

Cash Management

Secure, Online Delivery of Transaction Information for Corporate Treasury



What is Cash Management? Or, is it Treasury Management?

With the advent of the Internet, banks and other Financial Institutions are rethinking their corporate banking strategy. The Internet opens a new channel for delivering services to corporate clients and helps these institutions remove cumbersome and expensive paper processes. Services such as Cash Management, Trade Finance, and Payments delivered over public networks not only streamline a bank's internal processes, but also increase the ratio of fee-based revenue to more traditional interest-based revenue. Banks want such services to also be their primary profit source for three main reasons.

It is less sensitive to interest-rate fluctuations and thus will be more stable over time. Since these services are typically contracted for several years, they assure a steady revenue stream.

And finally, because these products and services are in effect, extensions of a corporation's operating processes, the relationships between a bank and its customers are deepened and strengthened.

Let us explore one of these corporate services, Cash Management, in some depth. Every business, no matter how small, needs to disburse and collect cash in order to bring business transactions to fruition. In a corporation, the controller is charged with managing disbursements (payables) and collections (receivables), while the treasurer is responsible for managing the cash for the business. All major banks offer cash management products and services to their corporate clients so they can better manage their most liquid asset – cash. Maintaining good relationships with their large corporate clients is of utmost importance to banks today. In order to offer services that closely address corporate treasurers' needs, banks market their cash management products under the name 'treasury management'.

Yes, the phrase 'cash management' is indeed synonymous with the phrase 'treasury management'. There is however, one caveat.

Treasury requirements in very large enterprises can be very complex. Treasury functions in these enterprises may go beyond the typical cash management activities of transaction initiation and information retrieval from their banks. Tying financial information with that enterprise's ERP system provides an example of such a treasury function. In such situations, one may think of cash management as a subset of treasury management.

Broadly speaking, banks offer four categories of cash management services. Some specific examples under each category are delineated below.

Demand Deposit Account (DDA) Services

- **Positive Pay:** An instrument to combat check fraud. A corporation presents issued checks to its bank in an electronic file format. Typically, check information consists of the check date, check number, amount and payee name. This information is then compared to actual checks received by the bank for payment. Checks not found within the Positive Pay file are not paid, and the corporation is notified of the discrepancy.
- **Account reconciliation:** Partial Reconciliation provides paid check detail by report or transmission. Account activity can be grouped, sorted and sub-totaled according to pre-determined needs. Full Account Reconciliation takes a company's daily check issuance information and compares it to the current paid check detail. A fully reconciled statement with a listing of checks outstanding and exception items is then generated.
- **Zero Balance Accounts:** A cost-effective way to concentrate deposits and fund disbursements. A company can establish separate "sub-accounts" for their plants, stores, projects, offices or other units that require flexibility to make deposits, write checks, or maintain separate balances. Each account is assigned a target balance level and a master concentration account for funds pooling purposes is established. At the end of the day, funds are swept in or out of the master account - depending on what is needed to bring each sub-account's balance back to its target level.

Collection Services

- **Lockbox:** Wholesale and Retail Lockbox services intercept corporate customers' mailed payments, processes and deposits them into the corporation's account, and reports those deposits back to them. This service is designed to accelerate the collection, processing and reporting of the corporation's remittances to give them faster, convenient access to their cash.
- **Subaccounting:** A management tool for a company's complex depository network. This service is particularly useful a business has national presence and multiple locations; it simplifies the administration of large, multi-state deposits by using individual location codes (subaccounts) to automatically identify all

transactions within a single account. Subaccounting automatically posts every transaction to the receiving account via a location code.

Disbursement Services

- **ACH:** This allows customers to initiate and manage a wide variety of transactions quickly and conveniently. Examples include depositing employees' wages directly into their checking accounts, making state and federal tax payments, processing transfers and vendor payments, and executing other debit transactions. There are usually many different products and services offered under this category.
- **Controlled Disbursements:** A cash management tool for accurately predicting daily cash positions; maximize overnight investments and minimize short-term borrowing.

Corporate Electronic Banking

- **Balance Reporting:** Improve and simplify the way corporations currently manage financial decisions and activities by gathering complete account information and updating reports multiple times throughout the day.
- **Transaction Initiation:** Stop payment tools that complement reporting services. These services offer enhanced control through the speed and convenience of Internet delivery for initiating, releasing and reporting stop payments on accounts. Images of cleared checks can be requested and through item inquiry capabilities, the current status of any check, wire transaction or other account transaction can be determined.

