

# Module: Finance

## Section: Cash Management

### EM-450

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#### Introduction

This section introduces several terms and concepts that should facilitate the understanding of the dynamics and importance of sound cash management. It also sets forth objectives and procedures for examining the cash management function of Farm Credit System (FCS or System) institutions.

Cash management refers to the practices and techniques designed to accelerate and control collections, ensure prompt deposit of receipts, improve control over disbursement methods, and eliminate idle cash balances. In general, the cash management function involves the effective and efficient use of cash to maximize cash flow at minimum cost. While System institutions generally do not maintain high cash balances, the cash management process is an integral part of an institution's financial activities and encompasses a wide variety of financial decisions. Such areas can include information systems management, investment management, funds management, and liquidity management. The level of complexity and sophistication will vary among the district banks as well as associations because of size, available resources, technology and information systems, financial objectives, etc.

In today's financial environment, electronic delivery systems are becoming increasingly important because of increased competition and the demand for more efficient and convenient capabilities. A significant number of transactions and amounts of funds can be moved electronically from one place to another almost instantaneously. Consequently, the opportunities presented can pose significant risks to a financial institution. Such threats include internal and external fraud, theft, and unauthorized manipulation of financial data.

#### Examination Objectives

The fundamental examination objective is to determine whether the institution's cash management activities are operated in a safe and sound manner. Specifically, examiners should:

- Determine the adequacy of the board's and management's direction, control, and oversight of the cash management function.
- Determine compliance with applicable laws, regulations, policies, procedures, and other established guidelines.
- Determine the adequacy of corrective actions related to any weaknesses communicated during the preceding examination.

#### Examination Criteria

Criteria for evaluating cash management activities include the Farm Credit Act of 1971, as amended (Sections 1.5 (14); 2.2 (10); 2.12 (18); and 3.1 (12) & (17)) and FCA Regulation 12 CFR 615.5134. These address FCS institutions' ability to use cash and investments to maintain sufficient liquidity and deposit or invest funds as authorized by FCA.

#### Cash

Cash includes cash items in the process of collection, currency and coin, and balances due from depository institutions. Cash provides flexibility and carries minimal risk in the short term. The amount of cash held will vary from institution to institution, depending on anticipated needs. For instance, liquidity needs, investment opportunities, and for associations the terms and conditions of the direct loan will affect cash balances held by the institutions.

Because cash is considered a nonearning or low-earning asset, excessive cash balances can have an adverse effect on earnings. As such, an opportunity cost associated with maintaining cash balances exists because these funds could be invested or applied elsewhere to provide a better overall return to the institution. Excessive balances may also reflect ineffective administration of the institution's resources by management. Conversely, account balances that are too low could leave the institution in a vulnerable position from an available funds standpoint. The risks and costs of holding this asset must be adequately managed to ensure the safety and soundness of the institution. Examiners should determine if the amounts carried are reasonable in relation to the institution's primary financial goals.

### **Elements of a Cash Management System**

The basic premise of sound cash management is to ensure that cash inflows (sources of funds) and outflows (uses of funds) are effectively controlled and utilized. To effectively control cash flow, institutions must implement adequate cash management techniques to expedite cash collections and check clearing in order to access and use the funds. Institutions must also develop cost-effective disbursement mechanisms for transferring funds. The board and management are ultimately responsible for selecting the best collection and payment mechanisms as well as adopting appropriate oversight and review guidelines, operating policies and procedures, and audit requirements. In some cases, institutions may deploy other financial institutions and organizations for cash management related services that can be performed more economically or efficiently. Such services include transfer and payment of funds, collection and concentration of funds, sweep account services, information reporting, and so on. Before discussing the major elements of a cash management system, a general understanding of how float affects the overall collection and disbursement process is important.

Float is caused by delays along the cash flow timeline. Float is usually measured in dollar days and is a function of the transaction's dollar amount and the number of days of delay. It is simply a means of quantifying the efficiencies or inefficiencies of the "cash in-cash out" cycle and focusing on opportunities and costs. An institution benefits from shortening all types of float associated with cash inflows and lengthening all types of float associated with cash outflows. The major components of float include mail, processing, availability, and clearing float.

**Collection** – An important component of the cash management function is the collection of funds. This process involves speeding up the conversion of receipts into available funds. By minimizing the float time associated with collection of accounts receivable and extending the float on the accounts payable side, institutions can more effectively manage cash. Hence, institutions should effectively develop a system to collect payments from customers.

