American National Standard for Financial Services

ANSI X9.121–2012

Balance and Transaction Reporting Standard

Previous version published as
BAI Cash Management Balance Reporting Specifications Version 2 Technical Reference Manual

Developed by
Accredited Standards Committee X9, Incorporated
Financial Industry Standards

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American National Standards Institute

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Foreword

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Introduction

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The Balance and Transaction Reporting Standard (BTRS) is intended to increase standardization of and improve upon the Bank Administration Institute Reporting Specification version 2 (BAI2). Changes include:

1) Modernization of text to include developments in banking and technology over the past 25 years

2) Additional structure to 88 record to support extended wire remittance in CTP payments

3) New batch level (89) and invoice level (90) records providing additional remittance information using ISO 20022 component tags to assist in reconciliation and straight through processing

4) Rationalization and reduction of the number of supported transaction codes

5) Additional SEPA transaction codes to support new European payment types

6) Double byte character set support through the incorporation of UTF-8

7) Require certain balance codes to facilitate SWIFT and ISO 20022 XML interoperability.

8) Modified currency rules to make them mandatory and allow for multi currency

9) Added new 900 series code categories to define debits and credits.

The standard builds upon the BAI2 format while retaining forward compatibility. Although a BTRS file with the above changes could not be interpreted with a BAI2 reader, a BAI2 file could be interpreted with a BTRS reader[1].

Suggestions for the improvement or revision of this Standard are welcome. They should be sent to the X9 Committee Secretariat, Accredited Standards Committee X9, Inc., Financial Industry Standards, 275 West Street, Suite 107 Annapolis, MD 21401 USA.

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[1] With some exceptions, a BAI2 file cannot be processed by a BTRS reader if deleted or repurposed codes were included in the BAI2 file

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Sterling National Bank ..... Eliot Robinson
SWIFT/Pan Americas ..... James Wills
Wells Fargo Bank ..... Jeff Harmon
Wells Fargo Bank ..... Ann Kirk

1 Balance and Transaction Reporting Standard

Market conditions and the need for greater visibility into cash flows have caused corporations to focus increased attention on cash management. Banks have responded by offering services such as: electronic banking, information reporting, lockbox remittance processing, cash concentration, electronic transfers, and controlled disbursement, which help companies improve cash flow and utilize idle funds.

Of equal importance are improvements in the delivery of information about a company's balances and transactions. The corporate treasurer's office must know the company's cash position to control usable funds effectively. By closely monitoring cash position, the treasurer is better able to:

- Analyze and project funding needs
- Assure appropriate liquidity
- Minimize idle cash balances
- Perform account reconciliation
- Maximize investment opportunities or reduce borrowings

Formerly, information needs were relatively simple and less time-critical. Data such as ledger balances, available balances, and float breakdowns were usually sufficient. However, in recent years the needs for more extensive reporting of greater transaction detail have dramatically increased. Banks have responded with increasingly sophisticated reporting systems.

As the number of banking relationships for a corporation increases, the daily task of gathering information becomes more difficult and time-consuming especially when bank cash management data is provided in a variety of formats. In order to consolidate reporting and monitor multiple banking relationships, many corporations request each of their banks to report balance information to a central agent that may be another bank or a third-party data aggregator.

2 Purpose

As reporting systems become more complex, differences in data formats can cause considerable difficulty. The *Balance and Transaction Reporting Standard* establishes a common format for exchanging cash management account data. By establishing an efficient mechanism for communication among multiple parties, the standard facilitates complete, accurate, and timely information reporting, and helps reduce the cost of providing this service.

3 References

3.1 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the specific edition cited applies. For undated references, the most recent edition of the referenced document (including any amendments) applies.

ISO 4217, *Codes for the representation of currencies and funds*

3.2 Informative References

Cash Management Balance Reporting Specification Version 2, 2005, BAI, Chicago, Illinois

4 Terms and definitions

The following are Data Elements and Definitions.

4.1 Account Status Terminology

4.1.1 Available Balance

4.1.1.1

Available Balance
The portion of the commercial account ledger balance against what the bank normally limits the account holder to draw. Ledger Balance – Float = Available Balance. This balance is also referred to as good funds, immediately available funds, or usable funds.

Note Frequently, the term "Collected Balance" is used to describe "Available Balance" as defined here. (See "Collected Balance" under Related Terminology.) In these instances, banks should report this balance in the Available Balance category.

4.1.1.2
Average Closing Available Balance MTD
The average closing available balance month-to-date. In general, it is calculated by summing the closing available balance for each calendar day elapsed in the month and dividing by the number of calendar days covered. This balance may or may not include adjustments depending on the procedures of each bank.

4.1.1.3
Average Closing Available Balance YTD
The average closing available balance year-to-date. In general, it is calculated by summing the closing available balance for each calendar day elapsed in the year and dividing by the number of calendar days covered. This balance may or may not include adjustments depending on the procedures of each bank.

4.1.1.4
Closing Available Balance
The available balance at the end of the business day for which activity is being reported. Closing Ledger – Float = Closing Available.

4.1.1.5
Current Available Balance
The available balance at a given time during the business day the information is being reported. It includes zero-float debits and credits processed up to that time. Opening Available Balance + (the Net of Zero-Day Float Debits and Credits processed up to that time) = Current Available Balance.

4.1.1.6
Opening Available Balance
The available balance at the start of the business day. Closing Available Balance Reported + The Net of One-day Float = Opening Available Balance. For example, Wednesday's "Opening Available Balance" is the result of Tuesday's "Closing Available Balance" ± The Net of Tuesday's Closing One-Day Float.

4.1.2 Float

The portion of the commercial account ledger balance that is normally not available for the account holder to draw against. Ledger Balance – Available Balance = Float.

4.1.2.1
One-Day Float
The portion of the commercial account ledger balance that is not available for the account holder to draw for one business day.

4.1.2.2
Two or More Days Float
The portion of the commercial account ledger balance that is not available for the account holder to draw against for two or more days.

4.1.2.3
Zero-Day Float
The net of debits or credits in a day's activity for which there is no float. This total affects the available balance immediately upon processing.

4.1.3 Ledger Balance

A commercial account balance that is the result of the total debit and credit activity as of a specific date and time. There is no indication of funds availability or usability. This is sometimes referred to as book, gross, or statement balance.

4.1.3.1
Average Closing Ledger Balance – MTD
The average daily closing ledger balance month-to-date. In general, it is calculated by summing the closing ledger balance for each calendar day elapsed in the month and dividing by the number of calendar days covered. This balance may or may not include adjustments depending on the procedures of each bank.

4.1.3.2
Average Closing Ledger Balance – YTD
The average daily closing ledger balance year-to-date. In general, it is calculated by summing the closing ledger balance for each calendar day in the year and dividing by the number of calendar days covered. This balance may or may not include adjustments depending on the procedures of each bank.

4.1.3.3
Closing Ledger Balance
The ledger balance as of the end of the business day (As-of-Date) for which the activity is being reported. Opening Ledger + Total Credits – Total Debits = Closing Ledger Balance.

4.1.3.4
Current Ledger Balance
The ledger balance at the time during the day the information is being reported. It includes debits and credits that have been processed up to that time. Opening Ledger Balance + (the Net of Debits and Credits processed up to that time) = Current Ledger Balance.

4.1.3.5
Opening Ledger Balance
The ledger balance at the start of business on the day (As-of-Date) for which the activity is being reported.

4.1.4 Total Credits

The sum of all credits posted to the ledger balance of an account.

4.1.5 Total Debits

The sum of all debits posted to the ledger balance of an account.

4.2 Related Terminology for INFORMATION Reporting Systems

The following are Data Elements and Definitions.

4.2.1
Beginning Available Balance
See “Opening Available Balance”

4.2.2
Beginning Ledger Balance
See “Opening Ledger Balance”

4.2.3
Book Balance
See “Ledger Balance”

4.2.4
Collected Balance
Frequently, the term “Collected Balance” is used to describe “Available Balance” as defined in this glossary. In these instances, banks would report this balance in the “Available Balance” category.

However, many banks define “Collected Balance” internally as the portion of the commercial account ledger balance for which a hold time allowing for the collection and return of deposited items has elapsed. When defined in this manner, a “Collected Balance” is distinguished from an “Available Balance.” For example, a bank may make the funds represented by a deposited item available to the customer in two business days per its clearing schedule, while the bank may not include the deposited item as collected for six days to allow for the possible return of the item.

4.2.5
Credit
A posting to a specified account of a certain named amount resulting in an increase in the value of the ledger balance of the account.

4.2.6
Customer Account
In general, this term is associated with a demand deposit checking account. However, there are other types of depository accounts that could have balances associated with them such as interest-bearing accounts and time deposit accounts.

4.2.7
Debit
A posting to a specified account of a certain named amount resulting in a decrease in the value of the ledger balance of the account.

4.2.8
Demand Deposit Account
See “Customer Account”

4.2.9
Ending Ledger Balance
See "Closing Ledger Balance"

4.2.10
Funds Availability
The float assigned to an item or a group of items that can be expressed in terms of zero-day, one-day, or two or more days.

4.2.11
Funds Usability
See "Funds Availability"

4.2.12
Good Funds
See "Available Balance"

4.2.13
Gross Balance
See "Ledger Balance"

4.2.14
Immediately Available Funds
See "Available Balance"

4.2.15
Statement Balance
See "Ledger Balance"

4.2.16
Unavailable Balance
See "Float"

4.2.17
Uncollected Funds
See "Float"

4.2.18
Usable Balance
See "Available Balance"

5 Information Reporting Transmission Files

5.1 DEFINITIONS OF PARTIES

In its simplest form, cash management Information reporting involves two parties: the customer and the depository institution. However, intermediaries, such as data processing firms and other banks, often relay the messages and may combine data from several sources into a single report for customer convenience. To avoid confusion when transmissions that involve a number of intermediaries are being described, the Information reporting standard defines the following relationships:

5.1.1 Customer

A commercial depositor. Balance and transaction data are reported for accounts held by the customer.

5.1.2 Originator

A depository financial institution. Data are reported for accounts held by the customer at the originator institution.

5.1.3 Intermediary

Any party other than the customer or originator involved in an information reporting transmission.

5.1.4 Sender

The processor that is transmitting a file containing information reporting data. The sender may be an originator or an intermediary.

5.1.5 Receiver

The processor receiving the file transmitted by the sender. The receiver may be an intermediary or the customer.

5.1.6 Ultimate Receiver

The processor that receives the final transmission of Information reporting data before it is translated into usable form. It may be a bank or a data processor that provides cash management services to a customer or it may be the customer if balance reports are transmitted directly to the customer's computer system.

In information reporting transmission files, the parties may be identified with one of the following: ABA**,** SWIFT, CHIPS, or another mutually agreed upon identifier.

5.2 UNIFORM TYPE CODES

Information reporting transmissions and downloads include data describing hundreds of different types of account activity, ranging from securities transactions to lockbox deposits. Each transaction, summary or balance classification has been assigned a uniform type code. The type code uniquely identifies the type of activity or balance being reported. Type codes are grouped into three levels:

1) **Status:** These codes describe the status/type of the account balance (for example, ledger balance, available balance and float position).

2) **Summary:** These codes summarize account credit and debit activity (for example, total wire transfer credits or total security debits).

3) **Transaction Detail:** These codes detail individual credits and debits (for example, individual wire transfer or foreign exchange debit).

The originator has the responsibility to ensure that only valid type codes are used in all transmissions. Receivers may, at their discretion, reject files that include invalid type codes or passing the transmission as is to the next receiver.

The code list is current as of the time of the publication of this document. Valid transaction codes can be found on the X9 website: www.x9.org.

The core list may be updated periodically as new codes are requested and approved by the X9C1 technical committee. To request a new code, please go to the X9 website: www.x9.org

5.2.1 Type Code Ranges

The following table indicates the ranges of three-digit numbers used for status, summary and detail type codes:

Type Codes	Description
001-099	Account status type codes
100	Total credits summary type code
101-399	Credit summary and detail type codes
400	Total debits summary type codes
401-699	Debit summary and detail type codes
700-799	Loan summary and detail type codes
900–919	Custom account status codes
920–959	Custom credit summary and detail
960–999	Custom debit summary and detail

Table 1 Type Code Ranges

5.2.2 Type Code for Non-monetary Information

Type Code 890 has been established to transmit non-monetary information not associated with an account status, summary amount, or transaction. Type Code 890 is neither a debit nor a credit. It is a detail type code and is used in Type 16 transaction detail records. The text field in a Type 16 record with an 890 Type Code contains the non-monetary information. The Amount and Funds Type fields shall be defaulted and the Bank Reference Number and Customer Reference Number may be either used as part of the message or defaulted. An example of such a message is illustrated below.

16,890,,,,,detail reports will be delayed until 11:00 AM.

5.2.3 Customized Type Codes

Bank processors shall use BTRS codes. Customized codes are created to meet the needs of specific customers and are often not of general interest to the cash management community. Instead of allocating uniform type codes to such specialized activities, the range from 900–999 has been reserved for customized type codes as follows:

900–919	Custom account status codes
920–959	Custom credit summary and detail
960–999	Custom debit summary and detail

X9 will not designate uniform type codes in this range, and users shall use caution in assigning unique type codes to meet customer needs and shall adhere to the following guidelines:

- Custom codes shall only be used for transactions between parties that have agreed to support the nonstandard type.
- X9 will not support type codes in the 900–999 range and users of the Standard might not accept these types in transmissions.

5.3 FILE STRUCTURE

Information reporting transmission files are divided into “envelopes” of data. These envelopes organize data at the following levels:

- File
- Group
- Account

5.3.1 File

Groups are combined into files for transmission. A file includes data transmitted between one sender and one receiver. A file can include groups of data from any number of originating financial institutions destined for any number of ultimate receivers. The groups within a file may contain different As-of-Dates and times.

Intermediaries may combine groups from several different source files into a new file for transmission.

5.3.2 Group

The next level of organization is the group. A group includes one or more account envelopes, all of which represent accounts at a single financial institution. All information in a group is for the same date and time.

5.3.3 Account

The lowest level of organization is the account. The account envelope includes balance, summary and transaction data. For a specific account at a financial institution, all records in an account envelope refer to the same account for the same date and time.

