How Better Forecasting Can Help Financial Institutions Right-Size Cash

One of the biggest challenges facing financial institutions is the need to constantly optimize the size of their cash inventories. It's complex given ever-changing market and customer requirements, not to mention fluctuations in demand and deposits. To paraphrase what's become known as the Goldilocks Principle, they don't need too much cash or too little, but an amount that's "just right."

Accurate Forecasting

When bigger isn't better. Of course, the bigger the financial institution's footprint, the bigger the challenge to right-size cash inventories.

For example, one of the nation's biggest banks has more than 5,000 retail branches and more than 16,000 ATMs. On any given day, its cash inventory across all those locations can exceed $2B. And different regions can experience deposit differentials in the hundreds of millions of dollars.

With that cash inventory size as a benchmark, it's easy to see how smaller financial institutions, like community banks and credit unions, still have to manage hundreds of millions of dollars worth of their own cash inventories. **And that comes with two big imperatives that treasury managers must keep in balance as best they can at all times:**

1 **Minimize non-earning assets.** Because physical cash holdings — vault cash — can count towards a bank's reserve requirement, all cash in excess of that requirement could be earning interest at the Federal Reserve if it were not sitting in a vault, a banking center or ATM.

For example, even if interest rates are small, it can add up. For every $100 million a financial institution has in its vault not earning interest, the opportunity cost is about $700 a day. Compounded daily over a year, that can add up to more than $250,000. If the Federal Reserve decides to raise interest rates, that figure can rise commensurately.

2 **Avoid cash-out events while minimizing safety stock.** Cash-out events occur when a financial institution can't meet customer demand for currency. They can be small inconveniences, like when an ATM user might find a machine that's out of cash and has to find another ATM to use. Or they can be bigger problems, like when a large chain store or sports stadium can't get all the currency and coins in the denominations they need for all their cashier drawers.

Either way, if the bank can't provide the cash required, it puts its reputation at risk. To avoid this, banks maintain a measure of excess inventory commonly referred to as "safety stock." Because safety stock is a non-earning asset, incurring cost of funds, financial institutions have to balance the reputational risk of a cash-out event against the cost of safety stock.

Accurate forecasting, the key to right-sizing:

Before the debut of sophisticated forecasting software, the process of balancing all these basic variables was more art than science. It required treasury managers to manage for obvious seasonal trends and special calendar days and to stay in constant communications with their branches. But to prevent cash-out situations, lots more safety stock was kept as a buffer.

Today, cash forecasting is more science than art. Forecasting accuracy has improved several orders of magnitude, thanks to currency supply chain management software used by GardaWorld Cash Services to help financial institutions right-size their cash inventories.

This software aligns safety stock to the statistical variation of demand and/or deposits at individual banking centers, ATMs and vaults. Extremely complex algorithms "learn" about cash demand at individual branches and ATMs over time.

Reducing cash levels by 20 to 40 percent:

The software combines complex analytics with historical trends and known events to precisely forecast cash needs for each cash point, whether a branch, an ATM or vault.

This increase in accuracy can help banks cut their cash levels, yet ensure cash availability. At the same time, it helps eliminate the expense of cross-shipping with the Fed and emergency deliveries. In addition, the software can optimize armored transport scheduling, which can balance the cost of cash versus delivery costs. It can also ensure more precise and responsive cash deliveries and pickups through delivery tracking and reconciliation.

Helping financial institutions right-size their cash inventories shows how GardaWorld Cash Services goes beyond armored transportation to provide value to its customers.

To find out more about how we can help you right-size your cash inventories, visit our website at garda.com/cashservices or contact your GardaWorld Cash Services representative.

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