Capital, Solvency and Regulation

Interview preparation summary · IN track

IN THIS SUMMARY

- Capital
- Regulation and reporting

INT.NK.1.a · Capital

Explain why an insurer holds capital on top of its reserves, and work out a solvency ratio, a surplus and the effect of a loss or of growth on them.

An insurer sets aside reserves for the claims it expects to pay. Capital is the extra money behind those reserves, held because real claims can turn out worse than expected, and its first job is to protect policyholders. Insurers in many regimes must hold capital against the risks they take, and the idea is summed up in a solvency ratio: available capital divided by required capital. Above 100% the insurer meets the requirement, and the surplus is the difference. Most firms also set a management buffer above the minimum, because a ratio that sits close to 100% leaves no room for a bad year, and a falling ratio can limit dividends, growth or new business. Two things move the ratio: a loss cuts available capital, and growth raises the requirement, since more risk needs more capital. Interviewers ask this to see whether you understand capital as a cushion against surprise, not as spare cash. The common mistake is to treat the ratio as a safety score, when it depends on how the requirement is measured and how risky the business is.

WORKED EXAMPLE: HARBOURLIGHT ASSURANCE: A LOSS AND A GROWTH PLAN

Harbourlight Assurance, an invented general insurer, has available capital of 180m and required capital of 120m on net premium of 600m. The requirement moves in proportion to net premium. It suffers an unexpected net loss of 45m after tax and then plans premium growth of 10%. Management wants a ratio of 130% at the end. Work out the ratio and surplus at each stage and the capital shortfall against the target. Figures are in dollars, other items are ignored.

Answer: The ratio goes from 150.0% to 112.5% after the loss and to 102.3% after growth. To reach 130% the insurer must raise or retain about 36.6m, or grow more slowly.

> **Interview tip:** Say the ratio is available over required, then show both ways it moves: a loss cuts the top, growth raises the bottom. Finish by saying what you would do about the gap.

INT.NK.1.b · Capital

Describe tiers of capital and risk-based requirements, and work out how limits on lower-quality capital change the capital that counts.

Not all capital is equal. Many regimes group capital into tiers by quality. The best is permanent and fully paid up and can absorb losses while the insurer keeps trading, such as ordinary shares and retained profits. Lower tiers include subordinated debt, which ranks behind policyholders but must eventually be repaid, and items such as a deferred tax asset, which are worth something only if the insurer makes future profits. Regimes typically limit how much lower-quality capital can count towards the requirement, so a large headline amount can shrink once the limits are applied. The requirement itself is usually risk-based: it is built from the risks taken, such as the lines written, the reserves, the assets held and the catastrophe exposure, rather than being one flat sum. Interviewers ask this to see whether you can look past a headline ratio. The common mistake is to add up all capital and ignore both its quality and the limits on counting it. Details differ by jurisdiction, so say that practice varies.

WORKED EXAMPLE: FENMOOR INSURANCE: WHAT COUNTS

Fenmoor Insurance, an invented insurer, has top-quality capital of 140m, middle-quality subordinated debt of 50m and lowest-quality capital of 30m, against a requirement of 150m. For this exercise only, assume that capital other than top quality counts in total up to 50% of the requirement, and the lowest quality alone up to 15%. These limits are invented for practice and are not any real rule. Work out the capital that counts and the ratio.

Answer: The capital that counts is 212.5m and the ratio is 141.7%, against 146.7% if nothing were limited. Top-quality capital alone covers only 93.3%, so the firm leans on lower tiers.

> **Interview tip:** Give the headline, then the quality. Say how much of the cover is top-quality capital and how close the limits are, and note that the details differ between regimes.

INT.NK.1.c · Capital

Describe how stress tests and rating agency views are used, and work out a post-stress solvency ratio and the effect of a management action.

A stress test asks whether an insurer would still hold enough capital after a severe but plausible shock, such as a major catastrophe together with a fall in asset values. The insurer applies the shock to its assets and liabilities, recalculates available and required capital and compares the result with its own appetite and the minimum. A reverse stress test works the other way: it starts from failure, for example a ratio below 100%, and asks which combination of events would cause it. Firms then list management actions, such as cutting a dividend or buying more reinsurance, though a good analyst asks whether those actions would really be available in a crisis. Rating agencies give independent opinions on financial strength, using their own models and judgement of management and risk control. Commercial buyers and brokers often care about a minimum rating, so it can limit who will buy from the insurer. The common mistake is to treat a passed test as proof of safety, when the scenarios are only as good as the imagination behind them.

WORKED EXAMPLE: ELLERBY GENERAL: A STRESS AND A REVERSE STRESS

Ellerby General, an invented insurer, has available capital of 300m against a requirement of 200m. A stress scenario combines a catastrophe that costs 30m net of reinsurance, a 3% fall on 1000m of bonds and a 20% fall on 80m of equities. Assume the requirement is unchanged, ignore tax, and note that a planned dividend of 20m has not yet been paid. Management's risk appetite is a ratio of at least 120%. Work out the post-stress ratio, then the effect of cancelling the dividend, then the reverse stress loss.

Answer: The stress takes the ratio from 150.0% to 112.0%, below appetite. Cancelling the dividend restores 122.0%. A loss of 100m would take it to 100%.

> **Interview tip:** State the scenario, the ratio after it and the action. Then add one caution: say whether the action would really be available in a crisis.