Institutions may collect funds dropped off at their location, by mail, or electronically. For payments received in person or in the mail, an institution may use either its own processing center or a lockbox. In a lockbox system, an institution collects payments through one or more locations and transfers available funds to a concentration bank as discussed below. A processor (i.e., bank or any third party) receives mail at a specified lockbox address, processes the remittances, and deposits them in the institution's account. The economic benefit of using a lockbox is a trade-off between reducing collection float and paying fees to a lockbox processor over and above internal processing costs. Institutions can also collect payments electronically via wire transfer or an automated clearinghouse (ACH) system. Wire transfers are used for large dollar payments when speed and finality are important. Electronic payments through the ACH are less expensive than wire transfers, but payment instructions must be submitted to the bank 1 or 2 days prior to settlement. The primary advantages of an electronic collection system are the reduction in float and processing costs.

**Concentration** – This is the movement of funds from outlying depository locations to a central bank account, commonly called a concentration account, where the funds can be more efficiently used. The most frequently used methods for concentration are depository transfer checks (DTCs), electronic depository transfers (EDTs), and wire transfers. A DTC is an unsigned paper instrument payable only to the bank of deposit for credit to a specific account. Instead of writing and depositing checks to concentrate funds, an institution instructs a concentration bank to prepare DTCs drawn for deposit into the

concentration account. After a DTC is deposited, it clears in the same manner as a regular check. An EDT is simply an electronic version of the paper DTC (also known as an ACH-DTC) and is normally more cost-effective. Wire transfers may also be used for concentration but is the most expensive method. They are generally used when the amounts are large enough to justify their cost and where funds are immediately needed. When designing an effective cash concentration system, institutions should carefully consider the costs involved, timing, and frequency of transfers. Time-zone problems and remote locations also are determining factors.

**Disbursement** – This involves controlling the release and timing of outgoing funds. Various disbursement techniques are available for institutions to effectively manage the disbursement process. These include checks, zero balance accounts, controlled disbursement, payable through drafts, and electronic disbursement methods.

- **Checks** – Checks are still the most frequently used payment instrument for bill paying and provide the payor with disbursement float. However, technological advances have increased the sophistication of check fraud. These technological advances include color copiers, high-resolution laser printers, and hand-held document scanners for use with a personal computer. Electronic payment methods help prevent check fraud by eliminating the check. Without a negotiable instrument, the counterfeiter has nothing to alter or copy. Furthermore, electronic payments (e.g., ACH) also offer strong cost savings potential by eliminating check printing costs, postage for mailing checks, and bank fees associated with check processing, account reconciliation, and check fraud prevention services.
- **Zero Balance Accounts (ZBAs)** – A ZBA is a disbursement account on which checks are written even though the balance in the account is zero. A transfer of funds from the institution's master account covers the checks. Funding of the ZBA account is automatic and involves only an accounting entry by the bank. Credits and debits are posted just before the close of business when a credit from the master account is posted to bring the balance back to zero. If there is a credit balance in the ZBA account, the ZBA will be debited and a credit made to the master account.
- **Controlled Disbursement** – Another method used to minimize balances in disbursement accounts is controlled disbursement. This is a bank service that provides same-day notification, usually by mid-morning, of the dollar amount of checks that will clear against the controlled disbursement account that day. The disbursement bank receives information from the local Federal Reserve Bank early in the morning so that the checks can be sorted and the institution notified of its funding requirement.
- **Payable Through Drafts (PTDs)** – A PTD is a payment instrument resembling a check that is drawn against the payor, not the bank, and on which the payor has a period of time to honor or refuse payment. PTDs are used frequently to fund loans on capital items purchased by the borrower (e.g., equipment or livestock). The use of drafts gives the institution an added measure of disbursement control and additional time to ensure that all terms have been met or expenditures authorized. Electronic PTDs are simply ACH debits to an institution's account in which the institution is notified in time to pay or reject each item. They are used for similar purposes as paper PTDs.
- **Electronic Disbursements** – As with collection and concentration systems, disbursements can also be made electronically. As indicated previously, funds operated by wire transfers are moved almost instantaneously, thereby reducing float time, but are a costly way to disburse funds compared to checks and ACH transactions. Image technology can also be used to facilitate the processing of payments. This technology allows paper documents (e.g., checks) to be scanned and converted to digital information. The images may be transmitted to a computer and stored there, or sent to a fax machine. The increasing use of electronic commerce and potential cost savings are expected to stimulate growth in electronic payment systems as discussed in the following section.

