Problem Statement: To evaluate the profitability of two agencies and understand different scenario when one strategy is better than another.

Data Points: Dell Inc. is using services of two agencies – A and B – to recover the chargeoffs/losses. Recovery rate for A and B are 3.25% and 3.5% respectively. Agency A charges 20% of the amount it recovers. Agency B charges $4500 per month per agent and one agent can work on maximum of 300 accounts. Average loss per account is $2000.

Analysis:

Step 1

Let us start with 300 accounts and the profitability matrix looks like:

	Agency A		Agency B	
Revenue	**$**	**19,500**	**$**	**21,000**
Total Cost	**$**	**3,900**	**$**	**4,500**
Fixed	$	-	$	4,500
Variable	$	3,900	$	-
Profit	**$**	**15,600**	**$**	**16,500**

Agency B is profitable than Agency A. Does this remain true for any number of accounts?

Step 2

If we consider a single account, Dell will incur losses with Agency B however Agency A still remains profitable. This implies that profitability curves of A and B cross each other for some value of accounts between 0 and 300. Let us say it is N.

Profitability equation for Agency A: Revenue – Cost = 65N (1 – 0.2) = 52N

Profitability equation for Agency B: Revenue – Cost = 70N - $4500

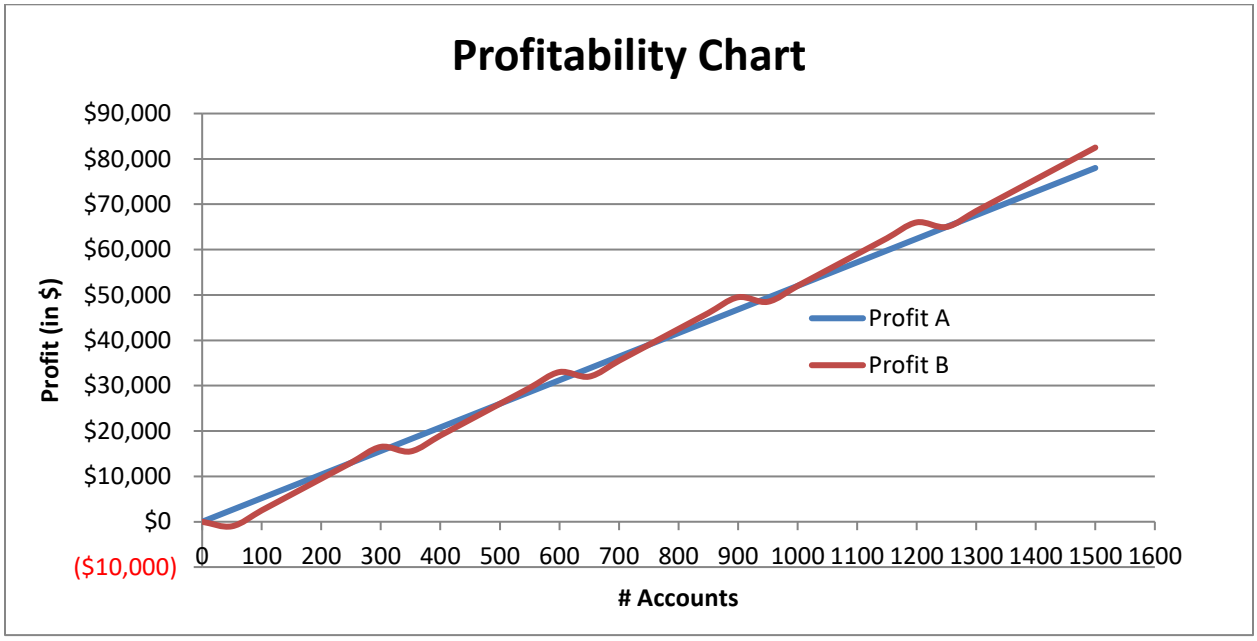
Profitability for both the agencies is same => 70N - $4500 = 52N

=> 18N = $4500 or N = 250

Step 3

Key observations:

- Profitability of B is a step function, which dips right after multiples of 300 accounts.
- Differential between profitabilities of A and B is maximum at multiples of 300 accounts.
- For every multiple of 300 accounts, profitability differential goes up $900
- This implies at 1500 accounts



APPENDIX

# Accounts	Profit A	Profit B
0	$0.00	$0.00
50	$2,600.00	($1,000.00)
100	$5,200.00	$2,500.00
150	$7,800.00	$6,000.00
200	$10,400.00	$9,500.00
250	$13,000.00	$13,000.00
300	$15,600.00	$16,500.00
350	$18,200.00	$15,500.00
400	$20,800.00	$19,000.00
450	$23,400.00	$22,500.00
500	$26,000.00	$26,000.00
550	$28,600.00	$29,500.00
600	$31,200.00	$33,000.00
650	$33,800.00	$32,000.00
700	$36,400.00	$35,500.00
750	$39,000.00	$39,000.00
800	$41,600.00	$42,500.00
850	$44,200.00	$46,000.00
900	$46,800.00	$49,500.00
950	$49,400.00	$48,500.00
1000	$52,000.00	$52,000.00
1050	$54,600.00	$55,500.00
1100	$57,200.00	$59,000.00
1150	$59,800.00	$62,500.00
1200	$62,400.00	$66,000.00
1250	$65,000.00	$65,000.00
1300	$67,600.00	$68,500.00
1350	$70,200.00	$72,000.00
1400	$72,800.00	$75,500.00
1450	$75,400.00	$79,000.00
1500	$78,000.00	$82,500.00