5.4 RECORD DESCRIPTIONS

Information Reporting files include the following types of records:

Record Code	Record Name	Purpose
01	File Header	The file header marks the beginning of a file. It identifies the sender and receiver of the transmission and describes the structure of the file.
02	Group Header	The group header identifies a group of accounts that are from the same originator and includes the same as-of-date and as-of-time.
03	Account Identifier and Summary/Status	This record identifies the account number and reports activity summary and account status information. Summary information may be accompanied by an item count and funds availability distribution.
16	Transaction Detail	This record is used for transmission of detail transaction information. Transaction detail may include two reference numbers and a free-form alphanumeric text.
88	Continuation	A Continuation record is used when data exceeds the maximum physical record length, OR when it is desirable to continue data into an additional record. It may follow any record type, including another “continuation” (88) record. The 88 record is also used to provide supplemental wire remittance information for standard Fedwire CTP and CHIPS Remittance transactions. See annex D for details.
89	Batch Detail	This record is associated to a batched transaction that contains multiple items (e.g., items in an ACH batch, items in a Lockbox deposit). There is one 89 record for each item in the batch or deposit. An 89 record shall always follow a 16 record, or an 88 record within a 16 record.
90	Invoice Detail	This record is associated to a batch transaction and provides information about the invoices for those transactions. There is one 90 record for each invoice. A 90 record shall always follow an 89 record, or an 88 record within an 89 record. .
49	Account Trailer	The Account Trailer record provides account control totals.
98	Group Trailer	This record provides group control totals.
99	File Trailer	This record provides file control totals.

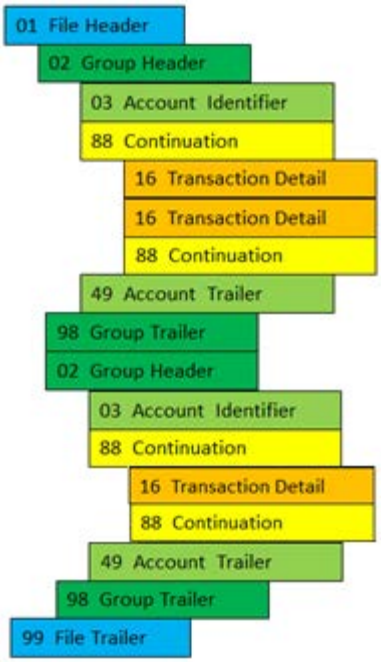
Table 2 Record Descriptions

5.5 FILE LAYOUT

The records in a balance reporting transmission file are ordered as follows:

01 File Header - Begins File
02 Group Header - Begins Group
03 Account Identifier - Begins Account
16 Transaction Detail (Optional) - Within Account
88 Continuation
89 Batch Detail (Optional) - Within a Transaction Detail
90 Invoice Detail (Optional) - Within a Batch Detail
49 Account Trailer - Ends Account
98 Group Trailer - Ends Group
99 File Trailer - Ends File

BTRS without 89 and 90
(Compatible with BAI2)



BTRS with 89 and 90

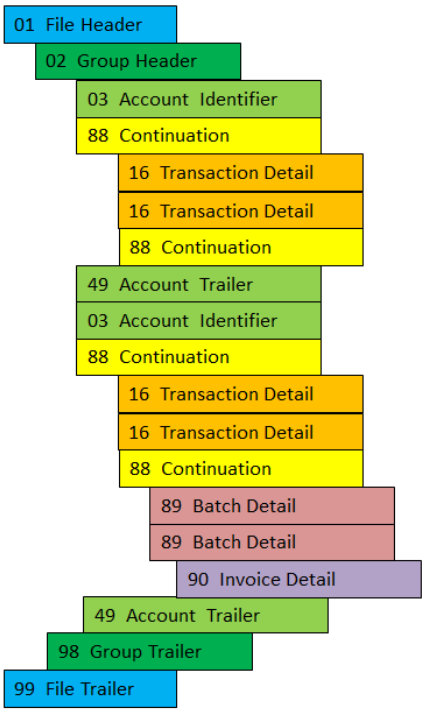


Figure 1 Groups in Files

5.5.1 Groups in Files

A file may contain several groups. Each group begins with a 02 group header record and ends with a 98 group trailer record. This allows a file to contain information from multiple originators. A group may contain several accounts. Each account begins with a 03 record and ends with a 49 Account Trailer record. The 03 record may or may not be followed by a transaction detail record (16).

5.6 RECORD CHARACTERISTICS

The Balance and Transaction Reporting Standard defines a format for data within files and records.

5.6.1 Physical Records and Logical Records

The standard refers to both physical and logical records, which are defined here to avoid confusion.

5.6.1.1 Physical Record

A group of contiguous characters occupying a specific number of character spaces.

5.6.1.2 Logical Record

The group of characters within a physical record that convey meaningful, related data. The logical record includes the record code, other codes defined by the format, all data, field delimiters and text.

Example: If the file header specifies a physical record length of 80 characters but only 65 characters are required to describe a transaction detail in the correct format, then the following conditions are true:

- The physical record occupies characters 1 through 80
- The logical record occupies characters 1 through 65
- Characters 66 through 80 are part of the physical record but not part of the logical record. Characters in these positions are meaningless and should be disregarded.

5.6.2 Fixed Length Records and Variable Length Records

Information reporting physical records may be of fixed length or of variable length. The “Physical Record Length” field in the File Header (01) record specifies number of characters in fixed length records. If the “Physical Record Length” field is defaulted, the file contains variable length records.

5.6.3 Free Format Fields/Field Delimiters

The standard employs free-format fields within records, that is, fields without a predetermined length. Free-format fields allow more flexibility for reporting diverse cash management data.

- Fields within records are delimited by a comma **“,”**.
- The end of a record that does not include text is indicated by the delimiter slash **“/”**.

The delimiter slash "/" indicates the end of a record that does not include "Text" (as defined by the 16 – Transaction Detail). It also indicates the end of the last field within the record. Do not use a comma to mark the end of the last field. A comma followed by a slash is used to indicate the default field value for the last field in the record. The Sample Transmission in Appendix D and the example in each record description indicate the correct use of delimiters.

Some fields within records are optional. To indicate that an optional field has the default value or is left unspecified, adjacent delimiters ",," or ",/" are used. Optional fields at the end of a record cannot be omitted but must be indicated by adjacent delimiters.

Because a comma "," and a slash "/" are used as field/record delimiters, neither can be included in any field except "Text". Text may include comma "," or slash "/" but may not begin with comma "," or slash "/".

5.6.4 Local Language

Characters within records shall apply the UTF8/Multi-byte format to allow for single byte and double byte character sets within the 16, 88, 89 and 90 records.

5.6.5 Leading Zeros

The record type is indicated by two digits. Both are significant. Do not delete the leading zero for record types 01, 02 and 03.

All three digits in a type code are significant. Do not delete leading zeros for status type codes 001 through 099.

Based on customer preference, account numbers may be transmitted with or without leading zeros. Leading zeros in a customer account number are significant. For example, the account number "0087654" would not be transmitted as "87654". Please note: many modern reporting systems allow for the removal of leading zeroes to allow for consistent reporting across financial institutions.

5.6.6 End of Record

The end of a logical record that does not contain "Text" is indicated by the delimiter slash "/".

The last field in the type 16 Transaction Detail record is "Text". The text must not begin with slash "/", but may contain comma "," or slash "/" after the first text character. Therefore, the end of a record ending in text cannot be delimited using these characters. Instead, the logical record continues until another record that is not a continuation (88) record begins. If fixed length records are specified, spaces between the end of the text and the end of the physical record must be filled with blank characters.

If a type 16 record does not include text, the text field is defaulted, as indicated by the adjacent delimiters ",/".

6 Record Formats

6.1 01 – FILE HEADER

The file header marks the beginning of a file. It identifies the sender and the receiver of the transmission, and it describes the structure of the file. All fields are required except those labeled optional.

Field Name	Field Description

Field Name	Field Description
Record Code	01
Sender Identification	Transmitter of file. Alphanumeric.
Receiver Identification	Next recipient of file. Alphanumeric.
File Creation Date	YYMMDD format; sender date.
File Creation Time	Military format (2400); sender Times are stated in military format (0000 through 2400). 0000 indicates the beginning of the day and 2400 indicates the end of the day for the date indicated. The time will be the local time of the sender.
File Identification Number	Identification number defined by the sender. The number must be new for each file with the same file creation date. Used to uniquely identify those files transmitted between a sender and a receiver on a given date.
Physical Record Length	Optional. Number of characters in a physical record. Default is variable length records.
Block Size	Optional. Number of physical records in a block. Default is variable block size.
Version Number	1 = BAI1 2 = BAI2 3 = BTRS

Table 3 File Header (Field code 01)

6.1.1 Delimiters

- Comma "**,**" delimits fields.
- Slash "**/**" delimits the end of the logical record.
- Adjacent delimiters, "**,,**" or "**,/**" identify defaulted or unspecified fields.
- All defaulted or unspecified fields must be identified.

6.1.2 Sample 01 Record

01,122099999,123456789,120621,0200,1,80,,3/

Last National Bank (122099999) is sending data to its third-party intermediary, Data Corp. (123456789). The file was created June 21, 2012 (120621) at 2:00 AM (0200). This is the first file created on this date and is identified as number 1. The physical records in this file are (80) characters in length. No block size is specified. This default is noted by adjacent delimiters (**,,**). The file is in Version (1) of the X9 BTRS Document. The slash (/) indicates that the preceding character was the last significant character in this physical record.

6.2 02 – GROUP HEADER

The group header identifies a group of accounts, all of which are from the same originator and include the same As-of-Date. All fields are required except those labeled optional.

Field Name	Field Description

Record Code	02 Include one 02 record per bank.
Ultimate Receiver Identification	Optional. Final receiver of this group of data. Alphanumeric.
Originator Identification	Originator. Alphanumeric.
Group Status	1 = Update 2 = Deletion 3 = Correction 4 = Test Only *See* "Group Status Codes" for definitions.
As-of-Date	YYMMDD; Originator date. This date cannot be in the future relative to the time zone in which the file is generated.
As-of-Time	Optional. Military format (2400); originator time zone. For reference only. Times are stated in military format (0000 through 2400). 0000 indicates the beginning of the day and 2400 indicates the end of the day for the date indicated.
Currency Code	These codes shall be based on international standard ISO 4217 and are the same as those used by SWIFT.
As-of-Date Modifier	Optional. 1 = Interim previous-day data 2 = Final previous-day data 3 = Interim same-day data 4 = Final same-day data (use for final Controlled Disbursement Presentment) As-of-Date Modifier does not affect processing. For reference only.

Table 4 GROUP HEADER (Field code 02)

6.2.1 Delimiters

- Comma "," delimits fields.
- Slash "/" delimits the end of the logical record.
- Adjacent delimiters ",," indicate defaulted or unspecified fields.
- All defaulted or unspecified fields must be identified.

6.2.2 Sample 02 Record

02,031001234,122099999,1,040620,2359,2,USD,2/

A group of data is being sent to a bank (031001234) from Last National Bank (122099999). The data in the file has a group status of update (1) and the data are as-of-June 20, 2004 (040620) at 11:59 PM. The group currency code field is USD. The data are final previous-day data as signified by the As-of-Date modifier (2).

6.3 03 – ACCOUNT IDENTIFIER AND SUMMARY STATUS

This record identifies the account number and reports summary and status information. Summary information may be accompanied by an item count and funds availability distribution. An 03 record must be used to

identify each account. All fields are required except those labeled optional. 03 records cannot report transaction detail. Detail is reported in record 16.

Field Name	Field Description
Record Code	03 Include one 03 record per account within a bank.
Customer Account Number	Customer account number at originator financial institution. The field is alphanumeric and includes significant leading zeroes. Must not contain a comma "," or slash "/".
Currency Code	Required. These codes shall be based on international standard ISO 4217 and are the same as those used by SWIFT.
*Type Code	Conditional. Identifies the type of summary or status data. *See* Appendix A for type codes. Default indicates that no status or summary data are being reported. For conditional rules, see Annex D.
*Amount	Optional. Expressed without a decimal. The currency code will determine the implied decimal. Status amounts are signed positive "+" or negative "-". Default of sign is positive. Summary amounts may only be positive or unsigned. Default of field indicates that no amount is being reported.
**Item Count	Optional. Integer field. Default is "unknown." For summary type codes only; must be defaulted for Status type codes. No implied decimal.
**Funds Type	Optional. Types are 0 = immediate availability (zero),1 = one-day availability, 2 = two or more days availability, S = distributed availability, V = value dated, Z = unknown (default) If funds type = S, the next three fields are immediate availability amount, one-day availability amount, and two or more day availability amount. See section "Funds Type." If funds type = V, the next two fields are value date (YYMMDD) and value time in military format (2400). Both are for the originator's business day and time zone. Value date is the date the originator makes funds available to the customer. Value dates prior to the As-of-Date in the Group Header record are not prohibited but are discouraged. Be prepared to receive such value dates. Prior value dates may be used to adjust availability for specific transactions. Value time is optional and may be defaulted by adjacent delimiters. Times are stated in military format (0000 through 2400). 0000 indicates the beginning of the day and 2400 indicates the end of the day for the date indicated. *See* Section "Funds Type." Amounts in the Funds Type field have the same currency code and implied decimals specified in the 03 record. Amounts in the Funds Type field are not included in the Account, Group and File Trailer batch control totals.

*Type 03 records may report several different status and/or summary amounts for the same account. For example, a single 03 record might report ledger balance and available balance, as well as the amount, item count and funds type for total credits and total debits. The "Type Code," "Amount," "Item Count" and "Funds Type" fields are repeated to identify each status or summary type. *See* Appendix A for Type Codes. Additionally, Type 03 records are not required to report status codes. If, however, status codes are present, then specific conditional rules apply. See Annex D.

**Type 03 records allow the reporting of item counts and funds availability for summary data only. Status availability is reported by individual type codes (e.g., type code 072, one-day float). The "Item Count" and "Funds Type" fields following a status amount shall be defaulted by adjacent delimiters.

Table 5 ACCOUNT IDENTIFIER AND SUMMARY STATUS (Field code 03)

6.3.1 Delimiters

- Comma "**,**" delimits fields.
- Slash "*/*" delimits the end of the logical record.
- Adjacent delimiters "**,,**" or "**,/**" indicate defaulted or unspecified fields.
- All defaulted or unspecified fields must be identified.

Note An 03 record must include an account number but might not include status or summary data. For example, an 03 record would not report status or summary data if it is used only to identify the account number for Transaction Detail (16) records that follow. In this case, the account number would be followed by the currency, then four commas and a slash ",,,,,/" to delimit the Type Code, Amount, Item Count and Funds Type fields, which are defaulted.

Example: 03,5765432**,**GBP**,,,,/**.

6.3.2 Sample 03 Record

03,0975312468,GBP,010,500000,,,190,70000000,4,0/

Data in this record are for the sending bank's account number (0975312468). The leading zero in the account number is significant and must be included in the data. The currency code is set to GBP. The amount for type code (010) is 5,000.00 GBP (500000). The Item Count and Funds Type fields are defaulted to "unknown" as indicated by adjacent delimiters (**,,,**). The amount for type code (190) is 700,000.00 GBP (70000000). The item count for this amount is four (4) and the availability is immediate (0).

6.4 16 – TRANSACTION DETAIL

This record reports transaction detail with accompanying text and reference numbers. All fields are required except those labeled optional.

