**American National Standard
for Financial Services**

ANSI X9.121-2016

Balance and Transaction Reporting Standard

BTRS Version 3 (BTR3)

Developed by
Accredited Standards Committee X9, Incorporated
Financial Industry Standards

Date Approved: February 19, 2016

American National Standards Institute

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Contents

Foreword

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

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Consideration will be given to proposed changes within 45 days of submittal. Proposed changes must be submitted to "continuous_maintenance@x9.org" using the published change form.

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Version 3

1) The Balance and Transaction Reporting Standard (BTRS) Version 3 is named "BTR3". This was decided as a more effective branding as the industry moves from BAI2 to BTR3. The standard will still be named BTRS, but each release will incorporate the level. The next release will be BTR4, for example.

2) The Record definitions were placed in a table in order to better define the attributes, rules, placement and best practices. Definitions from the previous Section 7 were integrated into this table to consolidate that information – then Section 7 was deleted.

3) On Record 02, the "Currency Code" is no longer used. It is removed in order to eliminate discrepancies with the Currency Code listed within Record 03 (a required field). It also was removed to avoid the creation of individual Record 02 for each currency within the same bank. In order to remain backward compatible, this field remains positional, but null.

4) On Record 02, the "Origination Identification" was renamed to "Bank Identification", to clearly associate the ABA/SWIFT to the Bank level.

5) On Record 02, the As-of-Date Modifier with value "1" (Interim Previous Day Data) retired because of non-use within the industry.

6) The Batch/Detail Records (batch level (89) and invoice level (90)) format from BTRS Version 1 were eliminated, until they can be revised to accommodate embedded XML.

7) On Record 02, the Group Status Codes are retired.

8) Eliminated the Annex containing a SWIFT MT-to-BTRS mapping, since there are no special rules required from an industry perspective. Key SWIFT MT balance codes are listed in the BTRS Status Code section for reference, which will suffice.

9) Eliminated the Annex containing a sample BTRS File, since that will be available on the x9.org website.

10) Modified requirement that certain balance codes to facilitate SWIFT and ISO 20022 XML interoperability be a best practice rather than required.

Version 2

The BTRS Version 2 was skipped to provide consistent versioning. The X9 Committee agreed that this naming convention provided better continuity when the industry moves from BAI2 to BTR3.

Version 1

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 (modified in Version 3)

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 (modified in Version 3)

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. (Note: With some exceptions, a BAI2 file cannot be processed by a BTRS reader if deleted or repurposed codes were included in the BAI2 file.)

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.

Introduction

By publication of this standard, no position is taken with respect to the validity of this claim or of any copyright in connection therewith. The copyright holder has, however, filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants.

This Standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Financial Services, X9. Committee approval of the Standard does not necessarily imply that all the committee members voted for its approval.

At the time this version was approved, the **X9** Management Committee had the following members:

> Roy C. DeCicco, X9 Chair
> Claudia Swendseid, X9 Vice Chair
> Steve Stevens, X9 Executive Director
> Janet Busch, Managing Director

At the time this standard was initially approved:

The **X9C** subcommittee on **Corporate Banking** had the following members:

James Wills, SWIFT	Chair
Mary Hughes, FRB Minneapolis	Chair beginning 2015
Deb Hjortland, FRB Minneapolis	Vice-Chair

The **X9C1-1 Code List Update** working group had the following members:

David Repking, JPMorgan Chase	Co-Chair
Greg Malosh, BNY Mellon	Co-Chair

The **X9C1-3 Language of Standard** working group had the following members:

John Scully, Bank of America Merrill Lynch	Co-Chair
Bill Lundeen, Proctor & Gamble	Co-Chair

The **BTRS Version 3 w**orking group had the following members:

David Repking, JPMorgan Chase	Chair

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Bryan Kirkpatrick, BNY Mellon
Ganesh Srinivasan, Volante Technologies
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James Wills, SWIFT
John Snyder, Chesapeake Systems
Kishore Rao, FundTech
Lisa Hays, BNY Mellon
Martin Milander, Bank of America Merrill Lynch
Rob Walusek, Wells Fargo
Sonja Johnson, U.S. Bank
Todd Pack, Bank of America Merrill Lynch
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William Porto, J.P. Morgan

Technical Reviewers: Chuck Walker and Dean Potter

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, cross-border payments, 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 unavailable funds breakdowns were usually sufficient. However, in recent years the need for more extensive reporting of greater transaction detail has 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.

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.

The Industry Documents Challenges with the BAI2 Specification

In April 2010, the AFP corporate community responded to a questionnaire formulated by David Bellinger (AFP Research Dept.). The response was overwhelmingly in support of revisions to turn BAI2 from a specification that varied by institution to a standard that the industry would use to normalize information reporting. This led to the BTRS revisions.

Questionnaire Title: *"Updating the BAI Codes for Information Reporting to Corporates"*
- Sent to all 6,300 AFP members
- Responses received from 1,116 financial professionals
- Responses from corporate practitioners only (i.e., non-FI)
- 600+ specific Challenges and New Code Suggestions

The Creation of BTRS

As a result of this corporate feedback, the X9C1 Balance Transaction Reporting Standard (BTRS) committee was formulated to address these concerns under the following principles:

- Create a standard BTRS File Structure, evolving BAI2 from a specification open to varying interpretation
- Modernize BAI2 to include developments in banking and technology over the past 25 years
- Rationalize and Reduce the number of supported Status, Summary and Detail codes
- Globalization
  - Provide additional SEPA transaction codes to support new European payment types
  - Allow for double byte character set support through the incorporation of UTF-8
  - Enable SWIFT and ISO 20022 XML interoperability – Code Mapping and Balance Inclusions
  - Enforce currency rules to make them mandatory and allow for multi-currency
- Develop a new Record 88 reporting structure to support extended wire remittance in CTP payments
- Strive for backwards compatibility with BAI2 to ensure 'low cost to convert".

Timeline

The modernization of BAI2 was a carefully planned and executed process that began when X9 obtained the copyrights.

2008 BAI2 Copyright Transferred to Accredited Standards Committee X9, Inc.

2010 AFP Survey Administered to Evaluate BAI2 - 1,116 Corporate Responses

2011 BTRS Formulated as a Collaboration of 52 Companies

2012 BTRS V1 Approved by ANSI Replaces BAI2 as the Industry Standard

2014 BTRS V2 Approval 2Q – Revised Codes and Batch Record Definitions

2016 BTRS V3 Approval 1Q – Revised this Standards document and minor Code updates

TBD *ASC X9 to announce future* <u>*sunset date for BAI2*</u>

Normative References

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

<u>**BTRS Code List**</u>   http://x9.org/

<u>**Currency Code List**</u>   ISO 4217, *Codes for the Representation of Currencies and Funds*

2   BTRS File Format

The Balance and Transaction Reporting Standard follow strict formation and syntax rules to enforce consistency within the industry. BTRS Information Reporting files are grouped into a hierarch of "envelopes" of file, bank, and account information.

These envelopes organize data at the following levels:

<u>File</u>

Groups are combined into a single file for an individual representation of related account activity information. A file contains data transmitted between one sender and one receiver. A file can include bank groups of account activity 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 to a single receiver.

<u>Bank</u>

The next level of organization is the bank group. A bank header includes one or more account envelopes, all of which represent accounts at a single financial institution. All information within a bank is for the same as-of date and time. Accounts within the bank group may be of different currencies.

<u>Account</u>

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

The records in a BTRS Information Reporting file are ordered as follows:

01	File Header	Begins File
02	Bank Header	Begins Bank
03	Account Header	Begins Account
16	Transaction Detail	Within Account
49	Account Trailer	Ends Account
98	Bank Trailer	Ends Bank
99	File Trailer	Ends File

- 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.

