## Retail Arbitrage



This module was written before the power of bidder arbitrage was understood. The deep discounting to $85 \%$ of the peg in the very early days is unlikely to occur.

With the equilibrium VIP\$ possibly as low as $85 \%$ of peg when the $A B C$ is purchasing in sales-only mode, how risky is it for the VIP Treasury and the ABC to guarantee merchants 99\% of the peg when they take the VIP\$ in trade? Can retail arbitrage account for the slack?

The merchant at a $1 \%$ discount pays only $1 \%$ for VIP\$ transactions. There are no other costs. In the early days, even the equipment will be provided free or subsidized heavily. The merchant will have cost savings over credit cards. For grocery stores, the time cost and equipment needed for rewards programs vanishes as well.

What about the consumer? Purchasing VIP\$ at a $1 \%$ discount gives them a $1 \%$ discount on all merchandise where the VIP\$ is accepted. This could be done automatically at the time of purchase. But there is a problem.

Biometric identities are only free to property owners who sell their land into the commons trust and merchants who accept the VIP\$. Although the VIP Treasury will sign a contract with the county's Motor Vehicle Division (DMV), there will be a cost to buy one.

Alternatively, if the consumer puts their VIP\$ in a photo ID associated e-wallet, the VIP Treasury cannot guarantee identity, or provide absolute theft and fraud protection. They can protect against loss of the private key.

Assume that between those with e-wallets, those who pay for a biometric identity, and those who get a free biometric identity, $50 \%$ of the adults in the county are able to take advantage of the $1 \%$ VIP\$ discount on the spot when purchasing.

Assume also an average of 1.8 adults per household and that 1\% of the county's properties are purchased into the commons trust at an average price of $\$ 200,000$.

Other assumptions for this example are that only county grocery stores and gas stations have opted in, and that each adult in the county spends an average of \$30
per day at grocery stores and gas stations. In the worst case, they all buy VIP\$ at the point of purchase, and the merchant goes to market with the VIP\$ at the end of the day.

Given a uniform distribution of spending throughout the day. How many VIP\$ are removed from circulation by retail arbitrage in this specialized case?

To make the math easier, assume 40,000 households. 1\%, or 400, have been sold into the commons trust.

40,000 households $\times 1.8$ adults participating per household $\times 50 \%$ participating $x$ 30 VIP\$ spent per day per adult participating $\times 50 \%$ on average withheld from circulation $=1.08$ million VIP\$ each day on average withheld from circulation.
Now consider the VIP\$ created. The land under 400 houses sold into the commons x 200,000 VIP\$/house sold into the commons = 80 million VIP\$. Retail arbitrage in this case would create less than $1.5 \%$ of VIP\$ demand. It does not appear to be a promising source of VIP\$ demand under these assumptions.

The VIP\$ pays a dividend and the U.S. dollar does not, so treating it like a hot potato is not rational. More rationally, between the patron and the merchant, the average VIP\$ used in retail would be in circulation for a week.

The merchant would cash in once a week and the consumer would purchase a fresh supply once a week. With the development of a VIP\$ economy, suppliers will also accept the VIP\$. This would lead to long periods before redemption. However, in the first few years, this cannot be relied upon.

Early retail arbitrage will add about 10\% to the demand for the VIP\$. If 40 homes were sold into the commons trust rather than 400, county demand from retail arbitrage would equal supply. But then, there would not be enough supply for merchants to bother accepting the VIP\$.

Nevertheless, any uniform increase in VIP\$ demand shifts the TAD curve to the right. Shifting the $76 \%$ VIP\$ supply line to the left is equivalent.


With $10 \%$ of the VIP\$ used in retail commerce, available sales-only VIP\$ supply decreases from $76 \%$ to $66 \%$. This has the effect of raising the VIP\$ floor from $85 \%$ to $90 \%$ of peg.

This highlights the importance of retail commerce in creating VIP\$ demand. While $90 \%$ is shy of the $99 \%$ peg
needed, there are other sources of demand and supply reduction discussed in the next two modules.

