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Subject F202 — Life Insurance

Specialist Applications

EXAMINER'S REPORT

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QUESTION 1

A South African resident has a savings policy that includes a guaranteed death benefit, and a retirement annuity policy with an insurer. She is also a member of her company's pension fund to which she and the company contribute, which includes an approved Group Life scheme that provides death and disability income benefits.

i. Compare the tax treatment of the premiums and benefits of the products from the point of view of the individual.

This question was well handled by those familiar with the South African tax environment. Most candidates missed the points on how the estate would be handled.

The employer's contributions to the pension fund are treated as a taxable fringe benefit in the hands of the employee.

But these contributions, the member's own contributions and the premiums for the retirement annuity policy are deductible from the member's taxable income subject to an overall limit of the lower of:

- 27.5% of the greater of taxable income or remuneration
- R350 000

The premiums payable for the savings policy are paid from after tax income, i.e. there is no tax deduction in the hands of the policyholder.

The premiums for the benefits under the approved Group Life scheme form part of the total contribution to the company's pension fund and are deductible for tax purposes (subject to the overall 27% / R350 000 contribution limits).

The lump sum proceeds of the savings policy paid on death, surrender or maturity are exempt from income tax in the hands of the original policyholder or beneficiaries.

The proceeds on death from the approved Group Life scheme are taxed according to a sliding scale.

The disability income benefit from the approved Group Life scheme is not taxed in the hands of the beneficiary.

On death before retirement, the benefit from the individual RA will be treated as a lump sum retirement benefit and taxed in the same way.

All policies on the life of the deceased are deemed to form part of the deceased's estate for estate duty purposes.

To the extent that the proceeds of the life insurance policy cause the dutiable amount of the estate to exceed the R3.5m threshold, the benefits are effectively subject to estate duty tax.

The retirement benefits of both the retirement annuity policy and company pension fund must be taken in the form of a compulsory annuity.

The annuity income is included in the policyholder's taxable income and taxed accordingly.

However, up to 1/3 of the income may be commuted for a lump sum on retirement.

ii. Briefly describe the operation of the various tax funds and how the tax payable by life offices is determined.

This question was handled reasonably well by those familiar with the Income Tax Act. Most candidates managed to name and discuss the five funds briefly. Fewer managed to detail the business in each fund correctly and even fewer managed to discuss how the taxable income in each fund was calculated.

In terms of Section 29A of the Income Tax Act, every insurer is required to maintain five separate funds,

which are treated as separate taxpayers.

The effect of these five funds is that a long-term insurer is not only required to pay tax on its profits, but also on the taxable income and capital gains generated on behalf of its policyholders.

The five funds are:

- The Risk Policy Fund (RPF) for policies where the benefits are solely payable due to death, disablement, illness or unemployment (excluding) annuity contracts.
- The Untaxed Policyholder Fund (UPF) for annuity contracts in payment, and for policies owned by pension, provident, retirement annuity, benefit funds, and owners who are exempt from tax.
- The Individual Policyholder Fund (IPF) for policies not in the RPF or UPF whose owner is any person other than a company.
- The Company Policyholder Fund (CPF) for policies not in the RPF or UPF whose owner is a company.

- The Corporate Fund (CF) or shareholder fund, which is represented by the assets held by the insurer that are not in the other four funds.

At the end of each financial year, insurers need to determine the value of liabilities in respect of the UPF, IPF, CPF and RPF.

Any excess or shortfall of the market value of the assets over the value of the liabilities shall be transferred to or from the corporate fund.

The taxable income for each fund consists of:

RPF – profits earned in the fund (Premiums less claims, movement in policy liabilities and deduction for transfers to the CF).

IFP and CPF – Investment income and other income such as administration fees within each tax fund, less a deduction for expenses.

UPF – does not have any taxable income.

CF – Investment income less expenses plus transfers from the other funds.

Any amount transferred from the corporate fund shall not be deducted from the taxable income of the corporate fund. However, it creates a special transfer balance for the Corporate Fund. Any future transfers to the CF from the same policyholder fund can be offset against this special transfer balance.

Different tax rates are applied to the taxable income of each fund.