Field Name	Field Description
Record Code	16 Include one 16 record per credit or debit within an account.
Type Code	Identified the type of detail data. *See* Appendix A for type codes. Type code 890 has been established to transmit information not associated with an Account Status, Summary amounts or Transactions. Type code 890 is neither a debit nor a credit. It is a detail type code and is used in Type 16 Transaction Detail records. The Text field in a Type 16 record with 890 type code contains the non-monetary information. The Amount and Funds Type fields shall be defaulted and the Bank Reference Number and Customer Reference Number may be either used as part of the message or defaulted. An example of such a message is illustrated below: 16,890,,,,,detail reports will be delayed until 11:00 AM.
Amount	Optional. Always positive (unsigned). Expressed without a decimal. Currency code in a Group Header record or in an Account Identifier record determines implied decimal. Default indicates that no amount is being reported.

Funds Type	0 = immediate availability (zero) 1 = one-day availability 2 = two-or-more-days availability S = distributed availability V = value dated Z = unknown (default) If funds type = S, the next three fields are immediate availability amount, one-day availability amount, and more than one-day availability amount. If funds type = V, • The next two fields are value date (YYMMDD) and value time in military format (2400). Both are for the originator's business date and time zone. The value date is the date the originator makes funds available to the customer. • For value dates different than the As-of-Date in the Group Header record, funds type V is the preferred method for indicating future or past dated transactions. Use prior value dates to adjust availability. Use future value dates to indicate transactions with future availability. (Note: Never use "V" to indicate an as-of post date.) • Value time is optional and may be defaulted by adjacent delimiters. Times are stated in military format (0000 through 2400). 0000 indicates the beginning of the day and 2400 indicates the end of the day for the date indicated.
Bank Reference Number	Optional. Alphanumeric field defined by the originator. Must not contain a comma "," or a slash "/". The length of the Bank Reference Number is not limited. However, the use of reference numbers over 76 characters in length is highly discouraged because many processors use 80 character records.
Customer Reference Number	Optional. Alphanumeric field defined by the originator. Must not contain a comma "," or a slash "/". The length of the Customer Reference Number is not limited. However, the use of reference numbers over 76 characters in length is highly discouraged because many processors use 80 character records. The Customer Reference Number will be the check number for the Transaction Detail type codes 474, 475 and 395.
Text	Optional alphanumeric field defined by the originator. Must not begin with a slash "/", but may contain a comma "," or a slash "/" after the first character.

Note Only one detail transaction may be reported by each Type 16 record. Record 16 cannot report status or summary amounts. Status and summary are reported in record 03.

Table 6 TRANSACTION DETAIL (Field code 16)

6.5 Delimiters

Comma "," delimits fields.

Adjacent delimiters "**,,**" indicate defaulted or unspecified fields.

The end of the "text" field is indicated by the beginning of the next record (unless it is a type 88 continuation record). Spaces between the end of the text and the end of the physical record must be filled with blanks if fixed length records are used. If the Type 16 record does not include text, the end of the logical record is indicated by the adjacent delimiters "**,/**" following the Customers Reference Number field.

Note Transaction Detail records report activity in accounts identified by 03 records. All Type 16 records following an 03 record refer to the account identified in the "Customer Account Number" field. (*See* Record Type 03.)

6.5.1 Sample 16 Record

16,165,1500000,1,DD1620,,DEALER PAYMENTS

This is a Detail Record (16). The amount for type code 165 is 15,000.00 USD (1500000) and has one-day (1) deferred availability (1). The bank reference number is (DD1620). There is no customer reference number (**,,**). The text is (DEALER PAYMENTS). The remainder of the field is blank filled if fixed length records are used, and the text field is delimited by the fact that the next record is not "88".

6.6 88– CONTINUATION RECORD

Record 88 is a Continuation record. If the data in any type of record exceed the physical record size, or if dividing the record is desirable for any other reason, an 88 record allows the data to continue in the same format. The continuation is labeled as a type 88 record. A Continuation (88) record may follow any type of record, including another Continuation (88).

Any record type may be continued by a type 88 Continuation record. A field may not be split across physical records unless that field is a text field.

Field Name	Field Description
Record Code	88
(Next Field)	The "Record Code" field is followed by a continuation of the preceding record. The format is exactly the same as in the preceding record. If the preceding record ended within a text field, the text continues in the 88 record. If the preceding record did not end within the text field, the 88 record continues with whatever field follows the final field in the preceding physical record. Do not split non-text fields between records. If a non-text field is begun in one record, it must be completed in that record. The following 88 record may continue with the next field. For Fed/CHIPS CTP invoice formats please reference Annex D.

Table 7 CONTINUATION RECORD (Field code 88)

6.6.1 Delimiters

- Delimiters are the same as for the preceding record. If the preceding physical record does not end within a text field, that record shall end with a delimiter slash "/", even if the following Continuation (88) includes or begins with text. If the preceding physical record ends within text that is to be continued, no delimiter shall be placed at the end of that record.
- If a record is to be continued by a type 88 Continuation record, the last field before the continuation is delimited by a slash "/", not by a comma and a slash "**,/**". The slash replaces the comma that ordinarily delimits that field. The example below correctly illustrates the use of delimiters.

6.6.2 Sample 88 Record

16,115,10000000,S,5000000,4000000,1000000/
88,AX13612,B096132,AMALGAMATED CORP. LOCKBOX
88,DEPOSIT-MISC. RECEIVABLES

If the preceding record was a 16 record that ended with the Funds Type field, the 88 record would continue with "Bank Reference Number."

See Annex D for information on Wire Remittance Information Fedwire/CHIPS Wire Remittance Information in the BTRS 88 Record

6.7 89 – BATCH DETAIL RECORD

A Batch Detail record contains the individual breakdown of the transaction described in the previous Transaction Detail record (16). This field type is not required and should be optional based on customer's request. A Batch Detail record may follow a previous Transaction Detail record (16) or a Continuation (88) record. Each batch shall appear in its own 89 record. An 89 record must always contain an amount.

The 89 record may only apply to lockbox deposits, standard deposits, and ACH settlement transactions as described below.

Field Name	Field Description
Record Code	89
(Next Field)	The "Record Code" field is followed by the individual breakdown of the transaction described in the previous Transaction Detail record (16). <u>Lockbox Deposit – Type Code 115</u> 1. <Amt> Check amount 2. <Ccy> Currency (Optional) 3. <ChqNb> Check number 4. <Acct> Check account number 5. <Id> Transit routing number (Optional) 6. <BatNb> Batch Number 7. <Dt> Check date 8. <Nm> Remitter (Optional) <u>Deposit – Type Code 175</u> 1. <Amt> Check amount 2. <Ccy> Currency (Optional)

	3. <ChqNb> Check number 4. <Acct> Check account number 5. <Id> Transit routing number (Optional) 6. <Dt> Check date 7. <Nm> Check payee (Optional) <u>Cash Letter Deposit – Type Code 187</u> 1. <Amt> Amount 2. <Ccy> Currency (Optional) 3. <ChqNb> Check number 4. <Acct> Account Number 5. <Id> Transit routing number (Optional) 6. <Dt> Check date 7. <Nm> Check payee (Optional) <u>ACH Credits/Debits within a Settlement Batch – Type Code 166 or 466</u> 1. <CdtDbtInd> Credit/Debit 2. <Ref> Bank Reference Number 3. <Dt> Settlement Date 4. <Amt> Amount 5. <OrigNm> Origin Company Name 6. <OrgId> Origin ID 7. <AddtlNtryInf> Company Entry Description 8. <RltdDt> Company Descriptive Date 9. <ActlDt> Effective Entry/Settlement Date 10. <BatNb> Batch Number 11. <SeqNb> Trace Number 12. <Nb> Individual Identification Number 13. <Nm> Individual Name 14. <AddtlTxInf> Discretionary Data

Table 8 BATCH DETAIL RECORD (Field code 89)

6.7.1 Delimiters

- Delimiters are the same as for the preceding record. If the preceding physical record does not end within a text field, that record shall end with a delimiter slash "/", even if the following Continuation (88) includes or begins with text. If the preceding physical record ends within text that is to be continued, no delimiter shall be placed at the end of that record.
- If a record is to be continued by a type 88 Continuation record, the last field before the continuation is delimited by a slash "/", not by a comma and a slash "**,/**". The slash replaces the comma that ordinarily delimits that field. The example below correctly illustrates the use of delimiters.

6.7.2 Sample 89 Record

Example of a Deposit containing 5 checks:

16,175,500000,S,0,500000,0,2090307963,1234567890,/
89,<Amt> 100000 <ChqNb> 12345 <Acct> 134555 <Dt> 02042012 <Nm> Emma Smith
89,<Amt> 100000 <ChqNb> 12346 <Acct> 14566 <Dt> 02042012 <Nm> Emma Jones
89,<Amt> 100000 <ChqNb> 12347 <Acct> 2356787 <Dt> 02042012 <Nm> Emma Hayes
89,<Amt> 100000 <ChqNb> 12348 <Acct> 234567 <Dt> 02042012 <Nm> Emma Rose
88,Rushmore

89,<Amt> 100000 <ChqNb> 12349 <Acct> 1336699 <Dt> 02042012 <Nm> Emma Jane

6.8 90 – INVOICE DETAIL RECORD

The Invoice Detail record (90) contains the individual invoice transaction described in the previous Batch Detail record (89). This field type is not required and should be optional based on customer's request. An Invoice Detail record (90) must follow a Batch Detail record (89). Examples of items that would appear in an Invoice Detail record (90) are invoices for items in a lockbox deposit.

Field Name	Field Description
Record Code	90
(Next Field)	The "Record Code" field is followed by the invoice information described in the previous Batch Detail record (89). Because 89 records are limited to BTRS codes 115, 166, 175, 187 and 466, 90 records shall also be limited to those codes. The Invoice Detail record (90) will contain one item per record and may be continued with a Continuation Record (88). Multiple invoices would be presented by an equal number of Invoice records (90).

Table 9 INVOICE DETAIL (Field code 90)

6.8.1 Format of an Invoice Detail Record

The 90 Record provides Invoice information about each transaction. The following tags should be used when describing invoice information in the 90 record.

Description	Tag
Remittance Originator	<Invcee>
Remittance Beneficiary	<Invcr>
Primary Remittance Document Info	<RfrdDocNb>
Actual Amount Paid	<RmtdAmt>
Gross Amt of Remittance Document	<<DuePyblAmt>
Amount of Negotiated Discount	<DscntApldAmt>
Adjustment Information	<AdjstmntAmtAndRsn>
Date of Remittance Document	<RfrdDocRltdDt>

6.8.2 Delimiters

- Delimiters are the same as for the preceding record. If the preceding physical record does not end within a text field, that record shall end with a delimiter slash "/", even if the following Continuation (88) includes or begins with text. If the preceding physical record ends within text that is to be continued, no delimiter shall be placed at the end of that record.
- If a record is to be continued by a type 88 Continuation record, the last field before the continuation is delimited by a slash "/", not by a comma and a slash ",/". The slash replaces the comma that ordinarily delimits that field. The example below correctly illustrates the use of delimiters.

6.8.3 Sample 90 Record

Example of a Lockbox Deposit containing 3 Checks with 5 Invoices:

Remitter	Check Amount	Check #	Account #	Date	Invoice
Company A	629.31	6850	20000331821	2/4/2012	91259127
Company B	1017.29	114212	0063830701	1/12/2012	91260962
Company C	1927.68	6139	2018624080	7/11/2012	91261011
					91261102
					91261103

A combination of Record 89 and 90 are used to report the Lockbox deposit and the items within that deposit within one entry. The Items are reported under the separate 89 record so that the values are not double-reported, as they would if they were likewise reported within a Record 16. Note that since only the Invoice Number is available, only "<RfrdDocInf>" is reported.

16,115,357428,S,101729,62931,192768,REF123456,223344/
88,AX13612,B096132,AMALGAMATED CORP. LOCKBOX
88,DEPOSIT-MISC. RECEIVABLES, LOCKBOX NUM 223344
89,<Amt> 62931 <ChqNb> 6850 <Acct> 20000331821 <Dt> 02042012 <Nm> Company A
90, <RfrdDocInf> 91259127
89,<Amt> 101729 <ChqNb> 114212 <Acct> 0063830701 <Dt> 01122012 <Nm> Company B
90, <RfrdDocInf> 91260962
89,<Amt> 192768 <ChqNb> 6139 <Acct> 2018624080 <Dt> 07112012 <Nm> Company C
90, <RfrdDocNb> 91261011<DuePyblAmt>50000<RmtdAmt>50000
90, <RfrdDocNb> 91261012<DuePyblAmt>55000<DscntApldAmt>5000<RmtdAmt>50000
90, <RfrdDocNb> 91261013<DuePyblAmt>92768<RmtdAmt>92768

6.9 49 – ACCOUNT TRAILER

The Account Trailer record provides account level control totals. All fields are required.

Field Name	Field Description
Record Code	49
Account Control Total	Algebraic sum of all "Amount" fields in the preceding type 03 record and all type 16 and 88 records associated with that account. The total does not include amounts reported in Funds Type or Item Count fields. This field includes the sign "+" or "-" for the total. If no sign precedes the total, the default is positive.
Number of Records	Integer. The total number of records in the account, including the 03 record and all 16 and 88 records, and including this account trailer 49 record.

Table 10 ACCOUNT TRAILER (Field code 49)

6.9.1 Delimiters

- Comma "," follows "Record Code" and "Account Control Total."
- Slash "/" follows "Number of Records" and indicates the end of the logical record.

Note There must be one 49 record for each 03 record. All 16 and 88 records between the 03 record and the 49 record refer to the account identified in the 03 record.

6.9.2 Sample 49 Record

49,18650000,3/

The Account Trailer record contains the account control total (18650000) which is the algebraic sum of "Amounts" in all records back to and including the preceding 03 record. The Account Control total does not include amounts in Funds Type fields. The number of records (3) includes the 03 record, a Detail (16) or Continuation (88) record, and this Account Trailer (49) record.

6.10 98– GROUP TRAILER

The Group Trailer record provides group level control totals. All fields are required

Field Name	Field Description
Record Code	98
Group Control Total	Algebraic sum of account control totals in this group. This field includes the sign ("+" or "-") for the total. If no sign precedes the total, the default is positive.
Number of Accounts	Integer. The number of 03 records in this group.
Number of Records	Integer. The total number of all records in this group. Include the 02, all 03, 16, 49, and 88 records, and this 98 record.

Table 11 GROUP TRAILER (Field code 98)

6.10.1 Delimiters

- Comma "," follows "Record Code," "Group Control Total," and "Number of Accounts."
- Slash "/" follows "Number of Records" and indicates the end of the logical record.

Note There must be one 98 record for each 02 record.

6.10.2 Sample 98 Record

98,11800000,2,6/

This Group Trailer record contains the group control total (11800000) which is the algebraic sum of all account control totals in this group. The number of accounts is two (2), reflecting the two account records (record type 03) in this group. The number of records in this group (6) includes the 02 record, all 03, 16, 88, and 49 records and this 98 record.

6.11 99 – FILE TRAILER

The File Trailer record provides file control totals. All fields are required.