INT.NK.2.a · Regulation and reporting

Distinguish conduct from prudential regulation, and use simple complaint and redress figures to describe a conduct problem and a reporting duty.

Insurers are typically supervised for two different things. Prudential regulation asks whether the firm is financially sound enough to keep its promises: capital, reserves, investments, risk management and reinsurance. Conduct regulation asks whether customers are treated fairly: how products are designed and sold, whether they give fair value, how claims are handled and how complaints are resolved. The two can overlap, since a reserve shortfall is prudential but a slow claims process that causes it is conduct, and the split of responsibility varies by country, sometimes sitting in one body and sometimes in two. Firms report to supervisors regularly, with capital returns and conduct data such as complaints, and they are generally expected to correct errors in what they report and to tell the supervisor openly. A graduate should be able to read simple conduct measures, such as complaints per thousand policies and the share upheld, and to size redress. The common mistake is to treat conduct as paperwork. A conduct failure can cost customers, redress and trust.

WORKED EXAMPLE: BRIGHTWELL DIRECT: A RISE IN COMPLAINTS

Brightwell Direct, an invented motor insurer, had 230,000 policies and 2,400 complaints last year, and has 240,000 policies and 3,600 complaints this year, of which 1,260 were upheld. The average payment on an upheld complaint is $450. Work out the complaint rates and the upheld share, estimate the redress cost, and say which of three issues is conduct and which is prudential: misleading renewal letters, a doubt that injury reserves are short, and claims paid late after a systems move.

Answer: The complaint rate rose from 10.4 to 15.0 per 1,000, with 35% upheld and redress of at least $567,000. Two issues are conduct and the reserve doubt is prudential.

> **Interview tip:** Use rates, not counts. Say what the numbers suggest about cause, size the cost and say that the root cause and other affected customers must be checked.

INT.NK.2.b · Regulation and reporting

Explain the contractual service margin and onerous contracts at overview, work out both for a simple group of contracts, and explain why accounting and regulatory views of an insurer differ.

IFRS 17 is an accounting standard for insurance contracts, and its core idea can be stated simply. When a group of contracts is written, the insurer estimates the present value of the premiums it will receive and of the claims and expenses it will pay, and adds a risk adjustment for the uncertainty. If the premiums exceed those costs, the surplus is not booked as profit at once. It becomes the contractual service margin, or CSM, which is released into profit as the insurer provides cover. If the costs exceed the premiums, the group is onerous, and the expected loss is recognised immediately. Profitable and onerous contracts are generally kept in separate groups so that losses are not hidden. Accounting profit is not the same as regulatory capital: accounting follows rules on timing of profit, while capital rules look at the ability to pay claims and the risks taken. A firm can show an accounting profit while its capital ratio falls. Details vary, so describe the idea and avoid rule numbers.

WORKED EXAMPLE: LINDQVIST MUTUAL: CSM AND AN ONEROUS GROUP

Lindqvist Mutual, an invented insurer, writes a group of three-year contracts. Present values at the start are premiums of 120m, claims and expenses of 84m and a risk adjustment of 9m. Cover is provided in the proportions 40%, 35% and 25% over the three years. A second group has premiums of 120m, claims and expenses of 118m and a risk adjustment of 8m. As a simplification, ignore interest on the CSM and use the proportions as the pattern of release. Work out the CSM, its release and the second group's result.

Answer: The first group has a CSM of 27m released as 10.80m, 9.45m and 6.75m. The second group is onerous and shows an immediate loss of 6m.

> **Interview tip:** Say that the CSM is profit that has not yet been earned, and that a loss is not deferred. Then add that accounting and regulatory capital answer different questions.

INT.NK.2.c · Regulation and reporting

Explain how reinsurance changes the capital requirement, what the relief costs, and why risk transfer and counterparty risk limit it.

Reinsurance and capital are closely linked. When an insurer cedes part of its risk, for example through a quota share, it keeps less premium and less risk, so its required capital usually falls and its solvency ratio rises. This is often called capital relief. The relief is not free. The insurer gives up part of its expected profit to the reinsurer, and it takes on counterparty risk, the chance that the reinsurer fails to pay, so regimes typically add a capital charge that is larger for weaker reinsurers. Supervisors and auditors may also look at whether risk has really been transferred: a contract that returns almost all expected losses to the cedant, through a profit commission or a cap on the reinsurer's loss, may earn little or no credit. A useful interview test is to divide the profit given up by the capital freed, and compare it with the cost of raising capital another way. The common mistake is to see reinsurance as free capital. It is a purchase, and it should be priced like one.

WORKED EXAMPLE: WRENFIELD INSURANCE: IS THE QUOTA SHARE WORTH IT

Wrenfield Insurance, an invented insurer, has gross premium of 500m, available capital of 210m and a requirement equal to 30% of premium retained. It considers a 20% quota share. Assume a counterparty charge of 5% of ceded premium is added to the requirement, the expected combined ratio is 96%, and the ceding commission just covers the cedant's costs, so the cost of the deal is the reinsurer's share of the expected underwriting profit. Shareholders' cost of capital is taken as 9%. Work out the ratios, the capital freed and the cost of the relief.

Answer: The ratio rises from 140% to 168%, freeing 25m, at a cost of 4m a year or 16% of the capital freed. That is above a 9% cost of capital, so the case rests on other benefits.

> **Interview tip:** Show the ratio before and after, then divide cost by capital freed. Mention counterparty risk and risk transfer, and say that practice varies by regime.

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