**Electronic Payment Systems** – The growing use and the reliance on the electronic transfer of funds expose an institution to additional risk in the management of cash. Each day, the institution's customers may make thousands of payments that result in the transfers of balances among the institutions, depository banks, and Federal Reserve Banks. In addition, institutions make their own payments in connection with carrying out their business. Because of electronic commerce, information moves faster and with greater accuracy. Consequently, the access and speed capabilities can magnify risk in an electronic environment. Since cash is a highly liquid asset, it can be easily transferred, concealed, and converted into other assets. For these reasons, institutions must have an adequate and effective information system (IS) in place. Coordination with IS examiners will be necessary to comprehensively evaluate an institution's electronic environment. While the range of electronic funds transfer may vary from institution to institution, the most common types of electronic payment systems include the following.

- **Automated Clearinghouse (ACH) System** – The ACH system was developed as an electronic alternative to checks. It comprises a network of regional associations, interbank associations, and private sector processors. The Federal Reserve is the principal ACH operator, and the majority of financial institutions are members of an ACH association. In an ACH transaction, payment information is processed electronically instead of manually, thereby increasing reliability, efficiency, and cost-effectiveness. Institutions can make both credit and debit transactions with an ACH. In addition, an ACH transaction is capable of transferring more information about a payment than is possible with a check. Transactions are settled 1 or 2 business days after the payment information is entered into the payment system. In general, ACH payments can be used in place of more costly wire transfers when the amounts are known at least 1 day in advance.
- **FedWire** – The FedWire is the Federal Reserve funds transfer system. It is a real-time method of transferring immediate funds and supporting information between two financial institutions using their respective Federal Reserve accounts. The system is reliable and secure but relatively expensive for institutions compared to checks and ACH transactions. The FedWire functions as both a communication (i.e., clearing) and a settlement facility. The FedWire service may be accessed by direct computer interface or off-line by telephone through a personal computer based electronic delivery system named FedLine. Funds are moved almost instantaneously once the originating bank has received the request. The transaction is final and irrevocable once the originating bank has sent the funds and the Federal Reserve confirms receipt. In the event of the sending bank's failure to settle, the Federal Reserve guarantees the transferred funds to the receiving bank. Therefore, there is no settlement risk to the recipient of a FedWire transfer. Nevertheless, other types of risk associated with the FedWire funds transfer method include potential loss because of errors, omissions, and fraud.
- **Clearinghouse Interbank Payments System (CHIPS)** – This is a funds-transfer network owned and operated by the New York Clearinghouse Association to deliver and receive United States (U.S.) dollar payments between domestic or foreign banks that have offices located in New York City. CHIPS was established to substitute electronic payments for paper checks arising from international dollar transactions, such as Eurodollar investments or foreign exchange contracts. The network is composed of a small number of settling participants (large U.S. chartered banks that settle end-of-day balances between each other) and a larger number of non-settling participants who maintain accounts with one of the settling banks. Unlike FedWire funds transfers, CHIPS transfers are not settled at the time the payment instructions are delivered. Instead, the transfers are settled at the end of the day through a net settlement arrangement established with the Federal Reserve Bank of New York.
- **Society for Worldwide Interbank Financial Telecommunications (SWIFT)** – This is a nonprofit cooperative of member banks serving as a worldwide interbank telecommunications network based in Brussels, Belgium. It is the primary message system employed by financial institutions worldwide to transmit either domestic or international payment instructions. Unlike electronic funds transfer systems, SWIFT only provides instructions to move funds. Messages are transferred requesting debits and credits and other types of messages to correspondent accounts. SWIFT

does not have a settlement mechanism. Settlement occurs through FedWire, CHIPS, or other means.

Complete elimination of risk from electronic funds transfer is an impossible task. However, the increasing use of electronic transfer activities makes it essential that each System institution clearly understands the risks inherent in these activities and be aware of the methods for possibly reducing these risks to an acceptable level. The next section provides a brief discussion of some of the sources of risk involved in the overall cash management operations.

### **Types of Risks**

Risks are inherent in all operational areas, including cash management. While cash has always been an area of high risk because of its liquidity, the risks have changed dramatically as a result of electronic media. Traditional currency is no longer the focal point of most institutions. Instead, electronic commerce moves incredible amounts of electronic money from one point to another almost instantaneously. Consequently, material losses could occur through error, inadequate controls, or fraud in electronic funds transfer systems. The following briefly identifies several types of risks associated with the cash management process. These risks are not all-encompassing or exhaustive by any means.

**Payment System Risk** – Payment system risk is the exposure to the uncertainty that settlement will occur. The failure of one participant to settle deprives other institutions of expected funds and prevents those institutions from settling in turn.

**Fraud Risk** – Fraud risk arises when a payment transaction is initiated or altered in an attempt to misdirect or misappropriate funds.