Field Name	File Description
Record Code	99
File Control Total	Algebraic sum of all group control totals in this file. This field includes the sign (“+” or “-”) for the total. If no sign precedes the total, the default is positive.
Number of Groups	Number of 02 records in this file.
Number of Records	Total number of records of all codes in the file, including Continuation records, headers and trailers (and including this 99 record); exclude any device-oriented records, JCL, tape marks, and so on.

Table 12 FILE TRAILER (Field code 99)

6.11.1 Delimiters

- Comma “,” follows “Record Code,” “File Control Total,” and “Number of Groups.”
- Slash “/” follows “Number of Records” and indicates the end of the logical record.

Note There must be one 99 record for each file. The 99 record indicates the end of the logical file.

6.11.2 Sample 99 Record

99,1215450000,4,36/

The File Trailer record contains the file control total (1215450000) which is the algebraic sum of all group control totals for this file. The number of groups (4) is the number of 02 records in this file. The number of records (36) is the total number of records in this file, including this 99 record.

7 Data Elements

7.1 ACCOUNT CONTROL TOTAL

Records: 49
Numeric, signed

The algebraic sum of all “Amount” fields in the preceding type 03 record and all type 16 and 88 records associated with that account. The total does not include amounts reported in Funds Type fields. This field includes the sign “+” or “-” for the total. If no sign precedes the total, default is positive.

7.2 AMOUNT

Records: 03, 16, 88
Numeric, signed

Reports the amount of the balance, summary or transaction identified by the preceding type code. Optional.

If the preceding type code is an account status code, “Amount” may be “+,” “-” or unsigned. If the preceding type code is an Account Summary or Transaction Detail code, “Amount” must be “+” or unsigned only.

“Amount” is expressed without a decimal point “.” Instead, 0, 1, 2 or 3 characters at the end of the field are designated as implied decimal places. The currency code determines the number of implied decimal places. The implied decimal for most currency codes is two (2) places, however some currencies have 0, 1 or 3 decimals. Currencies decimals are governed by ISO 4217 and may be referenced here:

http://en.wikipedia.org/wiki/ISO_4217

Example: 150,097.36 USD is 15009736. The currency “USD” implies 2 decimal places.

7.3 AS-OF-DATE

Records: 02
Numeric, six digits

Date for which reported information is current. Refers to the posting or accounting date at the originator financial institution.

YYMMDD Format (Numeric)

7.4 AS-OF-TIME

Records: 02
Numeric, four digits

Time of day, in originator time zone, for which reported information is current. For reference only. Optional.

Military Format, 24 hours. 0001 through 2400.

Times are stated in military format (0000 through 2400). 0000 indicates the beginning of the day and 2400 indicates the end of the day for the date indicated.

7.5 AS-OF-DATE MODIFIER

Records: 02
Numeric, one digit

Distinguishes same-day data from previous-day data and interim data from final data. As-of-Date Modifier is for identification only and does not affect processing.

1 = Interim/Previous-day
2 = Final/Previous-day
3 = Interim/Same-day
4 = Final/Same-day

Final: Status and Summary data at the close of business on the As-of-Date.
Interim: Status and Summary data may not reflect all activity on the As-of-Date.
Previous-day: As-of-Date is the previous business day.
Same-day: As-of-Date is the current business day. For intraday reporting.

7.6 BANK REFERENCE NUMBER

Records: 16
Alphanumeric

A field defined by the originator. Must not contain comma “,” or slash “/”. Optional.

The length of the Bank Reference Number is not limited. However, the use of reference numbers over 76 characters in length in highly discouraged because many processors use 80 character records.

7.7 BLOCK SIZE

Records: 01
Numeric

Number of physical records in a block. Optional.

7.8 CUSTOMER ACCOUNT NUMBER

Records: 03
Alphanumeric

- The customer commercial account number at originator financial institution.
- Include significant leading zeroes.
- Must not contain comma "," or slash "/".

7.9 CURRENCY CODE

Records: 02, 03
Alpha, 3 characters

Identifies the currency of reported amounts in Amounts and Funds Type fields. These codes shall be based on international standard ISO 4217 and are the same as those used by SWIFT.

See Appendix B for valid currency codes.

The currency code determines the number of implied decimals in the "Amount" and "Funds Type, Amount" fields. Decimal points "." are not used in amount fields. Instead, 0, 1, 2 or 3 characters at the end of the field are designated as implied decimal places. Amounts for most currency codes have two (2) implied decimal places. Exceptions are listed at the end of Appendix B.

Example: 150,097.36 USD is 15009736. The Currency code "USD" implies 2 decimal places.

7.10 CUSTOMER REFERENCE NUMBER

Records: 16
Alphanumeric

The Customer Reference Number will be the check number for Transaction Detail type codes 474, 475 and 395.

7.11 FILE CONTROL TOTAL

Records: 99
Numeric, signed

Algebraic sum of all group control totals in this file. This field includes the sign ("+" or "-") for the total. If no sign precedes the total, the default is positive.

7.12 FILE CREATION DATE

Records: 01
Numeric, 6 characters

Date sender created file: **YYMMDD** Format

7.13 FILE CREATION TIME

Records: 01
Numeric, 4 characters

Time of day sender created file. Used in file header only.

Military Format: 24 hours. 0001 through 2400.

Times are stated in military format (0000 through 2400). 0000 indicates the beginning of the day and 2400 indicates the end of the day for the date indicated.

7.14 FILE IDENTIFICATION NUMBER

Records: 01
Numeric

Sender determined identification number, used to identify uniquely those transmissions between a sender and a receiver. Each file with the same creation date must have a different identification number.

7.15 FUNDS TYPE

Records: 03, 16
Composite

Indicates the availability of the Account Summary or Transaction Detail "Amount." Account status availability is reported by using a separate type code. The Funds Type field following an Account Status type code in the 03 record shall be defaulted, as indicated by the adjacent delimiters "**,,**" or "**,/**"

"Funds Type" is a composite data element. It may occupy one field or several separately delimited fields. The first field is a single-character code that indicates the distribution of availability, and therefore defines any fields that follow.

These codes are:

Z = Unknown (default)
0 = Immediate availability
1 = One day availability
2 = Two-or-more days availability
V = Value dated
S = Distributed availability

"Z, 0, 1 or 2" indicates the availability of the entire "Amount".
No other "Funds Type" fields follow.

"V" indicates the availability of the entire amount on the specified date. The next field is the value date in YYMMDD format and the value time in military (2400) format. Both are for the originator's business date as indicated in the 02 record.

For value dates different than the As-of-Date in the Group Header record, funds type V is the preferred method for indicating future or past dated transactions. Use prior value dates to adjust availability. Use future value dates to indicate transactions with future availability.

Value time is optional and may be defaulted by adjacent delimiters. Times are stated in military format (0000 through 2400). 0000 indicates the beginning of the day and 2400 indicates the end of the day for the date indicated.

Example:

…,V,110701,1300,….

The entire amount is value dated. July 1, 2011, available at 1:00 PM

“S” indicates availability distributed over several days.

S – the next three fields are:

-Immediate availability

-One-day availability

-Two-or-more days availability

Example: …,S,150000,100000,90000,….

Availability funds amounts reported under “Funds Type” in distributed availability fields have the same currency code and implied decimal as the “Amount” field to which they refer. Available funds amount may be signed positive “+” or negative “-”. Default of sign is positive.

This allows float adjustments at the summary or detail level. Funds availability amounts may be associated with both debits and credits. Positive values indicate an increase in amount and negative values indicate a decrease in amount, regardless of whether the type code is a debit or credit. A record with no “Amount” field may include Funds Type availability amounts that are used to adjust float levels.

Available funds amounts are ***not*** included in Account, Group, and File control totals.

The sum of available funds may or may not equal the “Amount” field they describe.

7.16 GROUP CONTROL TOTAL

Records: 98
Numeric, signed

The algebraic sum of account control totals in this group. This field includes the sign (“+” or “-”) for the total. If no sign precedes the total, the default is positive.

7.17 GROUP STATUS

Records: 02
Numeric, one digit

The Group Status code specifies exactly how data in a group of accounts are to be processed.

7.17.1 Group Status Codes

1= Update

2= Deletion

3= Correction

4= Test Only

If a file must be retransmitted, the group status code does not change.

7.17.1.1 1 – Update

Most Information reporting transmissions are “updates.” “Update” is intended for both previous-day reporting and same-day reporting. “Update” reports all status, summary, and detail data.

Processing:

- An “update” must contain an 03 record for each account.
- If no data of any type code are on file, post the “update”.
- If status or summary data with the exact same type code as reported “update” data are already on file, delete the existing data and replace them with the “update” data. An account file can contain only one amount for each Status or Summary type code.
- If status or summary data with different type codes than reported “update” data are on file, post “update” data but do not change existing data with different type codes. They remain unchanged.
- Post any transaction detail data and do not affect existing detail, regardless of type code. A file can contain several details with the same type code.

7.17.1.2 2 – Deletion

“Deletion” removes all previously reported information for the indicated group of accounts on a particular As-of-Date. A deletion must contain an 03 record for each account to be deleted. This 03 record must include all fields, although only the “Customer Account Number” and “Record Code” must be specified. Others may be defaulted by adjacent delimiters. After a “deletion,” no data remain on file for an account on the specified As-of-date. “Deletion” is used when data are substantially incorrect, and accurate data are not yet available. After a “deletion” group, an “update” or “correction” group may follow to provide good data.

Processing: Completely eliminate all data on file for the group of accounts on the specified As-of-Date.

Warning: “Deletion” will destroy all data regardless of source. Be extremely careful when using deletion.

Suggestion: If only a few status or summary fields require correction, an “update” will allow replacement of those fields without affecting other data on file.

7.17.1.3 3 – Correction

“Correction” is used when previously transmitted data are substantially wrong. It allows all previously reported data to be deleted and replaced with corrected data.

Processing:

- Delete any data already on file for the account on that As-of-Date
- Post status, summary and detail data to file

Warning: Any data of any type code already on file regardless of source will be lost when “correction” is posted.

7.17.1.4 4 – Test Only

"Test Only" indicates a file that must be edited for syntax and batch totals but does not affect the receiver's live files. "Test Only" transmission is point-to-point only.

7.17.2 Group Status Code Processing Matrix

	1 Update	2 Deletion	3 Correction	4 Test Only
Data on File:				
Status – same type code	Replace	Delete	Replace	No Effect
Status – different type code	No Effect	Delete	Delete	No Effect
Summary – same type code	Replace	Delete	Replace	No Effect
Summary – different type code	No Effect	Delete	Delete	No Effect
Detail – same type code	No Effect	Delete	Replace	No Effect
Detail – different type code	No Effect	Delete	Delete	No Effect
New Data:				
Status	Post	Do Not Post	Post	Do Not Post
Summary	Post	Do Not Post	Post	Do Not Post
Detail	Post	Do Not Post	Post	Do Not Post

Table 13 Group Status Code Processing Matrix

The preceding matrix describes the effect of processing at the type code level. However, actual processing might affect the entire account record, regardless of type code. Example: a deletion eliminates all data and would not need to read existing data at the type code level.

7.18 ITEM COUNT

Records: 03
Numeric, Integer

Reports the number of items included in an activity summary identified by the preceding type code. Default is "unknown," indicated by adjacent delimiters ",,".

Used only with activity summary type codes. This field shall be defaulted for account status type codes.

7.19 NUMBER OF ACCOUNTS

Records: 98
Numeric, Integer

Number of 03 records in this group.

7.20 NUMBER OF GROUPS

Records: 99
Numeric, Integer

Number of 02 records in this file.

7.21 NUMBER OF RECORDS

Records: 49, 98, 99
Numeric, Integer

Total number of records within the account, group, or file of all codes, including continuation records, headers, and trailers (and including this control record); exclude any device-oriented records, JCL, tape marks, and so on.

7.22 ORIGINATOR IDENTIFICATION

Records: 02
Alphanumeric

Identifies the originator: The originator is the depository financial institution where the account being reported is held.

Financial Institutions: ABA, SWIFT, CHIPS, or another mutually agreed on number.

Nonbank Processors: DUNS number or another mutually agreed on number.

7.23 PHYSICAL RECORD LENGTH

Records: 01
Numeric

Number of characters in each physical record. Specified if fixed length records are used. If Physical Record Length is not specified, the records in the file are of variable length. If Physical Record Length is not specified, the field is defaulted by adjacent delimiters ",," indicating variable length records. However,

“physical record length” does not replace or alter any record length specified in the communication protocol. This field is strictly confined to the scope of this standard.

7.24 RECEIVER IDENTIFICATION

Records: 01
Alphanumeric

Identifies sender of a file.

Financial Institutions: ABA, SWIFT, CHIPS, or another mutually agreed on number.

Nonbank Processors: DUNS number or another mutually agreed on number. RECORD CODE

Records: All
Numeric, 2 characters

Identifies record type. Always the first two characters of a record.

01 File Header
02 Group Header
03 Account Identifier and Summary Status
16 Transaction Detail
49 Account Trailer
88 Continuation
89 Detail continuation Record
90 Invoice Continuation Record
98 Group Trailer
99 File Trailer

7.25 SENDER IDENTIFICATION

Records: 01
Alphanumeric

Identifies sender of a file.

Financial Institutions: ABA, SWIFT, CHIPS, or another mutually agreed on number.

Nonbank Processors: DUNS number or another mutually agreed on number.

7.26 TEXT

Records: 16
Alphanumeric

Descriptive text for detail transactions. Text must not begin with slash “/”, but may contain comma “,” or slash (/) after the first character.

If a 16 record does not contain text, the “Text” field is defaulted by the adjacent delimiters “,/”.

If a 16 or an 88 record does contain text, the end of the “Text” field is not delimited. Because “Text” is the last field in these records, the record is not delimited by slash “/”. Instead, the logical record continues until the beginning of the next record that is not a continuation (88) record. If fixed length records are used, the spaces between the end of the text and the end of the physical record must be filled with blank characters.

The “Text” field may continue into an 88 Continuation record. If the 88 continuation does not begin *within* the text field, the previous record is ended with a slash “/”.

7.27 TYPE CODE

Records: 03, 16, 88
Numeric, 3 digits

Identifies the type of balance, summary, or transaction being reported. There are three classes of type codes:

- Account Status
- Activity Summary
- Transaction Detail

Account status and activity summary type codes are used in record 03 only. Transaction detail type codes are used in record 16 only.

Type code 890 has been established to transmit information not associated with an account status, summary amounts or transactions. Type Code 890 is neither a debit nor a credit. It is a detail type code and is used in Type 16 Transaction Detail records. The Text filed in a Type 16 record with an 890 Type Code contains the non-monetary information. The Amount and Funds Type fields shall be defaulted and the Bank Reference Number and the Customer Reference Number may be either used as part of the message or defaulted. An example of such a message is illustrated below.

Example: 16,890,,,,,detail reports will be delayed until 11:00 AM.

