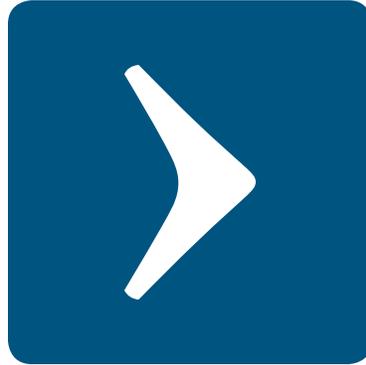


Banking Integration: Optimizing Cash Management



Integration with internal and external financial systems simplifies operations, expedites money movement and reduces errors associated with manual processes.

Overview

In today's dynamic business environment, fast-moving companies want cash management tools that allow them to streamline operations, improve internal controls, and better manage liquidity. To achieve these goals, it's essential for companies to seamlessly integrate with their banks to exchange information quickly and frequently, without costly and time-consuming IT development.

Most financial institutions offer integration solutions through a complex mosaic of electronic delivery channels, file formats, and data transfer technologies. This article examines these offerings and makes recommendations for selecting the right solutions for a company's business needs.

Written By

Patrick Steiner
Director, Product Integration
Silicon Valley Bank
408.654.3058
psteiner@svb.com

Banking Integration is Critical for Dynamic Companies

In an era of increasing need for accurate information on-demand, it's important to monitor time-critical cash movement and have clear visibility into financial activity as it happens. Banking integration provides this visibility and streamlines data exchange, such as the sending and receiving of payment files, account activity, and liquidity information. This improves controls, reduces errors, enhances reporting capabilities and optimizes cash management.

Banking integration can also effect improvements in:

- **Speed.** Whether a company is large or small it requires delivery and processing of information with both increasing frequency and velocity during the course of the day. You can expedite data delivery through automated event triggers and straight-through processing (STP), and improve real-time visibility through instant alerts and mobile messaging.
- **Regulatory compliance.** As regulatory scrutiny continues to increase, companies must demonstrate they have established controls over their business data and that the processes governing the data are auditable. The processes must comply with Sarbanes Oxley (SOX) or other similar requirements that are designed to assure the accuracy of a company's financial reporting. One way to achieve that level of control is straight-through processing, which allows data to move from one system to another without manual intervention. With STP, you

can build controls into automated daily business processes to improve SOX compliance, decrease reliance on thinning staff, and reduce the risk of human error. STP also simplifies disaster recovery with automation that can be managed from remote locations and replicated at a designated back-up site.

- **Global capabilities.** A company's success depends upon information that allows it to conduct business internationally. In today's global economy, companies exchange financial information across borders and across currencies. Cash moves to and from U.S. and foreign currency dominated accounts. Integrating with the right banking partner can provide companies with the tools they need to standardize complex data and financial flows, and dramatically streamline global cash management operations.

Banking Services and Information

Achieving seamless cash management integration and then deriving actionable intelligence from your data involves first understanding what information you can exchange with your bank and how best to exchange it.

In addition to conventional online banking, companies are using treasury management systems to manage their daily liquidity and cash forecasting. These systems — which can take the form of treasury workstations or cash management modules of an accounting or [ERP](#) system — necessitate an increased reliance on one or more forms of data exchange with banks.

The Impact of Banking Integration: One Company's Success

A rapidly growing company needed a new banking partner with innovative integration capabilities. The company's goal was to eliminate labor-intensive processes and retire legacy technologies. It needed a new integrated platform to support a wide range of cash management operations with varying information delivery channels and file formats for different uses.

The company chose to partner with a leading global bank that offered a comprehensive, automated, multichannel data integration solution. This choice:

- 1 Enabled the retirement of manual procedures and outdated tools
- 2 Transformed daily liquidity management, providing more accuracy, speed, visibility, and control
- 3 Offered new reports, new data formats, and new automated delivery channels, allowing the company to reduce costs, increase efficiency, grow their business, and further expand globally

Given the positive ROI and continuing high rates of adoption, banking data integration is a clear path to optimizing cash management in any business or market sector.

Banking Information	Business Benefits
Daily balance and transaction reporting	Daily cash positioning and liquidity management
Daily checks paid	Account reconciliation
Daily lockbox deposits	Automation of receivables posting
Credit card activity	Simplified expense reporting
Consolidated payables file (checks, wires, ACH)	Streamlined disbursements

To support these cash management tools, banks exchange information with their clients electronically. Such information might include account balances, details of checks paid and received, card activity, ACH or other low-value non-urgent payments, and wire transfers (domestic and international). Banks send and receive this data in both proprietary and industry-standard formats through a variety of channels.

Achieving seamless cash management integration and then deriving actionable intelligence from your data involves first understanding what information you can exchange with your bank and how best to exchange it.

An Array of Options: Delivery Channels and File Formats

Electronic interfaces are an essential component of an efficient cash management system. Integration with internal and external financial systems simplifies operations, expedites money movement and reduces errors associated with manual processes. This integration involves two primary considerations: delivery channels (how the data is transferred), and file formats (how the data is structured).

