

Cash Management
Bank Services Billing (camt.086.001.04)
Message Usage Guide (MUG)

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Version 11

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1. Introduction

This document describes the data content requirements of the Bank Services Billing (BSB) standard as defined by ISO 20022. The XML format (the schema) of the BSB message is not available in this document.

This document is intended to:

- define the basic structure of the BSB message
- assist implementers and others (corporations, banks, technology firms, etc.) to better understand the structure and intended use of the standard.
- define in detail the intended use of all the individual data elements within the message

The BSB standard consists of a single message specification. There are no additional messages (such as status, confirmation, resend, etc.). The BSB standard addresses the information content of the message. Message transport (i.e. communications protocols such as IP and FTP) and message security (such as PKI) are not addressed by the BSB standard.

1.1 BSB Summary

The BSB provides a standard means for banks to periodically advise their wholesale clients or correspondent banks bank service fees, taxes and average balances. Electronic in form, the BSB is designed to augment or replace the corresponding paper billing statement or to introduce a billing statement if there is no paper statement available.

BSB is intended to be equally relevant for use regardless of where bank accounts reside. By design BSB is intended to cover the EU, Singapore, USA, and other countries. It needs to be recognized however that bank billing and related market practice is complex and diverse across multiple geographies. It is possible that revisions to the standard will be required to accommodate market practice (or changes to practice) not accommodated by the standard at the time of its creation. A maintenance process will be available to address future revisions to the standard which may be required.

1.2 About the Creation of BSB

The original BSB standard was created at the request of a group of end users and providers, the International Bank Compensation Group (IBC). A standards team was then organized under the auspices of the TWIST, Treasury Workflow Innovation Standards Team, organization. The team first identified and specified the data requirements. Then TWIST organized the data defined by the team into an XML message which became known as the TWIST BSB. The current version of the TWIST BSB is version 3.1, dated September, 2006.

It was decided in late 2010 that the TWIST BSB would gain greater acceptance and use if it were reformatted into an ISO 20022 standard. A team was put together including members from SWIFT, ISO and the original TWIST team. The team retained all of the data elements contained in the original TWIST BSB, introduced a few new elements, and reformatted the XML structure according to the ISO 20022 standard. The ISO 20022 BSB standard and this document are the results of their efforts.

1.3 About the ANSI X12 822 Standard and its relationship to BSB

This document makes reference to the ANSI X12 822 transaction set which addresses the classic "Account Analysis" statement common in the United States market. The BSB includes virtually all of the substantive business requirements and capabilities found in the 822. The BSB does not provide for the transmission of historical rates as provided in the 822 RTE-DTM loops. The BSB does not provide for the transmission of historical balance and charge information as provided in the 822 LX-DTM loop. The BSB provides 822 CTP information in the *Price Method* and *Price Rule* elements of the Service Section.

In addition, the BSB is distinguished from the 822 as follows:

- BSB includes data not currently addressed by the 822 including: currency translations and taxes on services including the Value Added tax (VAT)
- BSB is designed to address bank billing in any geography

- BSB is expressed in XML

1.4 Standards Maintenance

This standard will be subject to periodic maintenance by ISO 20022. ISO 20022 messages can be updated on a yearly basis provided changes are requested by the users and approved through the [ISO 20022 Maintenance Process](#)

1.5 Project Team Participants

The ISO 20022 BSB team included the following individuals:

First	Last	Company	Type	Country
Bob	Blair	JPMC	Bank	USA
David	Dobbing	SWIFT	Standards	Singapore
Paul	Burstein	Consultant	Corporate	USA
Tom	Buschman	TWIST	Corporate	UK
Vincent	Kuntz	SWIFT	Standards	Belgium
Steve	Weiland	Open Solutions	Tech	USA

2. BSB Purpose

The purpose of the BSB is to transmit, from a Financial Institution (FI) to its wholesale customers or a correspondent FI (corporations, governments, institutions, banks, etc.), information describing the FI's billing of services rendered in the form of an electronic statement in a standard format. The BSB statement is a periodic (usually end of month) recounting of all service chargeable events that occurred during a reporting cycle, typically a calendar month, along with detailed tax and currency translation information. Account balance information, although strongly recommended, is not required.

The BSB statement is designed to provide detail in electronic form related to invoices (or an advice of debit) which a bank may supply to its customers today. BSB is not designed to be an invoice. BSB is not expressly designed to replace invoices currently in use. BSB may be used as an invoice by agreement between sender and receiver. No regulatory or legislative requirements were considered when creating this message standard. Users of the BSB message are cautioned to be aware of any regulatory or legal requirement for invoices before replacing existing invoices.

The BSB can supply the detail supporting separate invoices or debits but it is not the invoice or advice of debit record. The BSB must accurately reflect all the charge and tax related events that occurred during the calendar month and how the FI and taxing authorities were compensated for these events. The BSB does not ask the FI to revise its established pricing and billing procedures. How, when and what the customer is actually charged for remains in place. The BSB asks the FI to aggregate and report what actually happened during the billing period.

2.1 Benefits

The primary motivation for receiving electronic billing statements is simple. Corporations want to know how much is being spent for services rendered and to validate the information to ensure that the prices and charges are accurate. There are ancillary benefits because the corporation can:

- Check all bank calculations
- Examine each and every line item charge and tax
- Check expected balances, volumes and service prices
- Identify unused services
- Allocate bank charges automatically
- Perform modeling and "what if"
- Compare divisions, departments, regions, etc...
- Import/export data to general ledger and budget systems
- Perform bank-to-bank comparisons
- Perform trend analysis over time
- Satisfy regulatory and transparency requirements
- Archive statements electronically

A complete and accurate record of every service volume, every service price, every service charge, every balance on deposit, every interest rate, and every tax calculation for every account in every bank for the last "X" months is a powerful resource indeed. The only practical way to enable this resource is through use of electronic billing statements in a standard format.

2.2 Workflow and Message Delivery

The message standard as specified in this document involves a simple workflow, with the FI typically initiating a push transmission to the recipient. No supplemental messaging related to status, resend, acknowledgement, etc. has been provided for this version of the specification.

Message delivery (communications protocols, security, handshaking, etc.) will occur by bilateral agreement between the two correspondents.

Activating the BSB service includes the following steps:

- The FI and account holder agree to exchange the BSB message standard.
- They determine communications protocol, security, frequency of transmission, method of transmission (push vs pull, etc.), retransmission and possible pagination of a large physical message. Actual procedures and processes for transmission and retransmission are outside the scope of this document.

- The account holder provides the software to receive and make use of the BSB.
- The account holder receives the BSB on a test basis for one or two billing periods.

2.3 Processing BSB Messages

BSB messages are electronic in form. They are designed to be machine readable. To receive and use a BSB message a user must possess software. Software that may make use of this data does exist. Some examples would include:

- The simplest option – to convert BSB to human readable form – Use of HTML or spreadsheets to import and manipulate data
- At the next level – A simple import function into an ERP or similar system to electronically post fees paid to internal accounting systems.
- At the highest level – A special purpose software tool designed to accept the BSB from multiple banks, perform price and error checking, provide cross bank reporting, trend analysis, cost allocation, archiving and other related functions.

3. Content of the BSB Message

3.1 BSB Content

What data does the BSB standard contain? How often are they produced? Are they invoices?

To begin, it is very important to note what the BSB standard does not ask the FI to do. The BSB does not ask the FI to:

- Save up all chargeable events until month end and then debit/invoice the customer.
- Provide a balance based interest offset against service charges due.
- To combine an invoice with the billing statement.
- Change from a direct debit approach to an invoice approach, or vice-versa.
- Replace the paper-based Tax Invoice currently delivered.

In short, the BSB does not ask the FIs to revise their existing billing procedures.

Although some of these “nots” may be desirable, the BSB standard does not ask or require the FIs to make these changes. What it does ask for is a monthly recounting of all service chargeable and tax events in the form of an electronic statement. How, when and what the customer is actually charged for remains in place.

BSB can be used to report on fees charged per transaction at the time that the service is incurred, deducted from transaction principal at the time of credit, or held for periodic billing (e.g. one monthly debit to the account or an invoice). BSB is simply a reporting of the service fees and taxes incurred during a period, regardless of how those fees have been settled. The specification allows the sending FI to identify whether fees have already been settled, or remain outstanding (see *Payment Method* in the **Service** section).

The BSB is an electronic statement, produced typically on a calendar month end basis, that lists all individual chargeable events and taxes that occurred during the month along with summary totals and average deposit balances. This is something new. It does not ask the bank to change existing billing procedures.

3.2 Definitions

Financial Institution (FI)	The bank or institution that initiates the statements contained within the BSB message. The recipient of the message, the customer, holds accounts at the FI. Note that the institution that physically sends the XML message need not be the institution in which the accounts reside, although in most cases they are the same. The FI in which the accounts reside is termed the “originating” or “domicile” FI.
Customer	The corporate, business or other entity that holds accounts at the FI. The statements in the electronic message are based on the accounts that the Customer maintains at the originating FI.
Relationship	A Relationship is a collection of accounts held by the Customer in a hierarchical arrangement at the FI. For purposes of this document the lowest level accounts in a relationship are termed “ Detail ” accounts. They are real deposit/current accounts for which services are performed and which maintain deposit balances. The highest level account in a relationship is termed the “ Summary ” account. Summary accounts may be real accounts or fictitious entities used solely for summary reporting. By definition there can be only one Summary account in a relationship. Accounts that reside above the Detail level and below the Summary level are termed “ Intermediate ” accounts. Intermediate accounts may be real accounts or fictitious entities used solely for summary reporting. The term “ parent account ” refers to any account above the detail level that has accounts “rolling up” to it. By definition, Intermediate accounts and Summary accounts are both Parent accounts.