Appendix A lists Uniform Type Codes for use in Version 3 transmissions. Appendix A also includes an explanation of type code usage.

Only one amount for each status or summary type code can remain on file for each account on an As-of-Date. Many transaction details may be on file with the same type code.

7.28 ULTIMATE RECEIVER IDENTIFICATION

Records: 02
Alphanumeric

Identifies Ultimate Receiver. Ultimate Receiver is the processor that receives the final transmission of a group of Information reporting data in BTRS format before it is translated into usable form. Optional.

Financial Institutions: ABA, SWIFT, CHIPS, or another mutually agreed on number.

Nonbank Processors: DUNS number or another mutually agreed on number.

7.29 VERSION NUMBER

Records: 01
Numeric, one digit

For this version, always 3.

Annex A
(Normative)

UNIFORM INFORMATION REPORTING TYPE CODES AND TYPE CODE RANGES

A.1 Type Codes

Type codes are three-digit numbers used to identify the types of data reported. Codes are either Status, Summary, or Detail. General usage rules are as follows:

Account Status: These codes describe the status of the account (for example, ledger balance, available balance, and float position). Account Status type codes may only be used in the 03 record and associated Continuation (88) records. Status amounts may be positive or negative. Status type codes may not be accompanied by an item count or a funds type distribution. Only one amount for any status type code can remain on file for a given As-of-Date for a given account.

Activity Summary: These codes summarize account credit and debit activity (for example, total lockbox credits or total security debits) and may only be used in the 03 record and associated Continuation (88) records. Summary amounts are always positive or unsigned. Summary type codes may be accompanied by an item count or funds type distribution. Only one amount for any Summary type code can remain on file for a given As-of-Date for a given account.

Transaction Detail: These codes detail individual credits and debits (for example, individual lockbox deposit or foreign exchange debit) and may only be used in the 16 record. Detail amounts are always positive or unsigned. An account file may contain several transaction details with the same type code for a given As-of-Date.

A.2 Type Code Ranges

The following table indicates the ranges of three-digit numbers used for Status, Summary, and Detail type codes:

Type Codes	Description
001-099	Account status type codes
100	Total credits summary type code
101-399	Credit summary and detail type codes
400	Total debits summary type codes
401-699	Debit summary and detail type codes
700-799	Loan summary and detail type codes
900–919	Custom account status codes

920–959	Custom credit summary and detail
960–999	Custom debit summary and detail

Table 14 Type Code Ranges

Type Code for Non-monetary Information: Type Code 890 has been established to transmit information not associated with an Account Status, Summary amounts or Transactions. Type Code 890 is neither a debit nor a credit. It is a detail type code and is used in Type 16 Transaction Detail records. The Text field in a Type 16 record with an 890 Type Code contains the non-monetary information. The Amount and Funds Type fields shall be defaulted and the Bank Reference Number and Customer Reference Number may be either used as part of the message or defaulted. An example of such a message is illustrated below.

16,890,,,,,detail reports will be delayed until 11:00 AM.

A.3 Customized Type Codes

Whenever possible, processors should use Uniform BTRS Version 1 type codes. However, experience with BAI2 Version 2 indicates a demand for highly specialized codes for use in two-party reporting systems. These cods are created to meet the needs of specific customers and are often not of general interest to the cash management community. Instead of allocating uniform type codes to such specialized activities, the range for 900–999 has been reserved for customized type codes. X9 will not designate uniform type codes in this range, and users of the standard are free to assign unique type codes to meet customer needs within the following guidelines:

These codes shall only be used for transmissions between parties that have agreed to support the nonstandard type.

X9 will not support type codes in the 900-999 range and users of the standard might not accept these types in transmissions.

To request new codes, please logon to https://www.x9.org/standards/new_btrs_code_request/ and complete the request form.

The X9, BTRS committee will be quarterly to review new code requests.

Customized type codes shall fall within the following ranges:

Type Codes	Description
900–919	Account Status Codes
920–959	Credit Summary and Detail
960–999	Debit Summary and Detail

Table 15 Customized Type Codes

Type codes 920–999 that are used in 03 records are Summary type codes. Those used in 16 records are detail type codes.

A.4 BTRS Status Codes

Type Code	Description
010	Opening Ledger
015	Closing Ledger
020	Average Closing Ledger MTD
025	Average Closing Ledger YTD
030	Current Ledger
035	Opening Available
040	Opening Available Next Business Day
045	Closing Available
050	Average Closing Available MTD
055	Average Closing Available YTD
057	Investment Sweep Position
060	Current Available
070	0 Day Available
072	1 Day Available
073	Availability Adjustment
074	2 or More Days Available
076	Balance Adjustment
077	2 Day Available
078	3 Day Available
079	4 Day Available
080	5 Day Available
081	6 or More Days Available

A.5 BTRS Summary Codes

Type Code	Description
100	Total Credits
110	Total Lockbox Deposits
140	Total ACH Credits
167	ACH Settlement Credits
170	Total Other Check Deposits

BTRS Summary Codes Continued

Type Code	Description
180	Total Loan Proceeds
190	Total Incoming Money Transfers
207	Total International Money Transfer Credits
210	Total International Credits
215	Total Letters of Credit
230	Total Security Credits
250	Total Checks Posted and Returned
251	Total Debit Reversals
256	Total ACH Return Items
270	Total ZBA Credits
294	Total ATM Credits
307	Total Trust Credits
355	Investment Interest
370	Total Cash Deposits
371	Total Fees
390	Total Miscellaneous Credits
400	Total Debits
416	Total Lockbox Debits
450	Total ACH Debits
467	ACH Settlement Debits
470	Total Check Paid
480	Total Loan Payments
490	Total Outgoing Money Transfers
510	Total International Debits
515	Total Letters of Credit
530	Total Security Debits
550	Total Deposited Items Returned
551	Total Credit Reversals
570	Total ZBA Debits
628	Total Cash Center Debits
630	Total Debit Adjustments
632	Total Trust Debits
671	Total Fees

BTRS Summary Codes Continued

Type Code	Description
690	Total Miscellaneous Debits
720	Total Loan Payment

A.6 BTRS Detail Credit Codes

Detail Code	Summary Code	Description
115	110	Lockbox Deposit
141	140	ACH SEPA Transfer
165	140	ACH Received
166	167	ACH Originated Settlement
168	167	ACH Originated Settlement - Return
169	140	ACH Miscellaneous
171	180	Loan Deposit
172	170	Deposit Correction
173	170	Bank Prepared Deposit
174	170	Other Deposit
175	170	Check and Cash Deposit
187	170	Cash Letter
195	190	Money Transfer
201	390	Transfer - Automatic
206	190	Money Transfer - Book
208	207	Money Transfer - Cross-Border
213	215	Letter of Credit
214	210	Money Transfer - Foreign Exchange
216	190	Foreign Remittance
218	210	Foreign Collection
224	210	Commission
227	190	Standing Order
232	230	Sale of Debt Security
233	230	Securities Sold

BTRS Detail Credit Codes Cont.

Detail Code	Summary Code	Description
235	230	Matured Reverse Repurchase Order
236	230	Maturity of Debt Security
237	230	Collection
238	230	Collection of Dividends
242	230	Collection of Interest Income
243	230	Matured Fed Funds Purchased
244	230	Interest/Matured Principal Payment
249	230	Miscellaneous Security
252	251	Reversal
254	250	Posting Error
255	250	Check Return
257	256	ACH Received - Return
263	256	Overdraft
266	256	Return Item
268	256	Adjustment - Return Item
275	270	Transfer - ZBA
277	270	Transfer - Controlled Disb Funding
278	270	Adjustment - ZBA
295	294	ATM
301	390	Commercial Deposit
308	307	Trust Credit
346	230	Sweep Interest Income
347	230	Sweep from Investment or Loan
349	230	Principal Payments
351	230	Investment Sold
354	355	Interest
357	356	Adjustment
366	370	Cash Deposit
395	390	Check Reversal
397	390	Adjustment - Float
398	371	Fee - Reversal
399	390	Miscellaneous Credit

A.7 BTRS Detail Debit Codes

Detail Code	Summary Code	Description
408	690	Adjustment - Float
415	416	Adjustment - Lockbox
441	450	ACH SEPA Transfer
455	450	ACH Received
466	450	ACH Originated Settlement
468	467	ACH Originated Settlement - Return
469	450	ACH Miscellaneous
475	470	Check Paid
477	470	Bank Prepared Debit
481	480	Loan Payment
484	690	Check Draft
487	470	Cash Letter
495	490	Money Transfer
501	490	Transfer - Automatic
506	490	Money Transfer - Book
508	510	Money Transfer - Cross-Border
512	515	Letter of Credit - Commercial
513	515	Letter of Credit - Standby
514	510	Money Transfer - Foreign Exchange
516	490	Foreign Remittance
518	510	Foreign Collection
524	510	Commission
526	510	International Money Market Trading
527	490	Standing Order
531	530	Securities Purchased
542	530	Purchase of Debt Securities
544	530	Interest/Matured Principal Payment
549	530	Miscellaneous Security
552	551	Reversal
554	551	Posting Error

BTRS Detail Debit Codes Cont.

Detail Code	Summary Code	Description
555	550	Deposited Item Returned
557	450	ACH Received - Return
563	690	Overdraft
564	671	Fee - Overdraft
566	550	Return Item
567	671	Fee - Return Item
568	550	Adjustment - Return Item
575	570	Transfer - ZBA
577	570	Transfer - Controlled Disb Funding
578	570	Adjustment - ZBA
581	580	Controlled Disb Check
595	690	ATM
631	630	Adjustment
633	632	Trust Debit
651	530	Investment purchased
654	690	Interest
656	530	Sweep to Investment or Loan
658	530	Principal Payments
661	671	Fee - Account Analysis
666	628	Currency and Coin Shipped
695	690	Deposit Correction
696	690	Collection
698	671	Fee - Charged
699	690	Miscellaneous Debit
721	720	Loan Applied to Interest
722	720	Loan Applied to Principal
723	720	Loan Applied to Escrow
724	698	Loan Applied to Late Charges
725	720	Loan Applied to Buydown
726	698	Loan Applied to Misc. Fees
727	720	Loan Applied to Deferred Interest Detail
728	698	Loan Applied to Service Charge
890	n/a	Informational Message

Annex B
(Normative)

SAMPLE TRANSMISSIONS

B.1 This file illustrates the BTRS transmission format.

```
01,122099999,123456789,110621,0200,1,1,80,,3/
02,031001234,122099999,1,110620,2359,EUR,2/
03,0123456789,EUR,010,4350000,,,040,2830000,,/
88,072,1020000,,,074,500000,,/
16,115,450000,S,100000,200000,150000,,,/
89,15000,1234,654654654,071000505,110619,STRONG STEEL STORAGE
89,15000,2323,896554654,071000505,110612,ARMORED CARRIERS
89,15000,45609,564165165,071000505,110619,PONY EXPRESS LTD
49,9150000,4/
03,9876543210,,010,-500000,,,100,1000000,,,400,2000000,,,190/
88,500000,,,110,1000000,,,072,500000,,,074,500000,,,040/
88,-1500000,,/
16,115,500000,S,,200000,300000,,,LOCK BOX NO.68751
89,500000,54554,5453541356,071000505,110619,UNITED INDUSTRIES
90, Invoice # 12213, partial payment due to discounts
88,taken on early payment
90,Invoice #12214
90,Invoice #12215
49,4000000,5/
98,13150000,2,11/
02,053003456,122099999,1,040620,2359,USD,2/
03,4589761203,USD,010,10000000,,,040,5000000,,,074,4000000,,/
88,400,50000000,,,100,60000000,,,110,20000000,,,072,1000000,,/
16,218,20000000,V,040622,,SP4738,YRC065321/
88,PROCEEDS OF LETTER OF CREDIT FROM THE ARAMCO OIL CO
49,180000000,6/
98,180000000,1,8/
02,071207890,122099999,1,040620,2359,CNY,2/
03,0975312468,CNY,010,500000,,,190,70000000,4,0,110/
88,70000000,15,D,3,0,20000000,1,30000000,3,20000000/
49,140500000,3/
98,140500000,1,5/
02,071207890,122099999,3,040620,2359,JPY,2/
03,7890654321,JPY,010,800000,,,040,6000000,,,110,5000000/
88,4,/
49,11800000,3/
98,11800000,1,5/
99,345450000,4,31/
```

Record Code	Description
01	Last National Bank (122099999) is sending data to its third party intermediary, Data Corp. (123456789). The file was created June 21, 2011 (110621) at 2:00 a.m. (0200). This is the first file created this date and is sequence number 1. The physical records are (80) characters in length. No block size is specified. This default is noted by adjacent delimiters (,,). The file is in Version 3 of the *Standard*. The slash (/) indicates that the preceding character was the last significant character in this physical record.
02	A group of data is being sent to a bank (031001234) from Last National Bank (122099999). The data in the file have a group status of “update” (1) and the data are as-of-June 20, 2011 (110620) at 11:59 p.m. (2359). The group currency code field is EUR (Euro). The data are final previous-day data as signified by the As-of-Date modifier (2).
03	Data in this record and all records until the next 03 record are for the sending bank’s account number (0123456789). The currency code is EUR (Euro). The first data value is for type code (010), the sign is positive (+), and amount is 43,500.00 EUR (4350000). Item count and funds type are defaulted as indicated by the adjacent delimiters (,,,). The second data value is for type code (040), the sign is positive (defaulted to positive by absence of a sign preceding the amount), and the amount is 28,300.00 EUR (2830000). Again, item count and funds type are defaulted.
88	This continuation record picks up the same format as the preceding record (in this case an 03 record). The type code is (072) and the amount is a positive 10,200.00 EUR (1020000). The next data value is for type code (074) and the amount is a positive 5,000.00 EUR (500000). Item count and funds type are defaulted for both.
16	This detail record contains data for type code (115), the amount is a positive 4,500.00 EUR (450000), and the funds type is distributed (S). The same (or zero) –day availability is 1,000.00 EUR (100000), the one-day availability is 2,000.00 EUR (200000), and greater-than one-day availability is 1,500.00 EUR (150000). Bank reference number, customer reference number, and text are not used. These fields are defaulted as indicated by the adjacent delimiters (,,,/).
89	This detail continuation record contains additional breakdown of transactions for type code (115), the amount is a positive 1500.00 EUR, and the check number is 1234. The account number is 654654654, the ABA is 071000505, the check date is June 19, 2011 and the remitter is Briggs and Stratton
89	This detail continuation record contains additional breakdown of transactions for type code (115), the amount is a positive 1500.00 EUR, and the check number is 2323. The account number is 896554654, the ABA is 071000505, the check date is June 12, 2011 and the remitter is Armored Carriers
89	This detail continuation record contains additional breakdown of transactions for type code (115), the amount is a positive 1500.00 EUR, and the check number is 45609. The account number is 564165165, the ABA is 071000505, the check date is June 19, 2011 and the remitter is Pony Express LTD.

