**MANAGEMENT OBJECTIVE(S)**

To collect, maintain, and disburse funds in a way that minimizes the risk of misuse, maximizes profitable cash flow, and supports the entity's operations and mission.

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**BACKGROUND**

Cash is both a fundamental resource and the means by which the entity acquires other resources. To manage cash is to manage the entity's ability to purchase assets, service debt, pay employees, and control operations. Thus, effective cash management directly correlates with the entity's ability to realize its mission, goals, and objectives.

The cash management process combines:

- cash management tools, such as cash budgets and cash forecasting, for controlling cash availability and maximizing the investment of idle funds
- procedures for collecting, disbursing, and investing cash
- internal controls for safeguarding, recording, and reporting cash

This process must comply with existing laws and regulations, both federal and state, and applicable professional and ethical standards.

The cash management process has three major subsystems:

- collection
- disbursement
- investment

These subsystems have very different control objectives. For example, the collection subsystem should reduce the time between point of collection and actual deposit. The disbursement subsystem, on the other hand, should increase the time from point of disbursement to actual reduction of cash balances. Therefore, compatibility and coordination between subsystems is necessary for overall cash management objectives to be met.

The Cash Management Improvement Act of 1990 substantially impacts the management of federal funds. This Act places restrictions on the timing of state drawdowns and requires the payment of interest for untimely transactions.

An **Automated Clearing House (ACH)** processes financial transactions via electronic bookkeeping entries. In contrast, a "regular" clearing house processes checks and other paper warrants. Direct deposits are ACH transactions.

**DEFINITIONS (in alphabetical order)**

**Cash** is the basic unit of economic exchange. Cash may be currency or the right to draw currency. Since cash is immediately negotiable, it has the highest inherent risk of all assets.

A **cash forecast** projects future cash needs and availability. The process need not be highly sophisticated.

**Cash management** seeks to control cash availability and maximize investment yield on idle cash. It begins when the funds are received and ends when the expenditure is made (Allan, p. 3).

**Cash Management Improvement Act of 1990** (CMIA) governs the transfer of funds between federal agencies and states for federal grants and other programs. CMIA requires the timely transfer of funds between a federal agency and a state and the payment of interest where transfers are not made in a timely fashion. CMIA was effective for Texas state agencies on September 1, 1993. Texas colleges, universities, and other institutions of higher education are subject to the Act as of September 1, 1994.

A **concentration account** is a central bank account into which available funds from other accounts are deposited for investment and out of which other accounts are funded for disbursements. It simplifies cash management by consolidating available funds in one location.

A **controlled disbursement** account is a non-interest bearing account that is used to pay expenditures. Checks are written out of the account but the funds to cover the checks are not deposited until the check is presented to the bank for payment.

**Depository transfer checks (DTC)** are drafts requesting the transfer of funds from an entity's various deposit accounts to a central **concentration** account. Unlike checks, they are non-negotiable and can only be paid to the entity originating them. They are created by the concentration account and draw on the deposit account (Lipis, et al, p. 153).

**Float** is the time between a payment transaction and the actual receipt and/or disbursement of funds at the depository. A cash transaction has zero float because the payment can be immediately used. All other payments must usually go through three stages of float: mailing, processing, and clearance.

> **Collection float** is the time elapsed between collection and availability of cash to the entity at its depository (Tolson, et al, ¶ 320).
> **Disbursement float** is the time elapsed between disbursement and actual deduction from the entity's available cash at its depository (Tolson, et al, ¶ 320).

**Lockboxes** are mailboxes designated for the collection of cash. An appointed third party (bank or commercial vendor) intercepts the payments, processes them, and deposits them in a concentration account (Lipis, et al, pp. 151-152).
The funds in a **sweep account** are automatically transferred (swept) to another depository at the end of each day.

**Wire transfers** move funds from one depository to another by electronic means. It is usually a same-day transaction. They may be used to consolidate collection accounts, fund disbursement accounts prior to check clearance, and/or to transmit large sums for investment purchase (Lipis, et al, p. 159).

A **zero balance account** is a bank account that has funds only when needed and otherwise has a zero balance. These accounts can be used for collections and/or disbursements. When used for collections, they are called **sweep accounts**. Deposits are made daily into the account, and the balance is transferred at the end of the day to a **concentration** account. When used for disbursements, they are called **controlled disbursement** accounts. Checks are written out of the account, and funds are transferred from the **concentration** account as the checks clear.

