Retail General Insurance: Motor, Home, Travel and Pet

Interview preparation summary · IN track

IN THIS SUMMARY

- Products, pricing and the combined ratio
- Distribution, conduct and claims

INT.NG.1.a · Products, pricing and the combined ratio

Describe motor, home, travel and pet cover: what each covers, what drives its claims, and how frequency and severity differ across them.

Retail general insurance, also called personal lines, covers individuals and households. Motor cover typically has a legal minimum of third party liability, with extra layers such as third party fire and theft and comprehensive cover for the policyholder's own car, plus add-ons such as breakdown or legal expenses. Its claims are frequent, mostly small vehicle damage, with a tail of serious injury claims, so repair costs, parts prices and injury awards drive the result. Home insurance splits into buildings, which covers the structure, and contents, which covers belongings. Claims are less frequent but include weather events, escape of water, theft, fire and subsidence, so the book is exposed to storms and floods and usually needs reinsurance. Travel insurance covers medical costs, cancellation and baggage, with exposure driven by destination, trip length, age and medical conditions, and is mostly short-term. Pet insurance covers veterinary fees, often with a lifetime or annual limit, and claims are frequent, rising with age, breed and vet price inflation. Across the lines, frequency and severity differ, so the same pure premium can come from many small claims or a few large ones. Details vary by insurer and country, and the legal minimum for motor is set locally, so check current practice. The usual mistake is to treat all personal lines as one risk with one set of drivers.

WORKED EXAMPLE: FOUR PRODUCTS, FOUR CLAIMS PATTERNS

Invented figures for one year of an insurer's personal lines: motor 0.080 x 3,900 = 312.0; home (buildings and contents) 0.090 x 1,800 = 162.0; travel (per policy) 0.060 x 650 = 39.0; pet 0.550 x 420 = 231.0. The expense ratio is 30% of premium and the target profit 5%. Work out the pure premium (expected claims per policy), the technical premium for each product, and say which product is most frequency-driven and which most severity-driven. Conventions: illustrative numbers; frequency is claims per policy-year; ignore tax and investment income.

Answer: The technical premiums are about 480 for motor, 249 for home, 60 for travel and 355 for pet; pet is the most frequency-driven and motor the most severity-driven, and home needs an extra allowance for weather.

> **Interview tip:** Say: frequency times severity gives the pure premium, then I gross up for expenses and profit; pet is many small claims, motor has the big average claim, and home needs a catastrophe allowance on top.

INT.NG.1.b · Products, pricing and the combined ratio

Explain how personal lines premiums are built from rating factors, generalised linear models and machine learning, what telematics adds, and where fairness limits what factors can be used.

Personal lines pricing starts from a base premium and multiplies it by relativities for rating factors such as age, postcode, vehicle group, no-claims history and mileage. The relativities come from models of frequency and severity. A generalised linear model (GLM) fits all the factors together, so that the effect of age is measured after allowing for the vehicle and area, which a one-way look at each factor does not. Machine learning methods such as gradient boosted trees can find interactions and nonlinear effects but need more care over stability, explainability and testing. Telematics uses data from a device or app, such as braking, speed, time of day and mileage, to measure how a person drives. It adds real behaviour for young or new drivers but needs time to build up, so it is usually blended with traditional rating. Fairness limits matter: in the UK and EU insurers may not price on sex, and models must not use factors that act as a proxy for protected characteristics without justification. Regulators also expect firms to be able to explain their pricing and treat customers fairly. Check current rules. The usual mistake is to add one-way relativities together, which counts the same risk twice.

WORKED EXAMPLE: BUILDING A PREMIUM AND WHY ONE-WAY FACTORS OVERCHARGE

An invented motor rating plan has a base premium of 380. A 22-year-old in a good area with a mid-group car has relativities of age 1.55, area 1.2, vehicle group 1.1, no-claims 0.75 and mileage 1.05. A one-way analysis gave age 1.8 and vehicle group 1.25, because young drivers tend to drive higher-group cars; the multivariate model gives 1.55 and 1.1. With 6 months of telematics the driver's own data suggests a price of 520, and the insurer gives that a weight of 40%. Work out the premium, the overcharge from using one-way factors for age and group, and the blended premium. Conventions: multiplicative factors; the other relativities are unchanged.