Record Code	Description
49	The account trailer record contains the account control total (9150000), which is the algebraic sum of all amounts in all records back to and including the preceding 03 record. Funds type amounts are not included in this control total. The number of records (4) includes one 03 record, one 16 record, one 88 record, and this 49 record.
03	This second account record and its continuation record are similar to the first one except that they contain amounts with negative signs.
16	This detail record contains data for type code (115) in an amount of 5,000.00 EUR (500000) with distributed availability (S). There is no same-day availability (the field is defaulted to zero by the adjacent delimiters ",,"). The one-day availability is 2,000.00 EUR (200000) and the two-or-more day availability is 3,000.00 EUR (300000). Bank reference number and customer reference number are not used, as indicated by adjacent delimiters (,,,). The text is (LOCK BOX NO. 68751). The remainder of the field is filled with blanks to position 65. The field is delimited by the fact that the next record is ***not*** "88".
89	This detail continuation record contains additional breakdown of transactions for type code (115), the amount is a positive 50,000.00 EUR, and the check number is 54554. The account number is 5453541356, the ABA is 071000505, the check date is June 19, 2011 and the remitter is United Industries
90	This invoice addenda record contains free form information about the invoice. In this case, the text is "Invoice # 12213, partial payment due to discounts". The text is not completed and is continued by an 88 record.
88	This continuation record picks up the same format as the preceding record (in this case a 90 record). The completed text is "taken on early payment".
90	This invoice addenda record contains free form information about the invoice. In this case, the text is "Invoice # 12214"
90	This invoice addenda record contains free form information about the invoice. In this case, the text is "Invoice # 12215"
49	This is the account trailer record as previously described.
98	This group trailer record contains the group control total (13150000) which is the algebraic sum of all account control totals in this group. The number of accounts is two (2), reflecting the two account records (record type 03) in this group. Number of records (11) includes all records in this group, including the 02 and this 98 group trailer record.
02	A group of data is being sent to bank (053003456). This is an update (1) as-of-June 20, 2004, (040620) at 11:59 p.m. (2359). The currency code field is USD (U.S. dollars). The data is final previous-day data (2). (/) indicates end of record.
03	This summary/status record is similar to the two previous ones.
88	This is a continuation record as previously described.
16	This detail record contains data for type code (218) in an amount of 200,000.00 USD (20000000) with value-dated availability (V). The value date is June 22, 2004 (040622) and the value time is not specified, as indicated by adjacent delimiters (,,). The bank reference number is (SP4738), and the customer reference number is (YRC065321).
88	This continuation record contains the text for the preceding 16 record (PROCEEDS OF LETTER OF CREDIT FROM THE ARAMCO OIL CO). Because the text does not go to the end of the 65-character physical record, additional blanks are required. The field is delimited by the fact that the following record code is not an 88.

Record Code	Description
49	This record is similar to previous account trailer (49) records.
98	This record is similar to previous group trailer (98) records.
02	A group of data is going to bank (071207890). This group is an update with the same as-of-date, time, and modifier as the prior 02 record. The currency is CNY. (*See* previous examples.)
03	Data in this record are for the sending bank's account number (0975312468). The leading zero in the account number is significant and must be included in the data. The currency code is CNY. The amount for type code (010) is 5,000.00 CNY (500000). The item count and funds type field are defaulted to "unknown" as indicated by adjacent delimiters (,,,). The amount for type code (190) is 700,000.00 CNY (70000000). The item count for this amount is four (4), and the availability is immediate (0). Type code (110) is the last data item in this record. The slash (/) indicates end of record.
88	This continuation record extends the format of the preceding 03 record. The amount for type code (110) is 700,000.00 CNY (70000000). The item count for this amount is fifteen (15) and availability is distributed (D). There are three funds type distributions (3). Immediate availability (0) is 200,000.00 CNY (20000000), one-day availability (1) is 300,000.00 CNY (30000000), and three-day availability (3) is 200,000.00 CNY (20000000).
49	This account trailer record contains the account control total (140500000), which is the algebraic sum of all amounts of all records for this account. Funds type distributions are not included in this control total. The number of records (3) includes all records in this account, including this trailer record.
02	A group of data is going to bank (071207890). These data are a "correction" (3) of previously sent data. The as-of-date is June 20, 2004 (040620) and the as-of-time is 11:59 p.m. (2359). The currency code is JPY (Japanese Yen). The JPY currency has 0 (zero) decimals. This is final previous-day data (2). This correction will delete all data already on file for the account identified in the 03 record and will replace it with new data.
03	This summary/status replaces the previously sent 03 record for this account (7890654321). Type code (010) has an amount of 800,000 JPY (800000). The item count and funds type fields are defaulted to "unknown" as indicated by adjacent delimiters (,,,). Type code (040) has an amount of 6,000,000 JPY (6000000). The item count and funds type fields are defaulted to "unknown" as indicated by adjacent delimiters (,,,). Type code (110) has an amount of 5,000,000 JPY (5000000).
88	This continuation record extends the format of the preceding 03 record. The item count for type code (110) is four (4). Funds type is defaulted to "unknown" by adjacent delimiters (,/).
49	This account trailer record contains the account control total (11800000), which is the algebraic sum of all amounts in all records for this account. Funds type distributions are not included in this control total. The number of records includes all records in this account, including this account trailer.
98	This group trailer record contains the group control total (11800000), which is the algebraic sum of all account control totals for this group. The number of accounts is one (1). Number of records includes all records in this group, including this 98 record.
99	The file trailer record contains the file control total (345450000), which is the algebraic sum of all group control totals for this file. The number of groups (4) is the number of 02 records in this file. The number of records (3) is the total number of records in this file, including this 99 record.

Annex C
(Normative)
SWIFT MESSAGES

C.1 SWIFT MESSAGE TYPE 940: Conventions for translation into Balance and Transaction Reporting Format, Version 1

The resulting BTRS message shall follow the following format:

02,a,b,1,c,,d,e/
03,f,,g,h,i,j,k,l,,,m*,n*,o*,p*/
16,q,r,v,s,,t,u,vw
16,890,,,x,y,zw

Where “a” through “z” match the following fields in the SWIFT message:

a	Optional
b	“Sending Bank Identifier” from message header **
c	62 “Closing Balance”; Subfield 2 “date”
d	62 “Closing Balance”; Subfield 3 “currency code”
e	If 62F “2”; if 62M “3”
f	25 “Account Identification”; Edit to remove “,” or “/”
g	“015” If message contains field 62F “Closing Balance; Final”. Otherwise delete this field and following delimiter comma “,”.
h	62F “Closing Balance”; Subfield 4 “amount” ***. If message contains no field 62F delete this field and following delimiter comma “,”.
i	If message contains field 62F this is a defaulted field indicated by adjacent delimiters “,,”. Otherwise delete this field and following delimiter comma “,”.
j	If message contains field 62F this is a defaulted field indicated by adjacent delimiters “.,”. Otherwise delete this field and following delimiter comma “,”.
k	If 62F “045”; if 62M “060”
l	64 “Closing Available Balance”; Subfield 4 “amount”***
m	BAI Status type code; See Table M
n	65 “Forward Available Funds”; Subfield 4 “amount”***
o	Defaulted field
p	Defaulted field
q	BAI Transaction Detail type code ; See Table Q

r	61 “Statement Line”; Subfield 5 “amount”
s	61 “Statement Line”; Subfield 1 “value date”
t	61 “Statement Line”; Subfield 8 “Account Servicing” bank reference.
u	61 “Statement Line’; Subfield 7 “Account Owner” reference
v	86 “Information to Account Owner” associated with field 61
w	Delimiter “/” if no “Information to Account Owner”
x	20 “Transaction Reference Number”
y	21 “Reference to Related Message”
z	86 “Information to Account Owner” not associated with field 61

* A SWIFT 940 message may include several fields with the tag 65 for “Forward Available Funds”. Fields indicated by *, (m,n,o,p) are repeated in series as needed for each field 65.

** If “sending bank” is U.S. institution, replace SWIFT identification with ABA, including check digit.

*** If Subfield 1 “debit/credit mark” is ”D”, signed negative “-a”.

SWIFT fields 64 & 65 are optional. If either of these fields does not occur in a type 940 message, delete the corresponding item from the format above, as well as accompanying delimiters and those for defaulted fields associated with the deleted item.

SWIFT fields 21 & 86 are also optional. If either of these fields does not occur in a type 941 message, the corresponding field in the format shall be defaulted, as indicated by adjacent delimiters “,,” and “,/” respectively.

A SWIFT message 940 may contain several “Statement Line” fields (field tag 61) and associated “Information to Account Owner” (field tag 86) fields. A separate “Transaction Detail” record is created for each. If the message does not contain field 61, the first of the type 16 records in the above format is eliminated.

C.2 SWIFT MESSAGE TYPE 941: Conventions for translation into Balance and Transaction Reporting Format, Version 1

The resulting BTRS message shall follow the following format:

02,a,b,1,c,,d,2/
03,e,,010,f,,,400,g,h,,100,i,j,,015,k,,,045,l,,m*,n*,o*,p*/
16,890,,,q,r,st

Where “a” through “t” match the following fields in the SWIFT message:

a	Optional
b	“Sending Bank Identifier” from message header **
c	62F “Closing Balance”; Subfield 2 “date”
d	62F “Closing Balance”; Subfield 3 “currency code”
e	25 “Account Identification”; Edit to remove “,” or “/”
f	60F “Opening Balance”; Subfield 4 “amount” ***
g	90D “Number and Sum of Entries”; Subfield 3 “amount”
h	90D “Number and Sum of Entries”; Subfield 1 “# of entries”
i	90C “Number and Sum of Entries”; Subfield 3 “amount”
j	90C “Number and Sum of Entries”; Subfield 1 “# of entries”
k	62F “Closing Balance”; Subfield 4 “amount” ***
l	64 “Closing Available Balance”; Subfield 4 “amount” ***
m	Status type code; See table M
n	65 “Forward Available Funds”; Subfield 4 “amount” ***
o	Defaulted field
p	Defaulted field
q	20 “Transaction Reference Number”
r	21 “Reference to Related Message”
s	86 “Information to Account Owner”

t	Delimiter “/” if no “Information to Account Owner”

***** A SWIFT 941 message may include several fields with the tag 65 for “Forward Available Funds”. Fields indicated by *, (items m, n, o and p), are repeated for each availability indicated by a field 65.

****** If “sending bank” is U.S. institution, replace SWIFT identification with ABA including check digit

******* If Subfield 1 “debit/credit mark’ is “D”, amount is signed negative “-”.

SWIFT fields 60F, 90D, 90C, 64 and 65 are optional. If any of these fields does not occur in a type 941 message, delete the corresponding item from the format above, as well as accompanying delimiters and those for defaulted fields associated with the deleted item.

SWIFT fields 21 and 86 are also optional. If either of these fields does not occur in a type 941 message, the corresponding field in the format shall be defaulted, as indicated by adjacent delimiters “,,” and “,/” respectively.

C.3 SWIFT MESSAGE TYPE 942: Conventions for translation into Balance and Transaction Reporting Format, Version 1

The resulting BTRS message shall follow the following format:

02,a,b,1,c,d,e,3/
03,f,,100,g,h,,400,i,j,/
16,k,l,V,m,,n,o,pq
16,890,,,r,s,tu

Where “a” through “u” match the following fields in the SWIFT message:

a	Optional
b	“Sending Bank Identifier” from message header *
c	13 “Date/Time Indicator”; characters 1 through 6 “date”
d	13 “Date/Time Indicator”; characters 7 through 10 “time”
e	90C “Number and Sum of Entries”; Subfield 2 “funds code” or 61 “Statement Line”; Subfield 4 “currency code” **
f	25 “Account Identification”; Edit to remove “,” or “/”
g	90C “Number and Sum of Entries”; Subfield 3 “amount”
h	90C “Number and Sum of Entries”; Subfield 1 “# of entries”
i	90D “Number and Sum of Entries” Subfield 3 “amount”
j	90D “Number and Sum of Entries”; Subfield 1 “# of entries”
k	Transaction Detail type code;
l	61 “Statement Line”; Subfield 5 “amount”
m	61 “Statement Line”; Subfield 1 “value date”
n	61 “Statement Line”; Subfield 8 “Account Servicing” bank reference.
o	61 “Statement Line”; Subfield 7 “Account Owner” reference.
p	86 “Information to Account Owner” associated with field 61
q	Delimiter “/” if no “Information to Account Owner” associated with field 61.
r	20 “Transaction Reference Number”
s	21 “Reference to Related Message”

t	86 “Information to Account Owner” not associated with field 61
u	Delimiter “/” if no “Information to Account Owner”

***** If “sending bank” is a U.S. institution, replace the SWIFT identification with the ABA, including check digit.

****** If currency type is not the same for all 90D, 90C and 61 fields, create a separate group of each currency.

SWIFT fields 90D and 90C are optional. If any of these fields does not occur in a type 942 message, delete the corresponding item from the format above, as well as accompanying delimiters and those for defaulted fields associated with the deleted item.

SWIFT fields 21 and 86 are also optional. If either of these fields does not occur in a type 941 message, the corresponding field in the format shall be defaulted, as indicated by adjacent delimiters “,,” and “,/” respectively.

A SWIFT message 942 may contain several “Statement Line” fields (field tag 61) and associated “Information to Account Owner” (field tag 86) fields. A separate “Transaction Detail” record is created for each. If the message does not contain field 61, the first of the type 16 records in the above format is eliminated.

C.4 Table M

SWIFT field 65 “Forward Available Funds”; Subfield 2 “date” indicates the day on which funds are available to the customer. To determine the BTRS type code for reporting funds availability, calculate the number of business days between this date and the date in field 62F “Closing Balance”; Subfield 2. The BTRS type code for the number of business days is shown below:

Number of Days	BTRS Type Code
0	070
1	072
2	074
3	075
4	079
5	080
6	081

If the date in field 65 falls on a weekend or holiday, determine BTRS type code according to first business day following actual value date.

Annex D
(Normative)
Fedwire/CHIPS Wire Remittance Information in the BTRS 88 Record

D.1 Introduction

The Wire Remittance area of the Balance and Transaction Reporting standard shows the Fedwire/Chips Wire Remittance Information in the BTRS 88 Record.

Effective November 19, 2011, the Federal Reserve Banks and The Clearing House implemented new message formats for the Fedwire Funds Service (Fedwire) and The Clearing House Interbank Payments System (CHIPS) respectively.

Fedwire offers a new business function code, Customer Transfer Plus (CTP), which will provide space at the end of the message for up to 9,000 characters of remittance information.

CHIPS has space at the end of the Non-Bank (N) message for up to 9,000 characters of remittance information in their [820] Additional Payment Data tag. CHIPS implemented changes to this space to allow for additional types of remittance information.

D.2 Acceptable inclusion of Remittance information

As described in Section D.3 below, both Fedwire and CHIPS will offer three ways to include remittance information in a payment message; however, only one type of remittance information shall be used in a single wire payment message. Fedwire and CHIPS will implement the remittance information using similar tag and element names, format lengths and edits.