**OVERVIEW OF THE PROCESS**

The basic phases of a cash management process are (Allan, pp. 12-19):

- **The Systems Cycle:**
  - **Develop plans to meet cash needs.**
  - **Establish policies.**
  - **Establish specific objectives for each operating cycle.**
  - **Establish relationships with financial institutions.**
  - **Establish accounting systems.**
- **The Operating Cycle:**
  - **Forecast cash flows.**
  - **Collect and deposit collections.**
  - **Make disbursements.**
  - **Make investments.**
  - **Track investments.**
  - **Monitor, evaluate and audit the process.**

**PROCEDURES**

Suggested procedures, organized according to the elements of a finding, are listed below. They should be expanded or tailored to fit the specific entity being reviewed.

Note: The following procedures and the process described above are normative, rather than prescriptive. That is, they represent "average" or baseline thinking since they assemble information which repeatedly appeared in the various resources used to prepare this module. Do not be too hasty or literal in applying a given criterion or procedural step to a specific entity. While omissions or variations may be <u>obvious</u>, judgment must still be used to determine whether such omissions or variations are <u>material</u>.

**Review criteria:**
**General Criteria**

General criteria applicable to the cash management process are as follows:

Cash management systems have five important objectives (Allan, pp. 3-7):
- Safeguard cash assets of the entity.
- Spport entity operations.
- Met legal obligations and constraints upon the entity.
- Povide adequate liquidity.
- Mximize cash availability and investment yield.

Texas state entities may be required by the Treasurer to "implement a program for the rapid administration of deposits or transactions." These requirements may be waived when the Treasurer judges that the cost exceeds the benefit (Government Code 404.096).

The criteria related to the basic phases of the cash management process are:

**Specific criteria**

**<u>The Systems Cycle</u>**
The systems cycle is the basic overall plan for the cash management system (Allan, pp. 12-13).

**Develop plans to meet cash needs**
The entity should forecast its long-term (3-5 year) cash flow pattern. This is not a detailed cash forecast. Rather, it is a high-level financial forecast focusing on sources and uses of cash. The forecast should analyze these various sources and uses of cash, such as capital expenditure, debt issuance, and debt repayment. The entity should then establish its general cash management objectives. Any conflicts between the cash management objectives and program goals should be resolved. The resulting cash management plan can then be used to propose more detailed policies to meet the entity's long-term goals (Allan, p. 13).

**Establish policies** (Allen, pp. 13-14)
The entity should establish cash management policies which cover both general and specific aspects of cash management.

General cash management polices should establish responsibility and internal controls, define safekeeping and collateral procedures, and establish a system for monitoring and reporting performance as compared to objectives. They should also provide for compliance with legal and/or regulatory requirements and other applicable professional and ethical standards.

Specific cash management policies should be developed for the following aspects of the subsystems of collection, disbursement, and investment:
- <u>Collection</u>: Identify the methods to be used to collect receipts and minimize collection float.
- <u>Disbursement</u>: Establish payment dates and payment methods to maximize disbursement float.

- Investment: Identify types and amounts of investments allowed, set standards for dealers or brokers, etc.

However, a cost-benefit review of the proposed subsystem policies should be conducted before policies are finalized.

**Establish specific objectives for each operating cycle** (Allen, p. 15)
Once the cash policies are established, the entity should specify cash performance objectives for each operating cycle. These individual objectives will depend on the entity's needs, provisions of governing statute(s), and the capability of each manager and related staff. Possible objectives include:

- Cash availability: Establishes the amount of cash regularly available to fund operations. For example, excess cash equal to one week's expenditures.
- Yield: The target rate of return desired on cash investment. This can be stated in terms of an absolute percentage or an amount above or below a specific index and should be benchmarked.
- Dollar return: Targeted interest earnings for the year.
- Efficiency: Percentage of idle cash to be kept invested during the year.

**Establish relationships with financial institutions**
All state agencies, other than institutions of higher education, are required to deposit funds to the Treasury within three business days (Government Code Section 404.094). However, under certain circumstances, deposits can initially be made to financial institutions. They must still be transferred to the State Treasury within three business days.

Institutions of higher education "shall open in a local depository bank a clearing account to which it shall deposit daily all such receipts, and shall, not less often than every seven days, make remittances therefrom to the state treasurer . . ." Many of the receipts of these institutions, such as auxiliary enterprise funds, are exempt from this law (Education Code Section 51.008).