The definition for value of liabilities has changed with the introduction of SAM and the new Insurance Act to an "adjusted IFRS value". Before the introduction of SAM, liabilities were essentially the company's SVM liability determined for the policyholder fund. With SAM, SVM liabilities fall away. In essence the new value of liabilities should be equal to the IFRS policy liabilities. The difference between the IFRS policy liabilities and the 'old' SVM policy liabilities (if applicable) will be phased-in over 6 years.

With the introduction of the Taxation Laws Amendment Act of 2014, a South African insurer elected to retain its existing business in the IPF fund.

iii. **Compare the valuation bases (SAM, IFRS & EV) for this business and business sold after 1 January 2016.**

This question was answered very poorly. Most candidates struggled to generate sufficient detail around the various bases and were also vague on the similarities and differences.

All new risk business sold after 1 January 2016 will be included in the Risk Policyholders Fund (RPF).

The starting point for SAM, IFRS and EV assumptions is best estimate assumptions, which would be the same for SAM, IFRS and EV for risk decrements, terminations and expenses.

However, due to the use of SAM specific yield curves, the economic assumptions may differ between SAM and IFRS/EV.

Risk decrements

One would not expect the risk decrement bases to differ,

unless an experience investigation has shown a significant difference in the experience of the new cohort.

This may be a result of changes in the pricing basis/product design that accompanied the introduction of the RPF attracting a different mix of business.

Termination rates

Similar to risk decrements, one would not expect the lapse/surrender bases to differ.

Expenses

Unit expense for both sets of policies would be expected to be the same.

Because expenses in the IPF attract some tax relief, there may be an incentive to allocate more expenses to the IPF (e.g. overheads), which would result in higher unit expenses for the IPF polices than the RPF policies.

However, the insurer would have to have very good evidence to justify such a distinction.

In valuing the liabilities for the IPF policies, allowance will be made for the tax relief on expenses but there is no tax relief on expenses for RPF policies.

Assuming that the composition of the assets backing the liabilities of the two funds is similar, then the net discount rate for valuing policy liabilities will be higher for the RPF than the IPF because RPF's investment income is not taxable.

It is unlikely that the composition of the assets backing the liabilities of the funds will differ significantly, because the risk profile will be similar.

For embedded values, the risk discount rate for both cohorts of business will be the same.

There should be consistency between the products for the way negative reserves are treated. For instance, if negative reserves for pre-2016 polices are zeroised on the IFRS basis, then they should be zeroised for post-2016 policies too.

The insurer has a large amount of accumulated tax credits from previously written business. It is planning to launch a new endowment savings product.

iv. **Explain how the accumulated tax credits can be used for the benefit of the company and/or the policyholders of the new product, as well as the practical limitations.**

This question was answered reasonably well by the better candidates. Better candidates could detail how the tax credits originated and provide a broad range of ways that this could be used to benefit the company or its policyholders. The better candidates also picked up on the fact that the tax credit would at some point run out and discussed the corresponding implications.

The taxable income of the insurance company's IPF is reduced by tax credits carried over from previous years.

This means that the insurance company will not pay tax on the full taxable investment income generated by the new savings product.

If the company credits the policyholders' accounts with investment returns net of the 'normal tax', then it will make additional profits on the policies.

Alternatively it can share the benefit with the policyholders, with the expectation that it can make the products more marketable/competitive and that it will increase profits through higher volumes.

The policyholder benefits could be enhanced in a number of ways:

- Credit the policyholder accounts with a tax-free, or lower rate of tax, investment income.
- Policy and administration fees could be made lower than competitor's products.
- The amount of each premium allocated to the savings account could be made higher than competitor's products.
- Any other.

The company would need to check that its administration system is able to handle the benefit enhancement that is chosen.

It may choose different methods for single and recurring premium policies.

The company will need to determine how long the tax credits will last, and therefore what volume of sales can be supported.

It may need to limit the terms of the policies so that all policies mature before the projected tax credits run out.

The risk policies that are still in the IPF will still generate tax credits, but as more of this business shifts to the RPF the source of tax credits will dry up, and the company will need to take this into account in its projections.

Taxable investment income includes interest & rental income and capital gains. The tax credits can only be used when there is positive investment income against which they can be offset. A sharp market fall will lead to negative capital gains and a reduction in the investment income. The company needs to be aware that this can cause volatility in its profits.