Answer: The traditional premium is about 612; one-way factors would overcharge by about 32% on age and group together; and with a 40% telematics weight the premium is about 575.

Interview tip: Say: I multiply the relativities from a model that fits all factors together, I would not stack one-way factors, and telematics adds real driving behaviour, blended with traditional rating until there is enough data.

INT.NG.1.c · Products, pricing and the combined ratio

Work out the rate change needed from claims inflation, repair costs and frequency trend, and explain how weather, expenses and the underwriting cycle move the combined ratio in personal lines.

The combined ratio of a personal lines book is the loss ratio plus the expense ratio, which includes commission, acquisition cost such as price comparison fees, and running costs. Below 100% is an underwriting profit. The loss ratio moves with claims cost per policy, which is frequency times severity. Severity is driven by repair costs, parts and labour in motor, building and material costs in home, vet fees in pet, and injury awards, and claims inflation can run well above general inflation. Frequency changes with traffic, driving behaviour, weather and fraud. Weather is the main shock in home insurance: storms, floods and freezing weather can push the loss ratio up in a bad year, which is why firms hold catastrophe reinsurance and why climate trends matter for the long-run price. The underwriting cycle is the pattern of rate rises in hard markets and rate cuts in soft markets. In personal lines, price comparison sites make the market transparent, so a soft market can cut rates fast and a firm that follows the market down can find that claims inflation has overtaken its premium. The rate change needed is found from the projected loss ratio divided by the target loss ratio. Figures in the worked example are illustrative. The usual mistake is to look only at last year's loss ratio and not at the trend in claims cost.

WORKED EXAMPLE: HOW MUCH RATE DO WE NEED?

An invented motor book has an expiring loss ratio of 70% and an expense ratio of 30%. The target margin is 4%. Average claims cost is expected to rise by an amount that depends on its parts: own damage and repair 50% of claims cost rising 10%, third party property 15% of claims cost rising 6%, bodily injury 35% of claims cost rising 4%. Claim frequency is expected to fall by 2%. Work out the severity trend, the pure premium trend, the projected loss ratio at expiring rates and the rate change needed. Conventions: one year of trend; expense ratio stays the same share of premium; ignore lapses and mix.

Answer: The severity trend is 7.3%, the pure premium trend 5.15%, the projected loss ratio 73.6% and the rate change needed about 11.5%.

Interview tip: Say: I trend each part of the claims cost, combine severity and frequency, project the loss ratio, and divide by the target to get the rate need; then I say what the market will allow.

INT.NG.2.a · Distribution, conduct and claims

Explain how personal lines are distributed through price comparison websites and direct channels, and work out the economics of acquiring and retaining a customer.

Retail customers buy through price comparison websites (PCWs), directly from the insurer by website, app or phone, through brokers or intermediaries, and through partners such as banks, retailers and car makers. In the UK a large share of motor and home policies is sold through PCWs. A PCW shows many quotes ranked by price, so price becomes the main selling point, conversion rates are low and the insurer pays a fee or commission per sale. The cost of acquiring a new customer is therefore high and first-year margins are often thin or negative. The profit comes from renewal, when the acquisition cost has been paid and the customer is already on the books, so retention and customer lifetime value matter. Lifetime value depends on the margin each year, the retention rate and how long the customer stays. Direct channels cost less per sale but need brand and marketing. Insurers use data to decide how much to bid for a customer in each channel. Regulators watch renewal pricing so that loyal customers are not charged more than new ones, which limits the old tactic of recovering acquisition cost through high renewal prices. The usual mistake is to judge a channel on first-year margin alone, or to assume that retention can be pushed up without cost.

WORKED EXAMPLE: WHAT IS A PCW CUSTOMER WORTH?

An invented insurer sells a motor policy at 600 through a PCW. Claims are 70% of premium. Other expenses are 20% of premium in the first year and the PCW fee is 80. At renewal the price is the same, expenses are 12% of premium and marketing is 10. Retention is 72% a year. Work out the first-year and renewal margins per policy, the expected number of renewals, and the lifetime value; then repeat for 60% retention. Conventions: undiscounted, constant retention, same claims each year.

Answer: The first year loses 20 and each renewal earns 98; at 72% retention the lifetime value is about 232, falling to about 127 at 60% retention.