If the entity deposits funds outside the State Treasury, it should consider the following factors when selecting a financial institution (Texas Comptroller of Public Accounts, Financial Management., pp. 7-9):

- Financial stability
  - financial strength, including review of financial statement and audit report for the institution and its parent entity
  - the likelihood that the institutions holding its deposits and investments will be in business both during the current operating cycle and during the period(s) addressed in the cash management plan

- Services of the financial institution
  - scope of services
  - cost of services
  - timeliness of posting, transfer, loan approval, and other transactions as reasonably required by the entity

- correlation between the service areas of the depository and the entity
- available rates of return
- compensating balance requirements

The entity should clearly set forth the services it expects, the expected volume of business, performance standards, and its preferred method for fee payment (Allan, p. 15).

If the entity deposits more than is automatically insured by the FDIC, the institution should provide collateral for the excess. Many different kinds of collateral arrangements are possible. Requiring the collateral to be held by an independent third party provides the most security for the entity. The relative security of the collateral arrangement will affect the footnote disclosure required on the financial statements by GASB #3.

Depository banks selected by institutions of higher education to hold funds not required to be deposited in the Treasury are subject to the approval of the State Treasurer (Education Code Section 51.008).

**Establish accounting systems**
Sound cash management depends on the accuracy, reliability, and validity of the accounting systems used to control and safeguard the collection, disbursement, and investment of cash.

The entity should have the following controls over cash, among others (SAO, ICSQ - Cash Balances, pp. 1-4):

- An adequate segregation of duties should exist between cash receipts, disbursements, deposits, recording, and reconciliations. For example:
  - Timely cash reconciliations should be performed by employees not responsible for issuance of checks/warrants or handling of cash.
  - Cash and appropriation reconciliations should be reviewed and approved by an employee independent of reconciliation preparation.
- All cash balances should be properly recorded and classified, and any restrictions on the availability of funds should be properly disclosed.
- Cash deposits should be adequately collateralized, and the entity should monitor collateral to ensure adequacy.

The accounting and control systems for managing collections, disbursements, and investments (covered later in this module) should coordinate with each other, the cash management objectives, and entity policies, plans, goals, and objectives.

<u>**The Operating Cycle**</u>
The operating cycle is a series of regular, repetitive actions taken to manage cash (Allan, p. 17).

### Forecast cash flows

The operating cycle should begin with a comprehensive forecast of cash sources and uses. Sources include: revenues, grant proceeds, appropriations, sales proceeds, fees, etc. Uses include: expenditures, payroll, debt payments, etc.

The entity's fiscal success depends on accurate forecasting of its cash position (Tolson, ¶ 310.01). In a government entity, this forecasting may need to occur within the context of a specific fund or fund type.

Entities with the authority to accumulate excess cash and/or incur debt should forecast cash flows to ensure optimal resource use (Tolson, ¶ 310.02).

These forecasts should be kept current to an appropriate operating period (daily, weekly, monthly, quarterly, etc.)(Tolson, ¶ 310).

The entity should identify any restrictions on cash flow related to:
- federal grant requirements
- special revenue fund requirements
- debt service fund requirements
- trust fund requirements

The cash flow forecast should also consider other factors such as:
- seasonal variations in activity
- contract terms
- collectibility

The information developed in the forecast can be used to change or rearrange subsystem operations to adjust the availability of and return on investment cash as needed. For example:
- The forecast determines that federal funds must be disbursed within three days of receipt. Both the collection and disbursement processes will have to be adjusted to accomplish this. (Note that the Federal Cash Management Improvement Act requires that the drawdown of funds for major federal assistance programs be not more than three days prior to disbursement. For more information, see the SAO Federal Coordinators or the Methodology Project Information Resource Folder for Cash Management.)
- The forecast reveals that the entity will be receiving lump sum bond proceeds to be used to fund low-income housing loans. However, it will take three months to actually make the loans. The bond proceeds will need to be invested at a rate of return that will cover the bond interest payments in the interim.

### Collect and deposit receipts

Management of cash receipts should focus on developing procedures within the subsystem that will ensure cash or its equivalent is received in a timely manner, properly recorded and credited, and deposited to the appropriate account as quickly as possible. The objective is both to safeguard this highly liquid asset and minimize collection float.