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

- There must be one 99 record for each 01 record. The 99 record indicates the end of the logical file.
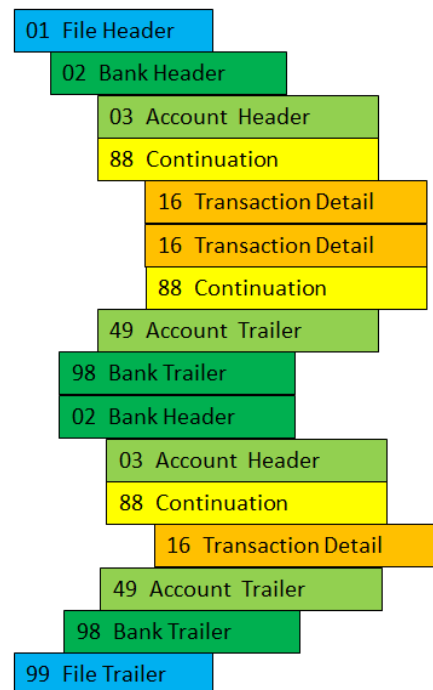
BTRS File Structure (Compatible with BAI2)

2.1   Record Descriptions

BTRS Information Reporting files include the following record codes:

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. It is enveloped with the Record 99, which marks the end of a file.
02	Bank Header	The Bank Header identifies a group of accounts that are from the same financial institution (originator) for the same as-of-date and as-of-time. It is enveloped with the Record 98, which marks the end of a Bank group.
03	Account Header	The Account Header identifies the account number, its currency, and reports the account status (aka Balance and associated account-level information) and transaction summary information. It is enveloped with the Record 49, which marks the end of an account.
16	Transaction Detail	The Transaction Detail is used report the credits and/or debit associated to the account. It reports the transaction value (in the currency indicated in the Account Header), availability, a bank reference, customer reference, and may include transaction detail reported within free-form alphanumeric text.
49	Account Trailer	This record provides account control totals. It is enveloped with the Record 03, which marks the beginning of an account.
98	Bank Trailer	This record provides Bank control totals. It is enveloped with the Record 02, which marks the beginning of a Bank group.
99	File Trailer	This record provides file control totals. It is enveloped with the Record 01, which marks the beginning of a file.
88	Continuation	A Continuation 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 record. The 88 record is also used to provide supplemental wire remittance information for standard Fedwire CTP and CHIPS Remittance transactions. (See Annex B for details.)

Table 1 - Record Code Descriptions

3   Record Code Formats

This section provides the format of each Record Code, with information about the field names, status, length, types and values/format. In addition, each field may include individual placement, rules, and/or best practices that define attributes for standards across the industry.

Here are conventions used in defining each Record Code:

The <u>Status Disposition</u> determines how a field should be used, based on these designations:
Mandatory   The field must appear within the record code to qualify for a BTRS file
Optional   The originator may determine whether the field can or should be included within the file
Conditional   The field must be included within the file, if applicable to the bank or account

The <u>Field Description & Length</u> tags determine how to apply the standard to a given field:
Rule   An enforced BTRS rule, which if not followed invalidates the file
Best Practice   Not an enforced BTRS rule, but a consensus among industry practitioners
Placement   Positioning of a Record or of a field value within a Record
Source   Origination of a value for a given field
Notes   Additional Information or explanations
Length Field   -   "U" means "Undefined" and, thus, at user discretion
                 -   1-xx where 'xx' is a numeric number means a varying length with a maximum of xx characters.

3.1   FILE HEADER – Record 01

The File Header marks the beginning of a file. It identifies the sender and the receiver of the transmission, and describes the structure of the file.

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the File Header record. Placement: Always the first record in the file. Is also associated with Record 99. Rule: One '01' Record Code per file	M	2	Numeric, with leading zeros	01
2	Sender Identification	Transmitter of file Rule: No zero or space padding is required. A zero on a 9 digit ABA, e.g., 021000001, is required. Best Practice: Bank ID (e.g., ABA or SWIFT BIC)	M	1-20	Alphanumeric	Variable Length
3	Receiver Identification	Next recipient of file Rule: No zero or space padding is required. A zero on a 9 digit ABA, e.g., 021000001, is required. Best Practice: For Financial Institutions, the Bank ID (e.g., ABA or SWIFT BIC). For non-FI, other bilaterally agreed upon identifier.	M	1-20	Alphanumeric	Variable Length
4	File Creation Date	Sender/Originator date In the local date of the Sender, or the preferred date of the Receiver, or other mutually agreed upon date, but same time zone as the Record 02.	M	6	Numeric (Integer)	YYMMDD
5	File Creation Time	Sender/Originator time In the local time zone of the Sender, or the preferred time zone of the Receiver, or other mutually agreed upon time zone, but same time zone as the Record 02	M	4	Numeric, with leading zeros	HHMM Military 24 Hour Clock (0000 through 2359)
6	File Identification Number	Identification number defined by the sender. Used to uniquely identify those files transmitted between a sender and a receiver on a given date. Best Practice: For a transmission, the number would be new for each file within the same file creation date for the same receiver. (This would not necessarily apply to an ad-hoc files.)	M	1-20	Numeric (Integer)	Variable Length
7	Physical Record Length	Number of characters in a physical record Default: Variable length records, maximum 80 chars Rule: Specified if fixed length records are used. If Physical Record Length is not specified, the records in the file are of variable length and 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. Best Practice: do not provide a value, so it defaults to variable length to a maximum of 80 characters.	O	1-3	Numeric, without leading zeros	40-999
8	Block Size	Number of physical records in a block Default: Variable block size Best Practice: do not provide a value, since most modern systems either ignore this information or would not obtain it from information within the file.	O	1-3	Numeric, without leading zeros	1-999
9	Version Number	1 = BAI1 2 = BAI2 3 = BTR3 New X9 Balance and Transaction Standard	M	1-2	Numeric, without leading zeros	3
10	End of Record Delimiter	Required delimiter for control records	M	1	Character	/

Table 2 - File Header (Record Code 01)

Sample 01 Record

Example Using Only Mandatory Fields
01,122099999,123456789,150623,0200,1,,,3/

#	Field Name	Value	Description
1	Record Code	01	Signifies the 01 Header Record
2	Sender Identification	122099999	Last National Bank (122099999) is transmitting bank account information to its third-party intermediary, Data Corp. (123456789)
3	Receiver Identification	123456789	Data Corp. (123456789) is the receiving bank.
4	File Creation Date	150623	The file was created by Last National Bank June 23, 2015
5	File Creation Time	0200	The file was created at 2:00 AM
6	File Identification Number	1	This is the first file created on this date and is identified as number 1 (but any unique number is acceptable)
7	Physical Record Length	null	No physical record length specified, so it defaults to variable length to a maximum of 80 characters. This default is noted by adjacent delimiters (,,)
8	Block Size	null	No block size is specified, This default is noted by adjacent delimiters (,,)
9	Version Number	3	The file is X9 BTRS Version 3 (BTR3)
10	End of Record Delimiter	/	Required delimiter

3.2 BANK HEADER – Record 02

The Bank Header identifies a group of accounts that are from the same originator and includes the same as-of-date and as-of-time. A file may contain one or several Bank groups. Each group begins with a 02 Bank Header record and ends with a 98 Bank Trailer record. This allows a file to contain information from multiple originators. A group may contain several accounts.

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the Bank Header record. Placement: Follows a '01' or '98' Record. Is also associated with Record 98. Rule 1: There is one '02' Record Code per Bank in the same file for the same DDA Post Date. Rule 2: A same bank can occur as separate '02' Records, given that each '02' Record is for a different DDA Post Date. Rule 3: There is no limit to the number of Banks per file.	M	2	Numeric, with leading zeros	02
2	Ultimate Receiver Identification	Final recipient of this file Rule 1: Can be the same as the Receiver Identification Rule 2: If this field is not specified, it assumed that the Receiver Identification field on the 01 Record is the "Ultimate Receiver Identification" Rule 3: No zero or space padding is required. A zero on a 9 digit ABA, e.g., 021000001, is required. Best Practice: For Financial Institutions, the Bank ID (e.g., ABA or SWIFT BIC). For non-FI, other bilaterally agreed upon identifier.	O	1-20	Alphanumeric	Variable Length
3	Bank Identification	Originator of the file. Bank ID associated to the "Customer Account Number" of Record 3,Field #2, where the account being reported is held Rule 1: No zero or space padding is required. A zero on a 9 digit ABA, e.g., 021000001, is required. Rule 2: Usage *Financial Institutions*: ABA, SWIFT, CHIPS, or another mutually agreed on number. *Nonbank Processors*: DUNS number or another mutually agreed on number. Rule 3: Use either an ABA or SWIFT BIC, unless not available. **ABA** The 9-digit Routing Number (no dashes), with leading zeros. Federal Reserve E-Payments Routing Directory: https://www.frbservices.org/operations/epayments/epayments.html **SWIFT** The SWIFT BIC, as either the 8 character bank or the 11 character bank/branch SWIFT Online BIC Search: http://www.swift.com/bsl/index.faces;jsessionid=AqDFP8CEunlDP8tIvzOqII9CwyK2JM7LsYCAmd5r	M	1-20	Alphanumeric	Variable Length