QUESTION 2

A South African life insurance company writes a range of risk products targeted predominantly at the upper socio-economic groups. A possible expansion of the product range into the lower socio-economic groups has been identified as part of its growth strategy. Recent market research has suggested that the current product range does not cater sufficiently for this segment of the South African population.

i. **List the main individual risk products available in the South African life insurance market and describe:**
   a) **the risks these products expose the insurer to;**
   b) **the specifics of these risks in relation to products sold in the lower socio-economic market.**

This question was well answered. The better attempts at the question covered a wider range of points and a greater degree of detail.

Mortality benefits

Critical Illness benefits

Permanent disability benefits

Income Protection benefits

Keyperson insurance benefits

Credit life products

Funeral products

Risks to the insurer

The main risk to the insurer is the incorrect pricing of products.

The lower socio-economic group market is new to the insurer and assumptions may need to be made in terms of mortality and morbidity (or other incidence) rates.

The risk is that these are too low and losses are incurred or too high and the product doesn't sell.

This could be mitigated through use of a reinsurer that may write business in this market.

Moral hazard risk exists for Income Protection cover where claimants may not notify the insurer when they're able to work again.

For CI or Disability benefits there is also a significant definition risk where the exact wording of the definitions can be interpreted differently by individuals.

On Income Disability benefits, claims assessment carries additional risk due to the complex nature of the product as well as the fact that assessment of disability is not always objective.

Reputational risk, where the terms and conditions of the policy are not understood properly by the policyholder.

In the lower socio-economic market complex products and definitions carry exacerbated risk in terms of understanding and ultimately increase reputational and TCF risk.

The relatively low financial sophistication and education of lower socio-economic groups may lead to customers misunderstanding the product as well as the value of the product.

Risk products also pose an underwriting risk.

Underwriting risk is higher for CI and Disability benefits due to the complicated nature of the product and complex links between different diseases.

For lower socio-economic groups products are likely to have limited or no underwriting. This increases the underwriting risk as there are less checks and controls on the risk posed by people purchasing the product.

Credit life and funeral policies also have limited or no underwriting and as such these policies also pose significant underwriting risk to the insurer.

Cross-subsidy risk may exist on products with simple pricing structures, like funeral or credit life.

CI and Disability benefits carry additional risks in terms of medical advances where diagnosis or treatment of conditions can change significantly which may impact the validity of definitions or severity of conditions.

To the extent that disability incidence is linked to the economy, economic cycles also pose a risk to the insurer if this has not been allowed for in the pricing of the products.

Anti-selection risk exists and is higher for products where there is limited underwriting as well as where a future cover option is selected.

Non-disclosure risk during underwriting where the policyholder withholds information about their health at application stage which may not be picked up by medical underwriting.

There is a risk of selective withdrawals, especially where competition in the market is strong and healthier policyholders can get a better priced product elsewhere.

There is a high risk of fraud on Funeral policies due to the lack of underwriting and the short timeframe in which the benefits need to be paid to the beneficiaries.

Products aimed at lower socio-economic groups will carry a volume and expense risk.

Due to products having lower sums assured and as such lower premium levels, a large part of the premium will go towards recouping the administration and distribution costs.

There is also an increased affordability and persistency risk for products sold in the lower socio-economic market.

Affordability of premiums can be a significant risk to the insurer and typically lapse rates and not-taken-up (NTU) rates are much higher in this market.

In order to assess the business case for a product range aimed at lower socio-economic groups, a proposal for a product range aimed at this segment of the market is required.

ii. Describe the
a) key product characteristics and
b) other relevant considerations
that would be set out in such a proposal.

This question was reasonably well answered. Most candidates managed to describe the basics with regards to the product characteristics but then fell short in covering other relevant considerations.

Many candidates also missed the points covering the fact that additional pricing assumptions would be required as well as the profit testing and financial impact exercises that should be carried out.

<u>Product Characteristics:</u>

Products must have a simple design and be easy to understand.

Financial literacy in the market is likely to be low and people should understand what they are purchasing.

Events that trigger claims should be objective and clearly understood.

Products must be affordable.

Insurance is likely to be a luxury item for most customers in this market.

Lower cover amounts. This will fit in with the needs of this market and also assist in affordability of the product.