Control procedures for safeguarding receipts include, but are not limited to, (AICPA, Section 4600.190, p. 4613):

- Proper authorization of transactions: Assign cash handling and recording responsibilities from initial receipt to deposit to ensure continuous accountability.
- Segregation of duties: The person who deposits the receipts should not record the transaction.
- Design and use of adequate documents and records: Pre-numbered receipts should be used.
- Adequate safeguards over access to assets and records: Establish control facilities for protecting undeposited cash.
- Independent checks: Deposit slips should be reconciled to the bank statement.

Management of the collection function focuses on shortening the time between receipt of these proceeds and availability to the entity at its depository, i.e. the objective is to minimize float. The entity's ability to maximize the total amount of revenues and receivables is a separate management process.

The technological environment of today's banking/financial industry provides a wide variety of services to minimize float. Some of these techniques relate to the form the receipts take, and some relate to the processes used to transport receipts to the depository. All should be reviewed to determine that the transaction costs are not in excess of the interest earned on the additional float.

Receipts can take many forms: cash, checks, wire transfers, and automated clearing house transfers. Some of these forms of receipts are more quickly deposited than others. To the extent possible, the entity should require remittances to be made in more readily available funds. For example, the State requires payments made on obligations over $250,000 to be made by electronic fund transfer (Government Code, Section 404.095).

In addition, many different kinds of processes can be used to transport receipts to the depository, such as: lockboxes, mail, direct deposit, and personal delivery. Again, some of these mechanisms are quicker than others, depending on the nature, scope, and location of entity operations.

Some processes for transporting receipts have the added benefit of making the subsequent investment and/or disbursement more efficient. For example, bank accounts can be set up by individual field offices to allow immediate deposit of receipts to be swept daily into a concentration account that invests the funds.

The number of offices collecting and depositing cash and the number of accounts receiving deposits should be limited, where practicable.

**Make disbursements**
Procedures in the cash disbursement subsystem should ensure that cash or its equivalent is disbursed timely, properly recorded and credited, and drawn from the proper account as slowly as possible. The objective is both to safeguard this highly liquid asset and maximize disbursement float.

Control procedures for safeguarding disbursements include but are not limited to (AICPA, Section 4600.190, p. 4613):
- Proper authorization of transactions: Invoices/supporting documents should be provided to the signer prior to signing the check/warrant.
- Segregation of duties: Approval for disbursements should be separate from voucher preparation and purchasing functions.
- Design and use of adequate documents and records: Pre-numbered checks should be used.
- Adequate safeguards over access to assets and records: Access to and usage of warrant and check-signing machines and signature plates should be controlled.
- Independent checks: Signed checks/warrants should be compared to document control totals.

The effective disbursement subsystem anticipates the need for cash to cover expenditures while maximizing disbursement float. By anticipating the amount and date of payments, the amount of non-interest bearing cash balances required to fund draws on disbursement accounts can be minimized. Controlled disbursement accounts can be used to reduce the time the funds are in the non-interest bearing account. Methods for maximizing disbursement clearance float include but are not limited to (Allan, pp. 57-60):
- Make disbursements out of a smaller institution that does not process items as quickly.

- Delay disbursements by maintaining demand accounts at a remote location.

In determining the timing of disbursements, consideration should be given to the time requirements of the State Comptroller's warrant system.

The disbursement subsystem should provide the data required to monitor cash account levels in a timely manner so that investments mature when checks clear, not when checks are written (Allan, p.18).

**Make investments**
One of the primary objectives of the cash management system is to maximize cash available for investment. Any cash so made available should be invested in accordance with the entity's investment policies. The characteristics of the investment selected should coordinate with the needs of the other cash management subsystems. For example, investment maturity dates should be coordinated with disbursement needs.

To formulate decisions and make informed judgments, the cash manager depends on the accuracy of the cash flow forecast, reports from the accounting system, and investment information from internal and external sources (Allan, pp.17-18).

(See the module on Investments for more information.)

**Monitor, evaluate, and audit the cash management system**
The entity should regularly measure and evaluate the achievement of all cash management objectives: cash availability, yield, dollar return, and efficiency. Material discrepancies should be reviewed to determine if changes should be made in the cash management process and/or plans, policies, and objectives.

The entity should make sure that the cash management process is in compliance with applicable laws, regulations, and professional and ethical standards.