4	Group Status	The group status will always report as "Update". Note: 2 = Deletion (**retired – do not use**) 3 = Correction (**retired – do not use**) 4 = Test Only (**retired – do not use**)	M	1	Numeric (Integer)	1 = Update
5	As-of-Date	DDA Post date of the Reported Accounts In the local date of the Sender, or the preferred date of the Receiver, or other mutually agreed upon date, but same time zone as the Record 01	M	6	Numeric (Integer)	YYMMDD
6	As-of-Time	DDA Post time of the Reported Accounts In the local time zone of the Sender, or the preferred time zone of the Receiver, or other mutually agreed upon time zone, but same time zone as the Record 01	O	4	Numeric, with leading zeros	HHMM Military 24 Hour Clock (0000 through 2359)
7	Currency Code	Not used, must be defaulted (add positional comma) Note: The Currency Code is only required on Record 03 at the account level, since within a bank there can be multiple currencies. Placement: no value is reported, but the comma delimiter is still required	n/a	0	n/a	Null
8	As-of-Date Modifier	The disposition of the information reported on the file Rules: As-of-Date Modifier does not affect processing. For reference only. Best Practice: "Final Same-day" can be used to indicate the final Controlled Disbursement Presentment has completed. Note: 1 = Interim previous-day data (**retired – do not use**) **Definitions** Final Previous-day: Status, Summary, and Transaction data at the close of business on the As-of-Date of the previous business day. For the prior day reporting of hard-posted activity. Interim Same-day: Status and Summary and/or Transaction data on the As-of-Date for the current business day. For the current day reporting of memo-posted activity. Final Same-day: Status and Summary and/or Transaction data at the close of business on the As-of-Date for the current business day. For the current day reporting of memo-posted activity.	M	1	Numeric	2 = Final Previous-day 3 = Interim Same-day 4 = Final Same-day
9	End of Record Delimiter	Required delimiter for control records	M	1	Character	/

Table 3 - Bank Header (Record Code 02)

3.2.1   Sample 02 Record

Example Using Only Mandatory Fields
02,,122099999,1,150622,,,2/

#	Field Name	Value	Description
1	Record Code	02	Signifies the 02 Bank Record
2	Ultimate Receiver Identification	null	No ultimate receiver specified. This default is noted by adjacent delimiters (,,)
3	Bank Identification	122099999	The bank account activity originated from Last National Bank, in the FED ABA format
4	Group Status	1	The account activity in the file has a group status of "update", which is always the value of this field.
5	As-of-Date	150622	The account activity is as-of June 22, 2015
6	As-of-Time	null	The post time not provided. This default is noted by adjacent delimiters (,,)

7	Currency Code	null	Currency Code is never used at the bank level, only at the account (Record Code 03) level. This default is noted by adjacent delimiters (,,)
8	As-of-Date Modifier	2	The data are "final previous-day data" as signified by the As-of-Date modifier (2)
9	End of Record Delimiter	/	Required delimiter

Note: the combination of null values for consecutive fields results in the display of 3 commas

Example Using All Fields
02,SWXXXXXX,122099999,1,150622,2359,,2/

#	Field Name	Value	Description
1	Record Code	02	Signifies the 02 Bank Record
2	Ultimate Receiver Identification	SWXXXXXX	Activity for one or more account is being reported to this bank, in the SWIFT BIC format
3	Bank Identification	122099999	The bank account activity originated from Last National Bank, in the FED ABA format
4	Group Status	1	The account activity in the file has a group status of "update", which is always the value of this field.
5	As-of-Date	150622	The account activity is as-of June 22, 2015
6	As-of-Time	2359	The account activity is as-of 23:59
7	Currency Code	null	Currency Code is never used at the bank level, only at the account (Record Code 03) level. This default is noted by adjacent delimiters (,,)
8	As-of-Date Modifier	2	The data are "final previous-day data" as signified by the As-of-Date modifier (2)
9	End of Record Delimiter	/	Required delimiter

3.3   ACCOUNT HEADER – Record 03

The Account Header identifies the account number and reports summary and status information. Only Summary information may be accompanied by an item count and funds availability distribution. A Record 03 must be used to identify each account. The 03 record does not report transaction detail; detail is reported in record 16. The Record 88 can be used to continue a Record 03.

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the Account Record. Placement: Follows a '02' or '49' Record. Is also associated with Record 49. Rule: One '03' Record Code per unique Account in the same Bank Header. Unlimited Accounts per Bank Header.	M	2	Numeric, with leading zeros	03
2	Customer Account Number	Customer account number at originator's financial institution. Rules: Must not contain comma "," or slash "/" delimiters.	M	1-35	Can contain alphabetic, numeric, and special characters (except delimiters)	Variable-length field Accounts may be transmitted with or without leading zeros
3	Currency Code	The Currency Code for the account Source: ISO 4217 and are the same as those used by SWIFT. Currencies can have 0, 1, 2, 3 or more fractional decimal places. Rule 1: The currency code determines the format of the amount value and number of implied decimals in all "Amount" fields. Rule 2: Periods and/or commas are not used in amount fields.	M	3	Alphabetic	XXX
		Select the desired format based on reporting for either a Status Code or Summary Code **The "Type Code," "Amount," "Item Count" and "Funds Type" fields are repeated to identify each Status or Summary type.**				
		Status Code Format (Report any Status Code, typically in ascending numeric code order)				
4	Type Code	Identifies the type of Status information reported Source: X9 BTRS Code List – Status Rule: The grouping of fields for Type Code, Amount,	C	3	Numeric (Integer)	Expressed with leading zeros

		Item count, and Funds Type fields can span across 2 physical records, when the record limit is reached. Example: 88,XXXXXXXXXXXXXXX,100,7966666,3 or 88,XXXXXXXXXXXXXXX,100, 88,7966666,3 Best Practice 1: For Prior Day include codes 010, 015, and 045 and for Current Day include codes 030 and 060. Best Practice 2: Sort Type Codes in ascending order to facilitate visual inspections.				
5	Amount	The amount stated in the reported Currency Code (Record 03 Field 3) Rule 1: The Currency Code will determine the implied decimal place. Rule 2: If the sign is included, it precedes the amount value. Defaults: Default for the sign is positive "+". Including the Status Code with no amount indicates that no amount is being reported (a special case that is different than reporting a zero amount). Best Practice 1: Positive numbers do not include "+" Best Practice 2: Sort Amounts in descending order within Type Code to facilitate visual inspections. Note: See the definition of "Amount" in Section 6 for format examples.	M	1-23 If not signed 1-24 if signed	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
6	Item Count	**Not used**, must be defaulted (add positional delimiter) Rule: No value is reported, but the delimiter is still required	n/a	n/a	n/a	n/a
7	Funds Type	**Not used**, must be defaulted (add positional delimiter) Rule: no value is reported, but the delimiter is still required	n/a	n/a	n/a	n/a
Summary Code Format (Report any Summary Code, typically in ascending numeric code order)						
4	Type Code	Identifies the type of Summary information reported Source: X9 BTRS Code List – Summary Rule: The grouping of Type Code, Amount, Item count, and Funds Type fields can span across 2 physical records, when the record limit is reached.	O	3	Numeric (Integer)	Expressed with leading zeros
5	Amount	The amount stated in the reported Currency Code (Record 03 Field 3) Rule: The Currency Code will determine the implied decimal place. Defaults: Default for the sign is positive "+". Including the Summary Code with no amount indicates that no amount is being reported (a special case that is different from reporting a zero amount). Best Practice 1: Positive numbers do not include "+" Best Practice 2: Sort Amounts in descending order within Type Code to facilitate visual inspections. Note: See the definition of "Amount" in Section 6 for format examples.	O	1-23 If not signed 1-24 if signed (includ ing sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" but are never negative "-".
6	Item Count	Rule: For summary type codes only; no implied decimal.	O	U	Numeric (Integer)	Does not include periods or

		Default: If "unknown", then use delimiter (null)				commas.
7	Funds Type	Rule 1: Amount has the same currency code and implied decimals specified in the 03 record. Rule 2: Amount is not included in the Account, Bank and File Trailer batch control totals. If Funds Type = 0, 1, 2, or Z, This indicates the availability of the entire Amount (Field 5), so there are no additional subfields 8, 9 or 10. If Funds Type = S, The next three fields are Immediate Availability (Field 8), 1 Day Availability (Field 9), and 2+ Day Availability (Field 10) and should add up to the value of the Amount field. If Funds Type = V, The next two fields are Value Date (Field 8) and Value Time (Field 9). Default: Z (Unknown Availability) Note: D = Distributed Availability (**retired – do not use**)	O	1	Alphanumeric	0 = immediate availability 1 = one-day availability 2 = two-or-more-days availability S = distributed availability V = value dated Z = unknown (default)
The next 3 Fields are Mandatory only on the Condition that Funds Type = S						
8	Immediate Availability	The portion of the Amount (Field 5) that represents the immediately available funds (aka Usable Funds). Rule: Mandatory when funds type = S Placement: Immediately follows "Funds Type" Default: Default for the sign is positive "+". Including the Status Code with no amount indicates that no amount is being reported (a special case that is different than reporting a zero amount). Best Practice: Positive numbers do not include "+"	C	1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
9	1 Day Availability	The portion of the Amount (Field 5) that is available in 1 Business Day (aka 1 Day Funds) Rule: Mandatory when funds type = S Placement: Immediately follows "Immediate Availability" Defaults: Default for the sign is positive "+". Including the Status Code with no amount indicates that no amount is being reported (a special case that is different than reporting a zero amount). Best Practice: Positive numbers do not include "+"	C	1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
10	2+ Day Availability	The portion of the Amount (Field 5) that is available in 2 or more Business Day (aka 2+ Day Funds) Rule: Mandatory when funds type = S Placement: Immediately follows "1 Day Availability" Defaults: Default for the sign is positive "+". Including the Status Code with no amount indicates that no amount is being reported (a special case that is different than reporting a zero amount). Best Practice: Positive numbers do not include "+"	C	1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
The next 2 are Mandatory only on the Condition that Funds Type = V						
8	Value Date	The originator's business day and time zone. Rule: The time zone corresponds to the same time zone used in the As Of Date/Time fields in the Bank Header Record 02	C	6	Numeric (Integer)	YYMMDD

