

## ***Cash Reconciliation - Manual Transaction***



***Systems & Procedures Training***

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## Introduction to Reconciling Transactions

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### Reconciling Trades

Transactions are reconciled to ensure that all transactions from the previous business day are accounted for by the mutual fund and the custodian bank. Errors in the completion of this task can result in:

- Missed trade or other transaction - Either the mutual fund or the custodian can miss a trade or other transaction. If this condition exists the NAV of the portfolio can be misrepresented to clients, participants and portfolio managers. Note that mutual fund operations does not miss trades in its own portfolios because trades are entered into the the trading system directly by the trading desk. Trades in external portfolios, managed by non-company managers, can be missed by the custodian or the mutual fund operations.
  - Erroneous cash reconciliation - If all transactions are not reconciled, there is a risk that the cash reconciliation process will be effected and the amount of investable cash reported to the portfolio manager will be incorrect. Reporting a wrong investable cash number can result in the portfolio manager investing too much or too little cash.
  - Account Overdraft - A missed transaction can result in a cash shortage and an overdraft of the portfolio's account at the custodian bank. An overdraft will result in a overdraft fee assessed by the custodian bank.
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### Transaction reconciliation process

The purpose of this process is to match each transaction on the custodian's daily cash report to the transactions in the accounting system. Each transaction is reconciled one at a time to verify that both the mutual fund and the custodian have accounted for every transaction that occurred on the previous business day. To complete this task, accountants use a cash spreadsheet.

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## Introduction to Reconciling Transactions, *Continued*

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Two types of transaction reconciliation processes

There are two distinct transaction reconciliation processes covered in the pages that follow. Conceptually, these two processes are similar. They are:

- Single currency transaction reconciliation - Single currency portfolios trade securities that are based in a single currency.
- Multi currency transaction reconciliation - These portfolios trade securities from around the world. When a transaction involves a security from a country outside of the U.S. it must be bought or sold in the currency of the country from which it is issued.

For example, if a security is issued in Great Britain, transactions must be settled in British Pounds. Before the security transaction is settled, a currency transaction must be completed by exchanging U.S. dollars (or other currency) for Pounds.

Each of these processes are described in detail in the sections that follow. Refer to the checked boxes on the table of contents on page two to determine which process you should review.

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Learning each process

You will learn only one of these processes now. As a new hire, you will begin to perform accounting tasks using the single *OR* multi currency process. Not both. The section that follows specifically addresses the single currency process.

Do NOT continue with this section if you know that you will be working with multi currency portfolios or if your coach did not check the Single Currency Transaction Reconciliation box in the table of contents on page 2 of this section.

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## Movement of Money and Making Variance Entries

### *Money Movement*

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Variance entries made to the Cash Reconciliation spread sheet

When transactions between the accounting system and the custodian do not reconcile, a variance entry is entered into the cash reconciliation spread sheet. It is important for you to realize that this does not resolve the discrepancy. It's only a variance adjustment which is made so an accurate investable cash amount can be reported to the portfolio manager.

Later, the discrepancy will be appropriately researched to determine the cause and appropriate corrective action. After the discrepancy is resolved, the variance entry made in the cash reconciliation spread sheet will be deleted.

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Understanding how money moves into and out of a portfolio

When a variance entry is made in the cash reconciliation spread sheet, the accountant needs to be aware of:

- How money moved into and out of the portfolio
- How money was expected to move into and out of the portfolio

Each of these issues are addressed in the sections that follow.

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Money movement

One of the most basic characteristics of a portfolio is that money moves into and out of its account. This concept gets a little confusing, but at the core it is basic and similar to how money moves into and out of your wallet every day.

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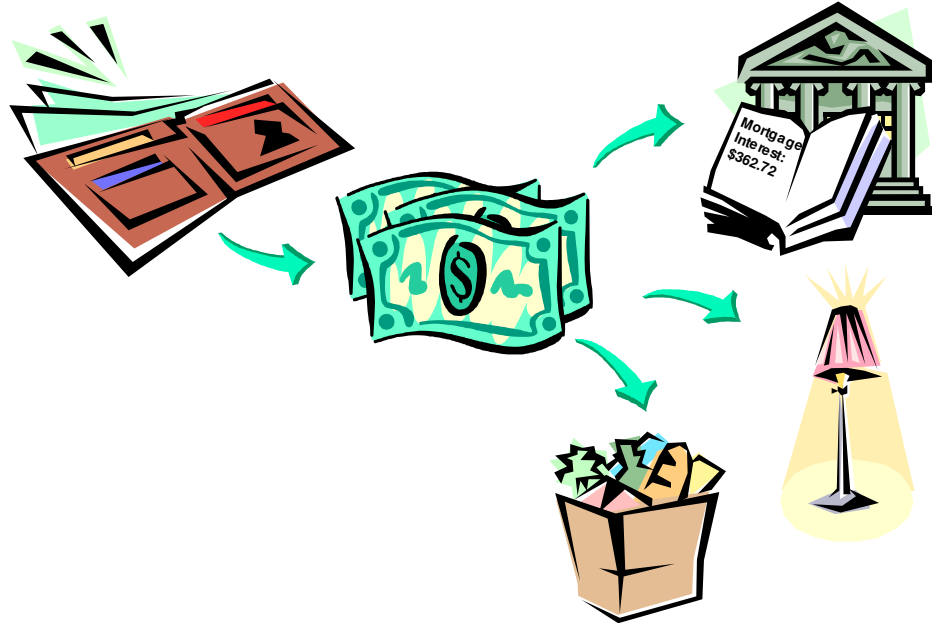
***Movement of Money, Continued***

