

# CASE STUDY 2

## CORE CREDIT UNION

CORE Credit Union ([www.corecu.org](http://www.corecu.org)) is a state-chartered credit union whose main office is located in Statesboro, Georgia. Statesboro is located in Bulloch County which is the largest county in east Georgia (in square miles). It is a predominantly rural county with a population of 70,000+ where agriculture is a significant part of the local economy. Statesboro, with a population of 28,000, is the county seat and is the central hub for both the public and private sectors of the economy. Brooklet is the largest community in the eastern part of the county, it is located about 10 miles east of Statesboro. Portal, located about 14 miles west of Statesboro, is the largest population center in western Bulloch County. Bulloch County is one of the fastest growing counties in Georgia and the U.S. Its population grew more than 25% from 2000 to 2010.

### **Credit Unions vs. Banks**

Credit unions are financial institutions that are similar to community banks in terms of the products and services that they provide to consumers. However, they differ from banks in several important ways. First, credit unions are non-profit organizations and unlike for-profit banks, they are not subject to federal or state income taxes. Second, credit unions are cooperatives and each credit union member owns the equivalent of one

share of the organization. Banks on the other hand have shareholders, who own shares of the bank's stocks. Bank managers and their Boards of Directors (who are typically paid) operate their banks in ways to maximize returns to bank stockholders. Credit union managers and their Board of Directors (who are unpaid volunteers) do this as well, but in their case, every customer is also a shareholder who owns the equivalent of one share of stock. When credit unions are well-managed, everyone benefits, typically in terms of higher interest rates on savings accounts and certificates of deposit (CD) and/or lower rates on loans. In banks, only a small fraction their customers, if any, are stockholders and it is the stockholders who benefit most from good decision making on the part of bank managers. Third, banks compete openly with one another for consumer and business accounts. Credit unions, however, may be restricted to offering their services to select employee groups (SEGs) and/or geographic regions. This limits their membership and growth opportunities.

Like banks, accounts at credit unions are insured up to \$250,000. The Federal Deposit Insurance Agency insures account at banks. The National Credit Union Association (NCUA) insures credit union accounts. Both banks and credit unions are subject to annual audits by independent auditors. State banking agencies, such as the Georgia Department of Banking, also audit the banks and credit unions that operate in their states. The FDIC and NCUA also perform annual audits for the financial institutions that they provide insurance for. In recent years, audit results have resulted in the closure or merger of multiple banks. From 2010 to 2012, the state of Georgia led the nation with its number of community bank closures.

## **Competitive Environment**

CORE CU is classified as state-chartered community credit union. For much of its 30 year history, it was primarily a credit union for educators (public

school teachers and university faculty and staff). The local hospital (East Georgia Regional) and several manufacturers (including Briggs & Stratton, Great Dane, and Viracon), successfully petitioned for membership and eventually the decision was made to change its charter to become a community credit union where anyone who “lives, works, or worships” in Bulloch County can join the credit union and take advantage of its products and services.

Within Statesboro, CORE competes for members with a federally chartered credit union. It also competes with multiple community banks (including Colonial, Farmers and Merchants, Heritage, Sea Island) and national banks (BB&T, Queensborough, and Wells Fargo) for consumer and business accounts.

Competitively, CORE credit union has held its own. It has approximately 8,000 members and more than \$50M in assets. Over the last decade it has experienced double-digit annualized asset growth rates and has one of the state’s best performers in the financial services industry in terms of return on assets (ROA) and other key financial performance metrics. During the economic downturn, CORE continued to grow in assets, members, and branch locations. In 2009, it opened a branch in Brooklet, Georgia and in 2012 it opened a branch in Portal, Georgia.

## **IT Infrastructure**

Information technology has been a key contributor to CORE credit union’s growth and solid financial performance. CORE was one of the first credit unions in Georgia to have a Web page and it has been among the early adopters of other banking applications such as telephone banking, Internet banking, online bill paying services, and mobile banking. The credit union’s management team and Board of Directors has demonstrated consistent interest in IT applications and infrastructure that extend products and

services to its members. Because so many of its key products and services are delivered online as well as via traditional means, members who move out of the area often continue to use CORE as their primary financial services after they move out of the area.