		Note: Value date is the date the originator makes funds available to the customer. Value dates prior to the As-of-Date in the Bank 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.				
9	Value Time	Value time is optional and may be defaulted by adjacent delimiters. Rule: The time zone corresponds to the same time zone used in the As Of Date/Time fields in the Bank Header Record 02 Note: Times are stated in military format (0000 through 2359). Format 0000 indicates the beginning of the day and 2359 indicates the end of the day for the date indicated	C	4	Numeric, with leading zeros	HHMM Military 24 Hour Clock (0000 through 2359)

<div align="center">

Table 4 - Account Header (Record Code 03)

</div>

3.3.1   Sample 03 Record

Example Using Only Mandatory Fields
03,0987654321,GBP,,,,/

#	Field Name	Value	Description
1	Record Code	03	Signifies the 03 Record
2	Customer Account Number	0987654321	The account number is listed, including a significant leading zero
3	Currency Code	GBP	The 3 character ISO currency code

Note: the combination of null values for consecutive fields results in the display of 4 commas

Example Using 1 Status and 1 Summary Field
03,987654321,CAD,010,500000,,,190,70000000,4,0/

#	Field Name	Value	Description
1	Record Code	03	Signifies the 03 Record
2	Customer Account Number	987654321	The account number is listed, with no leading zeros
3	Currency Code	CAD	The 3 character ISO currency code
4	Type Code (**Status**)	010	Status Code 010 is Opening Ledger
5	Amount	500000	The amount for type code (010) is 5,000.00 CAD
6	Item Count	null	The item count not provided for Status Codes. This default is noted by adjacent delimiters (,,)
7	Funds Type	null	The funds type not provided for Status Codes. This default is noted by adjacent delimiters (,,)
4	Type Code (**Summary**)	190	Summary Code 190 "Total Incoming Money Transfers", which signifies that there are Detail Codes (Record 16) associated to this Summary Code. In BTR3, these are 195, 201, 206 and 227
5	Amount	70000000	The amount for type code (190) is 700,000.00 CAD
6	Item Count	4	The item count for this amount is four.
7	Funds Type	0	Availability is immediate
	Delimiter	/	Since the final Summary Code includes a Funds Type value and is not defaulted, the delimiter immediately follows. If there were no Funds Type, it would be reported like this "190,70000000,4,/"

Note: the combination of null values for consecutive fields results in the display of 3 commas

Example Splitting a Summary Code (400) Across 2 Lines
03,1234567890,USD,010,0,,,015,0,,,040,0,,,045,0,,,050,0,,,055,1000000/
88,,,072,0,,,073,0,,,074,0,,,100,99666666,3,,190,99666666,3,,400/
88,99666666,1,,570,99666666,1,/

#	Field Name	Value	Description

1	Record Code	03	Signifies the 03 Record
2	Customer Account Number	1234567890	The account number is listed, not including leading zero
3	Currency Code	USD	The 3 character ISO currency code
4	Type Code (**Status**)	010, 015, 040, 045, 050, 072, 073, 074 and 055	Status Code 010 is Opening Ledger Status Code 015 is Closing Ledger Status Code 040 is Opening Available Next Business Day Status Code 045 is Closing Available Status Code 050 is Average Closing Available MTD Status Code 072 is 1 Day Available Status Code 073 is the Availability Adjustment Status Code 074 is 2 or More Days Available and Status Code 055 is Average Closing Available YTD
5	Amount	0 and 1000000	The amount for type code (010, 015, 040, 045, 050, 072, 074) is zero USD (0) and The amount for type code (055) is $10,000.00 USD
6	Item Count	null	The item count not provided for Status Codes. This default is noted by adjacent delimiters (,,)
7	Funds Type	null	The funds type not provided for Status Codes. This default is noted by adjacent delimiters (,,)
4	Type Code (**Summary**)	100, 190, 400, and 570	Summary Code 190 "Total Incoming Money Transfers", which signifies that there are Detail Codes (Record 16) associated to this Summary Code. In BTR3, these are 195, 201, 206 and 227
5	Amount	Credits = 99666666 Debits = 99666666	The amount for type code (100) is the sum of all credits – there is only one credit Summary (190) code, so they are both values are 996,666.66 USD. The amount for type code (400) is the sum of all debits – there is only one debit Summary (570) code, so they are both values are 996,666.66 USD.
6	Item Count	3, 3, 1, and 1	The item counts are included for all 4 Summary codes
7	Funds Type	null	Availability is defaulted to Unknown
	Delimiter	/	Since the final Summary Code does include a Funds Type value the delimiter immediately follows with no preceding comma.

Note: the combination of null values for consecutive fields results in the display of 2 or 3 commas

21

3.4   TRANSACTION DETAIL – Record 16

The Transaction Detail Record reports each credit and/or debit with accompanying text and reference numbers. The Record 88 can be used to continue a Record 16.

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the Transaction Detail. Placement 1: Follows a '03, '16', or '88' Record Placement 2: If a "message only" file, the Record 16 with a code 890 (information text) can follow the Record 01. Rule: One '16' Record Code per credit or debit transaction within an Account in the same Bank Group. Unlimited transactions per Account.	M	2	Numeric (Integer)	16
2	Detail Type Code	Identifies the type of Detail information reported Rule 1: Must be a valid BTRS Detail Code Rule 2: If a custom Detail Code is used, it must be within the valid range defined in the X9 BTRS Code List Rule3: The value cannot be a Status or Summary Code Source: X9 BTRS Code List - Detail	M	3	Numeric (Integer)	
3	Amount	The amount stated in the reported Currency Code (Record 03 Field 3) Note: Only optional for Detail Type 890 , see "Type Code for Non-monetary Information" Rule 1: The Currency Code will determine the implied decimal place. Rule 2: The sign of this Amount field is always positive Defaults: Default for the sign is positive "+". Best Practice: Positive numbers do not include "+" Note: See the definition of "Amount" in Section 6 for format examples.	M	1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas Can only be signed positive "+"
4	Funds Type	The Funds Type defines the determination of the transaction amount in terms of when the whole or partial amount is effective. Rule: Amount is not included in the Account, Bank and File Trailer batch control totals. Rule: Amount has the same currency code and implied decimals specified in the 03 record. Note: Only optional for Detail Type 890 , see "Type Code for Non-monetary Information" If Funds type = Z, 0, 1, 2 The entire amount applies to the code value and there are no additional fields as there are for S and V. If Funds Type = S, (See Next blue Section) The next three fields are Immediate Availability (Field 8), 1 Day Availability (Field 9), and 2+ Day Availability (Field 10) and should add up to the value of the Amount field. If Funds Type = V, (See blue Section after Next) The next two fields are Value Date (Field 8) and Value Time (Field 9). Note: D = Distributed Availability (**retired – do not use**)	M	1	Alphanumeric	Z = unknown 0 = immediate availability 1 = one-day availability 2 = two-or-more-days availability S = distributed availability V = value dated
The next 3 Fields are Mandatory only on the Condition that Funds Type = S						