The performance of the cash management system should align with entity goals and objectives.

The process of monitoring, evaluating, and auditing is the step providing the bridge to tie the systems cycle to the operating cycle. Its absence or ineffective use can disrupt and endanger the success of what might otherwise be a thoughtfully and effectively designed cash management system (Allan, pp. 18-19).

**Assess Condition:**

**Determine the actual process used**

Conduct interviews, observe operations, and identify and collect available documentation in order to gain an understanding of the entity's actual cash management process and controls. Included in the actual process are both official/unofficial and formal/informal processes and controls. An actual process may exist even if it is not documented. Possible procedures include, but are not limited to:

- Determine where the cash management process resides in the entity, who participates in the process, how the participants are selected, and what their role is.
- Obtain and review any manuals, policies, and forms that could document any phase of the cash management process, including its relationship to entity goals, objectives, strategies, and plans.
- Determine if and how management consciously selects and employs the assumptions, criteria, methods, processes, and techniques used in the cash management process. Obtain and review available documentation on the assessment of risks, costs, and benefits.
- Determine how the entity plans its cash management and its relationship to the entity strategic plan.
- Determine the authority and responsibilities of key personnel.
- Determine the kind and frequency of monitoring over the cash management process and how monitoring information is communicated to appropriate authority/responsibility levels for action.

In addition to gaining an understanding of the actual process, also try to find out:

- how the participants view the actual process
- what parts of the process they see as successful or unsuccessful
- what they think is important about the process and why

This information may help identify causes and barriers.

**Determine the strengths and weaknesses of the actual process**

Using the tailored criteria, the understanding of the entity's process gained above, and the procedures in this section, analyze the actual process to determine if it:

- is designed to accomplish the management objective (this module, page 1)
- has controls that provide reasonable assurance that the process will work as intended
- is implemented and functioning as designed
- is actually achieving the desired management objective(s)

Suggested procedures for each of these four analysis steps are detailed below. In executing these procedures, remember to identify and analyze both strengths and weaknesses.

Identify and review the steps in the actual process to determine if the process is designed to accomplish the management objective(s). Possible procedures include, but are not limited to:

- Determine if all major steps in the criteria are included in the actual process. If steps are missing, determine if their absence is likely to have a materially negative effect on the cash management process at the entity you are reviewing.
- Determine if all steps in the process appear to add value. If there are steps that do not appear to add value, try to get additional information on why they are included in the process.
- Review the order of the steps to determine if it promotes productivity. For example, determine if cost/benefit analysis is performed before collection and disbursement methods are chosen.
- Review the level of technology used in the process to determine if it is up-to-date and appropriate to the task. Besides computer, electronic, communications, and other mechanical technology, you should also consider what kinds of management technology are used (Gant charts, process maps, decision matrices, etc.). See the appendix to the module on Problem-Solving and Decision-Making for more information.

Identify the controls over the process and determine if they provide reasonable assurance that the process will work as intended. These controls should be appropriate, placed at the right point(s) in the process, and cost effective. Possible procedures include, but are not limited to:

- Draw a picture of the process, the controls, and the control objectives (see the graphic of the procurement process in the Introduction for an example). Flowcharts of the cash management process can help identify inputs, processes, and outputs.
- Determine if the control objectives are in alignment with the overall management objectives (this module, page 1).
- Identify the critical points of the process (i.e., those parts of the process most likely to determine its success or failure or expose the entity to high levels of risk) and the controls related to them. Consider whether the controls are:
  - in the right location within the process (input, operations, output)
  - timely (real time, same day, weekly, etc.)

  For example, determine the extent to which the cash management process exposes the entity to such risks as employee appropriation of funds for personal use or other revenue loss, withheld or delayed receipts or deposits, loss of interest on funds, available discounts not taken, errors in posting transactions, and diversion of funds from intended or mandated use.
- Compare the cost of the control(s) to the risk being controlled to determine if the cost is worth the benefit.

- Determine what controls are in place for monitoring and evaluating the overall effectiveness of the cash management process and making sure that changes are made in the process if it does not yield the desired results.

- Identify, describe, and assess the process used to gather input from employees who might reasonably discover flaws in the process.