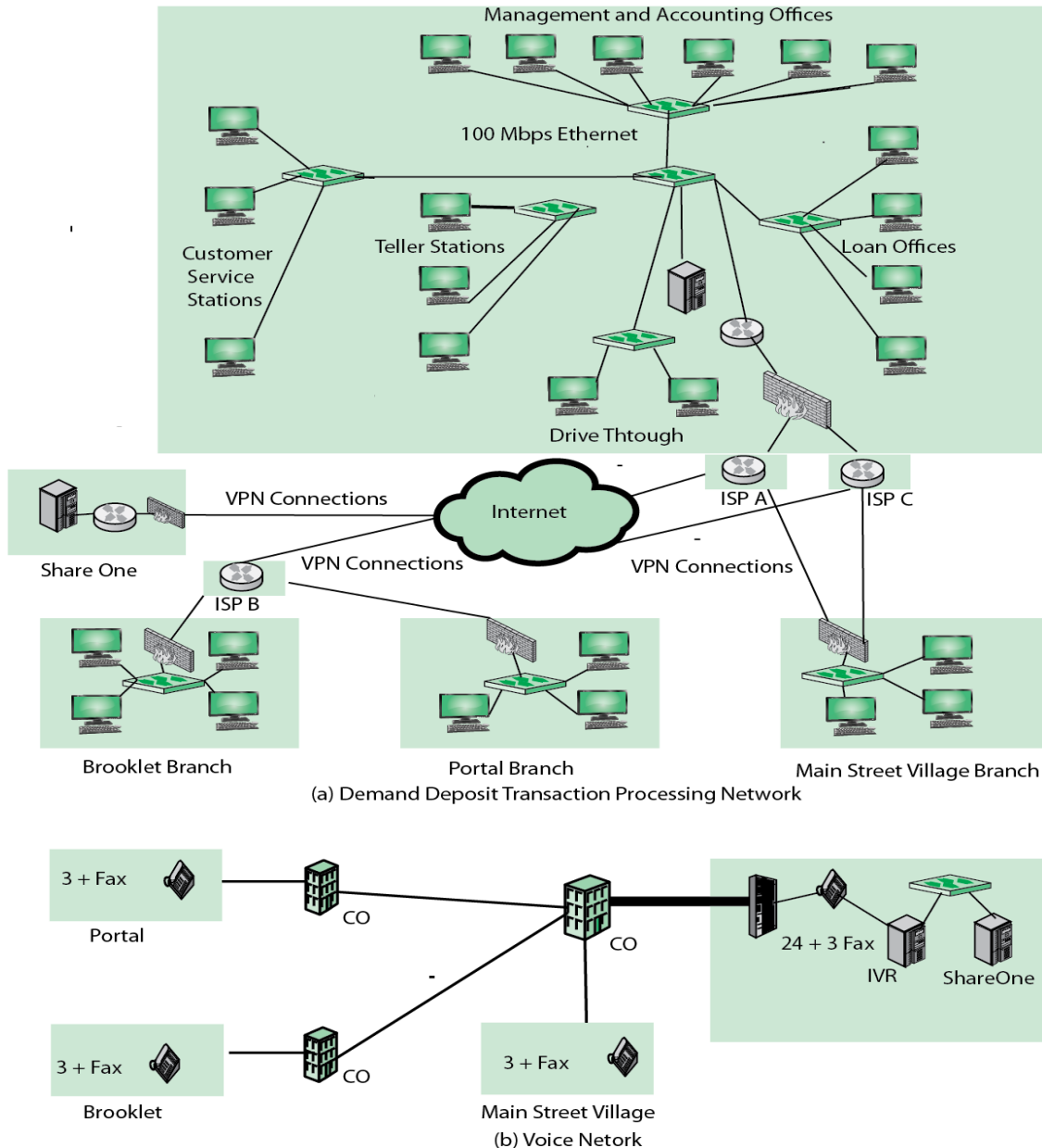


Figure C2.1 CORE's Data and Voice Networks

As illustrated in Figure C2.1a, CORE has a 100 Mbps Ethernet LAN at its main office and at each of its operating locations. Tellers, customer service personnel, loan officers, managers, and back office personnel at the main office use computers that are attached to the Ethernet LAN. Teller and loan transactions are performed on a Share One server that is also attached to the LAN. Each walk-in customer who makes a deposit, withdrawal, or loan payment receives a printed record of the transaction and their account balances are updated by the Share One server in real time.

Teller and loan officer computers at the branch offices are logically part of the Ethernet LAN at the main office. Each connects to the Share One server at the main office via a VPN connection. Like those for customers at the main office, transactions for walk-ins at the branches result in real-time updates to account balances.