The products would have limited or no underwriting.

This would assist in

- reducing costs
- reducing some of the complexity of the product
- making the sales process easier
- eliminating the need for customers to attend a clinic for underwriting when there may not be one easily available

In addition to a simple underwriting process, the claims process should be simple to follow and the payout should be quick. In this market where savings are likely to be low the need for the cover payout in the event of death / sickness would be immediate.

Product must be able to cope with potential missed premiums given affordability issues. Lapsing all policies that miss a premium will be costly and likely to cause some reputational damage.

Other Considerations:

The product should be designed to meet a need in the market. These will be different to those of higher socio-economic classes. A mortality benefit may be more likely to pay for a funeral than pay off a mortgage in this market.

This will impact the marketability of the products which is an important consideration.

A pricing basis will need to be developed for the proposed products.

Expected bases and assumption for the relevant variables need to be developed including:

- decrement bases (mortality/morbidity)
- lapse assumptions
- business volumes
- economic assumptions
- expenses
- other

Final premium rates need to be compared to competitor products in this market.

The general competitor position in this market should also be considered. Is the company leading into this market or following?

Cashflow projections will be required to determine the estimated profitability of the proposed products. The products need to be profitable in order to make financial sense for inclusion in the insurer's portfolio.

The proposal needs to include the estimated profitability numbers based on expected assumptions as well as the sensitivity of these numbers to fluctuations in the expected experience and volumes.

The distribution method will have to be considered.

Product distribution must make sense to the target market. E.g. would agents or direct marketing make more sense for the market?

Selling online when there may be limited access to the internet would be an issue.

It would need to be demonstrated that the proposed products will not introduce a significant insolvency risk to the insurer.

Due consideration needs to be given to the impact that the product will have on the balance sheet of the company given the risk appetite and capital strength of the insurer.

The administration requirements of the new products must be considered.

The current administration systems should be interrogated to assess whether it will be suitable for the proposed products. Any development needed on the systems should be established and the costs and resources involved with this should be estimated.

Extra staff or skills will need to be considered. Especially large costs such as the establishment of a call centre or other distribution models.

The proposed products should take any regulatory and industry requirements into account.

This includes insurance regulation, taxation and TCF considerations. Does insurer have the appropriate license to write the proposed business?

There should be consideration given to the impact of these products on the insurer's tax position.

Following on from the TCF considerations, a risk assessment should be done to determine the potential reputation risk associated with the introduction of these products, specifically the underwriting and claims elements of the proposed product.

The need for reinsurance assistance should be assessed. In particular possible assistance in terms of basis setting for pricing purposes, capital requirement reduction, underwriting and claims support.

The terms and costs of reinsurance should be assessed in the proposal in order to determine the optimum reinsurance strategy.

The company has decided to enter the new market and has an opportunity to partner with a third party that offers small loans and store credit in this market. It has been decided that the company will develop a credit life product to take advantage of this opportunity.

iii. Describe the design and function of a credit life policy and set out how the National Credit Act will influence the product design.

This question was surprisingly poorly answered. Many candidates could not set out the basic functioning of a credit life policy in terms of it paying out either the outstanding loan or the instalments and the claims triggers for these scenarios.

Many candidates also only had a superficial grasp of the NCA and could only cover the points related to the caps on premium rates.

Usually, a credit life policy is a bundled product which will cover

- the outstanding balance on the credit agreement in the case of death or permanent disability
- monthly instalments in the event of temporary disability or retrenchment (unemployment).
- The credit life policy may include premium waivers while in claim for temporary disability or unemployment cover.

Claims payments may be made to the third party that extended the loan. Any excess (if applicable) may be paid to the beneficiaries of the policy.

Cover will start at the time when the loan / credit is registered and will end at the end of the credit agreement (when the loan is paid off), when a death or permanent disability claim is paid, when the policy is cancelled – whichever happens first.

For policies with occupational disability cover, occupational disability will end at normal retirement age as specified in the policy description. Thereafter another disability definition may be utilized to assess permanent or temporary disability.

The regulations applying to credit life insurance were published in February 2017 and took effect on 9 August 2017 and apply to all credit agreements taking effect after this date.

