



A's possible actions:

$$Action(A) = \begin{bmatrix} x_1 & x_2 & x_3 \\ y_1 & 0 & y_3 \\ z_1 & z_2 & 0 \end{bmatrix} \begin{matrix} \text{from} \\ DTr(B, A) \ DTr(A, B) \ Cap(A) \\ \text{Purchase} \\ DTr(A, B) \text{ to} \\ Cap(A) \end{matrix}$$

Results:

$$\begin{aligned} DTr'(A, B) &= DTr(A, B) + x_1 + z_1 - y_1 - y_3 \\ DTr'(B, A) &= DTr(B, A) - x_1 - x_2 - x_3 \\ Cap'(A) &= Cap(A) + x_2 + y_1 - z_1 - z_2 \\ Bought &= \frac{x_3 + y_3 + z_2}{cost(b)} \end{aligned}$$

No funds destroyed/created rule:

$$\begin{aligned} DTr'(A, B) + DTr'(B, A) + Cap(A) + Bought \times cost(b) \\ = \\ DTr(A, B) + DTr(B, A) + Cap(A) \end{aligned}$$

Individual no funds created rules:

$$\begin{aligned} x_1 + x_2 + x_3 &\leq DTr(B, A) \\ y_1 + y_3 &\leq DTr(A, B) \\ z_1 + z_2 &\leq Cap(A) \end{aligned}$$

No adding and reducing from same place rules:

$$\begin{aligned} x_1 y_1 &= 0 & x_2 z_1 &= 0 & y_1 z_1 &= 0 \\ x_1 y_2 &= 0 & x_2 z_2 &= 0 & y_1 z_2 &= 0 \\ & & & & y_2 z_2 &= 0 \end{aligned}$$