All transactions on the Share One server are replicated in near-real-time at the Share One service center in Memphis, Tennessee. Exact duplicates of the Share One server and storage area network (SAN) at CORE's main office in Statesboro are located in the Share One service center. In fact, there are two duplicates of each at the Memphis location. Both are configured exactly like their counterparts in Statesboro. One is used for data replication (back up) and the second is available as a failover or for immediate shipment to CORE should some type of disaster (fire, tornado, earthquake, hurricane, etc.) strike CORE's main office.

## **Voice Network**

Voice communication has always been an important part of banking and is essential to high-quality customer service. As you might expect, phones are always ringing at CORE Credit Union and being able to address customer needs by phone is an important part of every business day. CORE's voice network is illustrated in Figure C2.1b. CORE has a PBX on premises at the

main office to support its staff of 20. Two-dozen phone lines and three facsimile lines are supported at the main office. Each of CORE's branches has three phone lines and another line for facsimile. Phone calls between the main office and the branches are routed through at least one central office (CO). Calls between the main office and the Main Street Village branch are connected via the Frontier Communications CO in Statesboro. Calls between the main office and either the Brooklet or Portal branch go through two CO's: the Frontier Communication's CO and a Bulloch Telephone CO.

One of CORE's older outreach services is phone banking. For almost two decades, members have been able to dial into COREY, an interactive voice response (IVR) system that enables members to check account balances, transfer money between accounts, and make loans payments. Because COREY enables members to do many types of transactions by phone, it reduces the need for members to call a customer service representative for help in performing routine financial transactions. This means that customer service representatives are more likely to be available to help members address more complicated issues.

When customers call the main number at CORE, they are greeted by an IVR recording and COREY is one of the menu options. Callers who select the COREY option hear another set of menu options. Because some callers select IVR options that affect account balances, such as verifying balances or transferring money among accounts, the IVR must necessarily be able to access account information in the Share One transaction processing system. Hence, the IVR server is connected to both the PBX and the Ethernet LAN at CORE.

## **ATM Network**

CORE has a drive-up ATM the main office and each of its branches. Another CORE Credit Union ATM is located in the student union at Georgia Southern

University. The ATMs at the branches have specially configured Ventus ATM wireless routers to communicate with the Share One server at the main office over VPN connections. The ATM at the university has a dial-up connection that comes into the main office through the PBX.

CORE members are not charged a transaction fee for using the credit union's ATM machines. Non-members can also get cash from a CORE ATM but they are charged a transaction fee for doing so. Non-member ATM transactions are called "foreign" transactions. To encourage non-members to use CORE ATMs, CORE's foreign transaction fees are less than those charged by any other financial institution in Bulloch County.

Consider the logic associated with an ATM transaction:

1. Determine if ATM is for a member or is foreign.
2. If the transaction is for a member, check account balance on Share One server; issue requested cash when cash request is less than account balance; otherwise present "insufficient funds" message.
3. If the transaction is foreign, send check balance request to ATM network; issue requested cash when cash request is less than returned account balance; otherwise present "insufficient funds" message.

## **Electronic Banking**

CORE relies on numerous third-party partners to deliver banking products and services to its members. Its ATMs are connected to ATM networks capable of providing international access to money in their accounts. Access to global ATM networks is just one of the major electronic banking services that are available to CORE Credit Union members (see Figure C2.2).

### ***INTERNET BANKING***

To reduce expenses, CORE abandoned batching and mailing canceled checks to its members more than a decade ago. Instead, members who want to verify that a check has been processed can access the check image

via the credit union's Internet banking services. Members who have a CORE Credit Union Visa card can also use the Internet banking service to track charges made to the card; they can also use the Internet banking service to pay the credit card balance via a fund transfer from a checking or savings account. CORE members can opt in to receive e-statements and avoid receiving monthly account statements by mail. E-statements for the previous month are available on the first day of each new month and their content is identical to that in printed statements which traditionally were only available by mail.

### ***BILL PAY***

About one-third of CORE's members use its bill pay services to pay their monthly bills. Bill pay enables members to make electronically payments without having to write and mail a physical check. After the account information for each payment is set up, monthly bills can be paid with a few mouse clicks. In some instances, payments go directly to recipient bank accounts. In other cases, Automated Clearing House (ACH) services are used to transfer payment amounts.

### ***ONLINE LENDING***

Interest on loans is a typically a major source of revenues for credit unions. To maximize revenue flows, it is important for a credit union to get as much of its deposits as possible in the hands of credit-worthy borrowers. Making it easy and convenient to make loans to borrowers with good credit histories is a strategy followed by many credit unions, including CORE. CORE allows members with good credit histories to apply for loans online. Instant approval may be granted for some types of online loan applications and loan processing can be expedited for applications that are made online because all or most of the required documentation needed to approve the loan is captured electronically.