			C	O	Size	Type	Format
5	Immediate Availability	The portion of the Amount (Field 3) that represents the immediately available funds (aka Usable Funds). Rule: Mandatory when funds type = S Placement: Immediately follows "Funds Type"	C		1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
6	1 Day Availability	The portion of the Amount (Field 3) that is available in 1 Business Day (aka 1 Day Funds) Rule: Mandatory when funds type = S Placement: Immediately follows "Immediate Availability"	C		1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
7	2+ Day Availability	The portion of the Amount (Field 3) that is available in 2 or more Business Day (aka 2+ Day Funds) Rule: Mandatory when funds type = S Placement: Immediately follows "1 Day Availability"	C		1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
The next 2 are Mandatory only on the Condition that Funds Type = V							
5	Value Date	The originator's business day and time zone. Rule: The time zone corresponds to the same time zone used in the As Of Date/Time fields in the Bank Header Record 02 Note: Value date is the date the originator makes funds available to the customer. Value dates prior to the As-of-Date in the Bank 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. Best Practice: For value dates different than the As-of-Date in the Bank 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 (aka effective date).	C		6	Numeric (Integer)	YYMMDD
6	Value Time	Value time is optional and may be defaulted by adjacent delimiters. Rule: The time zone corresponds to the same time zone used in the As Of Date/Time fields in the Bank Header Record 02 Note: Times are stated in military format (0000 through 2359). Format 0000 indicates the beginning of the day and 2359 indicates the end of the day for the date indicated	C		4	Numeric, with leading zeros	HHMM Military 24 Hour Clock (0000 through 2359)
The next 3 are Optional. The field placement is dependent upon the Funds Type value							
5 8 7	Bank Reference Number 5 (for Funds Type Z/0/1/2) 8 (for Funds Type S)	A reference assigned by the Financial Institution Rule: Must not contain a comma "," or a slash "/". Best Practice: A reference that uniquely identifies the	O		0-16 ISO & MT	Alphanumeric	

	7 (for Funds Type V)	transaction that a receiver can communicate back to the Financial Institution for research purposes.				
6 9 8	Customer Reference Number 6 (for Funds Type Z/0/1/2) 9 (for Funds Type S) 8 (for Funds Type V)	A reference assigned by the Originating Party Rule: Must not contain a comma "," or a slash "/" Best Practice: A reference (e.g., account number or check number) provided by or known by the receiver that facilitates transaction reconcilement, booking a payment, or otherwise uniquely identifying it by automated financial software. See: "Customer Reference Number" definition for the standard usage of this field.	O	0-16 ISO & MT	Alphanumeric	
7 10 9	Text 7 (for Funds Type Z/0/1/2) 10 (for Funds Type S) 9 (for Funds Type V)	Transaction information assigned by the Originating Institution Rule: Must not begin with a comma "," or a slash "/", but may contain a comma "," or a slash "/" after the first character. Best Practice: Text begins on separate Record 88 rather than the Record 16	O	U	Alphanumeric	Characters within Text shall apply the UTF8/Multi-byte format to allow for single byte and double byte character sets

Table 5 - Transaction Detail (Record Code 16)

3.4.1 Sample 16 Record

Example Using Only Mandatory Fields (Funds Type = 0)
16,399,25000,0,,,/

#	Field Name	Value	Description
1	Record Code	16	Signifies the 16 Record
2	Detail Type Code	399	BTRS Detail Code
3	Amount	25000	Assume YEN – the amount is 25000
4	Funds Type	0	Immediate Availability
5	Bank Reference Number	Null	No Bank Reference provided
6	Customer Reference Number	Null	No Customer Reference provided
7	Text	Null	No Text provided
8	Delimiter	,,,/	Commas are place keepers for null fields and a slash is inserted because there is no text

Example Using Only Mandatory Fields (Funds Type = S)
16,115,25000,S,10000,10000,5000,,,/

#	Field Name	Value	Description
1	Record Code	16	Signifies the 16 Record
2	Detail Type Code	115	BTRS Detail Code
3	Amount	25000	Assume USD – the amount is 250.00
4	Funds Type	S	Distributed Availability
5	Immediate Availability		The amount is 100.00
6	1 Day Availability		The amount is 100.00
7	2+ Day Availability		The amount is 50.00
8	Bank Reference Number	Null	No Bank Reference provided
9	Customer Reference Number	Null	No Customer Reference provided
10	Text	Null	No Text provided
11	Delimiter	,,,/	Commas are place keepers for null fields and a slash is inserted because there is no text

Example Using Only Mandatory Fields (Funds Type = V)
16,495,55000,V,150930,0521,,,/

#	Field Name	Value	Description
1	Record Code	16	Signifies the 16 Record
2	Detail Type Code	495	BTRS Detail Code
3	Amount	55000	Assume EUR – the amount is 550.00
4	Funds Type	V	Value Dated
5	Value Date	150930	The date is September 30, 2015
6	Value Time	0521	The time is 5:21 am
7	Bank Reference Number	Null	No Bank Reference provided
8	Customer Reference Number	Null	No Customer Reference provided
9	Text	Null	No Text provided
10	Delimiter	,,,/	Commas are place keepers for null fields and a slash is inserted because there is no text

Example Funds Type = 0, with All Fields

16,455,680486,0,0273646851TC,CTAS32160120126/
88,***ORIG CO NAME=US POSTAL SERVICE,ORIG ID=1135641517,DESC DATE=120126,ENTRY DESC***
88,***R=PAYMENT,ENTRY CLASS=CCD,TRACE NO=021000023646851,ENTRY DATE=120127,IND ID***
88,***NO=CTAS32160120126,IND NAME=AAAAAAAA AAAAAAAAAA,COMPANY DATA=000067841 26-JA***
88,***N-12***

#	Field Name	Value	Description
1	Record Code	16	Signifies the 16 Record
2	Detail Type Code	455	BTRS Detail Code
3	Amount	680486	Assume USD – the amount is 6,804.86
4	Funds Type	0	Immediate Availability
5	Bank Reference Number	0273646851TC	Bank Reference provided
6	Customer Reference Number	CTAS32160120126	Customer Reference provided
7	Text	(see **bolded Italics** above)	Text provided There is not a delimiter ("/") after each text line.

Note: Since there is text, there is no slash inserted at the very end of the Text field.

Example Funds Type = S with Text and Bank Reference and Customer Reference in an 88 Level

16,165,123000000000,S,100000000000,20000000000,3000000000/
88,TRACE12345678900,CUST REF 79/
88,THIS IS THE TEXT HERE

#	Field Name	Value	Description
1	Record Code	16	Signifies the 16 Record
2	Detail Type Code	165	BTRS Detail Code
3	Amount	123000000000	Assume USD – the amount is 1,230,000,000.00
4	Funds Type	S	Distributed Availability
5	Immediate Availability	100000000000	The amount is 1,000,000,000.00
6	1 Day Availability	20000000000	The amount is 200,000,000.00
7	2+ Day Availability	3000000000	The amount is 30,000,000.00
	Delimiter	/	The 16 record is continued to the next 88 continuation record designated by the slash (/)
8	Bank Reference Number	TRACE12345678900	Bank Reference provided in the Record 88
9	Customer Reference Number	CUST REF 79	Customer Reference provided in the Record 88
	Delimiter	/	Since there is text, the Record 88 with the customer reference is delimited by slash (/) which means text is to follow on next Record 88 continuation
10	Text	THIS IS THE TEXT HERE	Text provided on separate Record 88, by Best Practice (it could have immediately followed the Customer Reference on the line above)

Note: Since there is text, there is no slash inserted at the very end of the Text field.

Example Text Containing the Slash Delimiter

16,142,2599,S,2599,0,0,BANKREF,CUSTREF/
88,***REC FROM=DOLQMHGP,REMARK=/REMI/<CDTRREFINF><TP><CDORPRTRY><C D>SCOR</CD>***
88,***</CDORPRTRY></TP><REF>1234567890</REF></CDTRREFINF>/RE F/TEST USER***
88***, REFERENCE/***

#	Field Name	Value	Description
1	Record Code	16	Signifies the 16 Record
2	Detail Type Code	142	BTRS Detail Code
3	Amount	2599	Assume USD – the amount is 25.99
4	Funds Type	S	Distributed Availability
5	Immediate Availability	2599	The amount is 25.99
6	1 Day Availability	0	The amount is 0.00
7	2+ Day Availability	0	The amount is 0.00
8	Bank Reference Number	BANKREF	Bank Reference provided in the Record 16
9	Customer Reference Number	CUSTREF	Customer Reference provided in the Record 16
	Delimiter	/	Since there is text, the Record 88 with the customer reference is delimited by slash (/) which means text is to follow on next Record 88 continuation
10	Text	(In bold italics above)	Text begins on separate Record 88 rather than the Record 16, by Best Practice (it could have immediately followed the Customer Reference on the line above). Note that a slash falls as the first character in the second 88 record. Since that is within the text, it is valid; but a slash cannot begin the Text (e;g., "88,/REC…" is not allowed).

Note: No ending delimiter is used – the slash "/" that appears in "REFERENCE/" is part of the Text.

3.5   ACCOUNT TRAILER – Record 49

The Account Trailer record provides account level control totals. It is always reported for each Record 03 in the file and all fields are required.