Billing Relationship	A Billing Relationship is a relationship consisting of accounts which all have the same Settlement Currency . This type of relationship hierarchy typically consists of a number of detail deposit/current accounts which roll up to a billing relationship parent account. Charging typically occurs at the billing relationship parent account. Note that multiple Billing Relationships could roll up and be summarized at a higher relationship level. In this structure each of the Billing Relationships could use a different Settlement Currency and reside in a different Tax Region.
Account Balance Currency	This is the currency of the account held in the Deposit, source or feeder application. The Account Balance Currency code is carried in the AccountCharacteristics section.
Settlement Currency	This is the currency in which the billing relationship will be charged or settled. It is viewed that all accounts within a billing relationship must have the same Settlement (charging) Currency. For example, a direct-debit will be created by the system in this currency to collect services charges from the specified customer account. The Settlement Currency code is carried in the AccountCharacteristics section.
Service Pricing Currency	This is the currency used to price the service and in which services are accumulated as part of the original transaction. The Service Pricing currency code is carried in the Service sections.
Host Currency	This is the currency of the taxing authority to which the institution must pay taxes. Taxes are converted from Service Pricing Currencies directly to this currency for calculating tax payments. Tax payments are settled between the Financial Institution and the taxing authority in this currency. The Total Tax Amount is then converted to the account's Settlement (Charge) Currency for collection from the customer. The Host currency code may be carried in the AccountCharacteristics section. Additionally, the Host Currency code must be carried in the TaxRegion section for each Tax Region contained in the TaxRegion sections. A Summary account may settle taxes with multiple taxing authorities (Tax Regions) if the total relationship contains multiple Billing Relationships.
Tax Region	Designates a specific tax zone. Accounts are resident/domiciled in a tax region. Not all services are taxable in every tax region. A service may have multiple tax rates in effect in a tax region (e.g. National VAT, Local VAT, per transaction fee). The Tax Region code in which the account is resident is carried in the AccountCharacteristics section. Tax Regions should also be reported in the Service sections since a relationship summary account may contain services from many accounts that reside in different Tax Regions. Tax Region must be reported in the TaxRegion section.
Exclusive Tax	Exclusive Tax represents the method of determining a tax by multiplying the tax rate against the original cost of a good or service. For example, if a service is subject to VAT of 19.5% and costs €10. The tax owed for the service is €1.95. The cost of a good or service is quoted exclusive of tax. The BSB standard has been designed with the assumption that all bank service fees are quoted exclusive of tax.
Inclusive Tax	Inclusive Tax represents the method of stating the price of a good or service with the tax already included in the stated price. The cost of a good or service is quoted inclusive of tax. This often provides transparency for the user in terms of "total cost" of a good or service with the tax included. (e.g. \$1.30 inclusive of tax). If the cost of the good is \$1, the tax component of the service = \$.30. The inclusive tax rate is 23% $((\$1/\$1.30) - 1) \times 100$. As previously mentioned, the BSB standard has been designed with the assumption that all bank service fees are quoted exclusive of tax.

3.3 Tax Calculations and Presentation Options

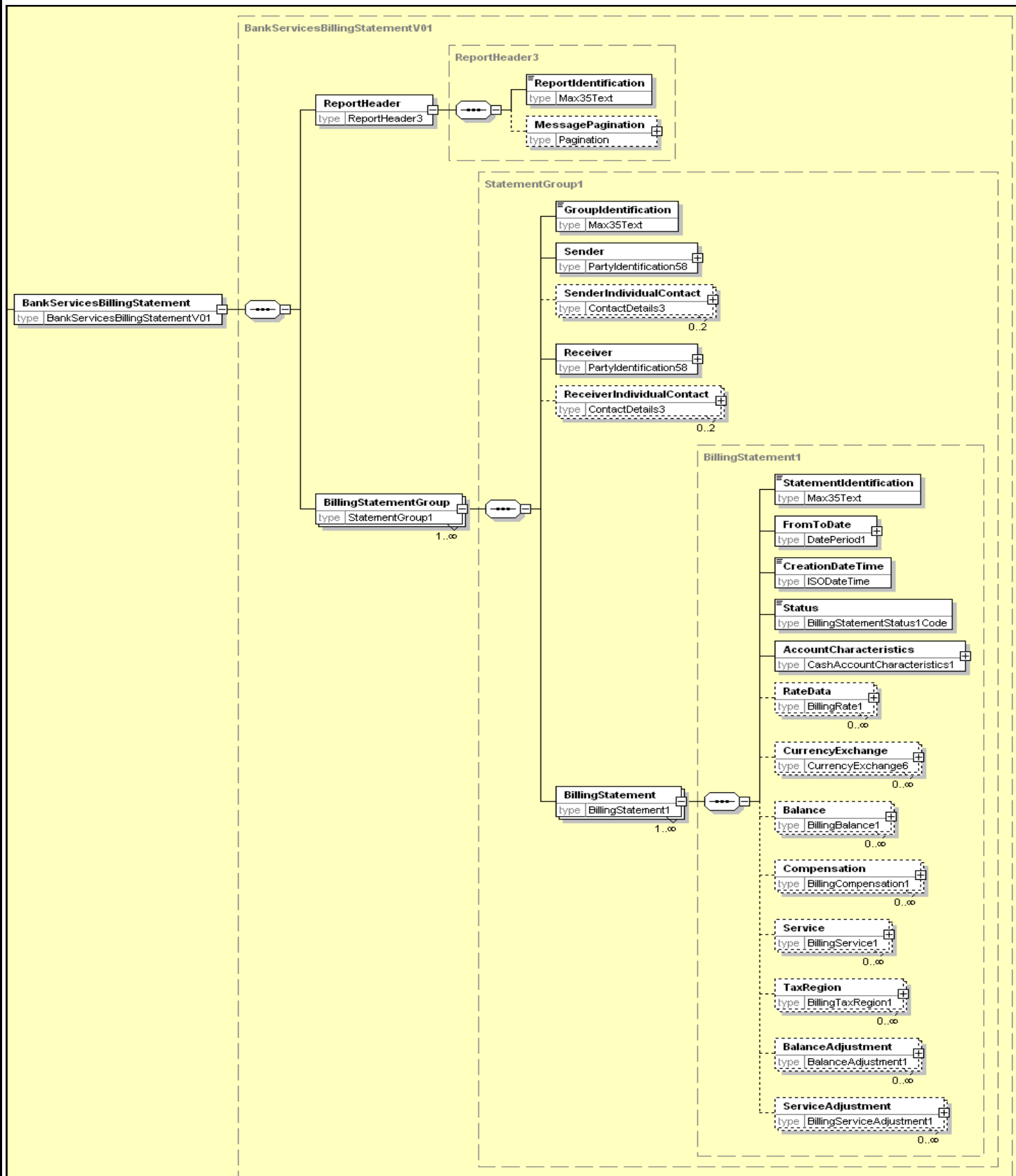
Depending upon which Tax Calculation method a financial institution has implemented, various tax related elements within a **Service** section and **TaxRegion** section may or may not be represented in a statement. The majority of billing applications calculate taxes based on one of four methods. These methods are identified below and are detailed in Appendix A. Note that the particular method used in a statement should be identified in the **AccountCharacteristics** section element *Tax Calculation Method*.

- Method A – Line-by-line per service tax calculation and settlement currency translation. The **TaxRegion** section is used for Tax Region general information, registration and invoice numbers. Tax totals should be transmitted in the **TaxRegion** section.
- Method B – Line-by-line per service tax calculation. The **TaxRegion** section is used for Tax Region general information, registration and invoice numbers. Tax totals and settlement currency translation are transmitted in the **TaxRegion** section.
- Method C – Group Tax Calculation, Group Settlement Translation. The complete **TaxRegion** section is required.
- Method D - This simple method of calculation and display requires that all services use the same Pricing currency so that the total tax is the simple sum of individual service taxes – all in the same Pricing currency. It is similar to methods A and B in that the individual service tax is calculated at the individual line item service level. The **TaxRegion** section is used for Tax Region general information, registration and invoice numbers. Tax totals should be transmitted in the **TaxRegion** section.

3.4 Message Structure Overview / Message Sections

The BSB is transmitted as a message within the ISO 20022 standard XML message structure. The BSB message is preceded by the ISO 20022 Business Application Header (BAH) which identifies the entities sending/receiving the message. Note that the entity actually transmitting the message may not be the same as the originating FI. The ISO 20022 Business Application Header is not described in this document.

Next comes the BSB statement information which is composed of a series of XML complex types or message sections. The sections along with their tags, presence and usage are listed here in the required sequence.



BankServicesBillingStatement <BkSvcsBlgStmt> [1..1]

Item that initiates the BSB sections. All subsequent sections are enclosed in this complex type.

ReportHeader <RptHdr> [1..1]

Identifies the logical message and provides for pagination if the message is too large to transmit as a single physical message.

BillingStatementGroup <BlgStmtGrp> [1..n]

This is a header for grouping statements with the same Sender and Receiver. It uniquely identifies the originating or domicile FI Sender and the single Receiver of all the statements that follow up to the next *BillingStatementGroup* or end of message. This is the only section that contains the originating bank level names, demographic information, and technical contact information.

Receiving systems assume that all the accounts and statements that follow up to the next *BillingStatementGroup* use the same service codes, service legends, price list, service charge calculations and tax calculations used by the Sender bank as identified here. Therefore if all statements use the same Sender bank meta data and there is only a single Receiver (customer) involved in the BSB conversation, there need be only a single *BillingStatementGroup* element even though multiple *BillingStatementGroup* elements are allowed in a transmission.

But If a BSB message contains accounts/statements from different branches within the same bank and these branches have different demographic data, officers, service codes and legends, price lists and calculations, then a new *BillingStatementGroup* element must initiate the statements for each new branch. Please review **Multi Branch Handling** in Appendix E for a full explanation.