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Money moving  
out of a  
portfolio

Money flows out of your wallet everyday for:

- Physical goods like groceries, books, CDs, newspaper, coffee, etc.
- Debt like mortgage, car loan, and credit card payments.
- Services like laundry, utility bills, rent, parking, train, etc.



Like you and your wallet, money flows from a portfolio as well. For instance money leaves the portfolio to:

- Purchase investments like stocks, bonds and money market instruments
- Pay expenses like broker's fees, portfolio management fees, custodian fees, etc.
- Pay for withdrawals that clients make to meet their cash needs

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*Continued*

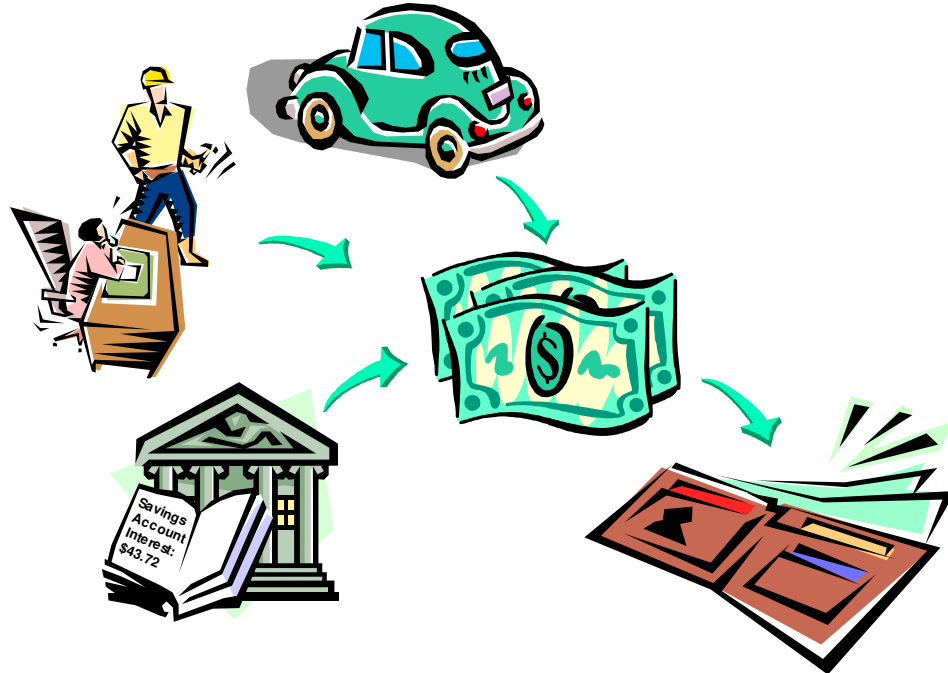
## ***Movement of Money, Continued***

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Money moving into a portfolio

It goes without saying that the goal of most people is to have more money entering their wallet than leaving. Typically, opportunities for money to enter your wallet include when you:

- Get paid for work you've provided to an employer or service you've performed for a customer or client
- Sell a personal possession like a car, furniture, etc.
- Receive interest or earnings from investments



Clients hire companies like our's to manage their investments and to maximize the return they receive on their investments. So there are many opportunities for money to enter a portfolio. For instance, money enters when the portfolio:

- Sells stocks, bonds, and money market instruments
  - Receives interest or dividend payments on securities that it holds
  - Receives additional contributions or deposits from clients
-