Review observations, interviews, documentation and other evidence and design specific audit procedures to determine if the process and/or the controls have been implemented and are functioning as designed. Depending upon the objectives of the project, these procedures may include both tests of controls and substantive tests, more information on which is found in *The Hub*, pp. 2-B-8, ff. Possible procedures include, but are not limited to:

- Determine if any evidence of management override exists.
- Walk through the actual process, i.e., follow a transaction through the people and documents involved, and compare to the official process.
- Determine the extent to which cash management plans, policies, procedures, and practices conform to applicable laws, regulations, and other professional or ethical standards.
- Review evidence to determine how cash management performance criteria and evaluation is communicated to affected personnel and management.
- Review report files to determine if the actual frequency of reports matches the official frequency. Review the reports to determine if variances are reviewed and resolved.
- Review reports to determine that the quality and amount of reported data is appropriate for cash performance monitoring and evaluation.
- Review evidence to determine that cash reported on the balance sheet actually exists on that date; all cash balances are properly classified, described, and disclosed on financial statements; and represent assets to which the entity has legal rights.
- Select from the following tests of controls, as appropriate:
  - Observe mail processing to see that cash handling and record keeping are segregated and that logs are created immediately upon receipt.
  - Verify posting of receipt or disbursement to general ledger and proper use of the chart of accounts, applicable object code, and date.
  - Trace receipt to a valid deposit and bank statement. Verify restrictive endorsement of checks.
  - Note the time between receipt and deposit dates. If the three-day rule applies, estimate financial loss due to untimely deposit.
  - Trace the receipt or disbursement to an offsetting entry in the appropriate subsidiary ledger, if applicable.
  - Verify appropriate authorization of disbursement and voucher preparation and review.
  - Determine that the voucher disburses from the proper fund, account, and object code; that voucher amount, order quantity, payee, and dates of delivery and disbursement are correct; and that available discounts are taken.
  - Determine adequacy of physical control over checks, warrants, and vouchers.

  - Determine accuracy and thoroughness of roll-ups from receipt or voucher through (subsidiary) ledger(s) to financial statements.
- Select from the following substantive tests, as appropriate:
  - Review significant adjustments to material bank accounts in the prior year made by the entity, Comptroller, or SAO. Determine if adjustments made by the entity are necessary and materially correct. Request bank confirmations on questionable accounts.
  - Determine that balances over FDIC coverage are secured by the financial institution, and trace security to documentation.
  - Tabulate and verify the proper double-entry posting of transfers between accounts occurring five days before and five days after the close of the fiscal year.

Additional information on controls and tests can be found in the modules on Investments, Accounts Receivable, and Accounts Payable.

Review and analyze any reports used by the entity to monitor the outcome(s) of the cash management process and/or any other information available to determine if the process is actually achieving the desired management objective(s) (this module, page 1). Possible procedures include, but are not limited to:

- Analyze these process reports over time for trends.
- Discuss any apparently materially negative or positive trends with management. Determine if and how management acts upon these trend reports and what changes, if any, were made in the process or controls as a result. Some process refinements, especially those affecting entity mission, goals, and outcome measures, may need to wait until the next appropriation cycle.
- Perform a time series analysis across multiple operating cycles of information contained in cash management plans, financial statements, key financial ratios, and proposed and actual budgets. Investigate significant fluctuations and determine the validity of explanations. See the Data Analysis module on time series analysis for more information.

**Determine causes**

Determine what circumstances, if any, caused the identified weaknesses in the cash management process. Possible procedures include, but are not limited to:

- Determine if the participants in the cash management process understand the entity's mission, goals, and values and support them through their management of the cash management process.
- Determine if the participants understand both the purpose of and their role in the cash management process.
- If the process occurs at multiple locations, determine if there is a process for ensuring adequate communication and coordination among them.
- Determine if the relationship between the cash management process and other entity processes is clear. For example, you could compare the schedule of maturities for short-term investments with the monthly payable schedules to determine if the appropriate amounts were being retained in short-term investment or if more money could be shifted to long-term investment. You could review average balances in demand accounts to determine if monies were being swept to short-term investments in a prompt and effective manner.
- Determine if the cash management process has adequate resources -human, dollar, time, and hard assets. If they appear inadequate, determine if entity resources have been allocated according to the materiality of the cash management process relative to other entity processes.
- Determine if the entity has considered using alternative resources such as industry associations, non-profit organizations, academic institutions, or other governmental entities to meet its resource needs.
- Determine if resources available to the cash management process have been allocated and used in a manner consistent with the importance of that resource to the cash management process.
- If there are negative trends in the monitoring reports, determine if the reports and their implications are communicated to and used by the appropriate parties to modify the process.