Sender <Sndr> [1..1]

Uniquely identifies the originating FI. This is the FI in which the accounts and statements that that follow reside.

SenderIndividualContact <SndrIndvCtct> [0..2]

Specifies the individual to contact in case of technical problems at the sender's location.

Receiver <Rcvr> [1..1]

Specifies the FI's customer receiving the statement(s) that follow.

ReceiverIndividualContact <RcvrIndvCtct> [0..n]

Specifies the individual to contact in case of technical problems at the receiver's location.

BillingStatement <BlgStmt> [1..n]

The one or more *BillingStatement* sections contain the actual statement(s) addressed to the Receiver (FI customer) for their reporting cycle, typically the calendar month. There may be more than one *BillingStatement* section (statements) but they are all from the same Sender and are all addressed to the same Receiver (FI customer). The statements are identified by the relationship level code and the account number (detail member account or relationship parent account) as assigned by the FI that originated the statements. The appropriate data processing key structure for receiving systems is statement date within relationship level within account number within the originator FI.

Each *BillingStatement* section consists of the sections described below. Note that the *AccountCharacteristics* section is required. It always initiates the sections that constitute the detailed statement information. In this context the words "account" and "statement" are used interchangeably.

FromDate <FrToDt> [1..1]

The statement reporting cycle start and end dates, typically a calendar month.

CreationDateTime <CreDtTm> [1..1]

Date and time that the statement was created by the originating FI, the Sender.

Status <Sts> [1..1]

Identifies the statement as an original, a replacement or a test.

AccountCharacteristics <AcctChrtcs> [1..1]

Identifies the account or relationship whose statement information follows. This section contains the account number, account title, position in a hierarchical structure, upward pointer to the next higher account in the relationship, currency codes, tax region, FI business contact and any other appropriate demographic information relating to the account. The Account Section initiates the statement information that follows up to the next *BillingStatement* or the end of the message.

RateData <RateData> [0..n]

One or more sections that carry the non tax, per annum rates values used by the account during the month such as the earnings credit rate or the overdraft interest rates. This section does not carry any tax rates

CurrencyExchange <CcyXchg> [0..n]

One or more sections that allow the receiver to translate the various currencies contained within the statement, one to the other.

Balance <Bal> [0..n]

One or more sections that carry the average value of various balances held within the account during the month.

Compensation <Compstn> [0..n]

One or more sections that carry the summary value of charges and taxes that occurred during the month.

Service <Svc> [0..n]

One or more sections that recount all chargeable events that occurred for this account during the reporting cycle, typically a calendar month. They include charges that were previously debited or invoiced, charges that were waived or free, and any charges which are due as a result of invoicing. These service sections supply the detail support for invoices and/or direct debits. Also included are the Tax Designation of the service (Taxable, Exempt, Zero-Rated) and the Tax Region associated with the service. The Tax Region is significant if the account is a summary account and includes services from lower accounts residing in different Tax Regions. If a service is taxable and requires a tax calculation then the taxing detail for the service should appear in the *TaxRegion* section.

TaxRegion <TaxRgn> [0..n]

One or more sections which summarize the taxable activities and tax charges of the account or relationship during the month. There may be multiple *TaxRegion* sections reported if the relationship parent account contains multiple Tax Regions.

BalanceAdjustment <BalAdjstmnt> [0..n]

One or more sections that identify balance or float adjustments to the account. They can reflect either adjustments to the current statement or adjustments to statements from prior reporting periods. They are used as memos to identify and describe the nature of the adjustments. The actual accounting item, the balance which affects charging totals, should be present in either the Balance or Compensation Sections.

ServiceAdjustment <SvcAdjstmnt> [0..n]

One or more sections that identify line item service adjustments to the account. They reflect adjustments to statements from prior reporting periods. They are used as memos to identify and describe the nature of the adjustments. The actual accounting item which reflects the net change in charges should be present in Compensation sections.

3.5 DataBase Key Structure

Many FI customers, the message receivers, will use the statement information to populate a database. This database typically includes all the FIs that send statements, all the accounts that receive statements, and the statement information itself over an extended period of time. The recommended data processing key structure for receiving systems is statement date within account number within relationship level within the originating FI. The elements that carry this information are all required elements. The originating FI must provide these elements in every message and the data contained in

these elements must be consistent from month to month. For example, an Account Number sent this month as “123-456-789” is not the same as “123456789” sent next month.

Key	Section	Element
Originating FI	Sender	<Id/OrgId/AnyBic> or <Id/Fid/BICFI>*
Relationship Level	AccountCharacteristics	<AcctLvl>
Account Number	AccountCharacteristics	<CshAcct/Id/Othr/Id>**
Statement Date	BillingStatement	<FromDate/ToDate>

* Either identification can be used but the sender must be consistent from month to month. Please review these two different identifiers on pages 20 and 21.

** Account ID Versus IBAN

The <AcctChrtcs/CshAcct/Id/Othr/Id> element is required to uniquely identify an account. This is not the same as the IBAN element. If the account’s IBAN is actually used by the FI to identify the account, then this IBAN should also be placed in <AcctChrtcs/CshAcct/Id/Othr/Id> element.

3.6 Standard Codes to Identify Service Fee Activity

The BSB standard provides for two codes used to identify individual services. The first code is required and constitutes the unique code internally by the originating FI in its billing systems. The second is an optional industry standard “common” code available from the Association for Financial Professionals (AFP). This optional second code is designed to identify the same service as offered by different banks and, therefore, to enable cross bank reporting. Examples of standard common service codes might include a code or codes for account fees, a code or codes to identify giro or ACH transaction fees, etc. The use of these standard codes is optional.

Further information on the AFP Service Codes is available at <http://www.afponline.org/servicecodes/>

The required originating FI internal code is carried in <Svc/SvcDtl/BkSvc/Id>

The optional common code set in use is carried in <Svc/SvcDtl/BkSvc/CmonCD/Issr> as either “AFP” for the US domestic code set or “AFPGBL” for the global code set. The code itself is carried in <Svc/SvcDtl/BkSvc/CmonCD/Id>.

4. BSB MUG Documentation Syntax

4.1 ISO Currency Code Specification

All Amount <Amt> data types are required to carry the 3 character ISO currency code as an XML attribute: **Currency (Ccy)** which is typed by **ActiveOrHistoricCurrencyCode**. All <Amt> elements in the Balance sections should be carried in the Account Balance Currency Code. All <Amt> elements in the Compensation sections should be carried in the Settlement Currency Code. All <Amt> elements in Service sections should be carried in the Pricing Currency Code. Note that in many cases these three codes will be the same.

4.2 Specification of Plus and Minus Signs

All Amount elements consist of two basic, required elements: <Amt> and <Sgn>. The <Amt> element carries the absolute decimal value of the number. The <Sgn> element carries the sign of the number and must be specified as one of the following **PlusOrMinusIndicator** Values:

- Meaning when True: Plus
- Meaning when False: Minus

Note that standard sign usage in the BSB statement is as follows:

- All service charges and tax levies are positively (plus) signed.
- A service charge credit back to the account is considered as a negative value.
- Account Compensation values (charges to the account) are considered as positive values unless the value represents a credit back to the account.

4.3 Element Nomenclature In This Document

In the detailed specification of the BSB elements that follows, a common approach is used to specify the Message Item, the XML Tag, the Presence Requirement, the related TWIST BSB XML tag and the related 822 segment element. An example is:

Legal Name <LglNm> TWIST: <legalName> 822: N201 in Table 1

Presence: [0..1]

Definition: Used for an FI name other than the standard name above or a department within an organization such as "Billing Department".

In this example, the *green* color and italics of *Legal Name <LglNm>* indicates that it is a basic element that contains data. Black, bold and non italicized such as **Sender <Sndr>** indicates that it is a complex type with basic elements enclosed.

In the example, the data from left to right is the Message Item (*Legal Name*), the ISO 20022 XML tag (*<LglNm>*), the related TWIST tag and the related 822 segment ID. The absence of a TWIST or 822 reference means that there is no related element. **Presence:** indicates if the elements is required and, if so, how many iterations are required or allowed. For example:

[0..1] means "Not required but only one if present"

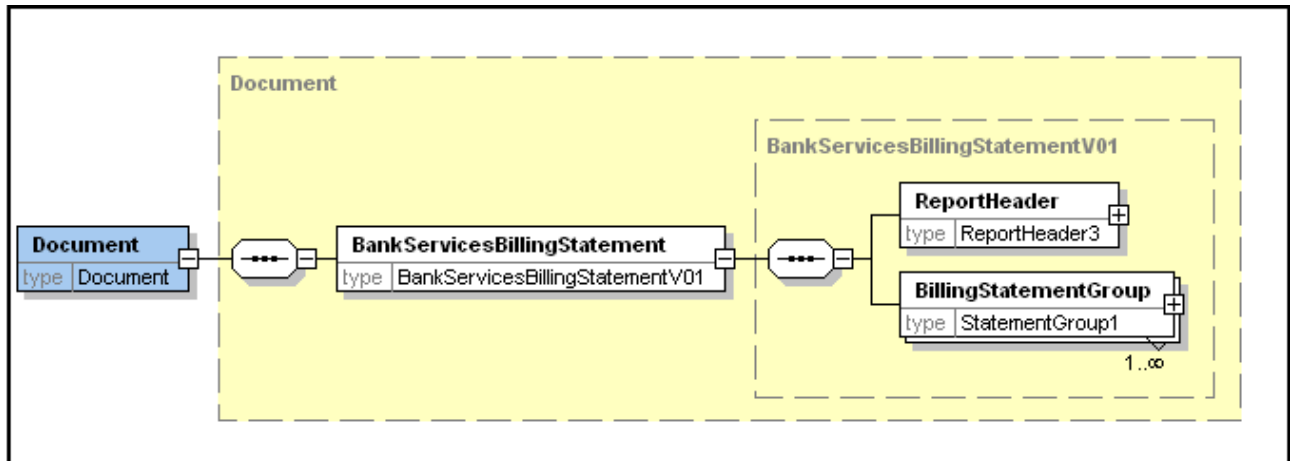
[1..1] means "Required but only one"

[1..2] means "Required but only one or two are allowed"

[1..n] means "Required and more than one allowed"

5. BSB Message Detailed Description

What follows is an element by element detailed description of every element in the BSB portion of the message. All elements are in the required sequence. All elements within a complex type are indented from their parent element.