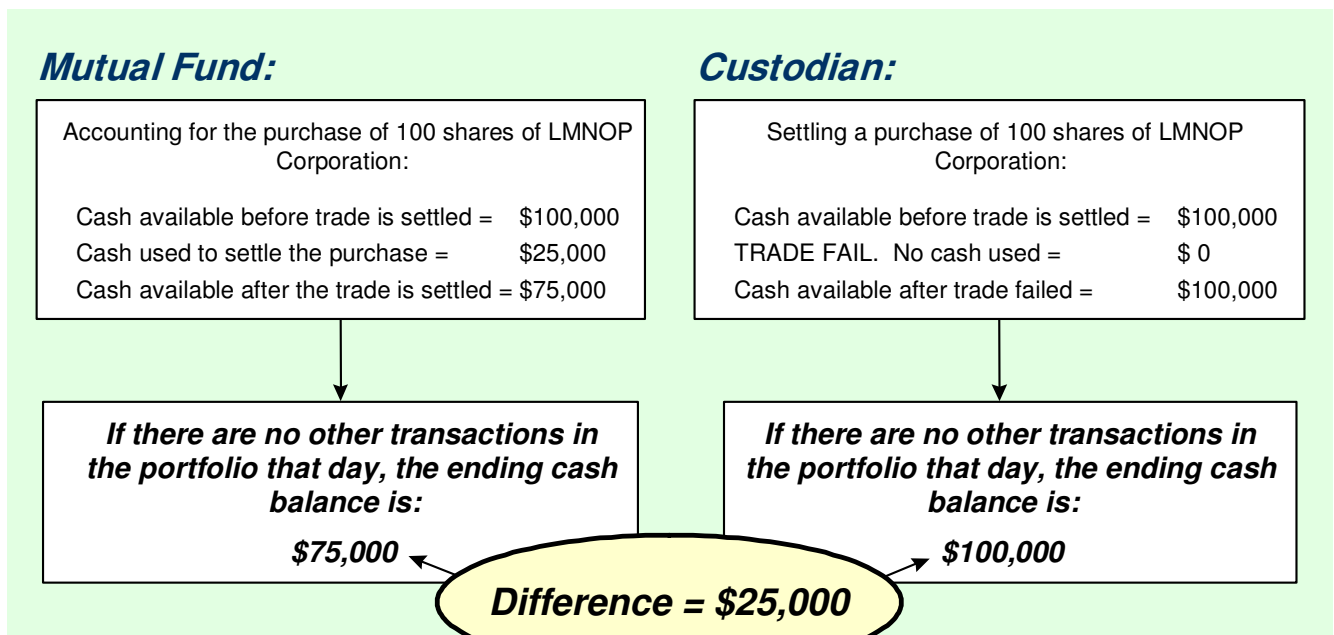
**Making Variance Entries**

Variance entries are necessary when cash balance discrepancies exist between the mutual fund and a custodian

Remember that accountants usually do not complete cash reconciliation activities for the current day. Cash reconciliation involves the previous day's ending cash balance which reflects the previous day's portfolio activities.

When the mutual fund calculates an ending cash balance it is based on the daily accounting of the portfolio's transactions which were expected to occur. There are occasions when activities are not settled by the custodian as expected.

When a trade fails, the previous day's ending cash balance calculated by the mutual fund does not match the cash balance at the custodian. This situation is illustrated below.



