

The Awful Float

About the spectre of the Float (everpresent in the minds of CFOs)

Thesis: the float is very small compared to other concerns

Assume

Example transit system annual fares	\$ 109,500,000	(assumptions are in blue)
Daily fares	\$ 300,000	(calculated numbers are in black)
Average fare	\$ 1.50	
-> Rides per day	200,000	
Outstanding cards / ridership	3	
-> Cards outstanding	600,000	
Average number of prepaid rides on a card	3	
Overnight interest rate	3.33%	

Proof

$$\begin{aligned}\text{Float} &= [\text{Cards}] * [\text{Rides on card}] * [\text{Interest rate}] \\ &= 600,000 * 3 * 3.33\% \\ \text{-> Float} &= \$ 60,000 \text{ per year} \\ &= \underline{0.055\% \text{ of Annual Fares}}\end{aligned}$$

Compare

Average number of mag-stripe cards issued per daily ridership per year	40
-> Number of cards issued per year	8,000,000
Cost per card	\$ 0.025
-> Cost of mag-stripe cards	= \$ 200,000 per year
	= <u>0.183% of Annual Fares</u>

Or compare typical cost of issuing smart cards, maintaining accounts, etc., usually costs over 5% of fares annually.

$$5\% * [\text{Annual fares}] = \$ 5,475,000$$

Conclusion: the float is very small compared to other concerns.

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