Thus, cash management products and services may be thought of as item-processing, on-line reporting, and reconciliation tools centered around a bank's payment processing systems. These tools are very dependent on information technologies, and the applications supporting them typically run on mainframe or mid-range computers.

One of the critical pieces of cash management offerings is an on-line interface for corporate clients. The corporate treasurer and her staff communicate with the bank online via an information reporting system that is referred to as an **electronic window**. Since the treasurer views cash management services as value-added services for efficient daily management of her corporation's cash, her opinion of the bank's offerings is tremendously influenced by the quality of the electronic window.

What is Cash Management?

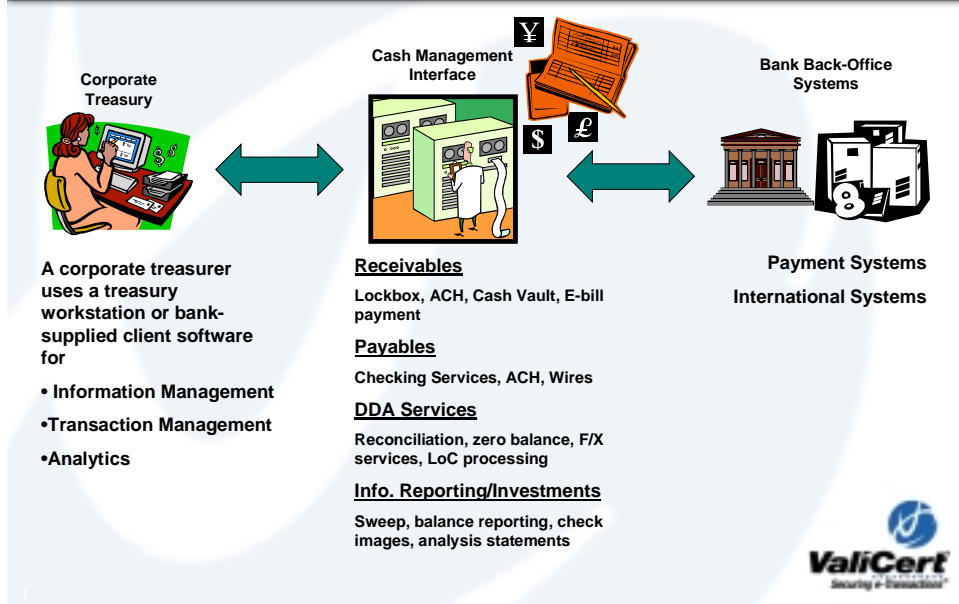


Figure 1. Cash Management Products

Business Trends in the Cash Management Market

The competitive landscape in online banking today presents unique challenges to banks and IT vendors alike. In recent times, interest in utilizing the Internet for commercial banking initiatives has accelerated. Banks with treasury management products utilizing proprietary networks are keen on porting these products to the Internet, while banks that currently do not offer such products are expressing interest in rolling out new Internet-based offerings. The key business drivers may be identified as follows:

Retention of existing corporate clients and attraction of new ones. The former applies to larger banks, while the latter applies to small and midsize banks.

Competitive trends are driving regional banks to offer Internet-based treasury solutions, so they can differentiate themselves and attract new clients.

Banks are increasingly viewing Internet-based cash management as a tool to build and cement relationships with small and mid-tier businesses. In contrast, earlier offerings often targeted large corporations with a view toward mitigating proprietary network costs.

In today's global economy, as corporations expand multinationally, it's structure evolves from a highly decentralized model to a more centralized one. Specifically, corporations are starting by centralizing liquidity and transaction management. Later, in a phased manner, corporations are looking to centralize bank accounts and accounting procedures. Each corporation does this at it's own pace, and banks' success depends on how accurately they assess this pace vis-à-vis equipping their client-base with adequate solutions.

This is particularly true in Europe, now that businesses are beginning to use the Euro. While the Euro may have been the catalyst for upgrading treasury operations, other factors such as competitive pressure and the offer of Europe-wide banking services are helping accelerate the adoption of pan-European cash management strategies.