When a discrepancy exists

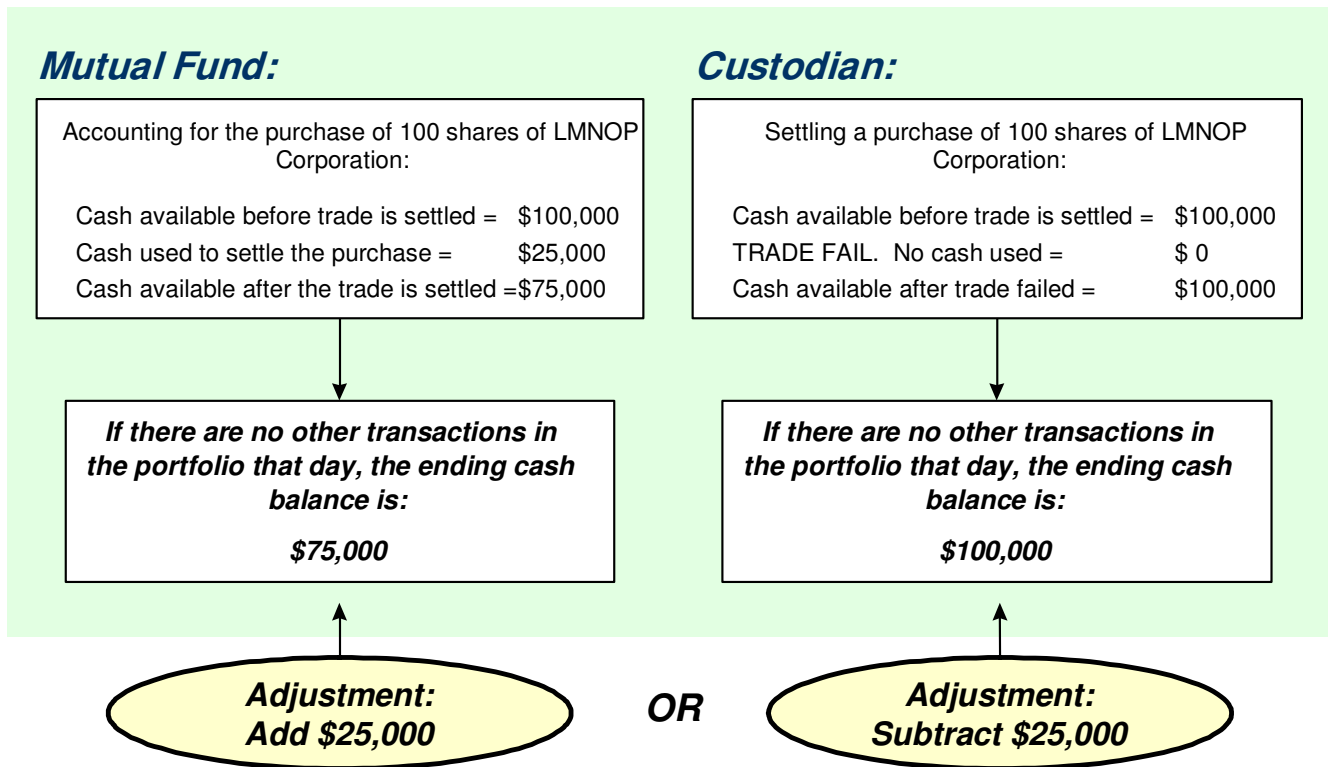
When a discrepancy like this is discovered, the cause is not researched immediately. Instead the accountant determines where cash didn't move as it was expected and makes an appropriate variance entry. Later the accountant will notify the Trade Group (TG) who will determine the cause and an appropriate resolution.

**Making Variance Entries, Continued**

Determining where money didn't move as expected

Before a variance entry can be made in the cash spreadsheet, the accountant must determine where money did not move into or out of the portfolio as expected. Remember that the custodian holds the actual cash and shares owned by the portfolio. At this point, it does not matter what was supposed to occur. The cash balance reported by the custodian is the actual cash in the portfolio.

The purpose of making a variance entry in the spreadsheet is to account for the difference in the cash balances reported by the mutual fund and the custodian. In this example, a variance entry is made to reconcile a \$25,000 difference.



*Continued*

***Making Variance Entry, Continued***

When a discrepancy exists

There are only two entries that will reconcile the discrepancy, and only one of them is correct. The options are:

- Add \$25,000 to the the mutual fund cash balance so both equal \$100,000
- Subtract \$25,000 from the custodian cash balance both equal \$75,000.

At this point we know that a trade failed but the cause is unknown. When a transaction appears on one cash report and not the other, make the variance entry on the side that did not list the transaction. For example, if the mutual fund's cash report lists a trade but the custodian's report does not, make the variance adjustment to the available cash calculated by the custodian.

The correct entry for the preceding graphic is to subtract \$25,000 from the custodian's cash balance.

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Samples of each transaction

The sections that follow provide samples of the mutual fund and custodian cash balance reports, as well as sample entries made in the cash reconciliation spread sheet. There are examples for each type of transaction you will reconcile on the job.

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## Reconciling Transactions - Single Currency

### *Introduction*

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Tools needed to complete a transaction reconciliation

To manually reconcile transactions between the mutual fund and a custodian, accountants need three things:

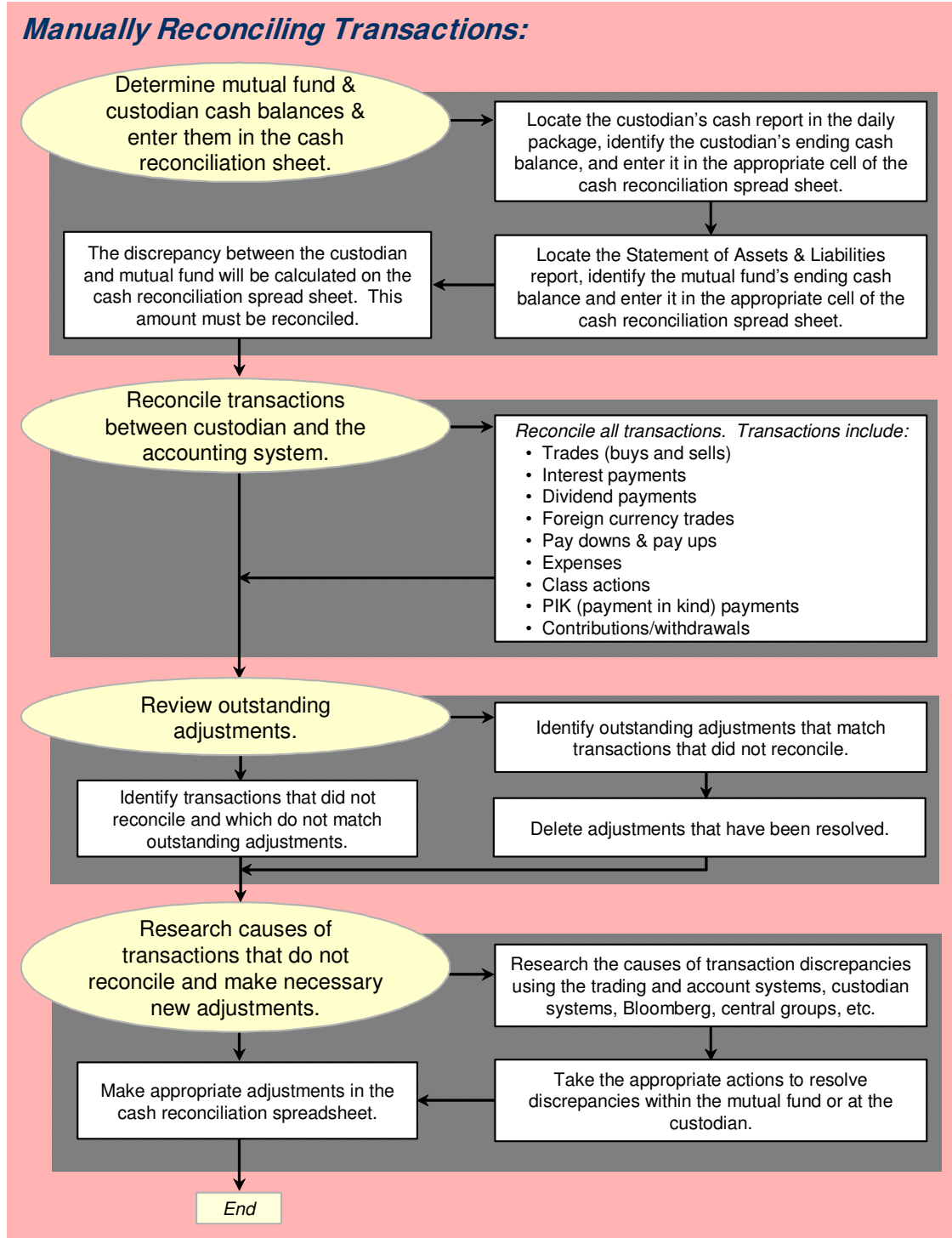
- Custodian cash report - Note that the name of this report varies depending on the custodian involved.
- Mutual Fund's Cash Forecasting report - This is an the accounting system report which is produced daily. It contains the previous business day's cash balance, list of transactions for the previous business day and for several days in the future. The specific number of days into the future varies by group.
- Cash spreadsheet - This is an Excel spreadsheet. While the spreadsheet used in each group looks different, the basic functionality is the same.

A workflow for resolving transactions for a single currency portfolio appears on the next page. Take a moment now and review the workflow.

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**Single Currency Transaction Reconciliation Process Overview**

Work flow



Continued on next page

**Reviewing Transactions on the Custodian's and the Mutual Fund's Cash Reports**

Purpose

The custodian's cash report and the accounting system's Cash Forecasting report provide detail on each of the transactions that occurred in the portfolio during the preceding business day. Each transaction is listed with vital information about the transaction.

An example of transactions listed on a custodian report is provided below. Review the information below for the type of data that appears on the cash reports. However, be aware that there are several types of transactions that can be listed on this report and each type will display different details about the security and the transaction.

Transaction information found on the custodian's daily cash report

Custodian Bank XYZ Fund					
VALUE	TYPE	ISSUE NAME		RECEIVED	
POST	TRADE/EX	SECURITY DESCRIPTION			
*** US DOLLAR ***					
- TOTAL	14DEC98	00:00:00	USD	BEG BAL	22,609.56
- TOTAL	14DEC98	23:59:00	USD	END OF DAY BAL	22,609.56
01DEC98	INTEREST	HEDSTROM CORP			35,000.00
15DEC98		SR SUB NT			
		1.000000%	MATY:01JUN07	PAY:01DEC98	
	42279QAC2	SHARES: 7,000,000.000			
01DEC98	DIVIDEND	NETTEL COMMUNICATIONS INC			
15DEC98	085				

- Example transaction on a custodian cash report:**
1. Date custodian posted the transaction.
  2. Type of transaction - example shows an interest payment.
  3. CUSIP number.
  4. Description of the security.
  5. Number of shares involved.
  6. Date the transaction settled.
  7. Amount of the transaction.