The NCA regulations stipulate minimum benefits which are at least the settlement of the outstanding loan in the event of death or permanent disability and all obligations payable until the policyholder is no longer disabled, unemployed or the credit agreement terminates, up to a maximum of 12 months' worth of the loan instalments in the case of temporary disability or unemployment (retrenchment).

Charges for the benefits under this policy will be paid by the policyholder all as one premium.

The new regulations however prescribe the maximum charge to be applied.

The maximum cost that a credit provider may charge for a credit life agreement varies from between R2 per R1000 cover and R4.50 per R1000 cover depending on the type of credit agreement.

According to the NCA, any credit life provider that increases their cost of credit life insurance to the above maxima should be able to demonstrate to the National Credit Regulator that the charges are justified using the customer's own risk profile and/or the appropriate data sources.

Credit life policies can be paid for by either a single or regular premium.

The NCA disallows the single premium to be added to the initial loan consideration which could be repaid as part of the loan instalments.

Therefore, no interest may be charged on the credit life insurance premium.

Another key prescription is that the customer should be able to choose the insurer through which they obtain the cover.

Where the policy will settle the outstanding credit obligations in the event of both temporary disability and the policyholder being unable to earn an income, the maximum cost of cover may be increased by up to R1 per R1000 cover.

If the customer is unemployed or a pensioner at the time of entering the contract, they cannot be charged for retrenchment or temporary disability cover.

If the customer is self-employed or informally employed at the time of entering the contract, the credit life insurance may include the cost of becoming unemployed or being unable to earn an income other than retrenchment or occupational disability.

The credit provider must be able to demonstrate that the above two points have been allowed for in the charging structure of the policies.

The credit provider may not compel the customer to take out insurance cover for death, disability or retrenchment cover.

The credit life policy may include waiting periods and certain exclusions and limitations of cover in order to manage the risk appropriately. The regulations stipulate that only certain exclusions or limitations of cover may be utilized.

For death and disability cover, claims resulting from:

- The abuse of alcohol, drugs or narcotics
- Willful or self-inflicted injury or suicide
- Active participation in war or similar uprising
- Use of nuclear, biological weapons, radio-active substances
- Participation in hazardous and/or criminal activities
- Any pre-existing conditions known to the customer that affected them in the 12 months prior to entering the credit life agreement

For unemployment benefits, claims resulting from:

- For agreements with terms of longer than 6 months, retrenchment within the first 3 months of entering into the agreement
- Lawful dismissal – including misconduct or dereliction of duties
- Voluntary retrenchment or termination of employment
- Resignation or Retirement
- Participation in unprotected strike
- Retrenchment the customer was aware of in the 3 months prior to entering into the agreement

According to the regulations, all exclusions and waiting periods must be explained to the customer at point of sale.

A 3-month waiting period can be applied for disability benefits with terms of longer than 6 months. No waiting period can be applied to policies with terms of 1 month or less.

The customer may substitute the credit life policy at any time after the credit agreement is entered into and the credit provider must accept such substitution provided that the new policy provides at least the same benefits as prescribed by the regulations.

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QUESTION 3

A South African life insurer is planning to launch a new smoothed bonus investment product. Bonuses will be declared monthly in advance with 80% of the bonus vesting. The monthly bonus is determined by an initial monthly bonus rate (IBR) that is adjusted by the funding level as follows:

Actual bonus = max(0, IBR + (Funding level – 1.03)/m)
Where m = 24 if Funding level > 0.95, else m = 6

There are 2 proposals for the calculation of the IBR

a) IBR = expected monthly investment return less management and guarantee fees, where the expected investment return is determined from the 1-year point on the government bond yield curve, and the assumed asset composition of the portfolio.

b) IBR = monthly equivalent of the average last three year's published CPI inflation.

i. Discuss whether these bonuses satisfy the principles of equity, and the advantages and disadvantages of each.

This question was poorly answered in general. Many candidates could only make some points around the equity issues but could not provide any meaningful discussion around what the formulae seek to achieve or what would happen in reality.

Horizontal equity means that similar policyholders should be treated equally.

For each bonus method policyholders who took out a policy at the same time with the same duration and premiums would receive the same benefits, so horizontal equity exists.