BankServicesBillingStatement <BkSvcsBllgStmt>

Presence: [1..1]

Definition: The major complex element that contains all the BSB detailed information in this message. All Other elements, complex or detail, are contained within this complex element.

5.0 Report Identification and Pagination Definition

ReportHeader <RptHdr>

Presence: [1..1]

Definition: Identifies the logical message and provides for pagination if the message is too large to transmit as a single physical message.

ReportIdentification <RptId>

Presence: [1..1]

Definition: Uniquely identifies the logical message. This is a free form text field which is sender defined. It is used to differentiate one logical message from another. In those situations where a logical message is too large to send as a single physical message (a "split" message), this report ID must be the same for the two or more physical messages that constitute the single logical message. Please review the *Message Pagination* topic in Appendix C for details.

MessagePagination <MsgPgntn>

Presence: [0..1]

Definition: Used to identify the multiple pages of a logical message that has been split into two or more physical messages. Pagination must be used in those cases where a logical message has been split into two or more physical messages. It should not be used if the logical message has not been split. Please review the *Message Pagination* topic in Appendix C for details. .

Notes: Pagination is allowed only when agreed between the parties.

PageNumber <PgNb>

Presence: [1..1]

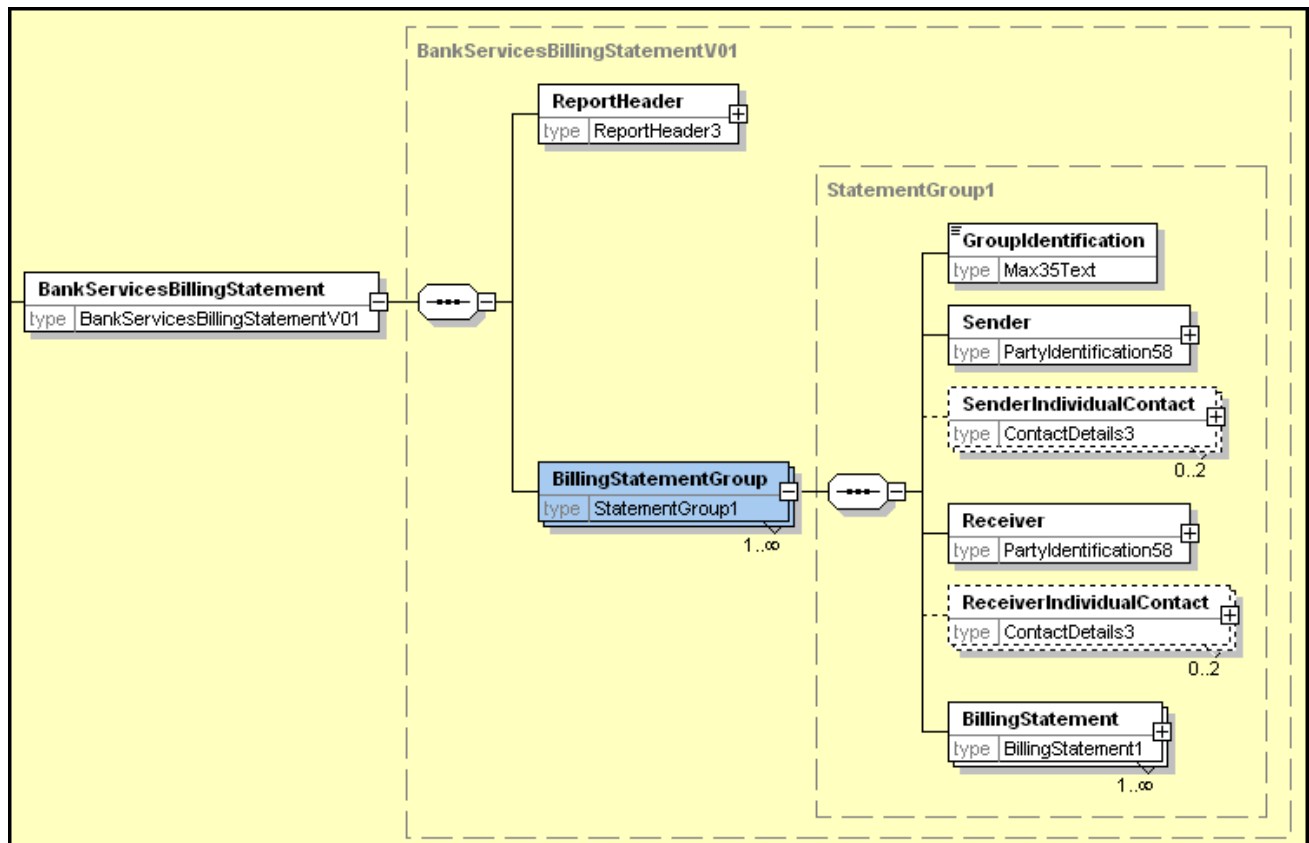
Definition: The current logical page number. Note that the various physical messages of a split message may not arrive in the receiver's location in the proper sequential order. The **PageNumber** and **LastPageIndicator** are used to assemble the two or more physical messages into the proper sequence. Note that the **ReportIdentification** must be the same for all the elements of the logical message.

LastPageIndicator <LastPgInd>

Presence: [1..1]

Definition: Indicates that this is the last page (yes) or not (no).

5.1 Billing Statement Group Definition



BillingStatementGroup <BlIgStmntGrp> TWIST: <statementHeader>

Presence: [1..n1]

Definition: Bank services Billing Statement Group identifying the sender and the receiver of the statement(s) that follow up to the next <BlIgStmntGrp> or end of message. There may be more than one <BlIgStmntGrp> complex type within the BSB message. It identifies the originating FI (the FI that originated the statements that follow), and any information pertinent to the originating FI such as contact information. It also uniquely identifies the single electronic receiver of all the statements that follow, typically a Customer of the FI.

The originating FI, the **Sender**, is not necessarily the same as the message sender. The message sender is that organization identified in the ISO 20022 Business Application Header that physically sent or forwarded the message. In most situations the message sender identified in the Application Header and the originating FI identified in the <BlIgStmntGrp> will be the same organization, but this is not always the case.

Notes:

The originating FI is typically a Financial Institution with a unique identifier code. This code is typically used in receiving systems as the primary identification key within a receiving system database that contains many originating FIs. This code is combined with the account Level Code, Account Number and Statement End Date to uniquely identify a statement within a customer's receiving database.

BillingStatementGroup is an XML complex type used to group together statements with the same Sender and Receiver characteristics.. It can appear more than once within the BSB message.

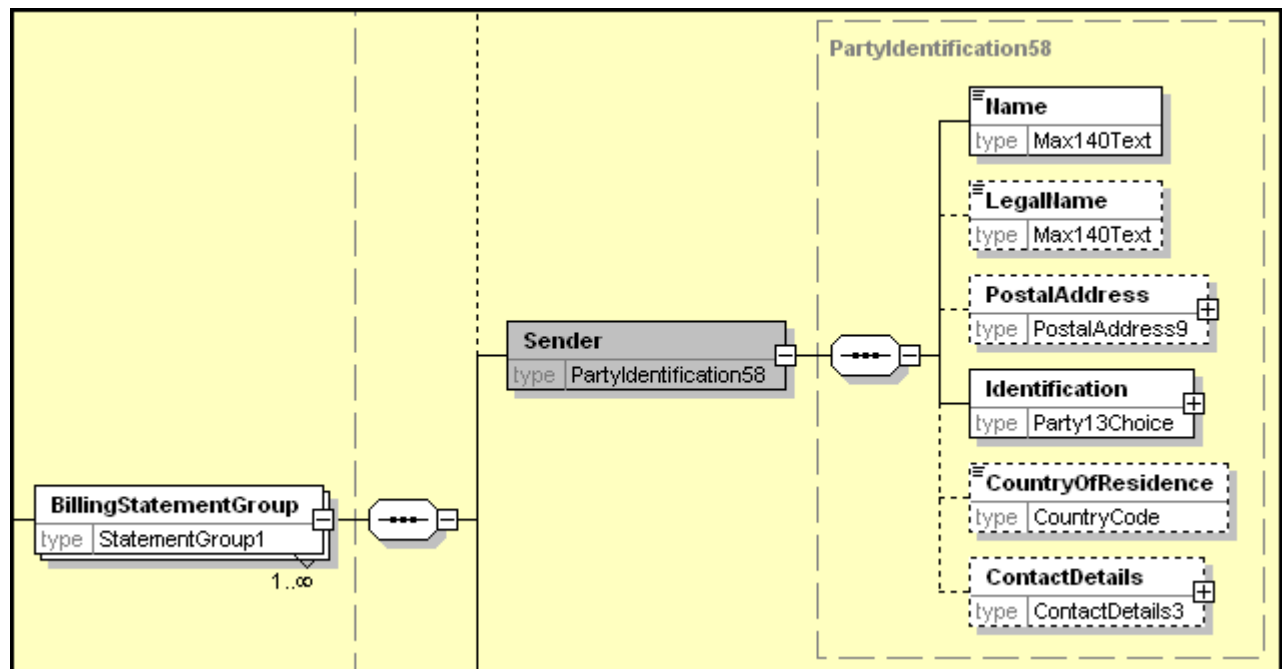
GroupIdentification <Grpld>

Presence: [1..1]

Definition: Used to distinguish one **BillingStatementGroup** from another in a multi group message. This is a free form text field which is sender defined. Note that if pagination is required and the message is split

across a particular group, then the same **GroupIdentification** must be used in all split elements that constitute the group.