Determine what internal or external constraints or barriers, if any, must be removed in order to successfully overcome these weaknesses. Possible procedures include, but are not limited to:

- Review the applicable entity, state, or federal laws or regulations to determine if any of them prevent the necessary changes from being made in the process.
- Determine if there are any key employees that are unwilling to change the process and why they are unwilling.

**Determine effect**

Compare the actual entity process to a recommended alternative process(es) and determine if each weakness in the entity process is material. Alternatives can be developed by using the criteria contained in this module, applying general management principles to the process, using the processes at comparable entities, etc. Materiality can be measured by comparing the dollar cost, impact on services (either quantity or quality), impact on citizens, impact on the economy, risks, etc., of the actual process to the recommended alternative process(es). Measurements can be quantitative, qualitative, or both. Possible procedures include, but are not limited to:

- Identify performance benchmarks (industry standards, historical internal data, other comparable entities, etc.) for the process in question and compare to actual performance. Measure the difference, if possible. Include the cost of additional controls or changes in the process.
- Estimate the cost of the actual process and the alternative process(es) and compare.
- Estimate the quantity and/or quality of services provided the actual process and the alternative process(es) and compare.
- Identify the risks associated with the actual process and with the alternative process(es). Measure and compare the tasks.

**Develop recommendations**

Develop specific recommendations to correct the weaknesses identified as material in the previous section. In developing these recommendations, consider the tailored criteria, kind of process and control weaknesses identified, causes and barriers, effects, and additional resources listed at the end of this module. Possible procedures include, but are not limited to:

- Identify alternative solutions used by other entities.
- Identify solutions for removing barriers.
- Provide general guidelines as to the objectives each solution should meet; then the entity can tailor the solution to its specific situation.
- Provide specific information, if available, on how each recommendation can be implemented.

**RESOURCES**
**Articles**

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**Human Resources**

The following staff members have specialized training or ongoing interest in cash management:

| Employee | Title/Function |
|---|---|
| Linda Lansdowne, CPA<br>Kathie Schwerdtfeger, CPA<br>Dennis Teinert, CPA | Savings and Loan Controller<br>Federal Coordinator<br>Federal Coordinator |
| Frank Coleman<br>Odie Cruz<br>Linda Lansdowne, CPA<br>Don McPhee, CPA<br>Bruce Truitt | Module Writers/Editors |
| Will Hirsch, CPA<br>Charlie Hrncir, CPA<br>Cathy Smock, CPA | Reviewers |

**Periodicals**

Note: Indexes and abstracts of periodicals in bold-faced type are available in the SAO Library via ABI/INFORM.

***ABA Banking Journal***
Published monthly by the American Bankers Association
Location: The University of Texas, Perry-Castañeda Library (HG 1501 B6)

*Accountant's Magazine*
Published monthly by the Accountants' Publishing Company (Scotland)

Location: The University of Texas, Perry-Castañeda Library (HF 5601 A22)

*Accounting and Finance*
Published monthly by the Accounting Association of Australia and New Zealand
Location: The University of Texas, Perry-Castañeda Library (HF 5601 A254)

*Accounting Review*
Published monthly by the American Accounting Association
Location: The University of Texas, Perry-Castañeda Library (HF 5601 A6)

*Accounting Today*
Published biweekly by Lebhar Friedman, Incorporated
Location: SAO Library

***Administrative Science Quarterly***
Published quarterly by the Cornell University Graduate School of Business
Location: The University of Texas, Perry-Castañeda Library (HD 28 A25)

*American Banker*
Published daily by American Banker
Location: The University of Texas, Perry-Castañeda Library (FILM 4070)

***Bankers Magazine***
Published monthly by BPC Banker's Magazine, Limited (UK)
Location: The University of Texas, Perry-Castañeda Library (HG 1503 B2)

***Barron's National Business and Financial Weekly***
W. Barron, Incorporated
Location: The University of Texas, Perry-Castañeda Library (332.05 B278)

*Bond Counsel*
Published weekly by American Banker
Location: SAO Library

***Business Week***
Published weekly by McGraw-Hill, Incorporated
Location: SAO Library

***Cashflow Magazine***
Published bimonthly by Coordinated Capital Resources
Location: The University of Texas, Perry-Castañeda Library (HG 4028 C45 C373)