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the Account Trailer. Placement: Follows a '03','16', or '88' Record Rule: Associated to a unique Record 03 Account Record within the same Bank Group.	M	2	Numeric (Integer)	49
2	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. Rule 1: The total does not include amounts reported in Funds Type or Item Count fields. Rule 2: This field includes the sign "+" or "-" for the total. If no sign precedes the total, the default is positive.	M	1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
3	Number of Records	The total number of physical records used to report the account. This is the number of records included within the Account (03) record, the Detail (16) records, all Continuation (88) records, and this Account Trailer (49) record.	M	U	Numeric (Integer)	Does not include periods or commas. Can be signed positive "+".
4	End of Record Delimiter	Required delimiter for control records	M	1	Character	/

Table 6 - Account Trailer (Record Code 49)

3.5.1   Sample 49 Record

Example
49,18650000,23/

#	Field Name	Value	Description
1	Record Code	49	Signifies the 49 Record
2	Account Control Total	18650000	Account Control Total 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. If the currency is EUR this amount is €186.500,00
3	Number of Records	23	This is the number of records included within the Account (03) record, the Detail (16) records, all Continuation (88) records, and this Account Trailer (49) record
4	End of Record Delimiter	/	Required delimiter for control records

3.6   BANK TRAILER – Record 98

The Bank Trailer record provides group level control totals. It is always reported for each Record 02 in the file and all fields are required.

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the Bank Trailer. Placement: Follows the last (final) '49' Record within that particular Record 02 Bank Group Rule: Associated to a unique Record 02 Bank Group within the Record 01 File	M	2	Numeric (Integer)	98
2	Group Control Total	Algebraic sum of account control totals in this group. Since the Currency Code is at the account level, this control total may combine amounts across different currencies. Rule: 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, the default is positive	M	1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
3	Number of Accounts	The number of 03 Account Records in this Bank group.	M	1-3	Numeric (Integer)	Does not include periods or commas. Can be signed positive "+".
4	Number of Records	The total number of physical records used to report the bank. This is the number of records included within the Bank (02) record, the Account (03) record(s), the Detail (16) record(s), all Continuation (88) record(s), the Account Trailer (49) record(s), and this Bank Trailer (98) record.	M	1-9	Numeric (Integer)	Does not include periods or commas. Can be signed positive "+".
5	End of Record Delimiter	Required delimiter for control records	M	1	Character	/

Table 7 - Bank Trailer (Record Code 98)

3.6.1   Sample 98 Record

Example
98,118650000,2,126/

#	Field Name	Value	Description
1	Record Code	98	Signifies the 98 Record
2	Group Control Total	118650000	Group Control Total is the algebraic sum of "Amounts" in all records back to and including the preceding 02 Record. The Group Control total does not include amounts in Funds Type fields.
3	Number of Accounts	2	This is the number of account included within the 02 record.
4	Number of Records	126	This is the number of records included within the Bank (02) record, the 2 Account (03) records, the Detail (16) records, all Continuation (88) records, the 2 Account Trailer (49) records, and this Bank Trailer (98) record
5	End of Record Delimiter	/	Required delimiter for control records

3.7   FILE TRAILER – Record 99

The File Trailer record provides file control totals. . It is always reported for the Record 01 in the file and all fields are required..

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the File Trailer. Placement: Follows the last (final) '98' Record Rule: Associated to the unique Record 01 File	M	2	Numeric (Integer)	99
2	File Control Total	Algebraic sum of all bank control totals in this file. Since the Currency Code is at the account level, this control total may combine amounts across different currencies. Rule: 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, the default is positive	M	1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas. Can be signed positive "+" or negative "-".
3	Number of Banks	The number of 02 Bank records in this file.	M	1-3	Numeric (Integer)	Does not include periods or commas. Can be signed positive "+".
4	Number of Records	The total number of physical records in the file. This is the number of records included within the file, from the File (01) record, the Bank (02) record(s), the Account (03) record(s), the Detail (16) record(s), all Continuation (88) record(s), the Account Trailer (49) record(s), the 4 Bank Trailer (98) record(s), and this File Trailer (99).	M	1-9	Numeric (Integer)	Does not include periods or commas. Can be signed positive "+".
5	End of Record Delimiter	Required delimiter for control records	1	1	Character	/

Table 8 - File Trailer (Record Code 99)

3.7.1   Sample 99 Record

Example
99,1215450000,4,136/

#	Field Name	Value	Description
1	Record Code	99	Signifies the 99 Record
2	File Control Total	1215450000	File Control Total is the algebraic sum of "Amounts" in all in the file. The File Control total does not include amounts in Funds Type fields.
3	Number of Banks	4	This is the number of banks represented by Bank Header (02) record.
4	Number of Records	136	This is the number of records included within the file, the 4 Bank (02) records, the Account (03) records, the Detail (16) records, all Continuation (88) records, the Account Trailer (49) records, the 4 Bank Trailer (98) records, and this File Trailer (99).
5	End of Record Delimiter	/	Required delimiter for control records

3.8   CONTINUATION RECORD – Record 88

Continuation Records are used to span a logical Record Code across physical records. If the data in any type of any record code exceeds the physical record size, or if dividing the record is desirable for another reason, a Record 88 allows the data to continue in the same format within a logical record. Any record type may be continued by a type 88 Continuation record.

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the Continuation Record. Placement: Follows any record type, including another '88' Record Rule: There is no limit to the number of 88 records	M	2	Numeric	88
2	(Next Field)	This "88" is a continuation of the preceding record. Rule 1: If the preceding record ended within a text field, the text continues in the 88 record. Rule 2: 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. Rule 3: 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. (e.g., do not split an amount field across 2 physical records) Rule 4: On Record 03, the grouping of Type Code, Amount, Item count, and Funds Type fields can span across 2 physical records, when the record limit is reached. Note: See Annex B for information on Wire Remittance Information Fedwire/CHIPS Wire Remittance Information	C	n/a	n/a	The format is a continuation of core record type in the preceding record.

Table 9 - Continuation Record (Record Code 88)

4 BTRS Type Codes Overview

BTRS Information Reporting files include data describing a variety of account activity, ranging from paper to electronic and from in-country to cross-border. Each Status, Summary or Transaction has been assigned a unique Type Code that enables easy identification. Type codes are grouped into three levels.

1) **Status:** These codes describe the balance or status/type of the account balance (for example, Opening Ledger, Closing Available and Balance Adjustment).

2) **Summary:** These codes summarize account credit and debit activity of related types (for example, Total Incoming Money Transfers and Total Security Debits).

3) **Transaction Detail:** These codes detail individual credits and debits (for example, ACH Originated Settlement, Money Transfer - Cross-Border, and SEPA Credit Transfer).

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 pass 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. New codes may be requested on the X9 website: www.x9.org.

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

Type Codes	Description
001 - 099	Account status type codes
101 - 399	Credit summary and detail type codes
400 - 699	Debit summary and detail type codes
700 - 799	Loan summary and detail type codes
890	Type Code for Non-monetary Information
900 - 999	Custom Status, Summary and Detail Codes

Table 10 - Type Code Ranges

4.1.2 Type Code for Non-monetary Information
Detail Type Code 890 communicates 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, Funds Type,, Bank Reference Number and Customer Reference Number must all be defaulted. The message is contained within the "Text" field. This record may be included as a "message only" file (refer to the "Specialty File Types" section) or included within a Record 03, as the normal positioning of a detail record. An example of such a message is illustrated below.

16,890,,,,,current day reports will be delayed until 11:00 AM

4.1.3   Customized Type Codes

Financial Institutions shall use standard BTRS codes. Customized codes are created to meet the emergency 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:

Type Codes	Description
900 - 919	Custom Account Status Codes (20 available)
920 - 934	Custom Credit Summary Codes (15 available)
935 - 959	Custom Credit Detail Codes (25 available)
960 - 974	Custom Debit Summary Codes (15 available)
975 - 999	Custom Debit Detail Codes (25 available)

Table 11 - Customized Type Codes

X9 will not designate new type codes within these ranges. Users should employ caution in assigning unique type codes to meet customer needs and shall adhere to the following guidelines:

1. Custom codes shall only be used for transactions between parties that have agreed to support the nonstandard type.

2. If applicable, the originating Financial Institution will initiate a request to consider the custom code to be adopted as a standard BTRS type code to be assigned within the standard 001-899 code range. Requests are created from the X9.org website.

3. X9 will not assign BTRS type codes in the 900–999 range.

4. Financial Institutions will not assign custom codes in the 001-899 range. This will avoid confusion that it may mistakenly be an actual X9 code and/or that the recipient is not prepared to accept it, and thus reject the file.

5. All users of the Standard should recognize these custom ranges, but are not required to accept custom types in a BTRS file.

4.1.4   Bank Reference Number Values

The Bank Reference Number contains a value known to the bank that posts the transaction for the purpose of uniquely identifying the transaction for research and investigation purposes. Typically, the customer uses the Bank Reference value when communicating with the bank for inquires.