5.1.1 Sender Definition



Sender <Sndr> TWIST: <stmtSender>

Presence: [1..1]

Definition: Uniquely identifies the originating FI, the FI that created the statement(s) which follow. The originating FI, the **Sender**, is not necessarily the same as the entity that transmits the message.

Name <Nm> TWIST: <name> 822: N102 in Table1

Presence: [1..1]

Definition: The name of the organization or FI that originated the statement(s) that follow. In a typical situation this is the FI in which all the accounts identified in the detail component reside. In those situations where one or more accounts in the detail component are domiciled in different locations or branches, then the **AccountServicer** complex type the **AccountCharateristics** section identifies the domicile bank.

Legal Name <LglNm> TWIST: <legalName> 822: N201 in Table 1

Presence: [0..1]

Definition: Used for an FI name other than the standard name above or a department within an organization such as "Billing Department".

PostalAddress <PstlAdr>

Presence: [0..1]

Definition: Information that locates and identifies a specific Sender address, as defined by postal services.

Notes:

- This complex type is defined by the ISO 20022 Message Component **PostalAddress9**
- The corresponding TWIST elements are located in <stmtSender/contactInfo/postAddress>.

Identification <Id>

Presence: [1..1]

Definition: Complex type that uniquely identifies the originating FI.

OrganisationIdentification <OrgId>

Presence: [1..1]

Definition: Complex type used to identify the FI.

Note: This complex type and the **FinancialInstitutionIdentification** complex type below are mutually exclusive. You must use one or the other and on a consistent basis from month to month.

AnyBic <AnyBic> TWIST: <orgId/orgIdNum> 822: N104 in Table 1

Presence: [1..1]

Definition: Code allocated to a financial institution or non financial institution by the ISO 9362 Registration Authority as described in ISO 9362 "Banking - Banking telecommunication messages - Business identifier code (BIC)".

Note: This is a code used to uniquely identify the originating FI. In a typical situation all the statements (accounts) within the **BillingStatementGroup** would reside in this institution. In those situations where one or more accounts are domiciled in different FI locations or branches, then the **AccountServicer** element in the **AccountCharacteristics** section identifies the domicile bank - the bank in which the account actually resides.

Other <Othr>

Presence: [0..n]

Definition: Unique identification of an organisation, as assigned by an institution, using an identification scheme.

Note: Use of this element is not recommended.

Identification <Id>

Presence: [1..1]

Definition: Identification assigned by an institution.

SchmeName <SchmeNm>

Presence: [0..1]

Definition: Name of the identification scheme

Notes: It is recommended that you do not use this complex type.

Code <Cd>

Presence: [1..1]

Definition: Name of the identification scheme, in a coded form as published in an external list.

Notes: Not recommended for use.

Proprietary <Prtry>

Presence: [1..1]

Definition: Name of the identification scheme, in a free text form.

Notes: Not recommended for use. See above

Issuer <Issr>

Presence: [0..1]

Definition: Entity that assigns the identification.

FinancialInstitutionIdentification <Fid>

Presence: [1..1]

Definition: Complex type used to identify the FI.

Note: This complex type and the **OrganisationIdentification** complex type above are mutually exclusive. You must use one or the other and on a consistent basis from month to month.

BICFI <BICFI> TWIST: <orgId/orgIdNum> 822: N104 in Table 1

Presence: [0..1]

Definition: Code allocated to a financial institution by the ISO 9362 Registration Authority as described in ISO 9362 "Banking - Banking telecommunication messages - Business identifier code (BIC)".

Note: This is a code used to uniquely identify the originating FI. In a typical situation all the statements (accounts) within the **BillingStatementGroup** would reside in this institution. In those situations where one or more accounts are domiciled in different FI locations or branches, then the

AccountServicer element in the **AccountCharacteristics** section identifies the domicile bank - the bank in which the account actually resides.

ClearingSystemMemberIdentification <ClrSysMmbld>

Presence: [0..1]

Definition: Complex type supplying Information used to identify a member within a clearing system.

Note: This complex type is not recommended for use in the BSB.

ClearingSystemIdentification <ClrSysId>

Presence: [0..1]

Definition: Complex type specifying a pre-agreed offering between clearing agents or the channel through which the payment instruction is processed.

Code <Cd>

Presence: [1..1]

Definition: Identification of a clearing system, in a coded form as published in an external list.

Proprietary <Prtry>

Presence: [1..1]

Definition: Identification code for a clearing system that has not yet been identified in the list of clearing systems.

MemberIdentification <Mmbld>

Presence: [1..1]

Definition: Identification of a member of a clearing system.

Other <Othr>

Presence: [0..n]

Definition: Unique identification of an organisation, as assigned by an institution, using an identification scheme.

Note: Use this element only if there is not a standard BIC available as defined by the ISO 9362 Registration Authority and described in ISO 9362 "Banking - Banking telecommunication messages - Business identifier code (BIC)".

Identification <Id>

Presence: [1..1]

Definition: Identification assigned by an institution.

SchmeName <SchmeNm>

Presence: [0..1]

Definition: Name of the identification scheme

Notes: It is recommended that you do not use this complex type.

Code <Cd>

Presence: [1..1]

Definition: Name of the identification scheme, in a coded form as published in an external list.

Notes: Not recommended for use.

Proprietary <Prtry>

Presence: [1..1]

Definition: Name of the identification scheme, in a free text form.

Notes: Not recommended for use. See above

Issuer <Issr>

Presence: [0..1]

CountryOfResidence <CtryOfRes>

Presence: [0..1]

Definition: Country in which the FI is located. It is the country from which the affairs of the FI are directed.

ContactDetails <CtctDtls>

Presence: [0..1]

Definition: Identifies a general contact at the Sender's location.

Notes:

- This complex type is defined by the ISO 20022 Message Component **ContactDetails3**
- There are no TWIST or 822 corresponding elements in this complex type.

SenderIndividualContact <SndrIndvCtct> TWIST: <contactinfo>

Presence: [0..2]

Definition: Specifies the individual(s) to contact in case of technical problems at the Sender's location.

NamePrefix <NmPrfx>

Presence: [0..1]

Definition: Specifies the terms used to formally address a person. Values are:

DOCT Title of the person is Doctor or Dr.

MIST Title of the person is Mister or Mr.

MISS Title of the person is Miss.

MADM Title of the person is Madam.

Name <Nm> TWIST: <individualContact/name> 822: PER02 in Table 1

Presence: [0..1]

Definition: The name of the FI's contact for technical problems.

PhoneNumber <PhneNb> TWIST: <contactInfo/phoneNumber> 822: PER03/04 in Table 1

Presence: [0..1]

Definition: The telephone number of the FI's contact.

MobileNumber <MobNb>

Presence: [0..1]

Definition: The cell or mobile device number of the FI's contact.

FaxNumber <FaxNb> TWIST: <contactInfo/Fax> 822: PER03/04 in Table 1

Presence: [0..1]

Definition: The facsimile phone number of the FI's contact.

EmailAddress <EmailAdr> TWIST: <contactInfo/Email> 822: PER03/04 in Table 1

Presence: [0..1]

Definition: The email address of the FI's contact.

Other <Othr> TWIST: <otherCommunication>

Presence: [0..1]

Definition: Complex type that provides contact communication details in a non standard form. Use if normal contact is not available.

ChannelType <ChanITp> TWIST: <otherCommunication/channelCode>

Presence: [1..1]

Definition: The method of communication expressed as a code.

Identification <Id> TWIST: <otherCommunication/value>

Presence: [0..1]

Definition: The communication value such as phone number or email address.

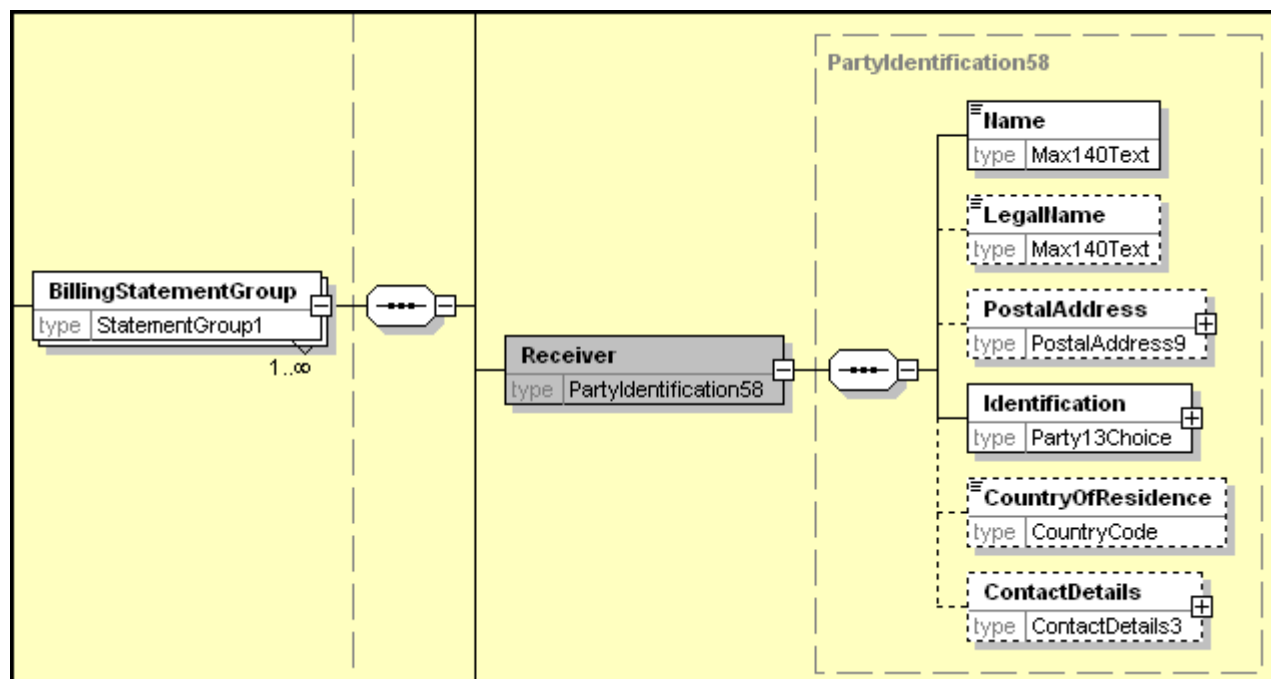
PreferredMethod <PrefrdMtd> TWIST: <contactInfo/prefMethod>

Presence: [0..1]

Definition: The preferred method used to contact the FI's contact. Values are:

PrefrdMtd	TWIST Value
LETT	Letter
MAIL	Email
PHON	Phone
FAXX	Fax
CELL	

5.1.2 Receiver Definition



Receiver <Rcvr>> TWIST: <stmtReceiver>

Presence: [1..1]

Definition: Uniquely identifies the receiver of the statement(s) that follow. Typically this is a commercial customer of the FI but it may also be another FI that has a correspondent relationship with the sending FI.

