

Interest Rate Swap Problem

a.

$$\text{May cash settlement} = \{(7.50\% - 7.75\%) * \$90,000,000\} \div 12 = \$18,750$$

Other expense	\$18,750	
Cash		\$18,750
<i>to record May settlement of swap</i>		

b.

Interest on the note ($90,000,000 * 7.50\% \div 12$) =	\$562,500	
Cash paid on swap	<u>18,750</u>	
Cash outflow	<u>\$581,250</u>	

Because this is a cash flow hedge, the cash outflow could also be calculated as the fixed rate times the notional amount ($\$90,000,000 * 7.75\% \div 12$) = \$581,250)

c.

Because this is a perfect hedge, the net cash flow is the same every month (\$581,250)

d.

$$\text{October cash settlement} = \{(8.10\% - 7.75\%) * 90,000,000\} \div 12 = \$26,250$$

Cash	\$26,250	
Other income		\$26,250
<i>to record October cash settlement for swap</i>		

e.

$$\text{Accrued interest} = \$90,000,000 * 7.70\% * 30/365 = \$569,589$$

Interest expense	\$569,589	
Accrued interest payable		\$569,589
<i>to record year-end accrued interest</i>		

The solution to swap problem continues on the next page.

f.

Other comprehensive income (expense)	\$5,000,000	
Interest rate swap liability		\$5,000,000

to record interest rate swap at fair-value under hedge accounting, year 2005

g.

Loss on interest rate swap	\$5,000,000	
Interest rate swap liability		\$5,000,000

to record interest rate swap at fair-value under no-hedge accounting year 2005

h.

Fair value of swap	\$4,700,000	
Book value of swap	<u>5,000,000</u>	
Debit needed to liability	<u>\$ 300,000</u>	

Interest rate swap liability	\$300,000	
Gain on interest rate swap		\$300,000

to record interest rate swap at fair-value under no-hedge accounting year 2006