule credits within set limits. Each adjustment should be evidenced: a large stack of unexplained credits is a warning sign. Remember how the ratio moves: a 10% premium cut raises a 60% loss ratio to 66.7%, because the same claims sit against less premium, not to 70%. Rate adequacy is judged against expected cost, not against last year's price or a competitor's quote. Interviewers ask this to test numerical comfort and discipline: can you say what a price must cover, and what you would give up before cutting it.

WORKED EXAMPLE: TECHNICAL PREMIUM AND DISCOUNT AT TESSEL PRINT WORKS

Tessel Print Works, an invented printer, seeks property and liability cover. The underwriter's expected annual claims cost for the risk is 420,000. Expenses (including brokerage) are 22% of premium and target profit is 6% of premium. The broker's quote request is 540,000. Find the technical premium, the rate adequacy of 540,000, and the effect of a 5% schedule credit and of a 10% discount on technical. Conventions: ignore tax and investment income.

Answer: The technical premium is 583,333. The quote of 540,000 is 92.6% adequate with a combined ratio of 99.8%. A supported 5% credit still leaves a small profit; a 10% discount makes the account loss-making.

Interview tip: Give the build in one sentence (claims divided by one minus expenses and profit), then the adequacy as a percentage, and then say which discount you could justify with evidence and which you could not.

INT.NU.2.b · Terms and judgement

Use deductibles and limits as underwriting tools, and explain how they reduce moral hazard and adverse selection and change expected claims cost.

A deductible is the part of each loss the insured bears first; a limit is the most the insurer pays. Both change the expected claims cost and the incentives. A deductible removes many small claims, which saves handling cost, but because most claims are small it removes only a modest share of claims cost, whereas a limit or high excess cuts exposure to the large losses that cause the volatility. Two problems sit behind these tools. Adverse selection happens before the policy starts: customers who know they are riskier buy more cover, or the best risks leave when prices rise. Moral hazard happens afterwards: with cover in place, the insured takes less care or exaggerates a loss. Sharing the loss through a deductible or co-insurance keeps the insured's stake in prevention, and offering a menu of deductibles lets customers reveal their own view of their risk. The usual mistake is to give a discount larger than the claims cost the change actually saves. Interviewers ask this to see whether you can reason about incentives and put a number on a trade-off.

WORKED EXAMPLE: HOW MUCH DOES A DEDUCTIBLE AND A LIMIT REALLY SAVE?

Dunmore Joinery, an invented business, had 12 claims last year (in thousands of dollars): 2, 3, 4, 6, 8, 12, 15, 22, 40, 75, 180 and 400. The total is 767. Compare a deductible of 5,000 per claim, a deductible of 10,000 per claim, and a 10,000 deductible with a limit of 250,000 per claim (applied after the deductible). Convention: past claims are treated as a guide to a typical year, ignoring trend.

Answer: A 10,000 deductible saves 12.1% of claims cost and removes five small claims, and adding a 250,000 limit takes the saving to 30.4%, mostly from capping one large claim.

Interview tip: Say that deductibles remove frequency while limits remove severity, give the percentage saved in each case, and then say that any discount offered should not exceed the saving.

INT.NU.2.c · Terms and judgement

Decide whether to renew, reprice, restructure or decline an account, using weighted experience, trend and a clear walk-away point.

At renewal the underwriter reassesses the risk instead of rolling over last year's terms. The usual method is to restate past loss ratios to the current rate level, weight recent years more heavily because they are more relevant, apply a trend for claims cost inflation, and compare the result with the break-even and target loss ratios. If the expected loss ratio is 80% and expenses are 30%, break-even is a 70% loss ratio, so the premium must rise by 80 / 70 - 1, about 14.3%, and more to reach a profit target. The sensible outputs are an ask, a floor below which you walk away, and structural alternatives such as a higher deductible or tighter conditions. Reasons to decline include risks outside appetite, risks that cannot be priced or restructured to an adequate level, and doubts about the integrity of the proposer. A one-off loss with a verified fix deserves some credit, not none and not full. The usual mistake is to apply a flat percentage increase to every account instead of judging each one. Interviewers ask this to see commercial judgement.

WORKED EXAMPLE: SETTING AN ASK AND A FLOOR FOR THE RAVENSCAR PACKAGING RENEWAL

Ravenscar Packaging, an invented manufacturer, has liability loss ratios of 55%, 66% and 79% for the last three years, already restated to the current rate level. Weight them 20%, 30% and 50%. Claims cost inflation is 5% for the coming year. Expenses are 28% of premium. The target combined ratio is 95%. The client says it will not accept more than 6%. Find the expected loss ratio, the increases for break-even and for target, and the result at the client's limit. Conventions: ignore investment income and tax.

Answer: Expected loss ratio is 73.8%. Break-even needs about +2.5% and target needs about +10.2%. At the client's +6% limit the combined ratio is 97.6%, so I would ask for +10%, settle near +6% only with a higher deductible, and walk away below +2.5%.

> **Interview tip:** State three numbers, the ask, the settlement point and the floor, and then name the non-price lever you would trade, such as a higher deductible, rather than only saying yes or no.

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