**Operational Risk** – Operational risk arises from the potential for loss because of significant deficiencies in system reliability or integrity. Security considerations are paramount, as institutions may be subject to external or internal attacks on their systems or products. Operational risks can also arise from customer misuse and from inadequately designed or implemented electronic banking.

**Credit Risk** – Credit risk is the risk that a counterparty will not settle an obligation for full value. Banks engaging in electronic banking activities may extend credit via nontraditional channels and expand their market beyond traditional geographic boundaries. Institutions engaged in electronic payment programs may face credit risk if a third-party intermediary fails to carry out its obligations with respect to payment. In addition, the institution must ensure that it has adequate controls to ensure that electronic fund transactions are conducted in accordance with loan conditions and that funds are not disbursed in excess of undisbursed commitments.

**Liquidity Risk** – Liquidity risk arises from an institution's inability to meet its obligations when they come due without incurring unacceptable losses. Liquidity risk may be significant for institutions that transact significant amounts of electronic fund transfers if they are unable to ensure that funds are adequate to cover liquidity needs.

**Legal Risk** – Legal risk arises from violations of or nonconformance with laws, rules, regulations, or prescribed practices. Legal risk may also arise when the legal rights and obligations of parties to a transaction are not well established. Institutions can face legal risks with respect to customer disclosure and privacy protection. Many aspects of electronic transactions are relatively new and have not yet been established with court precedence.

**Reputational Risk** – Reputational risk is the risk of significant negative public opinion that results in a critical loss of funding or customers. Reputational risk may involve actions that create a lasting negative public image of overall institution operations, such that the institution's ability to establish and maintain customer relationships is significantly impaired. Service or product problems, mistakes, malfeasance, or fraud may cause reputational risk. Reputational risk may be affected by not only the institution itself but its affiliation with other institutions.

**Foreign Risk** – Foreign risk might exist for institutions dealing with other countries. Institutions dealing with foreign participants are subject to country risk to the extent that foreign parties become unable or unwilling to fulfill their obligations because of economic, social, or political factors. In addition, institutions accepting foreign currency for electronic payment may be subject to risk from the market because of movements in foreign exchange rates.

### **Risk Management Process**

Risk management is an ongoing process of identifying, measuring, monitoring, and managing existing and potential risk exposure. Institutions should develop a risk management process to address known risks as well as remain dynamic enough to address risks that will undoubtedly surface in the future. An effective risk management program should minimize the negative effects of a problem situation. However, minimizing the potentially negative effects can be particularly difficult in an electronic environment that offers speed, sophistication, and access to many users. Because of the risks associated with cash management activities, institutions should establish systems and processes to control these risks. The level and complexity of the risk management process should be commensurate with the risk characteristics of each System institution (i.e., district bank or an association). Additional details regarding the basic elements of a sound risk management process are provided below.

**Board and Management Responsibilities** – An effective risk management process requires appropriate direction, control, and oversight by the institution's board of directors (board) and senior management. An institution's board is ultimately responsible for ensuring that management takes the steps necessary to ensure the safety and soundness of the cash management system. They must define the institution's cash management philosophy and policies and ensure that the risks being taken by the institution fit within the overall business strategies and financial capabilities of the institution.

The board is responsible for approving the overall policies of the institution with respect to cash management. The board should ensure that senior management has a full understanding of the risks incurred by the bank, and that the institution has personnel available who have the necessary technical skills to evaluate and control these risks. The board, or a designated committee, should periodically review information that is sufficient in detail and timeliness to allow it to understand and assess the performance of senior management. FCA Regulation 12 CFR 618.8440 also requires boards to annually adopt a 3-year operational and strategic business plan that considers factors that are likely to affect the institution during the planning period. Exposures to the risks associated with cash management should be reviewed as a part of this planning process.

Senior management must ensure that cash management procedures and processes are in place to effectively monitor and measure cash management. Senior management should ensure that proper cash management procedures are developed and revised as necessary. Furthermore, senior management should develop, implement, and monitor the internal controls for cash management. Areas to be considered include clearly defining the individuals and/or committees responsible for managing cash-related activities, ensuring adequate segregation of duties, ensuring sufficient resources, and providing sufficient cross-training or backup of identified key personnel. Personnel in sensitive positions should be required to take uninterrupted holidays of sufficient length to exercise the organization's ability to cope with unavailability and to detect fraudulent activity.

