Hedging repo borrowing

Situation

A repo trader is a consistent borrower of $100,000,000 in repo funds. He is worried that the economic data to be released in upcoming weeks could drive-up the overnight repo rate.

Objective

To protect current cost of overnight repo funds by using futures so that any rise in overnight rates will be offset by the gains on the futures position.

Strategy

June 1: The repo trader sells 30-day overnight repo rate futures and holds his position until expiry.

Hedge ratio = (number of days/30) x (amount hedged/contract size)
= (30/30) x ($100,000,000/$5,000,000)
= 20 contracts

Results

JUNE 1:

30-day overnight repo rate futures price	**98.00**
Sells 20 futures at 98.00	

JUNE 30:

Average overnight funding cost		2.20%
Interest rate expense	$100,000,000 x 2.20% x (30/365)	$180,821.92
Futures settlement		97.80
Gain on futures position	20 contracts x 20 basis points x $41.10 per basis point	$16,440.00
Net funding expenses	$180,821.92 - $16,440.00	$164,381.92
Effective cost of funds	($164,381.92/$100,000,000) x (365/30)	2.00%

The borrower effectively paid 2% even as overnight rates climbed to 2.20% as a result of this hedging strategy.