> **Interview tip:** Say: a PCW sale usually loses money in year one and earns it back on renewals, so I look at lifetime value and retention, and I remember that renewal pricing is regulated.

INT.NG.2.b · Distribution, conduct and claims

Explain renewal pricing and the UK fairness rules, including price walking, the equivalent new business price rule, fair value and the Consumer Duty, and work out their effect on revenue.

For years many insurers priced new customers keenly and raised prices at renewal, sometimes year after year, on the view that long-standing customers would not shop around. This is called price walking. In the UK, the Financial Conduct Authority's pricing practices rules for home and motor insurance, in force since 2022, say that a renewal price must not be higher than the price the firm would offer a new customer through the same channel for the same product, known as the equivalent new business price, and firms must show they comply. The Consumer Duty, in force since 2023, sets an overall standard that firms deliver good outcomes for retail customers, including fair value, clear communication, support and understanding. Fair value includes looking at whether premium is reasonable compared with the benefits and the cost of distribution, particularly where commission and fees are high. Insurers also face rules on automatic renewal and on how they treat customers with characteristics of vulnerability. These rules are UK-specific, and other countries have different approaches, so check current rules. In practice, the rules reduced the gap between new and renewal prices, so insurers moved to price new business higher or renewals lower, and had to rebuild their pricing around the total customer. The usual mistake is to say the rule fixes prices: it limits the renewal price relative to the new business price, and does not stop prices rising for everyone.

WORKED EXAMPLE: WHAT A RENEWAL PRICE CAP DOES TO REVENUE

An invented insurer has 100,000 renewing motor policies at an average price of 640 and 60,000 new policies per year at an average of 590. The equivalent new business price for the renewing customers averages 590. A rule caps renewal prices at that level. Work out revenue before and after, and the uniform price increase needed to recover it. Conventions: annual premium; no change in volumes or claims; the cap binds on every renewing customer.

Answer: The cap would cut revenue by about 5.0m (5.0%), and recovering it would need prices about 5.3% higher for everyone, before any volume effect.

> **Interview tip:** Say: in the UK the rule links the renewal price to the new business price, so the loyalty premium disappears; the insurer must raise the base price, cut costs or accept a lower margin, and the Consumer Duty adds a fair-value test on top.

INT.NG.2.c · Distribution, conduct and claims

Explain how personal lines claims are managed, including fraud, subrogation, repair networks, total loss decisions and bodily injury claims and the effect of regulation, and work out a repair versus total loss decision and a recovery.

A personal lines claim is judged on speed, fairness and cost. Fraud ranges from opportunistic exaggeration, such as inflating a claim, to organised schemes such as staged accidents, and insurers use data matching, analytics and investigation teams, balancing detection against delay and unfair treatment of honest customers. Subrogation is the insurer's right, after paying its customer, to recover the cost from the party at fault or its insurer, so a motor claim where another driver was to blame can be largely recovered. Repair networks are approved garages or builders that repair at agreed prices and standards, which usually lowers cost and improves service, but must keep quality and customer choice under review. A total loss arises when the cost of repair, plus any hire, would exceed the vehicle's value less its salvage, in which case the insurer pays the market value and takes the salvage. Bodily injury claims are the most severe and uncertain part of motor. In the UK, reforms since 2021

introduced a tariff for lower-value whiplash injuries and a different claims route, which lowered the cost of small injury claims; they are UK-specific, so check current rules. Regulation also expects claims to be handled promptly and fairly. The usual mistake is to see claims only as a cost to be cut, when fair and quick settlement is part of what the customer buys.

WORKED EXAMPLE: REPAIR OR WRITE OFF, AND WHAT CAN BE RECOVERED

An invented motor claim: the car's pre-accident market value is 9,000, the repair estimate is 7,000 and the salvage value if written off is 2,600. A courtesy car during repair costs 30 a day for 21 days. A third party is 70% at fault and their insurer accepts that share. Work out which option is cheaper and by how much, and what can be recovered. Conventions: ignore the policy excess and VAT; recovery applies to the net loss after salvage.

Answer: Writing the car off costs 6,400 against 7,630 for repair, a saving of 1,230; the insurer can recover 4,480 and bears a net 1,920.

> **Interview tip:** Say: I compare repair plus hire with value less salvage, then I look at who was at fault and recover their share; I also keep the customer informed, because speed and fairness are part of the product.

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