Name <Nm> TWIST: <name> 822: N102 in Table 2

Presence: [1..1]

Definition: The name of the organization that receives the statement(s) that follow. In a multiple statement (account) message this name identifies the customer at the highest level.

Note: The *Account Name* element in the AccountCharacteristics section carries the name of the individual account within the detail component of the message.

Legal Name <LglNm> TWIST: <legalName> 822: N201 in Table 2

Presence: [0..1]

Definition: Used for additional names or a department within an organization such as "Bank Relations".

PostalAddress <PstlAdr>

Presence: [0..1]

Definition: Information that locates and identifies a specific Receiver address, as defined by postal services.

Notes:

This complex type is defined by the ISO 20022 Message Component **PostalAddress9**

The corresponding TWIST elements are located in <stmtReceiver/contactInfo/postAddress>.

Identification <Id>

Presence: [1..1]

Definition: Complex type that uniquely identifies the Receiver of the statements.

OrganisationIdentification <OrgId>

Presence: [1..1]

Definition: Complex type used to identify the Receiver.

Note: This complex type and the **FinancialInstitutionIdentification** complex type below are mutually exclusive. You must use one or the other and on a consistent basis from month to month. If the Receiver is a commercial customer of the FI then use this element. If the Receiver is an FI then use the **FinancialInstitutionIdentification** element.

AnyBic <AnyBic> TWIST: <orgId/orgIdNum> 822: N104 in Table 2

Presence: [1..1]

Definition: Code allocated to a financial institution or non financial institution by the ISO 9362 Registration Authority as described in ISO 9362 "Banking - Banking telecommunication messages - Business identifier code (BIC)".

Note: This is a code used to uniquely identify the Receiver. In a typical situation all the statements (accounts) within the **BillingStatementHeader** would belong to this Receiver.

Other <Othr>

Presence: [0..n]

Definition: Unique identification of an organisation, as assigned by an institution, using an identification scheme.

Note: Use of this element is not recommended.

Identification <Id>

Presence: [1..1]

Definition: Identification assigned by an institution.

SchmeName <SchmeNm>

Presence: [0..1]

Definition: Name of the identification scheme

Notes: It is recommended that you do not use this complex type.

Code <Cd>

Presence: [1..1]

Definition: Name of the identification scheme, in a coded form as published in an external list.

Notes: Not recommended for use.

Proprietary <Prtry>

Presence: [1..1]

Definition: Name of the identification scheme, in a free text form.

Notes: Not recommended for use. See above

Issuer <Issr>

Presence: [0..1]

Definition: Entity that assigns the identification.

FinancialInstitutionIdentification <Fild>

Presence: [1..1]

Definition: Complex type used to identify the FI.

Note: This complex type and the **OrganisationIdentification** complex type above are mutually exclusive. You must use one or the other and on a consistent basis from month to month. If the Receiver is a Financial Institution (a correspondent bank) then use this element. If the Receiver is a commercial customer of the originating bank, then use the **OrganisationIdentification** element.

BICFI <BICFI> TWIST: <orgId/orgIdNum> 822: N104 in Table 1

Presence: [0..1]

Definition: Code allocated to a financial institution by the ISO 9362 Registration Authority as described in ISO 9362 "Banking - Banking telecommunication messages - Business identifier code (BIC)".

Note: This is a code used to uniquely identify the receiver. In a typical situation all the statements (accounts) that follow would belong to this Receiver.

ClearingSystemMemberIdentification <ClrSysMmbld>

Presence: [0..1]

Definition: Complex type supplying Information used to identify a member within a clearing system.

Note: This complex type is not recommended for use in the BSB.

ClearingSystemIdentification <ClrSysId>

Presence: [0..1]

Definition: Complex type specifying a pre-agreed offering between clearing agents or the channel through which the payment instruction is processed.

Code <Cd>

Presence: [1..1]

Definition: Identification of a clearing system, in a coded form as published in an external list.

Proprietary <Prtry>

Presence: [1..1]

Definition: Identification code for a clearing system that has not yet been identified in the list of clearing systems.

MemberIdentification <Mmbld>

Presence: [1..1]

Definition: Identification of a member of a clearing system.

Other <Othr>

Presence: [0..n]

Definition: Unique identification of an organisation, as assigned by an institution, using an identification scheme.

Note: Use this element only if there is not a standard BIC available as defined by the ISO 9362 Registration Authority and described in ISO 9362 "Banking - Banking telecommunication messages - Business identifier code (BIC)".

Identification <Id>

Presence: [1..1]

Definition: Identification assigned by an institution.

SchmeName <SchmeNm>

Presence: [0..1]

Definition: Name of the identification scheme

Notes: It is recommended that you do not use this complex type.

Code <Cd>

Presence: [1..1]

Definition: Name of the identification scheme, in a coded form as published in an external list.

Notes: Not recommended for use.

Proprietary <Prtry>

Presence: [1..1]

Definition: Name of the identification scheme, in a free text form.

Notes: Not recommended for use. See above

Issuer <Issr>

Presence: [0..1]

CountryOfResidence <CtryOfRes>

Presence: [0..1]

Definition: Country in which the Receiver is located. It is the country from which the affairs of the Receiver are located.

ContactDetails <CtctDtls>

Presence: [0..1]

Definition: Identifies a general contact at the Sender's location.

Notes:

- This complex type is defined by the ISO 20022 Message Component **ContactDetails3**
- There are no TWIST or 822 corresponding elements in this complex type.

ReceiverIndividualContact <RcvrIndvCtct> TWIST: <contactinfo>

Presence: [0..2]

Definition: Used to provide contact information for a technical representative at the Receiver's location. This is typically the individual to be contacted in case of technical transmission problems. The individual to be contacted in case of problems of a business nature is carried in the **AccountCharacteristics** section.

NamePrefix <NmPrfx>

Presence: [0..1]

Definition: Specifies the terms used to formally address a person. Values are:

DOCT Title of the person is Doctor or Dr.

MIST Title of the person is Mister or Mr.

MISS Title of the person is Miss.

MADM Title of the person is Madam.

Name <Nm> TWIST: <individualContact/name> 822: PER02 in Table 2

Presence: [0..1]

Definition: The name of the Receiver's contact for technical problems.

PhoneNumber <PhneNb> TWIST: <contactInfo/phoneNumber> 822: PER03/04 in Table 2

Presence: [0..1]

Definition: The telephone number of the Receiver's contact.

MobileNumber <MobNb>

Presence: [0..1]

Definition: The celll or mobile device number of the Receiver's contact.

FaxNumber <FaxNb> TWIST: <contactInfo/Fax> 822: PER03/04 in Table 2

Presence: [0..1]

Definition: The facsimile phone number of the FI's contact.

EmailAddress <EmailAdr> TWIST: <contactInfo/Email> 822: PER03/04 in Table 2

Presence: [0..1]

Definition: The email address of the Receiver's contact.

Other <Othr> TWIST: <otherCommunication>

Prsence: [0..1]

Definition: Complex type that provides contact communication details in a non standard form. Use if normal contact is not available.

ChannelType <ChanTp> TWIST: <otherCommunication/channelCode>

Presence: [1..1]

Definition: The method of communication expressed as a code.

Identification <Id> TWIST: <otherCommunication/value>

Presence: [0..1]

Definition: The communication value such as phone number or email address.