*Continued*

***Types of Transactions that will be Reconciled***

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Purpose            The report that appears on the next page provides a sample of transactions that appear on both the the accounting system's Cash Forecasting report and the custodian's cash report. Below is a list of all transaction types that can appear on these reports:

- Trades - buys and sells
  - Interest payments
  - Dividend payments
  - Foreign currency trades - only for portfolios that hold foreign securities
  - Pay downs and pay ups
  - Expenses
  - Class actions
  - Client or participant contributions and withdrawals
-

**Types of Transactions that will be Reconciled, Continued**

Transactions detailed on the custodian cash report

Custodian Bank XYZ Fund					
VALUE	TYPE	ISSUE NAME	RECEIVED	DISBURSED	
POST	TRADE/EX	SECURITY DESCRIPTION			
01DEC98	INTEREST	HEDSTROM CORP	35,000.00		
15DEC98		SR SUB NT			
		1.000000% MATY:01JUN07 PAY:01DEC98			
	42279QAC2	SHARES: 7,000,000.000			
08DEC98	DIVIDEND	NEXTEL COMMUNICATIONS INC	344.64		
15DEC98	08DEC98	PFD EXCH SER E 11.125PCT			
		RATE:1.000000 PAY:08DEC98			
	65332V707	SHARES: 344.640			
14DEC98	PURCHASE	AMRESKO COMM MTG		57,953.06	
15DEC98	09DEC98	SR SUB NT SER 1998 A			
		9.875% 15MAR05			
	031909AE4	BROKER: LEHMAN BROS INC.			
		FACE : 80,000.000			
		PRIN : 56,000.00			
		INTRST: 1,953.06			
15DEC98	SALE	BREED TECHNOLOGIES INC	255,320.83		
15DEC98	10DEC98	SUB DEB CONV 144A			
		9.250% 15APR08			
	106702AB9	BROKER: LEWCO SECS AGENT FOR WERTHEIM SHCRODER			
		FACE : 290,000.000			
25AUG98	PAYDOWN	ACP MTG L P	12,133.53		
25AUG98	01AUG98	CTF CL E FLTG RT 144A			
		7.436949% MATY:25FEB28 PAY:25AUG98			
	00087RAE6	C.FACE: 2,007,788.410			
		PRIN : 167.02			
		INTRST: 11,966.51			
25JAN99	SPDIV	E SPIRE COMMUNICATIONS INC	0.00		
25JAN99	20JAN99	JR REDEEABLE PFD 12.75PCT			
		PAY: 15JAN99			
	269153300	BROKER: STOCK DIVIDEND			
		SHARES: 16.224			

**Sample transaction types found on a custodian cash report:**

1. Interest payment
2. Dividend payment
3. Purchase
4. Sale
5. Paydown
6. PIK payment

**Identifying Previous Day's Ending Balances**

**Purpose**

Each day, the previous day's ending balances calculated by both the custodian and the mutual fund must be reconciled. The purpose is to ensure that neither the custodian nor the mutual fund has made an error in their calculation. This process is important to ensure that the portfolio manager has an accurate investable cash number.

The first step in the process of reconciling transactions is to identify the previous day's ending balance that was calculated by the mutual fund and by the custodian. The example below illustrate the cash reports of each.

Identifying the mutual fund's and custodian's ending cash balance for the previous day

### Accounting System XYZ Fund

ASSETS		
INVESTMENT SECURITIES AT VALUE (BOOK COST	727,792,403.42 )	730,562,859.25
<b>CASH</b>		<b>3,385,519.44</b>
FOREIGN		
RECEIVABLE		
ACCOUNT		
IN		
CURRENT		
UN		

**Determine the previous day's closing cash balances from both the mutual fund and the custodian. These amounts will be entered into the cash reconciliation spread sheet.**

1. Identify the previous day's ending cash balance in accounting system report as illustrated above.
2. Identify the previous day's ending cash balance calculated by the custodian. Note the cash balance is the sum of the **CURRENCY BALANCE** (which is cash) and the **CALL ACCOUNT BALANCE** which is the amount of available cash invested in overnight markets.

### Accounting System XYZ Fund

ACCOUNT / CURRENCY	CURRENCY BALANCE	CALL ACCOUNT BALANCE
-----		
ENDING BALANCES		
0 7M6R -- CIMCO TRUST - HIGH YIELD		
US DOLLAR	2,075,613.42	3,385,862.54
-----		

RUN DATE: 15 DEC 98 20:35:37 RQ0195

***Entering Ending Balances into the Cash Spreadsheet***

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Purpose            Once the cash balances have been identified, they are entered into the appropriate cells of the cash spreadsheet. The spreadsheets used by each group may vary from the example below. When you have completed this section ask your coach to review how to access your group's spreadsheet. For now, review the steps below.

