20. (2.75 points)

The following excerpts from Schedule P triangles have been provided for Commercial Multiple Peril from an insurance company's 2012 Annual Statement (all figures are in thousands of dollars). Only the prior year, first two accident years and the first four valuation years are shown.

Part 2E - Incurred Net Losses & DCC Reported at Year End

	2003	2004	2005	2006
Prior	1,101	1,076	1,106	1,149
2003	1,287	1,284	1,213	1,204
2004	XXX	1,347	1,346	1,272

Part 3E - Cumulative Paid Net Losses & DCC Reported at Year End

	2003	2004	2005	2006
Prior	000	479	718	832
2003	405	785	972	1,074
2004	XXX	412	801	989

a. (1.5 points)

Calculate the prior year row and the accident year 2004 row for Schedule P, Part 2E and Part 3E as they would appear in the company's 2013 Annual Statement.

b. (0.5 point)

Explain how to derive the average net case outstanding loss & DCC reserves triangle using the various parts in Schedule P.

c. (0.75 point)

Briefly describe three functions of Schedule P, other than measuring reserve adequacy.

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d. The first piece of this question is to explain why a regulator might not accept the use of Fair Value, and many answers were possible. Stating that it should be amortized is not a reason. Another common error was to state that bonds are held to maturity without explaining why Fair Value was not acceptable.

   The second part was to recommend another valuation method that the regulator may accept, which is similarly open-ended and many alternatives were possible. However, valuations were not accepted that would not be better than Fair Value in the regulator's viewpoint. Most candidates responded with SAP and GAAP methods.

20. Sample Answers

a.

Part 3E
Subtract the 2004 column from each of the prior and 2003 rows:
(479 + 785) – (479 + 785) = 0
(718 + 972) – (479 + 785) = 426
(832 + 1,074) – (479 + 785) = 642

	2003	2004	2005	2006
Prior	N/A	0	239	353
2003	N/A	0	187	289
New Prior	XXX	0	426	642

The 2004 accident year numbers are the same from the provided data table.

2013 Part 3E

	2004	2005	2006
Prior	0	426	642
2004	412	801	989

Part 2E
Subtract the original table for Part 3E from the table for Part 2E to calculate the reserves. Add the prior and 2003 rows to calculate the 2013 Part 2E prior year reserves.

	2003	2004	2005	2006
Prior	N/A	597	388	317
2003	N/A	499	241	130
New Prior	XXX	1,096	629	447

Add the 2013 Part 3E prior year paid to get the total incurred prior year row:

(1,076 – 479) + (1,284 – 785) + 0 = 1,096
(1,106 – 718) + (1,213 – 972) + 426 = 1,055
(1,149 – 832) + (1,204 – 1,074) + 642 = 1,089

The 2004 accident year numbers are the same from the provided data table.

2013 Part 2E

	2004	2005	2006
Prior	1,096	1,055	1,089
2004	1,347	1,346	1,272

b.
(Part 2 Incurred – Part 3 Paid – Part 4 Bulk & IBNR Reserves) / (Part 5 Section 2 Claims Outstanding)

c. Any three of the following:
- Monitoring the solvency of insurers.
- It shows experience by line and by accident year, thereby isolating blocks of business with good or poor experience.
- The accident year figures in Schedule P show the effects of changes in loss reserve margins on the calendar year results reported elsewhere in the Annual Statement.
- It provides the loss payment patterns for the federal income tax loss reserve discounting procedure
- It provides the disclosures needed for grossing up losses for interest discounts and for anticipated salvage and subrogation for the federal income tax calculation.
- It provides data for computing the reserving risk and/or written premium risk charges in the risk-based capital (RBC) formula
- It provides the loss payment patterns for the investment income offsets in the RBC formula.
- Provides the data for the non-tabular discount adjustment to surplus for the RBC ACL ratio.
- It shows the percentage of premiums and reserves related to loss-sensitive contracts
- To determine the sensitivity of premiums and/or reinsurance commissions to losses on loss sensitive contracts.
- Allows for the calculation of the loss-sensitive contract offset in the RBC formula.
- It separates occurrence from claims-made experience for the RBC claims-made offset.
- It supports the opinion (SAO) of the Appointed Actuary on loss and loss adjustment expense reserve adequacy.
- It shows the development of exposure year premiums from audits and retrospective adjustments.
- Part 6 allows for a more accurate comparison of loss ratios by accident year/exposure year.
- Provides the information to determine the tax basis earned premium for lines with audits or retrospective adjustments.
- It shows direct plus assumed versus ceded experience, so that the effects of reinsurance on accident year loss ratios can be examined.
- It shows claim count development patterns and changes in average claim severity by year, allowing better analysis of claims department performance.
- Used by actuaries and/or financial analysts to estimate a company's net worth.
- Shows loss development patterns for use in rate indications.

20. Examiner's Report

a. Generally, candidates did well on this part. The majority understood how to calculate the prior year row for Part 3E (Paid); however, the most common error was forgetting to write down the 2004 accident year row. Also, subtracting out the 2003 column (rather than 2004 column) in the calculation of the prior year paid was another common error. The prior year row for Part 2E (Incurred) was more of a challenge, but many candidates were able to successfully calculate the

reserves, and add in Part 3E. The most common error here was also the omission of the 2004 row.

b. This part was fairly straightforward, and many candidates provided the correct answer. The most common error was forgetting to subtract Part 4 (Bulk & IBNR) to derive the case outstanding.

c. The majority of candidates were able to successfully describe two or three additional functions of Schedule P, as there were many acceptable answers to this part.

21. Sample Answers

a. Candidates could select 2 of the 4 risks:
- Asset Risk – either of the following:
  - The risk that bond will default, the market value of stock and other investments will fluctuate
  - Risks that assets such as bond and equity investments lose value
- Credit Risk – either of the following:
  - The risk that counterparties will be unable or unwilling to pay such as reinsurance recoverables default
  - Risk that counterparties such as reinsurers will not pay as expected
- Underwriting Risk – either of the following:
  - Risk that losses will develop adversely and risk that business written over the coming year will be unprofitable
  - Risk that premiums will be insufficient to cover losses & expense and that reserves may develop adversely
- Off-Balance Sheet Risk – either of the following:
  - Risk related to having insurance subsidiaries and off-balance sheet items (R0)
  - This includes pass-throughs from affiliates; outside the square root covariance adjustment; & other misc. items like non-controlled assets & contingent liabilities

b.
- RBC (in $millions) = 12 + SQRT[$5^2+6^2+4^2+20^2+25^2$] = $45.196M
- Authorized Control Level (ACL) = 50% * RBC = $22.598M
- Adjusted Capital = PHS – Non-Tab discount – Tab discount on Medical = 35 – 4 – 1 = 30M
- RBC Ratio = Adjusted Capital / ACL = 30.0/22.6 = **1.327**

c. Regulatory Action Level

d. Actions

--Company – either of the following:

i. The company must submit a plan to the commissioner on how it plans to reduce risks or increase surplus

ii. Company must submit a plan to regulator detailing how it will raise capital or reduce risk

--Regulator – either of the following:

i. Regulator may ask the insurer to take corrective action such as limit new business but this action is discretionary

ii. Regulator has the power to take corrective action against insurer but is not required to do so.