Reading: Werner 14: Implementation
Model: Text Example
Problem Type: Additive Expense Fee

Find Calculate the following:

(a) fixed expense ratio

(b) fixed additive expense fee

Given

countrywide premium ($000s)	10,000
profit provision	6%
average loss cost	290

expense category	countrywide expenses ($000s)	%-fixed
commissions	1,400	0%
general expenses	1,100	41%
other acquisition	400	100%
taxes	300	0%
licenses & fees	100	100%
TOTAL	3,300	

Step 1 calculate $-fixed based on %-fixed

	$-total		%-fixed		$-fixed
commissions	1,400	x	0%	=	0
general expenses	1,100	x	41%	=	451
other acquisition	400	x	100%	=	400
taxes	300	x	0%	=	0
licenses & fees	100	x	100%	=	100
	3,300				951

Step 2a calculate the fixed expense ratio F

F	=	$-fixed	/	CW prem
	=	951	/	10,000
	=	9.5%	<== *final answer (a)*	

Step 2b calculate other ratios we'll need in Step 3

V + F	=	$-total	/	CW prem	=	3,300	/	10,000	=	33.0%
V + F + Q	=	V + F	+	Q	=	33.0%	+	6.0%	=	39.0%
V + Q	=	V + F + Q	-	F	=	39.0%	-	9.5%	=	29.5%

Step 3a calculate $\bar{P}(p)$ [projected avg prem] and $\bar{E}(F)(p)$ [projected fixed expense] as intermediate steps

$\bar{P}(p)$	=	loss cost	/	(1-V-F-Q)	=	290	/	61.0%	=	475.41
$\bar{E}(F)(p)$	=	$\bar{P}(p)$	x	F	=	475.41	x	9.5%	=	45.21

Step 3b put everything together to get the final projected fixed additive expense fee A(p)

A(p)	=	E(F)(p)	/	(1-V-Q)
	=	45.21	/	70.5%
	=	64.12	<== *final answer (b)*	

Note 1: *The quantity (1-V-Q) is called the Variable Permissible Loss Ratio or VPLR.*

Note 2: I used a "p" in parentheses (p) to indicate "projected" quantities. Strictly speaking, the "p" should be a subscript but it was too small to be legible in this spreadsheet.

Reading: Werner 14: Implementation
Model: Text Example
Problem Type: Additive Expense Fee

Find Calculate the following:

(a) fixed expense ratio

(b) fixed additive expense fee

Given

countrywide premium ($000s)	7,000
profit provision	3%
average loss cost	310

expense category	countrywide expenses ($000s)	%-fixed
commissions	1,500	0%
general expenses	1,200	58%
other acquisition	600	100%
taxes	400	0%
licenses & fees	100	100%
TOTAL	3,800	

Step 1 calculate $-fixed based on %-fixed

	$-total		%-fixed		$-fixed
commissions	1,500	x	0%	=	0
general expenses	1,200	x	58%	=	696
other acquisition	600	x	100%	=	600
taxes	400	x	0%	=	0
licenses & fees	100	x	100%	=	100
	3,800				1,396

Step 2a calculate the fixed expense ratio F

F	=	$-fixed	/	CW prem
	=	1,396	/	7,000
	=	19.9%	<== *final answer (a)*	

Step 2b calculate other ratios we'll need in Step 3

V + F	=	$-total	/	CW prem	=	3,800	/	7,000	=	54.3%
V + F + Q	=	V + F	+	Q	=	54.3%	+	3.0%	=	57.3%
V + Q	=	V + F + Q	-	F	=	57.3%	-	19.9%	=	37.3%

Step 3a calculate $\bar{P}(p)$ [projected avg prem] and $\bar{E}(F)(p)$ [projected fixed expense] as intermediate steps

$\bar{P}(p)$	=	loss cost	/	(1-V-F-Q)	=	310	/	42.7%	=	725.75
$\bar{E}(F)(p)$	=	$\bar{P}(p)$	x	F	=	725.75	x	19.9%	=	144.74

Step 3b put everything together to get the final projected fixed additive expense fee A(p)

A(p)	=	E(F)(p)	/	(1-V-Q)
	=	144.74	/	62.7%
	=	231.00	<== *final answer (b)*	

Note 1: *The quantity (1-V-Q) is called the Variable Permissible Loss Ratio or VPLR.*

Note 2: I used a "p" in parentheses (p) to indicate "projected" quantities. Strictly speaking, the "p" should be a subscript but it was too small to be legible in this spreadsheet.