4.1.5   Customer Reference Number Values

The Customer Reference Number contains a value known to the customer for the purpose of identifying, booking, and/or reconciling a transaction. Typically, it contains a value from the originated transaction, like a check number, that is maintained within the customer's financial applications. An example is a Location (aka ULID), which is typically be a store number provided on a Deposit Ticket in the MICR line to report the depository store number, just like a paid check serial number.

In order to provide consistency across financial institution, BTRS recommends a best practice for the value of the Customer Reference Number for the following transaction types.

Detail Code	Transaction Type	Value
366	Cash Deposit	Location number
475	Check Paid	Check number
581	Controlled Disb Check	Check number
395	Check Reversal	Location number
301	Deposit	Location number
666	Currency and Coin Shipped	Location number
172 & 695	Deposit Correction	Location number
115	Lockbox Deposit	Lockbox number
254 & 554	Posting Error	Location number

Table 12 – Customer Reference Values

5   File and Record Construction with Delimiters

This section provides the rules to construct a proper BTRS file. The combination of Record Codes dictates the intent of the file. The combination of a consistent physical record size and the placement of field and end-of-line delimiters are important to the structure of the BTRS file, so that recipient can process it without exceptions.

5.1   Specialty File Types

A valid BTRS file contains a well-defined Record Type hierarchy. Files that do not follow a specific order cannot be classified as BTRS. Here are examples of file structures that communicate account information in specific ways.

5.1.1   Empty File

An 'empty' file is one that acts as an acknowledgment from the originator to recipient that there is no incremental activity. Some recipients that schedule several daily current day files, for example, require a BTRS file even when there is nothing new to report. To accomplish this, the <u>minimum content</u> is a BTRS file containing only a File Header record and a File Trailer record. These 2 records inform the recipient where the file originated and the absence of 03 and 16 records communicate that no account has any activity. Note that the intent to report no incremental activity can also be accomplished with a BTRS file that includes Records 03/49, either with current balances or not, but such may be harder to determine what incrementally changed, so the' empty' file may be a preferred format.

<u>Example</u>:
01,123456789,NAMENAME,150716,2100,11,,,3/
99,0,0,2/

5.1.2   Message Only File

If the originator requires only communication with the recipient, a 'messages only' file can be constructed. To accomplish this, only the originator and message are required. So, the BTRS file will contain a File Header and File Trailer record to indicate the originator and the Record 16 and detail code 890 will indicate the required message.

<u>Example</u>:
01,123456789,NAMENAME,150716,2100,11,,,3/
16,890,,,,,detail reports will be delayed until 11:00 AM
99,0,0,3/

5.1.3   Balances Only File

Some recipients manage cash on a macro level, so only balances matter. For this case, a BTRS file without Record 16's is a valid construction. The Record 03/49's indicates the incremental changes in account balances and no Record 16 are included. The Record 03 may contain Status and/or Summary Codes.

Example of 2 account (there could be more) and 0 transactions:
01,123456789,NAMENAME,150430,1201,970,,,3/
02,AAAAAAAAAA,123456789,1,150429,1201,,2/
03,000000099999999,USD,010,7121731010,,,015,7671175795,,,035,7640058756,,/
88,040,6426590616,,,045,7291457372,,,050,6851614220,,,055,6851614220,,/
88,057,10000000000,,,070,379738423,,,072,348601384,,,073,20000,,/
88,074,31137039,,,100,12407855130,58,,110,55015363,2,,140,15015296,2,/
88,170,376481853,8,,190,3609563513,4,,230,8043241800,1,,250,3056032,4,/
88,270,297000314,31,,356,8469788,1,,390,11171,5,,400,11858410345,17,/
88,450,924337,3,,490,1234949644,4,,530,10000000000,1,,550,3056032,4,/
88,570,618967635,4,,690,512697,1,/
49,109146269785,9/
03,000000088888888,USD,010,0,,,015,0,,,035,0,,,040,0,,,045,0,,,050,0,,,055,0,,/
88,070,0,,,072,0,,,073,0,,,074,0,,,100, 20207610,11,,110,4580461,1,/
88,140,15594164,7,,170,31500,2,,356,1485,1,,400,20206125,1,,570,20206125,1,/
49,80827470,4/
98,109227097255,2,15/
99,109227097255,1,17/

5.2   Physical Records and Logical Records

The physical and logical record lengths of a BTRS file must be consistent. This is controlled by settings in the Record 01 File Header in the Physical Record Length (Field 7) and Block Size (Field 8). These settings are included within the BTRS file for informational purposes only and are not intended to be used to validate and possibly reject an otherwise valid file.

Physical Record

A "physical record" defines a fixed character length required by each record. All records in the file must be exactly that number of defined characters. Any record content that would otherwise not attain that fixed length must be padded with blank spaces to reach that required length.

Logical Record

A "logical record" is a 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 (if applicable).

In the examples, the "CR" represents a "carriage control" and the "LF" represents a "line feed". Both are recommend in order for the file to be human-viewable (with only the line feed, applications like MS Notepad wrap the records.)

Example 1: 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. The Record Code spans less than the physical record length.

```
---------------------- Logical Record ----------------------
 01,021999991,99999999,151030,1201,970,,,3/                                                    CRLF

------------------------------------------ Physical Record ------------------------------------------
```

- The physical record occupies characters 1 through 80

- The logical record spans 1 physical record and 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.

Example 2: Same record lengths as in Example 1, but the Record Code spans more that the physical record length.

```
---------------------------------------------- Physical Record ----------------------------------------------
01,123456789,NAMENAME,150430,1201,970,,,3/                                              CR LF
02,AAAAAAAAAA,123456789,1,150429,1201,,2/                                               CR LF
03,000000099999999,USD,010,7121731010,,,015,7671175795,,,035,7640058756,,/             CR LF
88,040,6426590616,,,045,7291457372,,,050,6851614220,,,055,6851614220,,/                CR LF
88,057,10000000000,,,070,379738423,,,072,348601384,,,073,20000,,/                      CR LF
88,074,31137039,,,100,12407855130,58,,110,55015363,2,,140,15015296,2,/                 CR LF
```

- The physical record occupies characters 1 through 80

- The logical record spans 3 physical records

- A logical record within each physical record occupies characters up to and including forward slash ("/")

5.3   Fixed and Variable Length Records and Control Characters

BTRS physical records may be of fixed length or of variable length. The "Physical Record Length" field in the File Header Record (Record 01) specifies number of characters in fixed length records. If the "Physical Record Length" field is defaulted, the file contains variable length records of up to 80 characters.

In the examples below, the "CR" represents a "carriage control" and the "LF" represents a "line feed". Both are recommended in order for the file to be human-viewable (with only the line feed, applications like MS Notepad wrap the records). These control characters are located in a hidden position of each line. So, if the record length is 80 characters, the control characters will be in positioned after the 80th character, making the length of readable information 80 characters per line. In a variable length record, the control characters are positioned at the end of the readable text, while in a fixed length record, blanks spaces are added until the line reaches 80 characters before placing the control characters afterward. (The utility Notepad++ was used to create these examples and enables a display of the control characters.)

Here is an example of a variable and fixed record. Each line varies up to a maximum record length of 80 characters. When text for other information exceeds 80 characters, it is completed within a Record 88 that follows.

Variable Length Record Example
```
01,123456789,NAMENAME,150430,1201,970,,,3/CR LF
02,AAAAAAAAAA,123456789,1,150429,1201,,2/CR LF
03,000000099999999,USD,010,7121731010,,,015,7671175795,,,035,7640058756,,/CR LF
88,040,6426590616,,,045,7291457372,,,050,6851614220,,,055,6851614220,,/CR LF
88,057,10000000000,,,070,379738423,,,072,348601384,,,073,20000,,/CR LF
88,074,31137039,,,100,12407855130,58,,110,55015363,2,,140,15015296,2,/CR LF
88,170,376481853,8,,190,3609563513,4,,230,8043241800,1,,250,3056032,4,/CR LF
```

Fixed Length Record Example
```
01,123456789,NAMENAME,150430,1201,970,,,3/                           CR LF
02,AAAAAAAAAA,123456789,1,150429,1201,,2/                            CR LF
03,000000099999999,USD,010,7121731010,,,015,7671175795,,,035,7640058756,,/   CR LF
88,040,6426590616,,,045,7291457372,,,050,6851614220,,,055,6851614220,,/      CR LF
88,057,10000000000,,,070,379738423,,,072,348601384,,,073,20000,,/            CR LF
88,074,31137039,,,100,12407855130,58,,110,55015363,2,,140,15015296,2,/       CR LF
88,170,376481853,8,,190,3609563513,4,,230,8043241800,1,,250,3056032,4,/      CR LF
```

5.4   Field Delimiters

BTRS files have a flat-file construction with Record Codes that define the content of each record. Each record type consists of multiple fields that are separated by a comma in a manner similar to a CSV (Comma Separated Values) file. The BTRS standard employs many 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 ",".