**Policies and Procedures** – Proper cash management policies and procedures are critical to implementing any sound cash management process. Institutions should have the board-approved policies that define its philosophy on cash management and procedures to implement the policy parameters. As indicated previously, cash is a highly liquid asset that can be easily transferred, concealed, and converted into other assets. As a result, institutions should have policies and procedures in place to direct and control the flow of cash from the time it is received, through the various stages of use and custody, to its final disbursement. The board should establish policies that address the objectives and operating parameters for maintaining cash. Generally, this would include target cash balances and a periodic analysis of the institution's cash needs.

The complexity of an institution's cash management-related policies and procedures will vary greatly, depending on the type of institution. Small associations may have relatively simplistic procedures because of the minimal amounts of cash transactions. However, larger and more complex associations may require policies and procedures that are more in depth. For example, a System bank may have a policy that requires management to review and evaluate the institution's cash management process on a periodic basis to determine if:

- Compensating balances or fees charged by depository institutions are cost-effective and comparable to the fees charged by other depository institutions.
- The financial condition of the depository institution is sound and deposits in excess of Federal deposit insurance are safe.
- New or alternative cash management services and techniques are available to further reduce costs.

System banks also would be expected to have extensive procedures in place, as they handle large cash transactions frequently.

**Internal Controls** – A system of effective internal controls is another critical component of cash management and a foundation for the safe and sound operation of any institution. In view of the potential for material loss, particularly through electronic activities, institutions must establish a strong internal control environment. The extent of an institution's internal control program should be commensurate with the complexity and sophistication of the activities in which it engages. As with many other aspects of institution operations, the type of controls used will vary but will likely consist of policies, procedures, operating parameters, monitoring activities, separation of duties, reporting, audit, and management information systems. For instance, policies and procedures should address the internal controls necessary to ensure cash is adequately safeguarded and recorded/reported to reflect actual balances on hand. Segregation of responsibilities is one control that can be used to safeguard cash and reasonably ensure the reliability of accounting records. For example, the same person should not be responsible for recording the cash received on account and for posting the receipts to the accounting records. Signatory authorities and an effective internal audit function can also be used to provide additional controls over the cash management function.

Auditing (internal and external) provides an important independent control mechanism for detecting deficiencies and minimizing risks in the cash management process. Institutions should conduct periodic reviews of its cash management process to ensure its integrity, accuracy, and reasonableness. They should ensure that individuals responsible for evaluating risk monitoring and controls are independent of the function they are assigned to review. Actions should be taken to ensure that personnel are following established policies and procedures, as well as ensuring that the procedures that are established actually accomplish intended objectives. Institutions should also have their cash management functions reviewed on a regular basis by an independent party, such as an internal or external auditor. The internal auditor should be separate and independent from employees making risk management decisions. To augment internal audit, management may seek qualified external auditors, such as cash management consultants or other professionals with relevant expertise, to provide an independent assessment of the cash management activity. The board and management should address the problems identified in the audits and correct any material weaknesses noted in a timely manner.

Examiners should review the adequacy of the institution's internal controls to determine if the board and management are providing sufficient oversight in the area of cash management. However, examiners should exercise discretion in determining the scope of the cash management review based on the level of the institution's activities in this area.

**Monitoring and Reporting** – Ongoing monitoring and reporting are important aspects of any risk management process. For cash management activities, monitoring is particularly important because of the electronic environment and rapid changes that may occur with new innovations, such as the use of the Internet. In relation to information systems, two important elements of monitoring are system testing and auditing. Testing and auditing of systems operations can help detect unusual activity patterns and avert major system problems, disruptions, and attacks. Periodic reporting is also essential to ensure that the institution is complying with policy requirements and established parameters. More frequent reporting may be appropriate, depending on the institution's complexity and risk exposure. The reports provided to the board and senior management should be clear, concise, timely, and provide the information needed for making decisions.

**Contingency Planning** – Contingency planning should be a routine part of any institution's business planning and operations. Contingency planning is basically a process of reviewing an institution's functions and assessing each area's importance to the viability of the organization. In the area of cash management, contingency plans can minimize business disruptions caused by problems that may impair or destroy an institution's processing and delivery system (i.e., communications equipment, computer equipment, and funds transfer network). The loss or extended disruption of the business operation presents substantial financial risk to the institution. Each institution should assess its own risks and develop strategies accordingly. An effective contingency plan covers all the bases of the institution's business operations and should be periodically evaluated and tested for adequacy and feasibility.

### **Examination Procedures**

Examination procedures for funding and debt management are detailed in FCA Workpaper 4500. Close coordination with information systems, finance, and other examiners should be considered with respect to evaluating specific cash management activities and avoid duplication of efforts. Consistent with risk-based examination principles, examiners should add, delete, or modify procedures as needed based on the particular circumstances of the institution.