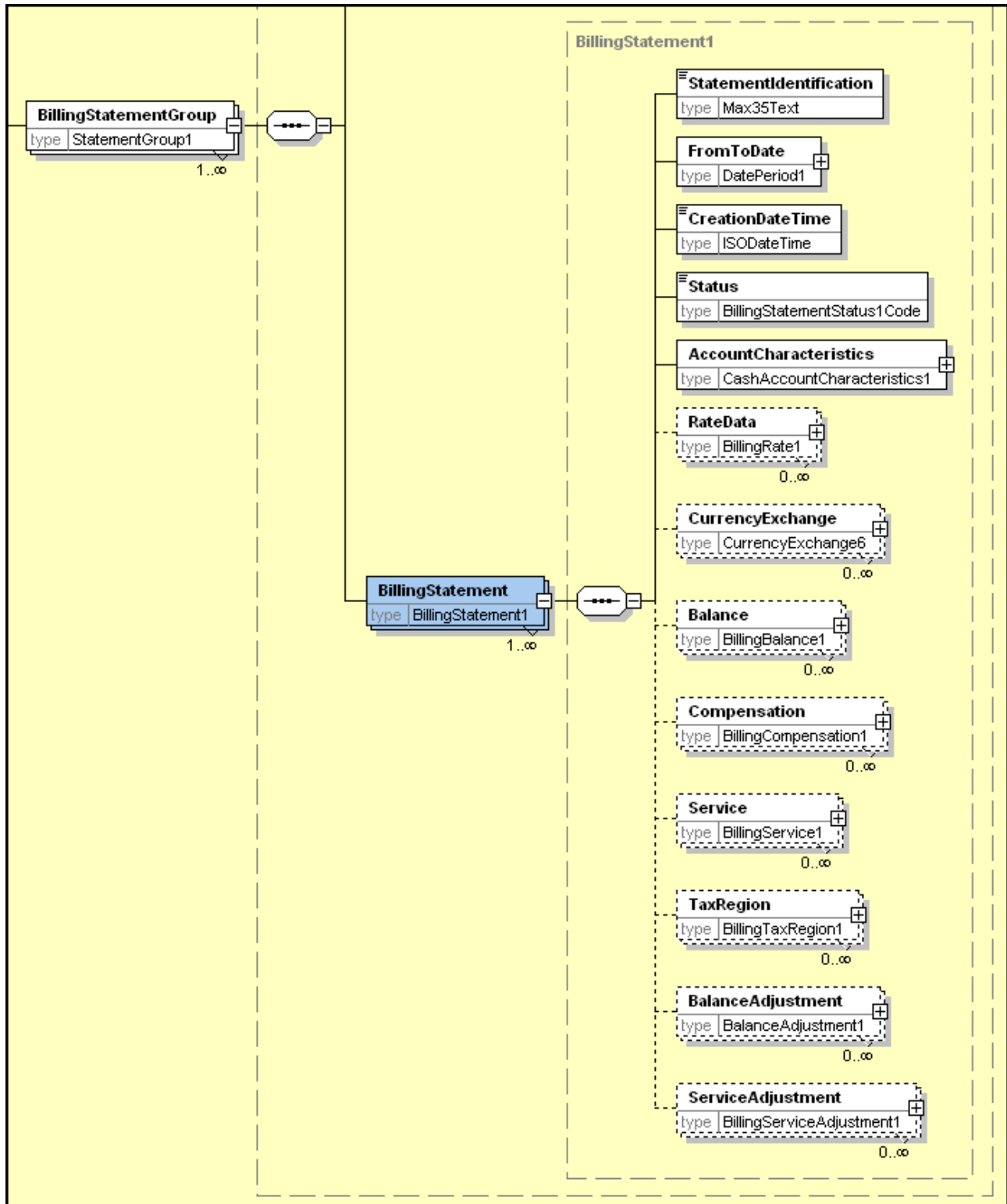
PreferredMethod <PrefrdMtd> TWIST: <contactInfo/prefMethod>

Presence: [0..1]

Definition: The preferred method used to contact the Receiver's contact. Values are:

PrefrdMtd	TWIST Value
LETT	Letter
MAIL	Email
PHON	Phone
FAXX	Fax
CELL	

5.2 Billing Statement Definition



BillingStatement <BlgStmt>

Presence: [1..n]

Definition: The complex type which provides the bank services billing statement recounting of all service chargeable events that occurred during a reporting cycle, such as the end of the month reporting. There can be multiple statements within a BSB message but each must begin with the **BillingStatement** complex type.

StatementIdentification <StmtId>

Presence: [0..1]

Definition: Identifies the customer billing statement that follows. This is free form text with no applicable format or standard.

FromToDate <FrToDt>

Presence: [1..1]

Definition: Date range between the start date and the end date for which the statement is issued.

FromDate <FrDt> TWIST: <statementStartDate> 822: DTM02 where DTM01=150

Presence: [0..1]

Definition: Indicates the starting date of the statement period

Note: The *Statement Start Date* and the *Statement End Date* determine the number of days in the statement period and the number of days in the year involved.

ToDate <ToDt> TWIST: <statementEndDate> 822: DTM02 where DTM01=151

Presence: [1..1]

Definition: Indicates the ending date of the statement period

Notes:

- The *Statement Start Date* and the *Statement End Date* determine the number of days in the statement period and the number of days in the year involved.
- In the absence of the *Statement Start Date*, the number of days in the statement period is assumed to be the actual number of calendar days in the *Statement End Day* month.

CreationDateTime <CreDtTm> TWIST: <statementProductionDate> 822: DTM02 where DTM01=009

Presence: [1..1]

Definition: Indicates the date on which the financial institution produced this statement

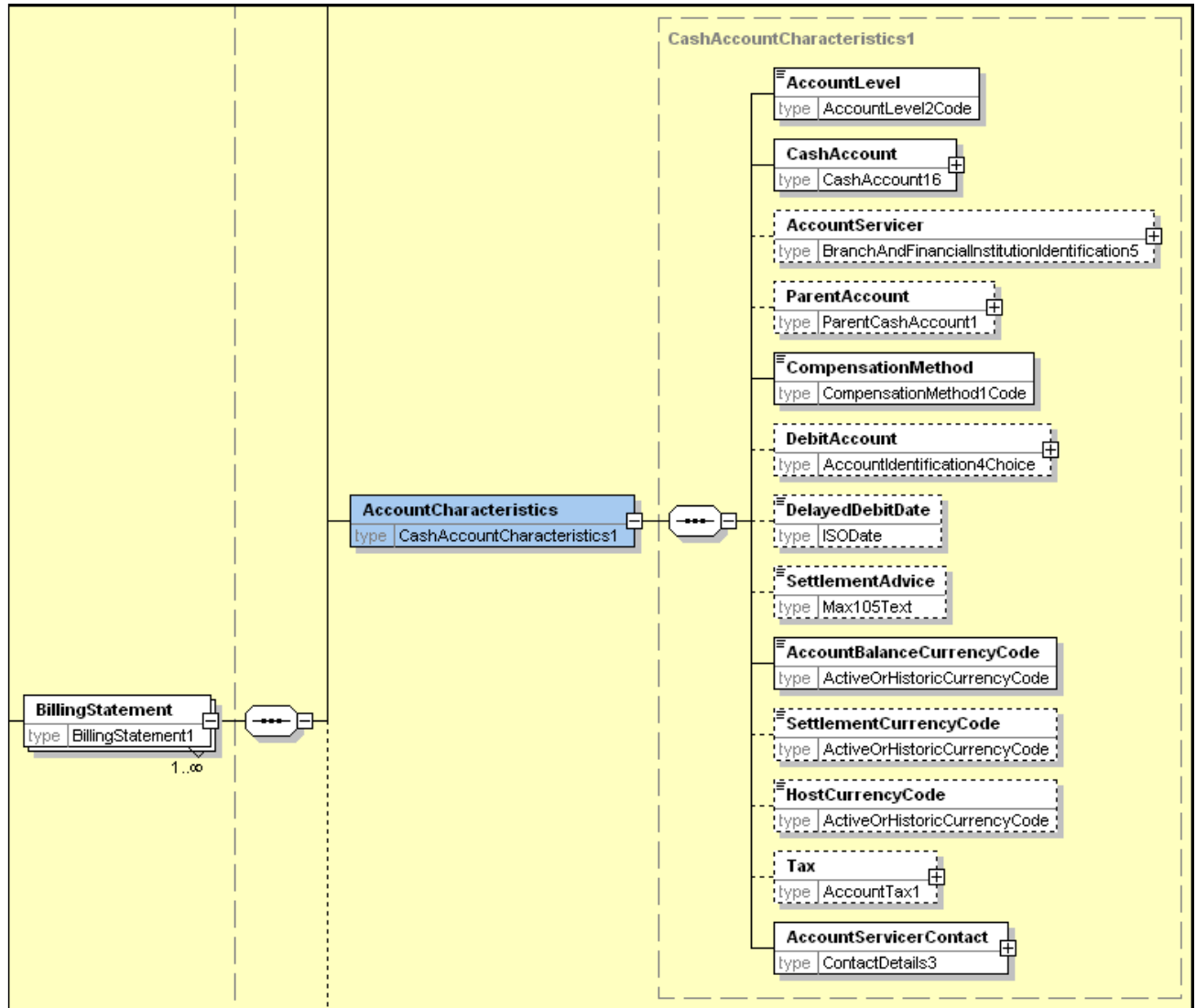
Status <Sts> TWIST: < statementStatus> 822: BGN01

Presence: [1..1]

Definition: Indicates the status, or nature, of the statements that follow. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values.

- **ORGN Original** - The statement uniquely identified by the *Account Level*, *Account Number*, *Statement Start Date* and *Statement End Date* is the original statement.
- **RPLC Replace** – This statement replaces a previously transmitted statement. The statement to be replaced is identified by the *Account Level*, *Account Number* and *Statement End Date*.
- **TEST Test** – This is a test statement and does not represent real events.

5.2.1 Account Section Definition



AccountCharacteristics <AcctChrtcs> TWIST: <account>

Presence: [1..1]

Definition:

The Account Section identifies the account or relationship whose statement information follows. The Account Section contains the account or relationship parent number, account title, statement dates, position in a hierarchical structure, upward pointer to a possible next higher account in the relationship, currency codes, tax region and any other appropriate demographic information relating to the account. The Account Section initiates the statement information that follows up to the next Account Section or the end of the message. There may be multiple Account Sections (statements) within the **BillingStatementGroup** complex type but all must have the same **Sender** and **Receiver** and they must all be for the same statement period.

Notes:

Although there may be more than one Account Section (statement) within a message, the combination of *Level Code*, *Account Number* and *Statement End Date* must be unique within a message. Receiving systems rely on the FI identification code, the *Level Code*, *Account Number* and *Statement End Date* to uniquely identify a statement.

The statement period (billing cycle) is assumed to begin on the first calendar day of each month and end on the last calendar day of the month.

AccountCharacteristics is the XML complex type. It can appear only once in a statement.

