17. (2.25 points)

a. (0.75 point)

Identify three changes in an insurance company's internal environment that could distort the paid or reported development patterns.

b. (1.5 points)

Briefly describe how each change identified in part a. above may be observed in a diagnostic triangle.

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QUESTION 17

TOTAL POINT VALUE: 2.25 | **LEARNING OBJECTIVE(S): B2**

SAMPLE ANSWERS

Part a: 0.75 point

Any three of the following, without having answers that are too similar to each other:

- Increase (decrease) in case reserve adequacy
- Increase (decrease) in settlement rate, Speedup (slowdown) in case settlement
- Paying out claims faster
- Prioritization of large vs small claims
- Change in mix of business
- Change in policy limits or change the deductible offered
- Change in underwriting rules
- Change in reporting process, such as introducing a new call center
- Growing/shrinking in book of business that change the average accident date
- Reinsurance program change
- Change subrogation procedure to increase recoveries
- Company implement new rule requiring insured to report claims faster
- Take a more aggressive litigative stance on claims
- Start a fraud detection department
- Change in how claims are processed, such as introducing new technology
- Increased risk control (safety programs)

Part b: 1.5 points

Sample Responses for "Increase (decrease) in case reserve adequacy"

- A triangle of case outstanding/open claim count will show an increase
- The paid-to-reported ratio could be used. If case O/S adequacy increases the ratio would decrease going down columns

Sample Responses for "Increase in settlement rate" / "Paying out claims faster"

- Look at disposal rate. Could show increase in disposal rate which is evidence of speedup in settlement rate
- Look at paid to reported triangle and see if paid/reported is increasing down column
- Closed-to-reported claim counts triangle will show an increasing trend down the column

Sample Responses for "Prioritization of large vs small claims"

- If small claims are prioritized and closed quickly, # Closed/# reported ratio triangle would observe an increase in early maturities. Also average paid severity would decrease at early maturities
- Average paid severity (or incremental paid severity) would decrease at early maturities since smaller claims are being closed
- Average case o/s increases as later maturities down the column since only large claims are left open

Sample Responses for "Change in Mix of Business", "Change in underwriting rules"

- Look at triangles separated by mix of business. % reported for mix 1 or % reported for mix 2. This could tell you if one mix is experiencing more claims
- You can observe this with average severity triangles (reported or paid). If you see shifts in severity that can imply the mix of business is changing

Sample Responses for "Change in policy limits or change the deductible"

- Check average paid severity to see if there is an increase

Sample Responses for "Change in reporting process, such as introducing a new call center"

- Changes in claim reporting pattern can be assessed using the age-to-age development factor of reported claim counts and ratio of reported claim count to exposure. Increase in ratio across years implies faster claim reporting
- Look at ratio of reported loss to on-level premium. The introducing of a new call center could lead to an increase in the first column if reporting speeds up

Sample Responses for "Growing/shrinking in book of business that change the average accident date"

- Start by looking at the paid or reported claim age to age development factor triangles. LDFs will be distorted and likely increasing because the average accident date is shifting towards the end of the period and LDFs will be from claims that had less time to develop
- Look at reported claim count triangle – one might see claims count development factors increase in the first period due to shifting of average accident date to later in the year
- For change in average accident date, could look at disposal rates (or reported claims) by quarter instead of annual to see if the earlier maturity disposal rates are decreasing

Sample Responses for "Reinsurance program change"

- Look at ratio of net to gross reported claim triangle, check if the ratio is changing significantly from prior years

Sample Responses for "Change subrogation procedure to increase recoveries"

- Reported subrogation claims to reported claims showing an increase down a column would be an indicator of increased subrogation
- A triangle of salvage and subrogation to paid losses can be created to observe any changes to the recoveries. This will cause the paid or incurred pattern to shift so could observe regular paid or reported triangle as well

Sample Responses for "Company implement new rule requiring insured to report claims faster"

- If it's required to report claims, may speed up reporting – would see higher ratio of reported counts per exposure at earlier maturities

Sample Responses for "Take a more aggressive litigative stance on claims"

- Split claim counts into two triangles – those that go through litigation vs the total #. If you see an increase in claim counts that go through litigation coupled with increases down the column of ALAE severity triangles, this implies more claims are taken to litigation

- Look at closed to reported claim count triangle. If claims are being taken to court, they won't be closed as quickly so ratios down the columns should decrease
- Look at the ratio of the paid to reported claims (not including ALAE). If this triangle shows a lower paid to reported value down the triangle columns by development period, claim defense may be getting stronger
- This can be observed in a Paid ALAE to Paid Claims triangle down column – an increase would indicate more money is spent on ALAE (Lawyers)

Sample Responses for "Start a fraud detection department"

- Ratio of reported claims to earned premium. If this ratio decreases down the column after introduction of a new fraud analytics tool, this could suggest the change was positive
- Use a triangle showing claim counts without pay / reported claim counts – the latest diagonal should show an increase in ratio versus historical levels

Sample Responses for "Change in how claims are processed, such as introducing new technology"

- The ratio of # closed / # reported should be higher down the column
- If a new claim system is implemented, this could speed up claim settlement. Look for an increasing pattern in the disposal rate triangle along the diagonal

Sample Responses for "Introduction of Safety Programs"

- More safety programs (ie risk control) can lead to better loss experience – look at reported claims to earned premium to see if this decreases over time

EXAMINER'S REPORT

The candidates were expected to understand practices that can distort development patterns and how to use development triangles as a diagnostic tool.

Part a

Candidates were expected to provide examples of "internal" changes to an insurance company's practice that can lead to distortion of paid/loss triangles.

Common mistakes included:

- Discussing changes that are external to the company, such as tort reform.
- Discussing events that are outside of the company's control, such as large losses or catastrophe
- Providing two examples that are too similar to each other, such as "paying claims faster" and "increase in settlement rate"

Part b

Candidates were expected to identify a development triangle that can be used to diagnostic the change stated in part a. and provide a description of how it should change (e.g., increase/decrease, down the column or in the latest diagonal).

Common mistakes included:

- Stating the correct diagnostic triangle but providing no explanation
- Identifying a diagnostic triangle that wouldn't show the identified change.
- Giving the wrong direction of change
- Simply stating that there will be changes or distortions in the diagnostic triangle