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## Reconciling Transactions

### *Introduction*

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#### Purpose

Recall that the purpose of reconciling transactions is to ensure that the cash balance is correctly calculated. An incorrect cash balance can result in a cash management problem which can needlessly lose money for the portfolio. For example, if a transaction is missed by either the mutual fund or the custodian, resulting in a negative balance in the custodian account, an overdraft fee will be charged to the portfolio. On the other hand, a large amount of uninvested cash in the custodian account is a lost opportunity to earn potential a return to the portfolio as cash lies idle.

When transactions are reconciled appropriately, the correct cash balance can be calculated and provided to the portfolio manager who ensures that the portfolio's cash is invested properly.

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#### Reconciling transactions

When reconciling transactions, it is critical that you correctly:

- Identify each discrepancy that exists between the transactions listed on the custodian's cash report and those provided on the mutual fund's cash report.
- Make the appropriate variance entry on the cash spread sheet. It is particularly important to determine if the variance entry should be made in the custodian or the mutual fund section of the spread sheet.
- Enter all of the appropriate information into the cash spreadsheet.

At this point in the cash reconciliation process, it is not important for you to determine why a discrepancy exists, who caused it, or how it should be resolved. What is important is correctly identifying and recording each discrepancy. Later, you will research all discrepancies and determine the correct resolution.

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**Introduction,** Continued

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Making  
variance  
entries in the  
cash  
spreadsheet

There are two general guidelines that should be followed most of the time when making variance entries in the cash spreadsheet. Note that exceptions may apply from group to group. The guidelines are:

1. Portfolio cash outflows should be entered into the spreadsheet as a negative number, while cash inflows should be entered as a positive. For example, because a purchase results in a cash outflow, a variance involving a purchase transaction will be entered as a negative number.
2. Variance entries should be made in the section of the spread sheet where the transaction was missed. If the transaction is missing on the custodian cash report, make the variance entry in the custodian section of the spread sheet. If the the mutual fund cash report is missing a transaction make the entry in the the mutual fund section of the spread sheet. For example, if an interest payment which appears on the custodian cash report is missing from the the mutual fund cash report, the variance entry should be in the the mutual fund section of the Reconciliation spread sheet.

Remember that these are general guidelines which we will elaborate on as you continue this training.

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**Reconciling Purchases**

Purpose

The report below provides an example of purchase transactions listed on a custodian cash report. Each purchase is listed as a separate transaction and data is provided about each security.

Because a purchase results in cash leaving the portfolio, the amount of the transaction is listed in the DISBURSED column. When reconciling purchase or other type of transaction, compare each transaction on the custodian's cash report, to the information detailed on the mutual fund's cash report. A sample the mutual fund cash report appears on the next page.

Review the purchases that appear on the custodian cash report below and the the mutual fund cash report on the next page and complete the activity that follows.

Purchases on the custodian's daily cash report

<b>Custodian Bank XYZ Fund</b>				
VALUE	TYPE	ISSUE NAME	RECEIVED	DISBURSED
POST	TRADE/EX	SECURITY DESCRIPTION		
14DEC98	PURCHASE	AMRESKO COMM MTG		57,953.06
15DEC98	09DEC98	SR SUB NT SER 1998 A 9.875% 15MAR05		
	031909AE4	BROKER: LEHMAN BROS INC. FACE : 80,000.000 PRIN : 56,000.00 INTRST: 1,953.06		
15DEC98	PURCHASE	CENTURY COMMUNICATIONS CORP		351,750.00
15DEC98	10DEC98	SR DISC NT .000% 15JAN08		
	156503AN4	BROKER: MORGAN, J.P. SECURITIES FACE : 700,000.000 PRIN : 351,750.00 INTRST: 0.00		
15DEC98	PURCHASE	MCMS INC		67,853.33
15DEC98	10DEC98	SR SUB NT SER B 9.750% 01MAR08		
	55269HAE2	BROKER: BT ALEX BROWN FACE : 80,000.000 PRIN : 65,600.00 INTRST: 2,253.33		
15DEC98	PURCHASE	AMRESKO COMM MTG		123,196.88
15DEC98	10DEC98	SR SUB NT SER 1998 A 9.875% 15MAR05		
	031909AE4	BROKER: LEHMAN BROS INC. FACE : 170,000.000 PRIN : 119,000.00 INTRST: 4,196.88		