Under method (a) a sharp increase in the yield curve could lead to bonuses that are higher than the underlying return on the portfolio for a few months until the self-balancing nature of the formula kicks in, which may lead to some inequity between policyholders whose policies had matured just before the increase and those whose policies matured just after. Given that the IBR is a monthly bonus rate, the potential differences are probably not enough to violate the equity principle.

Vertical equity means that where distinctions are made between different classes, then the effects of the distinction are proportional to the differences.

For smooth bonus business there is a conflict between smoothing of investment returns and complete equity between generations of policyholders.

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For an acceptable level of vertical equity to exist, the bonuses declared during periods of high investment returns should be higher than those declared during periods of poor investment returns.

Both these bonus formulae aim to get the portfolio to a 103% funding level. If investment returns are high, then the funding level will be high, and so the bonus will be high.

Conversely low investment returns lead to lower funding levels and lower bonuses, so there is a correlation between investment return and bonus rate, and a certain amount of vertical equity.

There is effectively a 24-month period over which investment returns are distributed, which should ensure fairness between policy cohorts that are a few years apart.

The 24 months might be too long in a situation where the portfolio is substantially overfunded, so the company could look at reducing the spreading term if the funding level were over 110%, say.

Equity may be difficult to achieve if the portfolio is severely underfunded because new policyholders would get quite low bonuses while the funding level recovered. In such cases, it may be appropriate to close the existing product to new business and open a separate portfolio for new policyholders.

Maintaining a 103% funding level (or positive BSR) is a balance between maintaining a buffer for financial soundness and distributing the surplus to the policyholders.

However, with a new product the first generation of policyholders may be disadvantaged by the targeting of the 103% funding level. The company may need to consider phasing the target funding level in over a few years.

From a policyholder's perspective there is not much difference between the 2 methods, as over time the dominant contributor to the bonuses is the actual investment performance that is effectively distributed over the rolling 24- month period.

However, short term government bond yields can be more volatile than historic CPI, so the monthly bonus under (a) would be volatile.

From the company's perspective it will be easier to explain the CPI starting point (b) than the investment assumption (a).

The CPI figure is publicly available so the bonus calculation (b) is more transparent.

Bonus method (b) can be used to illustrate that the portfolio is aiming to provide inflation beating returns more easily than (a) because it references inflation.

However, in a scenario where there is one year of very high inflation following 2 years of low/moderate inflation, then the three-year average may appear to be quite low, especially if competitors use starting bonus rates that are more in line with current investment yields.

Although broad investment guidelines would be included in the PPFM for both bonus policies, there is more scope to change the asset composition under method (b), because that will not affect the monthly bonus calculation.

The company plans to offer variants of the product to retail (individual) and institutional (group) clients.

ii. Discuss the termination conditions for these sets of clients.

This question was also poorly answered in general. Many candidates could not set out sufficient differences between retail and institutional products.

Unitised smooth bonus policies such as this have a book value that consists of net premiums plus accumulated bonus, and a market value that is the asset share of the policy.

For individual (retail) clients where the book value is greater than the market value (e.g. after a sudden market fall), and the policyholder surrenders the policy early, a market value adjuster (MVA) is usually applied to book value so that the value paid out does not exceed the underlying market value.

This is to prevent selection against the fund by the policyholder and to protect the interests of the other policyholders in the fund.

It also protects the company from a mass surrender scenario where it would pay out more benefits than the total assets of the portfolio and make a loss.

However, no MVA is applied on death or maturity of the policy because there is no anti-selection risk.

Applying a MVA is not the same as the cancelling of non-vested bonuses. In an extreme scenario an MVA can be applied in addition to the cancellation of non-vested bonuses.

For group schemes (institutional clients), MVAs are usually not applied when an individual member withdraws from the scheme. This is because the withdrawal benefit is only accessible if the member terminates their employment, and so the risk of anti-selection is reduced.

An MVA may apply if the whole scheme terminates, however.

Alternatively, some companies will pay out the book value but over a number of years.

Many defined contribution retirement funds allow members to choose the portfolios in which their savings are invested, and to switch funds. In the case where a member switches from a smooth bonus fund to another fund, then an MVA will usually apply because the anti-selection risk exists.

Some companies will allow the member to switch without an MVA if sufficient notice has been given (e.g. 4-6 months) because that reduces the anti-selection risk.

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