According to the TowerGroup, the US treasury management market grew at a CAGR of 7% in the 90's and will continue to grow at a slightly higher rate in the next five years. The revenue generated by this market will grow from \$10.5 billion in 1999 to roughly \$16 billion in 2005. The US cash management revenues account for roughly 40% of the worldwide market with European revenues accounting for another 40%. Asia and Latin America generate 10% apiece.

Although large corporations (revenue > \$250 million) contribute almost 50% of the cash management revenue, they tend to shop for products based on price and is the least profitable segment of the cash management market. Small and mid-tier businesses account for the rest of the revenue and they tend to buy quality services and technology. These groups form the most profitable segments of the cash management business.

In the US, interestingly, this revenue growth will primarily come from small and mid-tier businesses with annual revenue under \$50 million. US banks with more than \$50 billion in assets have over 75% market share. The mid-tier banks (assets \$10 billion to \$50 billion) account for the rest. The smaller banks have very little market share, but this is changing; they are growing aggressively as they increase their penetration in the small business market.

In 1999, TowerGroup estimates that paper-based transactions generated **two-thirds** of the cash management revenues, while electronic ones generated the rest of the revenue. By 2005, this ratio is expected to be half and half.

This expected shift in volume from paper-based transactions to electronic ones will determine the path of future technology investments in banks and bias it towards electronic payment delivery

systems. This shift is also driven by banks' perception that electronic transactions contribute higher margins than paper-based transactions.

What do the banks and corporations need in order to leverage ubiquity and ease-of-use of public networks? How will independent IT vendors respond to these needs?

Technology Issues

Most corporate electronic banking systems today are based on antiquated 1970s' technology architecture that was developed for text-based on-line banking. The reporting system, or electronic window, lies at the heart of existing on-line banking architecture; it functions as a gateway for incoming client requests, distributing them to the bank's back-end processing systems. The electronic window acts as an information and content provider to the customer, either directly, or by accessing other systems that can provide the requisite content. The electronic window systems, mostly run on fault-tolerant platforms such as Compaq, Stratus, or IBM System 88, are designed such that corporations can request transaction and account inquiries electronically, receive statements and reconcile accounts electronically and authenticate corporate users from their desktops.

The user interface began as a 'dumb' terminal connected to the electronic window. As desktop and telecommunications technologies evolved, user interfaces proliferated; DOS-based applications running on PCs began to emerge, as did other delivery channels like telebanking and auto-fax. In the early 90s, Windows-based applications with GUIs were introduced and new user interfaces now co-exist with old ones. Over the last 15 years, IT investment has been directed toward providing multiple client delivery channels and technologies. This trend will continue to evolve with the evolution of new Internet technologies.

So, what is a Web-enabled system?

For treasurer's, the whole concept of a Web-enabled solution may be confusing. Smoke and mirrors are sometimes deployed to enhance legacy systems. Placing a web screen in front of the legacy system is one way of Web-enabling, but it has extremely limited functionality. The important ingredients of a treasury system are outlined below.

The ability to **customize** a treasury system is very important.

The 'user interface' is very personal; users want to be comfortable with look and feel.

Globalization necessitates **localization** (multi-language capabilities).
 Small treasury operations can become big – a good solution needs to be **scalable**.
 Deployment and configuration options need to be **flexible**, as should database options.
 Easy **integrability** with ERP and other corporate systems.
 Robust security features including authentication, encryption, and audit trails.

The diagram below highlights these features.

