

B_j reports an untrue value $v'_j < v_j$

Position
Unchanged

Payment and quantity
remains unchanged
thus $u'_j = u_j$

Position
Changed

$B_j < B_{k-1}$

$u'_j = u_j$

$B_j = B_{k-1}$

$B'_j \rightarrow B_k$

$B_j = B_k$

$B'_j \rightarrow B_{k+1}$
Will not trade
thus $u'_j = 0$

$\gamma' \in [v_L, v'_K]$

$\gamma' \notin [v_L, v'_K]$

Since short
 B_j loses
 $u'_j = 0$

$\gamma \in [v_L, v_K]$

$\gamma \notin [v_L, v_K]$

Pays Gamma and if $v'_j < v_j$ and $\gamma \notin [v_L, v_K]$
 $u'_j \leq u_j$ $\gamma' \notin [v_L, v'_K] \rightarrow u'_j = 0$