*Continued*

**Reconciling Purchases, Continued**

Purchases on the mutual fund's daily cash report

<b>Accounting System XYZ Fund</b>						
CURRENCY: U.S. DOLLAR						
CASH DATE	TRANS CODE	MEMO NUM	SECURITY NUMBER	SHORT DESCRIPTION	RATE	LOCAL CASH AMOUNT
12/14/98			BALANCE			1,071,460.60
12/15/98						
	BUY	5483804	031909AE4	AMRESKO 98-A 9.875 3'05	9.875	-123,196.88
	BUY	5483812	156503AN4	CENTURY COMM 0 1'08	.0	-351,750.00
	BUY	5483814	303727AC5	FAIRCHILD 10.125 3'07	10.125	-906,675.00
	BUY	5483816	55269HAE2	MCMS INC 9.75% 3/01/08	9.75	-67,853.33

Making entries in the cash spreadsheet

The table below is designed to help you make variance entries in the cash spreadsheet. Note that your coach should have filled in the blank boxes with group specific directions. Use this table to complete the exercise that appears on the following page.

IF the purchase transaction:	THEN:
Is missing from the custodian cash report	
Is missing from the the mutual fund cash report	
Is a greater dollar amount on the custodian report than on the the mutual fund report	
Is a greater dollar amount on the the mutual fund report than on the custodian report	
Is a reversal	

*Continued*

### Transaction Reconciliation: Activity 1 - Reconciling Purchases

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Instructions      Portions of both the custodian's and the mutual fund's cash reports appear on the previous two pages. Each report lists purchases made to a portfolio. Your assignment is to reconcile the purchase transactions that appear on these two reports by answering the following questions.

1. Do the transactions represent cash flow into or out of the portfolio?

Cash flow in       Cash flow out

2. Tick and tie the purchase transactions that appear on the two reports. To do this, match up the purchases on each report and check that the CUSIP, security name and dollar amounts match. Place a check mark on the reports to the right of each transaction that matches.

3. Do ALL purchases tie?       Yes       No

4. If "No", provide this information for each transaction that does not tie:

Settlement date: \_\_\_\_\_

Security name: \_\_\_\_\_

CUSIP number: \_\_\_\_\_

Transaction type: \_\_\_\_\_

Broker name: \_\_\_\_\_

Trade Date: \_\_\_\_\_

Dollar amount: \_\_\_\_\_

5. Should the dollar amount entered in the Cash Reconciliation spread sheet be positive or negative?

First Variance:                      Second Variance:  
 Positive       Negative       Positive       Negative

6. Should the dollar amount entered in the cash spreadsheet be entered on the Custodian's side or on the mutual fund's side?

First Variance:                      Second Variance:  
 Custodian's       Mutual Fund's       Custodian's       the mutual fund's

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*Continued on the next page*

**Transaction Reconciliation: Activity 1 - Feedback**

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Purpose Feedback, like below, is provided after each activity in this chapter. It is provided so you can check your answers after completing each exercise. If you find any feedback to be confusing or unclear ask your coach for clarification.

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1. Does the transaction represent a cash flow into or out of the portfolio?  
 Cash flow in  *Cash flow out*
2. Tick and tie the purchase transactions that appear on the two reports.
3. Do ALL purchases tie?  Yes  *No*
4. On the custodian's cash report the following transaction does not tie

Settlement date: 12/15/98  
Security name: Amresco Comm Mtg  
CUSIP number: 031909AE4  
Transaction type: Purchase  
Broker name: Lehman Bros. Inc.  
Trade Date: 12/14/98  
Dollar amount: \$ 57,953.06

On the mutual fund's cash report the following transaction does not tie

Settlement date: 12/15/98  
Security name: Fairchild  
CUSIP number: 303727ACS  
Transaction type: Purchase  
Broker name: not provided  
Trade Date: 12/14/98  
Dollar amount: \$ 906,675.00

5. Should the dollar amount entered in the cash spreadsheet be positive or negative?

*A purchase represents an out flow of cash to buy a security. Therefore, a purchase is always entered as a negative number in the spread sheet.*

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**Transaction Reconciliation: Activity 1 - Feedback, Continued**

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6. Should the dollar amount entered in the cash spreadsheet be entered on the custodian's side or on the mutual fund's side?

*If the portfolio is an internal portfolio, a purchase cannot be missed on the mutual fund's side, and all missed purchases must be entered on the custodian's side.*

*If the portfolio is an external portfolio the purchase can be missed on either the mutual fund's or the custodian's side, and your answer should be:*

- *The AMRESKO COMM MTG variance should be listed on the mutual fund's side.*
  - *The FAIRCHILD variance should be listed on the custodian's side.*
-