As a result of the Fedwire and CHIPS message format changes, banks will need to update their cash reporting systems to deliver the remittance information to their customers. One of these reporting channels is BTRS (formerly BAI2), but today, banks do not use common tag names to identify the various components of the wire information, so their clients must be able to interpret different formats.

This document proposes two standard methods for identifying Fedwire/CHIPS remittance data in the BTRS 88 record. While these methods do not address a common practice for identifying information for the entire wire payment message, they provide a common practice for identifying the wire remittance information. Banks shall use either method for identifying the wire remittance information in the BTRS 88 record. Banks will be free to select either method depending on their individual client needs. The methods are as follows:

Fedwire/CHIPS Tags – Banks can use this method to insert the tag ADDENDA= and then “copy/paste” the Fedwire/CHIPS remittance data with the actual Fedwire/CHIPS tags into the BTRS 88 record. This method can be used for the “Related” and “Structured” Fedwire/CHIPS remittance types, but is the only method that shall be used for the “Unstructured” remittance type, which can carry other data formats such as ANSI X12, General XML, ISO 20022, narrative text, STP820, SWIFT and UN/EDIFACT. Banks may wish to use this method if they provide BAI2 data to corporates electronically for processing into their own internal backend systems. See Section D4.

ISO 20022 XML Tags – Banks can use this method to insert the tag ADDENDA= and then identify the Fedwire/CHIPS remittance data with specific ISO 20022 XML tags. Please note that under this method banks would not be converting the Fedwire/CHIPS remittance data to an ISO 20022 XML format than conforms to specific XML rules/structure. Rather, they would be merely using the ISO 20022 XML tag

names as a way to identify the individual remittance tags/data elements contained in the Fedwire/CHIPS message. This method can be used for the “Related” and “Structured” Fedwire/CHIPS remittance types. Banks may wish to use this method if they provide BAI2 data to corporates via a physical report or through an online banking portal. See Section D5.

D.3 Fedwire/CHIPS Remittance Types (Effective November 19, 2011)

Remittance Type (Only one type can be included in a single wire payment)	Remittance Type Indicator		Remittance Tags M = Mandatory tag for the remittance type	
	Fedwire Local Instrument Code	Comparable CHIPS Additional Payment Data Type	Fedwire	CHIPS
Unstructured Used when the originator wants to send the beneficiary a block of up to 9,000 characters of remittance data in a certain format. However, Fedwire & CHIPS will not edit the content for a particular format.	**ANSI** = ANSI X-12 **GXML** = General XML **IXML** = ISO 20022 XML **NARR** = Narrative **S820** = STP 820 **SWIF** = SWIFT field 70 **UEDI** = UN-EDIFACT	**02** **05** **04** **99** **06** **03** **01**	**{8200}** Unstructured Addenda Information **M**	**[820]** Additional Payment Data **M**
Related Used when the originator sends the remittance info to the beneficiary outside of the wire payment & in the wire payment just wants to tell the beneficiary where to go to get the remittance data	**RRMT**		**{8250}** Related Remittance Information **M**	**[825]** **M**
Structured Used when the originator wants to include up to 9,000 characters of remittance data in structured fields. These fields are compatible with the ISO 20022 & STP 820 formats.	**RMTS**		**{8300}** Remittance Originator **M** **{8350}** Remittance Beneficiary **M** **{8400}** Primary Remittance Document Info **M** **{8450}** Actual Amount Paid **M** **{8500}** Gross Amt of Remittance Document **{8550}** Amount of Negotiated Discount **{8600}** Adjustment Information **{8650}** Date of Remittance Document **{8700}** Secondary Remittance Document Info **{8750}** Remittance Free Text	**[830]** **M** **[835]** **M** **[840]** **M** **[845]** **M** **[850]** **[855]** **[860]** **[865]** **[870]** **[875]**

D.4 Fedwire/CHIPS Tags Method to Identify Wire Remittance Data in the BTRS 88 Record

Banks can use this method to insert the tag ADDENDA= and then “copy/paste” the Fedwire/CHIPS remittance data with the actual Fedwire/CHIPS tags into the BTRS 88 record. This method can be used for the “Related” and “Structured” Fedwire/CHIPS remittance types, but is the only method that shall be used for the “Unstructured” remittance type, which can carry other data formats such as ANSI X12, General XML, ISO 20022, narrative text, STP820, SWIFT and UN/EDIFACT. Banks may wish to use this method if they provide BTRS data to corporates electronically for processing into their own internal backend systems.

Unstructured Remittance Type Fedwire Tag {8200} CHIPS Tag [820]	Fedwire/CHIPS Tags Example to show how Unstructured Remittance Data would appear in the BTRS 88 Record

The tag/data elements for Unstructured Remittance Data in Fedwire & CHIPS are as follows:

Fedwire tag {8200} Unstructured Addenda Info

Addenda Length (4 char)

Addenda Information (8994 char)

CHIPS tag [820] Additional Payment Data

Additional Payment Data Size (4 char)

Additional Payment Data Format Type (2 char)

Additional Payment Data (8994 char)

Rules:

1. Begin the remittance data on a new BTRS 88 record line.

2. Insert tag name ADDENDA=

3. Insert the appropriate Fedwire Local Instrument Code from element 01 of tag {3610} or CHIPS Additional Payment Data Type from element 02 of tag [820].

Fedwire Local Inst Code / CHIPS Add Pmt Data Type:

ANSI / 02 (ANSI X-12)
GXML / 05 (General XML)
IXML / 04 (ISO 20022 XML)
NARR / 99 (Narrative)
S820 / 06 (STP 820)
SWIF / 03 (SWIFT field 70)
UEDI / 01 (UN-EDIFACT)

4. Insert all of the content from Fedwire tag {8200} or CHIPS tag [820] (including the actual Fedwire/CHIPS tag number).

In this example, the Fedwire/CHIPS unstructured remittance tag includes data in the STP820 format. This information would appear in the BTRS 88 record as follows:

Fedwire Example

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA=S820{8200}0698ISA*00*          *00*          *17*021000099      *17*0
88,71000099      *101208*1011*U*00401*000000001*0*P*;\GS*RA*021000099*071000099*
88,20101208*1615*1*X*004010STPWIR\ST*820*0001\BPR*C*38975.96*C*FWT**01*021000089
88,*DA*123123122***01*021000018*DA*182389281*20101208\TRN*1*EP10019\N1*PR*JONES
88,PLUMBING*91*123456789012345\N1*PE*SMITHFAUCETS\ENT*1\RMR*IV*3920394930203**30
88,000.01*41000.01*10000\REF*R7*3920394930203*DISCOUNT APPROVED BY DSMITHE\DTM*0
88,03*20090123\ADX*-1000.00*01*TD*PRICING ERROR - USED CATALOG 199JAN2009\RMR*IV
88,*254221222500**4475.95*5000.99*400.02\REF*PO*5722319 *MARKETING DEPARTMENTORD
88,ER FOR STORE 17\DTM*003*20090125\ADX*-125.02*04\RMR*R7*21222500**4500\SE*16*0
88,001\GE*1*1\IEA*1*000000001\
```

CHIPS Example

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA=06[820]069806ISA*00*          *00*          *17*021000099      *17*07
88,1000099      *101208*1011*U*00401*000000001*0*P*;\GS*RA*021000099*071000099*2
88,0101208*1615*1*X*004010STPWIR\ST*820*0001\BPR*C*38975.96*C*CWT**01*021000089*
88,DA*123123122***01*021000018*DA*182389281*20101208\TRN*1*EP10019\N1*PR*JONES P
88,LUMBING*91*123456789012345\N1*PE*SMITHFAUCETS\ENT*1\RMR*IV*3920394930203**300
88,00.01*41000.01*10000\REF*R7*3920394930203*DISCOUNT APPROVED BY DSMITHE\DTM*00
88,3*20090123\ADX*-1000.00*01*TD*PRICING ERROR - USED CATALOG 199JAN2009\RMR*IV*
88,254221222500**4475.95*5000.99*400.02\REF*PO*5722319 *MARKETING DEPARTMENTORDE
88,R FOR STORE 17\DTM*003*20090125\ADX*-125.02*04\RMR*R7*21222500**4500\SE*16*00
88,01\GE*1*1\IEA*1*000000001\
```

Related Remittance Type Fedwire Tag {8250} CHIPS Tag [825]	Fedwire/CHIPS Tags Example to show how Related Remittance Data would appear in the BTRS 88 Record

The Related Remittance Information tag in Fedwire & CHIPS has the same structure as follows:

{8250} / [825] Related Remittance Information

01	**Remittance Identification**	(35 char)
02	**Remittance Location Method**	(4 char)
03	**Remittance Location Electronic Address**	(2048)
04	**Name**	(140 char)
05	**Address Type**	(4 char)
06	**Department**	(70 char)
07	**Sub-Department**	(70 char)
08	**Street Name**	(70 char)
09	**Building Number**	(16 char)
10	**Post Code (Zip Code)**	(16 char)
11	**Town Name**	(35 char)
12	**County Sub Division (State)**	(35 char)
13	**Country**	(2 char)
14	**Address Line 1**	(70 char)
15	**Address Line 2**	(70 char)
16	**Address Line 3**	(70 char)
17	**Address Line 4**	(70 char)
18	**Address Line 5**	(70 char)
19	**Address Line 6**	(70 char)
20	**Address Line 7**	(70 char)

Rules:

1. Begin the remittance data on a new BTRS 88 record line.

2. Insert tag name **ADDENDA=**

3. Insert all of the content from Fedwire tag **{8250}** or CHIPS tag **[825]** (including the actual Fedwire/CHIPS tag number).

In this example, the Fedwire/CHPS Related Remittance Information tag only contains the following data elements:

01	Remittance Identification	(e.g., 000000123)
02	Remittance Location Method	(e.g., EMAL)
03	Remittance Location Electronic Address	(e.g., get-remittance-info-here@xxx.org)

This information would appear in the BTRS 88 record as follows:

Fedwire Example

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA={8250}000000123*EMAL*get-remittance-info-here@xxx.org
```

CHIPS Example

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA=[825]000000123*EMAL*GET-REMITTANCE-INFO-HERE@XXX.ORG
```

Structured Remittance Type Fedwire Tag {8300} to {8750} CHIPS Tag [830] to [875]	Fedwire/CHIPS Tags Example to show how Structured Remittance Data would appear in the BTRS 88 Record
The Structured Remittance tags in Fedwire & CHIPS have the same structure as follows: {8300} / [830] Remittance Originator {8350} / [835] Remittance Beneficiary {8400} / [840] Primary Remittance Document Info {8450} / [845] Actual Amount Paid {8500} / [850] Gross Amt of Remittance Document {8550} / [855] Amount of Negotiated Discount {8600} / [860] Adjustment Information {8650} / [865] Date of Remittance Document {8700} / [870] Secondary Remittance Document Info {8750} / [875] Remittance Free Text **Note:** To see each of the individual data elements included in each of the above tags, please see the ***Structured Remittance Type*** section below under the ***ISO 20022 XML Tag Names***. **Rules:** 1. Begin the remittance data on a new BTRS 88 record line. 2. Insert tag name **ADDENDA=** 3. Insert all of the content from Fedwire tags **{8300} to {8750}** or CHIPS tags **[830] to [875]** (including the actual Fedwire/CHIPS tag numbers).	In this example, all of Fedwire/CHPS Structured Remittance tags were used. This information would appear in the BTRS 88 record as follows: **Fedwire Example** 16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX 88,ADDENDA={8300}OICUSTABC Corporation*111111111-PD***DLVY*Purchasing Department 88,**Washington Avenue*25*10451*Bronx* NY*US*********John Smith*212-555-1111*212 88,-444-222**john.smith@abccorpbrx.org*{8350}XYZ Corporation*OI*DUNS*999988888** 88,*ADDR*Accounts Receivable**Michigan Avenue*100*60601*Chicago* IL*US*{8400}CIN 88,V*INVOICE-000001*{8450}USD100000.00*{8500}USD100500.00*{8550}USD400.00*{8600} 88,01DBITUSD100.00*Deducted USD100 from pmt due to pricing error in original ini 88,oce*{8650}20101109{8700}PUOR*PO-000001*{8750}For more info about this pmt,cal 88,l John Smith 212-555-1111* **CHIPS Example** 16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX 88,ADDENDA=[830]OICUSTABC CORPORATION*111111111-PD***DLVY*PURCHASING DEPARTMENT* 88,*WASHINGTON AVENUE*25*10451*BRONX* NY*US*********JOHN SMITH*212-555-1111*212- 88,444-222**JOHN.SMITH@ABCCORPBRX.ORG*[835]XYZ CORPORATION*OI*DUNS*999988888***A 88,DDR*ACCOUNTS RECEIVABLE**MICHIGAN AVENUE*100*60601*CHICAGO* IL*US*[840]CINV*I 88,NVOICE-000001*[845]USD100000.00*[850]USD100500.00*[855]USD400.00*[860]01DBITU 88,SD100.00*DEDUCTED USD100 FROM PMT DUE TO PRICING ERROR IN ORIGINAL INVOICE*[8 88,65]20101109[870]PUOR*PO-000001*[875]FOR MORE INFO ABOUT THIS PMT, CALL JOHN S 88,MITH 212-555-1111*

D.5 ISO 20022 XML Tags Method to Identify Wire Remittance Data in the BTRS 88 Record

Banks can use this method to insert the tag ADDENDA= and then identify the Fedwire/CHIPS remittance data with specific ISO 20022 XML tags. Please note that under this method banks would not be converting the Fedwire/CHIPS remittance data to an ISO 20022 XML format than conforms to specific XML rules/structure. Rather, they would be merely using the ISO 20022 XML tag names as a way to identify the individual remittance tags/data elements contained in the Fedwire/CHIPS message. This method can be used for the "Related" and "Structured" Fedwire/CHIPS remittance types. Banks may wish to use this method if they provide BTRS data to corporates via a physical report or through an online banking portal.

Note: When a Fedwire/CHIPS message contains remittance data using the Unstructured remittance type (i.e., tag {8200} / [820] respectively), use the Fedwire/CHIPS Tags method described above in Section D4.

Below are the general rules that banks should follow when using this method to include wire remittance data in the BTRS 88 record.

a) Rules that Apply to All Tags

1) The tag names will be the ISO 20022 XML equivalent tag names, so they will be variable in length, contain both upper and lower case characters, and will be enclosed between less-than and greater-than signs (i.e., < >).
2) Tag names shall not contain spaces.
3) Tag names must retain their font case (e.g., <BldgNb> is correct, <BLDGNB> is incorrect).
4) There is 1 space between the <tag> and the value (e.g., <TwnNm> Bronx is correct, but <TwnNm>Bronx is incorrect).
5) There is 1 space preceding each category/element tag (e.g., <TwnNm> Bronx <CtrySubDvsn> NY is correct, but <TwnNm>Bronx<CtrySubDvsn>NY is incorrect).
6) Do not split tag names between two 88 record lines (e.g., must retain <DtAndPlcOfBirth> on one 88 record line).

b) Category Tag Names

1) This is the tag name that replaces the Fedwire/CHIPS tag number. This tag will be followed by an equal sign.
2) Every new category shall start on a new 88 record line (i.e., this only applies to the Structured Remittance tags).

c) Element Tag Names

1) This is the tag name that identifies the individual data element included in the Fedwire/CHIPS tag.
2) Only display this tag when actual data is present (i.e., do not display blank Element Tags).
3) A space shall be inserted between each element

.