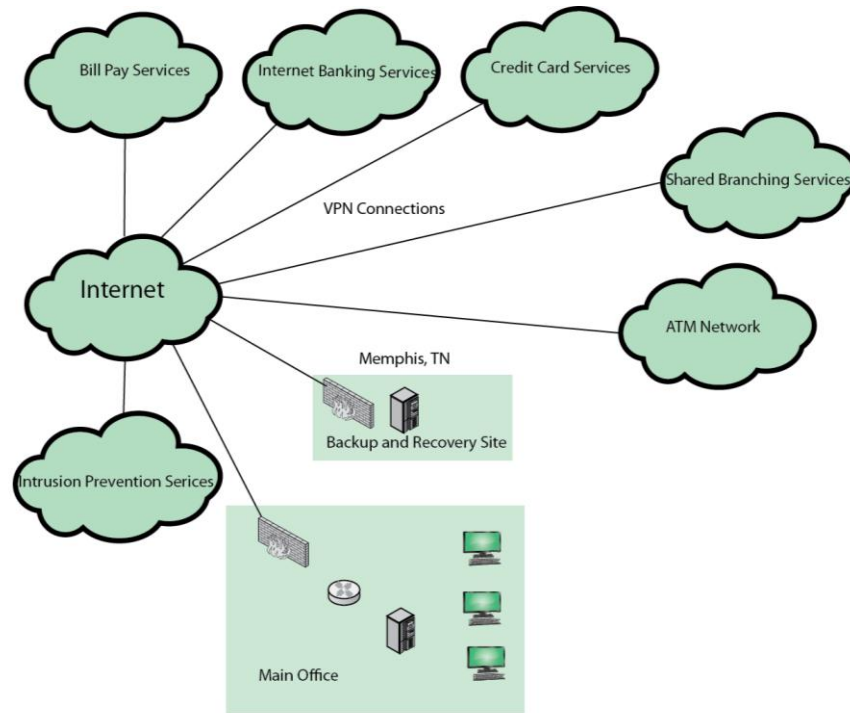


Figure C2.2 CORE's Third-Party Cloud Services

### **SHARED BRANCHING**

Statesboro is the home of Georgia Southern University and its 20,000+ students. Many students come from families who are credit union members in other communities, states, or countries. To serve these students, CORE is a member of the Shared Branching Services networks. This enables individuals who are members of other credit unions to use CORE branches for the same types of transactions that they would go to do at the credit union in their home town. For example, they can access balances of accounts in their home town credit union, make deposits, withdrawals, cash checks, make loan payments, or transfer money between their accounts.

### **Backup and Security Mechanisms**

Protecting the security and integrity of member accounts is important to any financial institution. A variety of mechanisms are used by CORE to protect member accounts. Several of these are illustrated in Figure C2.1 including

VPN connections and near-real-time between the Share One servers in Statesboro and the Memphis Share One service center. The data replication service ensures that copies of all transactions are stored at both locations. The service center is capable of serving as a “hot site” for processing CORE’s transaction should disaster strike its main office.

To provide a failover communication link to the Internet, CORE uses two ISPs: Frontier Communications and Northland Cable. Dual ISPs serve the Mainstreet Village branch and this arrangement will also be implemented for the Brooklet branch. Other security mechanisms include:

- Triple DES (Data Encryption Standard) encryption is used to transport ATM transaction messages across the network.
- UPS (uninterrupted power supply) systems are in place for the servers and communication technologies at the main office.
- Intrusion protection services are provided by a third-party firm that monitors all transactions going through the firewalls at each of CORE’s sites.
- Wireless LANs are not used at the main office or branches because of their potential security vulnerabilities.

## **Discussion Points**

1. To what extent are CORE Credit Union’s networks as converged? Identify and briefly describe additional network convergence opportunities.
2. Visit CORE’s Web site ([www.corecu.org](http://www.corecu.org)) to get richer picture of the full range of products and services offered by the credit union. Identify and briefly describe additional products and services that CORE could offer its members.
3. Many experts expect mobile payment systems to increase in popularity. What changes would be needed to CORE’s network infrastructure to support mobile payments?

4. CORE relies multiple third-parties to deliver its products and services? Identify the advantages and disadvantages of using this approach to serve its members?
5. Because it is less expensive to process electronic banking transactions, CORE has a financial incentive to increase the number of members who use its electronic banking applications. If you were the manager at CORE, what would you do to encourage more members to do most of their banking transactions electronically?
6. What additional security and backup mechanisms do you recommend for CORE's networks?