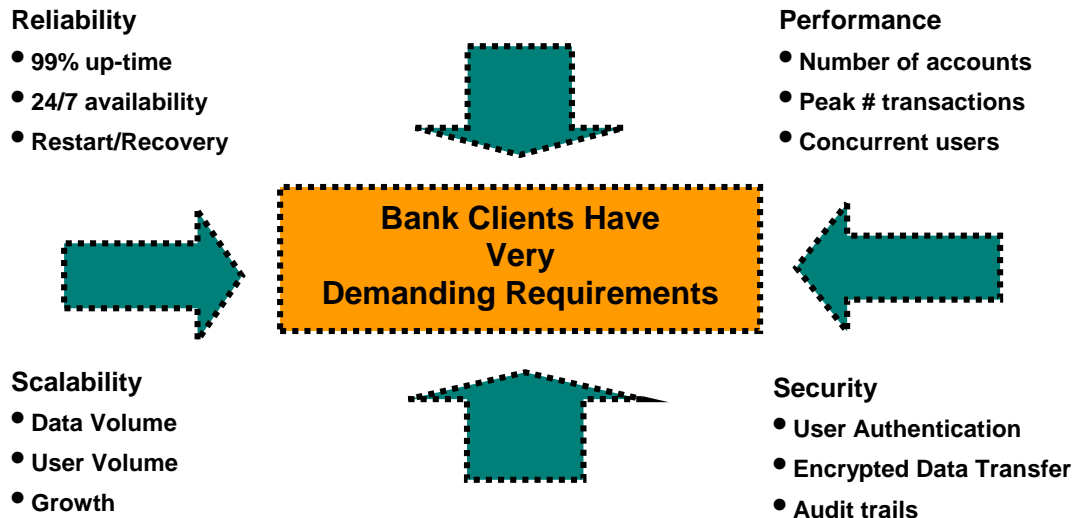


Figure 2. Technology Requirements for e-Cash Management

Web-enablement may be fashionable, but what treasurers really want is the functionality in products that helps them perform optimally. After all, the web is a delivery channel; a very powerful and sophisticated one, but still only a delivery channel.

In the last couple of years, several banks have introduced Web-based information reporting systems. These systems are based on HTML technology and use existing fault-tolerant machines as servers. This is changing slowly and many banks are looking to open systems architecture wherein a Web-server accesses the bank back end systems using middleware.

Build or Buy?

The three sources of software applications for on-line banking, and on-line cash management in particular, are 1) built in-house, 2) bought from Independent Software Vendors (ISVs), and 3)

outsourced to a trusted third party. In most banks, some combination of these options is prevalent.

Large banks prefer to build applications in-house for three reasons. The first is their belief that it provides them with competitive advantage in commodity businesses. The second is the notion that the complexity of products coupled with the geographic complexity of their corporate relationships makes it easier for them to build in-house rather than buy and customize. Lastly, building Web-enabled cash management solutions requires a thorough understanding of both technology as well as business issues, and currently, there is a dearth of experienced software programmers with such skills. Even if they are available, they are expensive; only the largest banks can afford to pay high salaries and keep them engaged. However, even such banks are looking to combine vendor solutions in order to keep up with rapidly changing technology and to reduce time-to-market.

For smaller banks, building applications in-house is a highly inefficient process, especially since many products and offerings have now been commoditized. It is becoming increasingly difficult for these banks to sink in significant resources for new initiatives, while supporting legacy applications at the same time. Hence, most small and mid-tier banks are relying on ISV solutions.

Banks that buy from ISVs see themselves as integrators of software applications. Partnering with ISVs provides banks' applications with up-and-running core components, a shorter time-to-market and reduced development cost. Once they buy ISV solutions, banks try and differentiate themselves by customizing the front end.

Data concentrators provide electronic banking to corporate clients as a service bureau for banks. With these arrangements, a service bureau acts as an agent for multiple banks and multiple corporations, operating software applications to compile and integrate data from banks for transmission to clients. The corporate treasury client is generally required to choose a single lead bank to access on-line banking data from the data concentrator. The lead bank's name and logo appear on the desktop used by corporate clients. Smaller banks who do not wish to make significant IT investment in back-office systems prefer to outsource on-line banking services.

Politzer & Haney and Bottomline Technologies are marketing their applications as an outsource service. Politzer & Haney markets Web Cash Manager Outsourcing Services to community and regional banks. Politzer & Haney software resides on Web and database servers at NCR's data

center. Some examples of Politzer & Haney's bank clients that have implemented products in an outsourced environment are Berkshire Bank, Charter One Bank, Matewan National bank, Southern California Bank, and Sunwest Bank.

ValiCert Offerings Enable Trusted Information and Transaction Management

Corporate treasury information is quite sensitive, to say the least. Corporations lose billions of dollars annually due to internal (employee embezzlement) and external (vendor participation) fraud. The FBI estimates that check fraud alone amounts to over \$15 billion in 1999. Security and trust are critical issues when it comes to electronic transmission and retrieval of important and sensitive information such as corporate treasury data.

The GartnerGroup published a report in 1998 identifying Commercial Cash Management as one of the most risky forms of Internet banking. They go on to add that in this type of banking, transactions may range from tens to hundreds of thousands of dollars, and that such transactions may, therefore, require strong security and trust elements. These trust elements may include the following.