Delivery Channels

Cash management integration with a bank typically involves moving data across one of three primary delivery channels:

- **Online Channel.** Many banks allow companies to manually upload or download files over the Internet through a simple, intuitive Web interface. The online channel typically uses a

secure transfer protocol called [HTTPS](#). It is ideal for smaller, infrequent file transfers where simplicity is key in both setup and daily use. It is important to note that the online channel includes the growing mobile banking channel, which is rapidly becoming a favorite for busy executives and treasury managers.

- **Desktop Client.** The desktop client channel involves installing a small, unobtrusive piece of software on a server, workstation, or laptop. This applet monitors a given folder, either on the local machine or on a remote server, and automatically transfers over the Internet any file placed in that folder. The desktop channel combines the power and flexibility of automated, event-driven delivery with quick and easy setup, limited need for difficult-to-obtain IT resources, and low-cost maintenance.
- **Direct Transmission.** This channel provides a more substantial, secure connection to the bank for automated transfers with greater bandwidth to accommodate larger files and/or higher volumes. In technical implementation, establishing a direct transfer link with a bank involves two primary considerations: connectivity and transfer protocol.

Connectivity

Establishing connectivity with a bank can be as simple as creating a secure pathway over the Internet, such as a [VPN](#) tunnel. Many companies use this same method for remote employees to connect to their email or access their corporate networks. This type of link typically takes only hours to establish and test, and it's ideal for low-volume traffic where simplicity and affordability are key.

Larger companies with more complex banking integration needs may opt for a dedicated line to their financial institution(s), which provides a faster, more robust, and more secure conduit at a higher initial and ongoing cost.

Transfer Protocol

A direct transmission connection typically uses one of several secure transfer technologies, such as [File Transfer Protocol \(FTP\)](#) with encryption (e.g., PGP®), SFTP (also known as Secure FTP or SSH FTP), or FTPS (also known as FTP Secure or FTP-SSL).

Delivery Channel	Pros	Cons
Online (Web)	<ul style="list-style-type: none"> ◦ Simplest setup ◦ Prevalent, intuitive, and easy to use ◦ Typically no connectivity costs other than standard Internet access 	<ul style="list-style-type: none"> ◦ File transfers must typically be initiated manually—automation may not be supported
Desktop Client	<ul style="list-style-type: none"> ◦ Simple to set up and use ◦ Easy to automate file transfers ◦ Limited IT support needed 	<ul style="list-style-type: none"> ◦ Potential hardware/software compatibility issues
Direct Transmission	<ul style="list-style-type: none"> ◦ Provides greater automation ◦ Accommodates larger files and higher transfer volumes 	<ul style="list-style-type: none"> ◦ More costly to set up and maintain ◦ Requires IT labor to establish, test, and support connectivity

Although it is easy to get lost in the acronyms, all the above methods are simply different vehicles that travel the same road to securely deliver data from one place to another.

Comparison of Delivery Channels

File Formats

Another key consideration in banking integration is the format in which banks and companies will exchange data. Many banks have established custom proprietary layouts for certain data files, such as a consolidated inbound payables file of all checks, wires, and ACH transactions. Banks also frequently offer industry-standard file layouts such as [NACHA](#) for ACH activity, [BAI2](#) for statement or lockbox data, and [EDI820](#) for check issuance records in the United States. Internationally, EDIFACT, SWIFT, and the emerging ISO 20022 (XML) standard are common.

The challenge can be exporting data from or importing data into a company's particular accounting or ERP system when native file formats differ. This "last mile integration" can involve significant IT labor. Custom-coding may be required to modify imported/exported data and transform it into a format that is palatable to either a company's system or its banking partner's.

Fortunately, banks are meeting this challenge head-on. They are developing innovative new tools for companies to easily convert data files and streamline integration with a company's back-end systems through automated data transfers. This significantly simplifies payables, receivables, reconciliation, and daily liquidity management activities.

Conclusion: Selecting a Banking Integration Solution

The value proposition for banking integration is improved controls, reduced errors and operational expense, and streamlined cash management. Today's financial services ecosystem offers a wide variety of solution choices in banking integration. A company evaluating them should concentrate on three key decisions to achieve success quickly and cost-effectively:

- **Identify the specific needs.** Evaluate your cash management operations, review the integration options, and then perform a cost-benefit analysis. Focus first on the banking information you use most and the integration solutions that will best reduce those costs by improving controls and streamlining operations.
- **Choose the best delivery channel and integration approach.** Assess your business needs: what information you need from your banking partner, when or how frequently, and how much data is involved. Next, determine which file formats are supported by your treasury management, ERP or accounting system. Then choose the channel(s) most appropriate for your needs and a connectivity technology that best aligns with your existing infrastructure.
- **Select the right banking partner.** Choose a financial institution with the customer service, customized solutions, and deep domain expertise necessary to help you achieve your goals and implement the right mix of services, channels, and global integration options for your specific needs. The right banking partner can quickly take the complexity out of cash management integration for companies of all sizes and can deliver robust solutions to lower your costs and improve controls so you can focus less on banking — and more on your business.