ISO 20022 XML Tags
Related Remittance Type
Fedwire Tag {8250} & CHIPS Tag [825]

The Related Remittance Information tag in Fedwire & CHIPS has the same structure and data elements as noted below.

Rules:

1. Begin the remittance data on a new BTRS 88 record line.
2. Insert tag name **ADDENDA=** followed by one space.
3. **Category Tag Names:** Replace the Fedwire/CHIPS Related Remittance tag number (i.e., {8250} and [825] respectively) with appropriate ISO 20022 XML tag name followed by an equal sign
4. **Element Tag Names:** Precede each data element in the Fedwire/CHIPS Related Remittance Information tag with the appropriate ISO 20022 XML tag prior to inserting it in the BTRS 88 record.

Fedwire/CHIPS Tags & Data Elements			ISO 20022 XML Tag	Example Data
{8250} / [825] Related Remittance Information			**<RltdRmtInf>**	
01	Remittance Identification	(35 char)	<RmtId>	000000123
02	Remittance Location Method	(4 char)	<RmtLctnMtd>	EMAL
03	Remittance Location Electronic Address	(2048 char)	<RmtLctnElctrncAdr>	get-remittance-info-here@xxx.org
04	Name	(140 char)	<Nm>	
05	Address Type	(4 char)	<AdrTp>	
06	Department	(70 char)	<Dept>	
07	Sub-Department	(70 char)	<SubDept>	
08	Street Name	(70 char)	<StrtNm>	
09	Building Number	(16 char)	<BldgNb>	
10	Post Code (Zip Code)	(16 char)	<PstCd>	
11	Town Name	(35 char)	<TwnNm>	
12	County Sub Division (State)	(35 char)	<CtrySubDvsn>	
13	Country	(2 char)	<Ctry>	
14	Address Line 1	(70 char)	<AdrLine>	
15	Address Line 2	(70 char)	<AdrLine>	
16	Address Line 3	(70 char)	<AdrLine>	
17	Address Line 4	(70 char)	<AdrLine>	
18	Address Line 5	(70 char)	<AdrLine>	
19	Address Line 6	(70 char)	<AdrLine>	
20	Address Line 7	(70 char)	<AdrLine>	

The example below shows how the Fedwire/CHIPS Related Remittance Information would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS.

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA= <RltdRmtInf>= <RmtId> 000000123 <RmtLctnMtd> EMAL
88,<RmtLctnElctrncAdr> get-remittance-info-here@xxx.org
```

ISO 20022 XML Tags
Structured Remittance Type
Fedwire Tags {8300} to {8750} & CHIPS Tags [830] to [875]

The Structured Remittance tags in Fedwire & CHIPS have the same structure and data elements as noted below. Below are examples to show how each individual Fedwire/CHIPS structured tag would look in the BTRS 88 record. On the last page of the document is an example to show all of the ten Fedwire/CHIPS structured tags together in an 88 record.

Rules:

1. Begin the remittance data on a new BTRS 88 record line.

2. Insert tag name **ADDENDA=** followed by one space.
   NOTE: *The examples below show ADDENDA= for each individual Fedwire/CHIPS tag; however, if all of these tags were included together in a single wire payment,* ***ADDENDA=*** *shall only appear once at the beginning of the 88 record. You can see this illustration in the example on the last page of the document.*

3. **Category Tag Names:** Replace each of the Fedwire/CHIPS Structured Remittance tag numbers (i.e., {8300} to {8750} and [830] to [875] respectively) with the appropriate ISO 20022 XML tag name followed by an equal sign **(noted in bold text)**. Begin each "category" on a new BTRS 88 record line.

4. **Element Tag Names:** Precede each data element in the Fedwire/CHIPS Structured Remittance tags with the appropriate ISO 20022 XML tag prior to inserting it in the BTRS 88 record.

Fedwire/CHIPS Tags & Data Elements			ISO 20022 XML Tag	Example Data
{8300} / [830] Remittance Originator			**<Invcee>**	
01	Identification Type	(2 char)	**<Id>**	OI
02	Identification Code	(4 char)	**If element 01 = OI use <OrgId>** **If element 01 = PI use <PrvtId>**	CUST
03	Name	(140 char)	**<Nm>**	ABC Corporation
04	Identification Number	(35 char)	**<Id>**	111111111-PD
05	Identification Number Issuer	(35 char)	**<Issr>**	

06	Date & Place of Birth	(82 char)	**<DtAndPlcOfBirth>**	
07	Address Type	(4 char)	**<AdrTp>**	DLVY
08	Department	(70 char)	**<Dept>**	Purchasing Department
09	Sub-Department	(70 char)	**<SubDept>**	
10	Street Name	(70 char)	**<StrtNm>**	Washington Avenue
11	Building Number	(16 char)	**<BldgNb>**	25
12	Post Code (Zip Code)	(16 char)	**<PstCd>**	10451
13	Town Name	(35 char)	**<TwnNm>**	Bronx
14	County Sub Division (State)	(35 char)	**<CtrySubDvsn>**	NY
15	Country	(2 char)	**<Ctry>**	US
16	Address Line 1	(70 char)	**<AdrLine>**	
17	Address Line 2	(70 char)	**<AdrLine>**	
18	Address Line 3	(70 char)	**<AdrLine>**	
19	Address Line 4	(70 char)	**<AdrLine>**	
20	Address Line 5	(70 char)	**<AdrLine>**	
21	Address Line 6	(70 char)	**<AdrLine>**	
22	Address Line 7	(70 char)	**<AdrLine>**	
23	Country of Residence	(2 char)	**<CtryOfRes>**	
24	Contact Name	(140 char)	**<Nm>**	John Smith
25	Contact Phone Number	(35 char)	**<PhneNb>**	212-555-1111
26	Contact Mobile Number	(35 char)	**<MobNb>**	212-444-2222
27	Contact Fax Number	(35 char)	**<FaxNb>**	
28	Contact Electronic Address	(2048 har)	**<EmailAdr>**	john.smith@abccorpbrx.org
29	Contact Other Information	(35 char)	**<Othr>**	

The example below shows how the Fedwire/CHIPS **Remittance Originator** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS.

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA= <Invcee>= <Id> OI <OrgId> CUST <Nm> ABC Corporation <Id> 111111111-P
88,D <AdrTp> DLVY <Dept> Purchasing Department <StrtNm> Washington Avenue
88,<BldgNb> 25 <PstCd> 10451 <TwnNm> Bronx <CtrySubDvsn> NY <Ctry> US <Nm> John
88,Smith <PhneNb> 212-555-1111 <MobNb> 212-444-2222 <EmailAdr> john.smith@abccor
88,pbrx.org
```

Fedwire/CHIPS Tags & Data Elements			ISO 20022 XML Tag	Example Data
{8350} / [835] Remittance Beneficiary			**<Invcr>**	
01	Name	(140 char)	**<Nm>**	XYZ Corporation
02	Identification Type	(2 char)	**<Id>**	OI
03	Identification Code	(4 char)	If element 01 = OI use <OrgId>	DUNS

			If element 01 = PI use <PrvtId>	
04	Identification Number	(35 char)	**<Id>**	999988888
05	Identification Number Issuer	(35 char)	**<Issr>**	
06	Date & Place of Birth	(82 char)	**<DtAndPlcOfBirth>**	
07	Address Type	(4 char)	**<AdrTp>**	ADDR
08	Department	(70 char)	**<Dept>**	Accounts Receivable
09	Sub-Department	(70 char)	**<SubDept>**	
10	Street Name	(70 char)	**<StrtNm>**	Michigan Avenue
11	Building Number	(16 char)	**<BldgNb>**	100
12	Post Code (Zip Code)	(16 char)	**<PstCd>**	60601
13	Town Name	(35 char)	**<TwnNm>**	Chicago
14	County Sub Division (State)	(35 char)	**<CtrySubDvsn>**	IL
15	Country	(2 char)	**<Ctry>**	US
16	Address Line 1	(70 char)	**<AdrLine>**	
17	Address Line 2	(70 char)	**<AdrLine>**	
18	Address Line 3	(70 char)	**<AdrLine>**	
19	Address Line 4	(70 char)	**<AdrLine>**	
20	Address Line 5	(70 char)	**<AdrLine>**	
21	Address Line 6	(70 char)	**<AdrLine>**	
22	Address Line 7	(70 char)	**<AdrLine>**	
23	Country of Residence	(2 char)	**<CtryOfRes>**	

The example below shows how the Fedwire/CHIPS **Remittance Beneficiary** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS.

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA= <Invcr>= <Nm> XYZ Corporation <Id> OI <OrgId> DUNS <Id> 999988888
88,<AdrTp> ADDR <Dept> Accounts Receivable <StrtNm> Michigan Avenue <BldgNb> 100
88,<PstCd> 60601 <TwnNm> Chicago <CtrySubDvsn> IL <Ctry> US
```

Fedwire/CHIPS Tags & Data Elements			ISO 20022 XML Tag	Example Data
{8400} / [840] Primary Remittance Document Info			**<RfrdDocInf>**	
01	Document Type Code	(4 char)	**<Cd>**	CINV
02	Proprietary Document Type Code	(35 char)	**<Prtry>**	
03	Document Identification Number	(35 char)	**<Nb>**	INVOICE-000001
04	Issuer	(35 char)	**<Issr>**	

The example below shows how the Fedwire/CHIPS **Primary Remittance Document Info** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS.

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA= <RfrdDocInf>= <Cd> CINV <Nb> INVOICE-000001
```

Fedwire/CHIPS Tags & Data Elements	ISO 20022 XML Tag	Example Data
{8450} / [845] Actual Amount Paid	**<RfrdDocAmt>**	
01 Currency Code (3 char)	**<RmtdAmt>**	USD
02 Amount (18 char & 1 decimal period marker)	**This is part of the <RmtdAmt> (see example).**	100000.00

The example below shows how the Fedwire/CHIPS **Actual Amount Paid** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS.

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA= <RfrdDocAmt>= <RmtdAmt> USD 100000.00
```

Fedwire/CHIPS Tags & Data Elements	ISO 20022 XML Tag	Example Data
{8500} / [850] Gross Amt of Remittance Document	**<RfrdDocAmt>**	
01 Currency Code (3 char)	**<DuePyblAmt>**	USD
02 Amount (18 char & 1 decimal period marker)	**This is part of the <DuePyblAmt> (see example).**	100500.00

The example below shows how the Fedwire/CHIPS **Gross Amount of Remittance Document** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS.

```
16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
88,ADDENDA= <RfrdDocAmt>= <DuePyblAmt> USD 100500.00
```

Fedwire/CHIPS Tags & Data Elements	ISO 20022 XML Tag	Example Data
{8550} / [855] Amount of Negotiated Discount	**<RfrdDocAmt>**	
01 Currency Code (3 char)	**<DscntApldAmt>**	USD
02 Amount (18 char & 1 decimal period marker)	**This is part of the <DscntApldAmt> (see example).**	400.00
	The example below shows how the Fedwire/CHIPS **Amount of Negotiated Discount** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS. 16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX 88,**ADDENDA= <RfrdDocAmt>= <DscntApldAmt>** USD 400.00	

Fedwire/CHIPS Tags & Data Elements	ISO 20022 XML Tag	Example Data
{8600} / [860] Adjustment Information	**<AdjstmntAmtAndRsn>**	
01 Adjustment Reason Code (2 char)	**<Rsn>**	01
02 Credit Debit Indicator (CRDT or DBIT)	**<CdtDbtInd>**	DBIT
03 Currency Code (3 char)	**<Amt>**	USD
04 Amount (18 char & 1 decimal period marker)		100.00
05 Additional Information (140 char)	**<AddtlInf>**	Deducted USD100 from pmt due to pricing error in original invoice
	The example below shows how the Fedwire/CHIPS **Adjustment Information** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS. 16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX 88,**ADDENDA= <AdjstmntAmtAndRsn>= <Rsn>** 01 **<CdtDbtInd>** DBIT **<Amt>** USD 100.00 88,**<AddtlInf>** Deducted USD100 from pmt due to pricing error in original invoice	

Fedwire/CHIPS Tags & Data Elements	ISO 20022 XML Tag	Example Data
{8650} / [865] Date of Remittance Document	**<RfrdDocInf>**	
Date of Remittance Document (CCYYMMDD)	**<RltdDt>**	20101109
	The example below shows how the Fedwire/CHIPS **Date of Remittance Document** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS. 16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	

	88,**ADDENDA= <RfrdDocInf>= <RltdDt>** 20101109	
Fedwire/CHIPS Tags & Data Elements	**ISO 20022 XML Tag**	**Example Data**
{8700} / [870] Secondary Remittance Document Info	**<CdtrRefInf>**	
01 Document Type Code (4 char)	**<Cd>**	PUOR
02 Proprietary Document Type Code (35 char)	**<Prtry>**	
03 Document Identification Number (35 char)	**<Ref>**	PO-000001
04 Issuer (35 char)	**<Issr>**	
	The example below shows how the Fedwire/CHIPS **Secondary Remittance Document Info** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS. 16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX 88,**ADDENDA= <CdtrRefInf>= <Cd>** PUOR **<Ref>** PO-000001	
Fedwire/CHIPS Tags & Data Elements	**ISO 20022 XML Tag**	**Example Data**
{8750} / [875] Remittance Free Text	**<AddtlRmtInf>**	
01 Line 1 (140 char)	**<AddtlRmtInf>**	For more info about this pmt, call John Smith 212-555-1111
02 Line 2 (140 char)	**<AddtlRmtInf>**	Call before 5 ET
03 Line 3 (140 char)	**<AddtlRmtInf>**	
	The example below shows how the Fedwire/CHIPS **Remittance Free Text** tag would appear in the BTRS 88 Record. Please note that the information would look the same for Fedwire and CHIPS. 16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX 88,**ADDENDA= <AddtlRmtInf>= <AddtlRmtInf>** For more info about this pmt, call John 88, Smith 212-555-1111 **<AddtlRmtInf>** Call before 5 ET	

Annex E
(Normative)
Status Codes

When status codes are present for an account the following status codes are required. If no status codes are present, such as is the case with a detail only file, the following codes are optional.

PRIOR DAY	CURRENT DAY
Opening Ledger (010)	Current Ledger (030)
Closing Ledger (015)	Current Available (060)
Closing Available (045)	