- Do not use a comma to mark the end of the last field in any Record Code

If fixed length records are used, spaces between the end of the last significant character and the end of the physical record must be filled with blank spaces.

Some fields within records are optional. To indicate that an optional field has the default value or is left unspecified, the positional field delimiter (viz., comma) is retained adjacent, such that delimiters ",," or ",/" are used to preserve the placement of the defaulted value. Optional fields at the end of a record can be omitted, but must be indicated by adjacent delimiters. If 2 contiguous optional fields are defaulted, then delimiters ",,," or ",,/" are used. So, insert one comma for each defaulted value in order to retain its position.

5.5   End of Record Delimiter

Except for a Record 16 that includes the Text field, all BTRS Record Codes must end with the end-of-record delimiter forward slash "/". The reason for the exception is that a text field may contain commas and/or slashes, and as such, become included within the Text field itself. (Note the exclusion that the Text field may not begin with a comma or a slash, since that confuses the delineation with the preceding fields in the Record 16.)

The forward slash serves to indicate the end of the Record Code, so the rules for fixed and variable length records are followed:

In a variable length record, this is an example of how control characters are positioned immediately after the end of line delimiter.

    01,021999991,99999999,151030,1201,970,,,3/CRLF

In a fixed length record, this is an example of how spaces must be added from the end of line delimiter to the 80th position.

    01,021999991,99999999,151030,1201,970,,,3/ ---------------------- spaces ---------------------- CRLF

In a fixed length record, this is an example of an INVALID use of delimiters – there is no space-filled with a delimiter in the 80th position.

    01,021999991,99999999,151030,1201,970,,,3   -------------------- spaces -------------------- /CRLF

5.5.1   Delimiters: Record 01/02/03

- Slash "/" delimits the end of the logical record
- Adjacent delimiters, ",," or ",/" identify defaulted or unspecified fields

5.5.2   Delimiters: Record 16

- Adjacent delimiters “,,” indicate defaulted or unspecified fields

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

If Record 16 does not include text, the end of the logical record is indicated by the adjacent delimiters “,/” following the Customers Reference Number field.

If Record 16 includes text, the end of the “text” field is indicated by the beginning of the next record (so it does not end with either a comma or a slash). If a Record 16 extends to include multiple Record 88 continuations for text, none of those records end in a slash, not even the last one.

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 “/”.

5.5.3   Delimiters: Record 88

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 Record 88 Continuation, 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.

Record 03
    03,1234567890,USD,010,0,,,015,0,,,040,0,,,045,0,,,050,0,,,055,1000000/
    88,,,072,0,,,073,0,,,074,0,,,100,77666666,3,,190,77666666,3,,400/
    88,99666666,1,,570,99666666,1,/

Record 16
    16,455,680486,0,0273646851TC,CTAS32160120126/
    88,ORIG CO NAME=US POSTAL SERVICE,ORIG ID=1135641517,DESC DATE=120126,ENTRY DESC
    88,R=PAYMENT,ENTRY CLASS=CCD,TRACE NO=021000023646851,ENTRY DATE=120127,IND ID
    88,NO=CTAS32160120126,IND NAME=AAAAAAAA AAAAAAAAAA,COMPANY DATA=000067841 26-JA
    88,N-12

5.5.4   Delimiters: Record 49/98/99

- Slash “/” indicates the end of the logical record.

6 Terminology

This section defines terminology used throughout this standard.

6.1   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:

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

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

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

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

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

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.

6.2   Account and Transaction Indicative Information

6.2.1   As-of-Date

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

6.2.2   As-of-Time

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

Military Format, 24 hours. 0000 through 2359.

Times are stated in military format (0000 through 2359). 0000 indicates the beginning of the day and 2359 indicates the end of the day for the date indicated.

6.2.3   Customer Account

A record of financial transaction affecting the assets, liabilities, income, expenditures, or net worth of an individual or business entity. The financial transactions are dated and entered in an account as debits or credits. 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.

6.2.4   Amount

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

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.

"Amount" can be expressed with leading zeros, but the best practice is to not include leading zeros.

Currency decimals are governed by ISO 4217 and may be referenced here:
http://en.wikipedia.org/wiki/ISO_4217

Example 1: USD 100.00 would be expressed as +10000 or 10000

Example 2: JPY 100 would be expressed as +100 or 100

Example 3: USD 00.01 would be expressed as +1 or 1

6.2.5   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.

6.2.6   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.

6.2.7   ABA Number (aka Route-Transit)

American Banking Association Number - A numerical coding system for easy identification of banks within U.S. Federal Reserve Bank districts. Also called a Transit Routing Number.

6.3   Funds Availability

The effective availability 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.

6.3.1   Availability

The portion of the commercial account ledger balance that is normally not available for the account holder to draw against. Ledger Balance – Available Balance = Uncollected or 1+ Days Available.

The X9 BTRS Committee recommends the "General Method" as the best practice for how availability is reported. This promotes uniformity across financial institutions and should be used for Multi-bank Reporting. There may be cases, however, where the Granular Method makes sense to depict longer availability days for specific clients for reporting within a financial institution.

General Method (Best Practice)

070	0 Day Available
072	1 Day Available
074	2 or More Days Available

Granular Method

070	0 Day Available
072	1 Day Available
077	2 Day Available
078	3 Day Available
079	4 Day Available
080	5 Day Available
081	6 or More Days Available

6.3.2   One-Day Available

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

6.3.3   Two or More Days Available

The portion of the commercial account ledger balance that is not available for the account holder to draw against for two or more business days.

6.3.4   Zero-Day Available

The net of debits or credits in a day's activity for which there is no available funds. This total affects the available balance immediately upon processing.

6.3.5   Value Date

The effective date of the funds, the Value Date is the date as of which a debit or a credit transaction should be posted to an account. Most transactions have a Value Date equal to the Posting Date. Back-valued transactions have a Value Date earlier than their Posting Date.

6.4   Available Balance

The portion of the commercial account ledger balance against what the bank normally limits the account holder to draw. Ledger Balance – (Net of the 1-6 Day Available funds buckets) = 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.

6.4.1   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.

6.4.2   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.

6.4.3   Closing Available Balance

The available balance at the end of the business day for which activity is being reported.

- Closing Ledger – (Net of the 1-6 Day Available funds buckets) = Closing Available
- Prior Day "Closing Available" plus Prior Day "1 Day Available" plus RegCC/Holds = Current Day "Opening Available"

6.4.4   Current Available Balance

The available balance at a given time during the business day the information is being reported. It includes zero-day available debits and credits processed up to that time.

Opening Available Balance + (Zero-Day Availability of the Debits and Credits processed up to that time) = Current Available Balance.

6.4.5   Opening Available Balance (aka Beginning Available Balance)

This is a new balance for BTRS, used to report the available balance at the start of the business day.

6.4.6   Opening Available Balance Next Business Day

The available balance at the start of the next business day. Closing Available Balance Reported + One-day Available = Opening Available Balance for the next business day.

For example, Wednesday's "Opening Available Balance" is the result of Tuesday's "Closing Available Balance" + Tuesday's Closing One-Day Available.

6.5   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.

6.6   Ledger Balance (aka Statement Balance or Book Balance)

6.6.1   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.

6.6.2   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.

6.6.3   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.

6.6.4   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.
- Prior Day "Closing Ledger" equals Current Day "Opening Ledger"

6.6.5   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.

6.6.6   Opening Ledger Balance

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

ANNEX A   (Normative)

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 1-6 day available funds 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 13 - 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 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 meet regularly to review new code requests. See the x9.org website for details.

ANNEX B   (Normative)

Fedwire/CHIPS Wire Remittance Information

B.1 Introduction

The resulting BTRS message shall follow the following format:

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.

B.2 Acceptable Inclusion of Remittance Information

As described in Section C.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 C.4.

- 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 C.5.

B.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]

B.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 <u>only</u> 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXX 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXX 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
	XXXX
	88,**ADDENDA={8250}**000000123*EMAL*get-remittance-info-here@xxx.org
	
	CHIPS Example
	
	16,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
	XXXX
	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 XXXXXXX 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 XXXXXXX 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*

B.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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	

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

<table>
<tr><td colspan="2" align="center">ISO 20022 XML Tags
Structured Remittance Type
Fedwire Tags {8300} to {8750} & CHIPS Tags [830] to [875]</td></tr>
</table>

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 <u>once</u> 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXX
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> If element 01 = PI use \<PrvtId>	DUNS
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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXX
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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXX
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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX 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,XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXX 88,**ADDENDA= <AddtlRmtInf>= <AddtlRmtInf>** For more info about this pmt, call John 88, Smith 212-555-1111 **<AddtlRmtInf>** Call before 5 ET	