- Authentication & Authorization – verifying identities of sending and receiving parties.
- Privacy – preventing others from eavesdropping on confidential communications.
- Integrity – ensuring that the information is not altered in transit.
- Non-Repudiation – providing integrity and authentication that is legal-grade, so it can stand in a court of law.

ValiCert is a leading player in the e-transaction security market, and offers products and services that address precisely these trust issues. The ValiCert SecureTransport™ product enables secure data transfer and exchange over public networks. It is an enterprise-class, secure file transfer product that enables transport of valuable or sensitive information in a confidential, reliable and guaranteed manner. Valicert Digital Receipts Solutions™ provides secure, legal-grade proof management and reporting tools, including digital notarization and vaulting of transaction confirmations. ValiCert's technology and practices statements, coupled with the legislative activity around digital signatures in various countries (in the US, and the E-SIGN law went into effect in October 2000) ensure that the audit trails generated by ValiCert offerings will provide proof assurances in the event of disputes.

ValiCert Enterprise VA Suite™ is a high-performance, scalable digital certificate validation solution that ensures strong authentication of users – it imbues confidence in treasury management scenarios, where both the bank and the corporation can be certain that the user is indeed who they claim they are. Besides being available as products, these offerings can be hosted either by ValiCert in their secure data center as the ValiCert AssuredTrust Service™, or by one of ValiCert's worldwide affiliates. Identrus is a global network of Financial Institutions; it provides a legal and technical framework of standards that enables banks to serve their corporate clients as trusted third parties for financial transactions. ValiCert products comply with Identrus specifications, are installed in a majority of Identrus banks.

ValiCert infrastructure and application products and services, together with its association with Identrus place it in a unique position to secure and streamline treasury and cash management processes. The following schematic is a high-level architectural depiction of a streamlined treasury process.

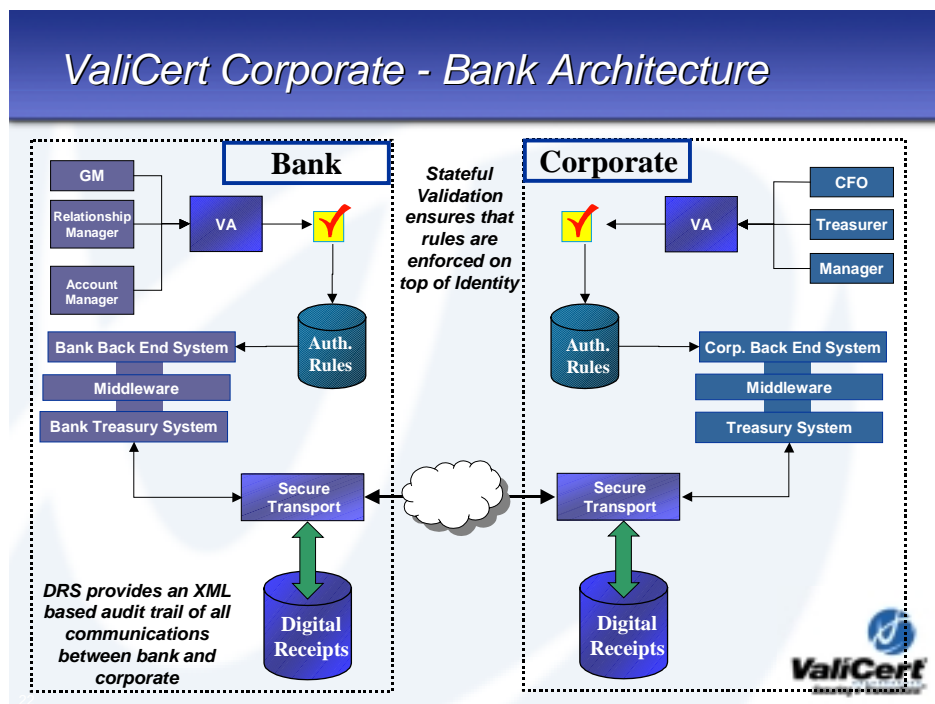


Figure 3. Architecture of a secure, streamlined treasury process.

For more information regarding ValiCert's e-transaction security solutions, and how ValiCert delivers Professional and other Software and Applications Integration Services, visit our website at www.valicert.com or call 650.567.5400.