Glossary

Automated Clearing House (ACH)

A nationwide electronic funds transfer network which enables participating financial institutions to distribute electronic credit and debit entries to bank accounts and to settle such entries.

BAI2

Cash Management Balance Reporting Specifications Version 2. An electronic cash management reporting standard prevalent in the U.S., it was originally created by the Banking Administration Institute (BAI), and is now administered by the Accredited Standards Committee X9. BAI2 is the most current BAI version.

EDI820

An electronic data interchange file format that is specifically designed to carry structured data about Payment Order and Remittance Advice transactions.

Enterprise Resource Planning (ERP)

An integrated system used by companies to manage resources, including tangible assets, financial information, materials, and the workforce. It allows for the flow of information between various business functions within the company, and manages connections to outside stakeholders as well. It houses a company's General Ledger, Accounts Receivable and Accounts Payable sub-ledgers, and other financial systems of record.

File Transfer Protocol (FTP)

FTP is a standard network protocol used to copy a file from one host to another over a TCP/IP-based network, such as the Internet. FTP is built on a client-server architecture and utilizes separate control and data connections between the client and server applications, which solves the problem of different end host configurations (i.e., Operating System, file names). FTP is used with user-based password authentication or with anonymous user access. Applications were originally interactive command-line tools with standardized command syntax, but graphical user

interfaces have been developed for all desktop operating systems in use today.

NACHA

National Automated Clearing House Association. NACHA- The Electronic Payments Association is an industry trade association and the administrator of the Automated Clearing House (ACH) network in the United States.

PGP™

Pretty Good Privacy. Computer program that encrypts and decrypts data. Administers cryptographic privacy and authentication used in data communication. Often applied in email privacy.

Secure File Transfer Protocol (FTPS)

The transfer of files using Secure Socket Layer (SSL) protocol and Transport Layer Security (TLS). An extension of File Transfer Protocol (FTP).

Secure Hypertext Transfer Protocol (HTTPS)

Securing HTTP enables users to send individual messages securely over the web. When “https” is used in the first part of a URL (part that precedes the colon and specifies an access scheme or protocol), as opposed to “http”, this term specifies the use of HTTP enhanced by a security mechanism, which is usually Secure Socket Layer (SSL v2/v3). Current practice is to layer HTTP over SSL, distinguishing secured traffic from insecure traffic by the use of a different server port. This same practice can be done using Transport Layer Security (TLS v1) protocol, which is the successor to SSL.

Secure HTTP Advantages

- Secure HTTP, which is already built into most online banking systems, provides an ideal avenue for secure file transfer between banks and corporate clients.
- Secure HTTP, when implemented properly on the client and server side, is a very secure solution for all types of data transmission for a bank's corporate clients.

- Secure HTTP protocol emphasizes maximum flexibility in choice of key management mechanisms, security policies, and cryptographic algorithms.

Secure HTTP Disadvantage

- Secure HTTP provides no obvious means of scripting to automate authentication, decryption/encryption of data, and desired file delivery/receipt handling.

SSH File Transfer Protocol (SFTP)

The abbreviation SFTP is often mistakenly used to specify a form of Secure FTP, by which people most often mean FTPS. Another misconception is that SFTP is a kind of FTP over SSL. SFTP is neither FTP over SSL nor FTP over SSH (which is also technically possible, but very rare). In actuality, SFTP is a binary protocol, standardized in RFC 4253. In later versions SFTP has been extended to provide not only file uploads/downloads, but also file-system operations, such as file locking, creation of symbolic links, etc.

Virtual Private Network (VPN)

A continuation of a private network that incorporates public and shared network links. A VPN facilitates data sent over the Internet between two public or shared networks with properties that model a private link.

About Silicon Valley Bank

Silicon Valley Bank is the premier commercial bank for companies in the technology, life science, venture capital, private equity and premium wine industries. SVB provides a comprehensive suite of financing solutions, treasury management, corporate investment and international banking services to its clients worldwide. Through its focus on specialized markets and extensive knowledge of the people and business issues driving them, Silicon Valley Bank provides a level of service and partnership that measurably impacts its clients' success. Founded in 1983 and headquartered in Santa Clara, Calif., the company serves clients around the world through 26 U.S. offices and international operations in China, India, Israel and the United Kingdom. Silicon Valley Bank is a member of global financial services firm SVB Financial Group (Nasdaq: SIVB), with SVB Analytics, SVB Capital, SVB Global and SVB Private Client Services. More information on the company can be found at www.svb.com.

SVB  *Find a way*

SVB Financial Group

Silicon Valley Bank Headquarters

3003 Tasman Drive Santa Clara, California 95054 U.S.A.

Phone 408.654.7400 svb.com