*CMA: The Management Accounting Magazine*
Published bimonthly by the Society of Management Accountants of Canada
Location: The University of Texas, Perry-Castañeda Library (H 1 C647)

*CPA Letter*

Published monthly by the American Institute of Certified Public Accountants
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***Credit and Financial Management***
Published monthly by the National Association of Credit Management
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*Dallas Fed*
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*Decision Sciences*
Published bimonthly by the American Institute for Decision Sciences
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*FASAB News*
Published monthly by the Financial Accounting Standards Advisory Board
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*Financial Accountability and Management*
Published quarterly by Basil Blackwell Publishers, Limited (UK)
Location: The University of Texas, Perry-Castañeda Library (HJ 101 F56)

***Financial Analysts Journal***
Published bimonthly by the Financial Analysts Federation
Location: The University of Texas, Perry-Castañeda Library (332.605 AN13)

***Financial Executive***
Published monthly by the Financial Executives Institute
Location: The University of Texas, Perry-Castañeda Library (HF 5001 F514)

***Financial Management***
Published quarterly by the Financial Management Association
Location: The University of Texas, Perry-Castañeda Library (HG 4001 F55)

***Forbes***
Published monthly by Forbes, Incorporated
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***Fortune***
Published biweekly by Time, Incorporated
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*GAAFR Review*
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*GAO Journal*
Published quarterly by the United States General Accounting Office
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*GAO Reports and Testimony*
Published monthly by the United States General Accounting Office
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*Government Accountant's Journal*
Published quarterly by the Association of Government Accountants
Location: SAO Library

***Government Finance Review***
Published bimonthly by the Government Finance Officers Association
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***Harvard Business Review***
Published bimonthly by the Harvard Business School
Location: SAO Library

*Institutional Investor*
Published monthly by Institutional Investor, Incorporated
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***Internal Auditor***
Published monthly by the Institute of Internal Auditors
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*Internal Auditing*
Published quarterly by Warren, Gorham, and Lamont
Location: SAO Library

***Journal of Accountancy***
Published monthly by the American Institute of Certified Public Accountants
Location: The University of Texas, SAO Library

*Journal of Accounting and Public Policy*
Published quarterly by North Holland Publishers
Location: The University of Texas, Perry-Castañeda Library (HJ 9701 J687)

*Journal of Business Finance and Accounting*
Published quarterly by Basil Blackwell, Limited (UK)
Location: The University of Texas, Perry-Castañeda Library (HG 1 J581)

*Journal of Business Forecasting Methods and Systems*

Published bimonthly by Graceway Publishing Company, Incorporated
Location: The University of Texas, Perry-Castañeda Library (HB 3730 J65)

*Journal of Cash Management*
Published bimonthly by the National Corporate Cash Management Association
Location: The University of Texas, Perry-Castañeda Library (HG 4028 C45 J68)

*Journal of Economic and Social Measurement*
Published monthly by North-Holland
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***Journal of Finance***
Published monthly by the American Finance Association
Location: The University of Texas, Perry-Castañeda Library (332.05 J827)

*Journal of Financial and Quantitative Analysis*
Published quarterly by the University of Washington Graduate School of Business
Location: The University of Texas, Perry-Castañeda Library (332.05 J828)

***Management Accounting***
Published monthly by Straker Brothers, Limited (UK)
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*Managerial and Decision Economics*
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Pubished quarterly by Barmarick Publications, Limited (UK)
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***National Public Accountant***
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*Public Finance Accountant*
Published weekly by American Banker
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*Public Finance Washington Watch*
Published weekly by the Bond Buyer
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*Today's CPA*
Published bimonthly by the Texas Society of Certified Public Accountants
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*Treasury Management Association Journal*
Published bimonthly by the Treasury Management Association
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New York, New York
(212) 285-8915

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New York, New York

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Chicago, Illinois
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Government Finance Officers Association
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Austin, Texas
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Bethesda, Maryland

(301) 907-2862

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SAO Report No. 94-099: *Follow-Up on the Management Control Audit of the Lamar University System*, April 1994

SAO Report No 3-015: *A Review of the Comptroller's Management Process*, November 1992

SAO Report No. 1-148: *An Overview of Management Controls at the Texas Department of Public Safety*, August 1991

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