AccountLevel <AcctLv> TWIST: <accountLevel> 822: ACT02 with value "RELATIONSHIP SUMMARY"

Presence: [1..1]

Definition: Defines the level at which the account exists within a hierarchical structure. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values.

- **DETL Detail** – The account is a real deposit/current account. It is either not a member of a hierarchy or it is at the lowest level in a hierarchy. If the account is a member of a hierarchy, the *Parent Qualifier* and *Parent Account Number* elements are required.
- **INTM Intermediate** – The account exists at an intermediate level within a hierarchy. It can be a real deposit/current account or a fictitious account used exclusively to total information from lower levels in the hierarchy. Intermediate level accounts require the *Parent Level* and *Parent Account Number* elements.
- **SMRY Summary** – The account is at the highest level in a hierarchy. It can be a real deposit account or a fictitious account used exclusively to total information from lower levels in the hierarchy. The *Parent Level* and *Parent Account Number* elements must not be present.

CashAccount <CshAcct>

Presence: [1..1]

Definition: A complex type which identifies the account owning the statement which follows and to or from which a cash entry can be made.

Identification <Id>

Presence: [1..1]

Definition: A complex type which provides unique and unambiguous identification for the account between the account owner and the account servicer.

IBAN <IBAN> TWIST: <iban>*

Presence: [1..1]

Definition: International Bank Account Number (IBAN) - identifier used internationally by financial institutions to uniquely identify the account of a customer. Further specifications of the format and content of the IBAN can be found in the standard ISO 13616 "Banking and related financial services - International Bank Account Number (IBAN)" version 1997-10-01, or later revisions.

Note: <Iban> element and the <Othr> element shown below are mutually exclusive. The IBAN is not necessarily the same as the account number commonly used by the FI. This commonly used account number is entered below in <Othr/Id>.

* Account ID Versus IBAN

The <AcctChrtcs/CshAcct/Id/Othr/Id> element should be used to uniquely identify an account. This is not the same as the IBAN element. If the account's IBAN is actually used by the FI to identify the account, then this IBAN should be placed in the <AcctChrtcs/CshAcct/Id/Othr/Id> element.

Other <Othr>

Presence: [1..1]

Definition: Complex type providing unique identification of an account, as assigned by the account servicer, using an identification scheme.

Identification <Id> TWIST: <bban> 822: ACT01

Presence: [1..1]

Definition: A code which, combined with the *Account Level*, uniquely identifies the account or relationship parent within the FI environment. Sometimes referred to as the Domestic Account Number or the BBAN.

Notes:

- This is the element, not the IBAN element shown above, that receiving systems will use to uniquely identify the account within a receiving system database.
- The *Account Number* used for relationship parent accounts may be any alphanumeric identification that the FI chooses and may deviate from the FI's standard account numbering format.
- The *Account Number* should be in the same customer recognizable format as is used on FI statements and other documents.

- The *Account Number* is not the IBAN number although it may be the same as the IBAN.
- The *Account Number* may contain internal punctuation such as dashes and blanks, but must not contain leading blanks. In other words the number must be left justified in the element value.
- Account numbers (and *Account Level* values) must be consistent in format from month to month so that the receiving systems can recognize that this month's account statement belongs to the same account received last month. For example, to send an account number as "1-2345-6" one month and as "123456" the next month is forbidden.

SchmeName <SchmeNm>

Presence: [0..1]

Definition: Name of the identification scheme

Notes: It is recommended that you do not use this complex type. The account number identification supplied above in <Othr/Id> follows the FI's own unique identification scheme which does not have to be defined.

Code <Cd>

Presence: [1..1]

Definition: Name of the identification scheme, in a coded form as published in an external list.

Notes: Not recommended for use. See above <SchmeNm>

Proprietary <Prtry>

Presence: [1..1]

Definition: Name of the identification scheme, in a free text form.

Notes: Not recommended for use. See above <SchmeNm>

Issuer <Issr>

Presence: [0..1]

Definition: Entity that assigns the identification.

Notes: Not recommended for use. It is assumed that the FI is the issuer. See above <SchmeNm>

Type <Tp>

Presence: [0..1]

Definition: A complex type that specifies the nature, or use of the account.

Code <Cd>

Presence: [1..1]

Definition: Enumerated code that specifies the type of account. Values are:

CASH	Account used for the payment of cash.
CHAR	Account used for charges if different from the account for payment.
COMM	Account used for commission if different from the account for payment.
TAXE	Account used for taxes if different from the account for payment.
CISH	Account used for payment of income if different from the current cash account.
TRAS	Account used for trading if different from the current cash account.
SACC	Account used to post debit and credit entries, as a result of transactions cleared and settled through a specific clearing and settlement system.
CACC	Account used to post debits and credits when no specific account has been nominated.
SVGS	Account used for savings.
ONDP	Account used for overnight deposits.
MGLD	Account used for a marginal lending facility.
NREXI	Account used for non-resident external.
MOMA	Account used for money markets if different from the cash account.
LOAN	Account used for loans.
SLRY	Accounts used for salary payments.

*Proprietary <Prtry>***Presence:** [1..1]**Definition:** Nature or use of the account in a proprietary free text form.*Currency <Ccy>***Presence:** [0..1]**Definition:** Identification of the currency in which the account is held.**Notes:** Should only be used in case one and the same account number covers several currencies and the initiating party needs to identify which currency needs to be used for settlement on the account. This currency code is not to be confused with the AccountBalanceCurrencyCode *<AcctBalCcyCd>* or SettlementCurrenryCode *<SttlmCcyCd>* below.*Name <Nm>* TWIST: <accountName> 822: ACT02**Presence:** [0..1]**Definition:** Name of the account, as assigned by the account servicing institution, in agreement with the account owner in order to provide an additional means of identification of the account.**AccountServicer <AcctSvcr>****Presence:** [0..1]**Definition:** A complex type optionally used to uniquely identify the account's domicile bank/branch, the bank/branch in which the account actually resides. This domicile bank/branch may be a member of a larger FI which originated the message and which may have an identifier code different from the domicile bank/branch code. Do not use this complex type to indicate the domicile bank/branch unless the domicile bank/branch uses the same service codes, price list, currencies, demographic information, contacts and tax calculations as the bank identified in the **BillingStatementGroup, Sender** section.**Notes:** It is important to note whether this account resides in the same bank as identified in the **BillingStatementGroup, Sender** section. If this account is domiciled in a different bank/branch and uses different service prices or service ID codes, then it should be included in a different **Bank Services Billing Statement V01** complex type. Please review **Multi Branch Handling** in Appendix E for a full explanation.**FinancialInstitutionIdentification <FinInstnId>****Presence:** [1..1]**Definition:** Complex type which provides unique and unambiguous identification of a financial institution, as assigned under an internationally recognised or proprietary identification scheme.*BICFI <BICFI>* TWIST: < domicileBankIdentifier> 822: ACT04**Presence:** [1..1]**Definition:** Code allocated to a financial institution by the ISO 9362 Registration Authority as described in ISO 9362 "Banking - Banking telecommunication messages - Business identifier code (BIC)".**ClearingSystemMemberIdentification <ClrSysMmbld>****Presence:** [0..1]**Definition:** Complex type supplying Information used to identify a member within a clearing system.**Notes:** This complex type is not recommended for use in the BSB.**ClearingSystemIdentification <ClrSysId>****Presence:** [0..1]**Definition:** Complex type specifying a pre-agreed offering between clearing agents or the channel through which the payment instruction is processed.*Code <Cd>***Presence:** [1..1]**Definition:** Identification of a clearing system, in a coded form as published in an external list.*Proprietary <Prtry>*

Presence: [1..1]

Definition: Identification code for a clearing system that has not yet been identified in the list of clearing systems.

MemberIdentification <Mmbld>

Presence: [1..1]

Definition: Identification of a member of a clearing system.

Name <Nm>

Presence: [0..1]

Definition: Name by which an agent within the account servicing FI is known and which is usually used to identify that agent.

PostalAddress <PstlAdr>

Presence: [0..1]

Definition: Complex type that provides information that locates and identifies a specific address as defined by postal services and used to contact the FI's agent.

Note: This complex type is defined by the ISO 20022 Message Component **PostalAddress6**

Other <Othr>

Presence: [0..1]

Definition: Complex type supplying unique identification of an agent, as assigned by an institution, using an identification scheme.

Note: Complex type defined by ISO 20022 Message Component

GenericFinancialIdentification1

BranchIdentification <BrnchId>

Presence: [0..1]

Definition: Identifies a specific branch of the domicile branch.

Notes: This component should be used in case the identification information in the financial institution component does not provide identification up to the branch level.

Identification <Id>

Presence: [0..1]

Definition: Unique and unambiguous identification of a branch of a financial institution.

Name <Nm>

Presence: [0..1]

Definition: Name by which an agent of the branch is known and which is usually used to identify that agent.

PostalAddress <PstlAdr>

Presence: [0..1]

Definition: Complex type that provides information that locates and identifies a specific address as defined by postal services and used to contact the branch's agent..

Note: This complex type is defined by the ISO 20022 Message Component **PostalAddress6**

ParentAccount <PrntAcct>

Presence: [0..1]

Definition: Complex type which identifies the Parent of this account if this account exists within a hierarchical structure. If there is no Parent for this account then this complex type must not be present.

Level <Lv> TWIST: <parentAccount.parentLevel> 822: ACT05

Presence: [0..1]

Definition: Defines the level at which the Parent of this account exists within a hierarchical structure. If there is no Parent for this account then this element must not be present. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values.

- **INTM Intermediate** – The parent account exists at an intermediate level within a hierarchy
- **SMRY Summary** – The parent account is at the highest level in a hierarchy.

Note: If *Parent Level* is present then *Parent Account Number* must be present.

Identification <Id>**Presence:** [1..1]**Definition:** A complex type which provides unique and unambiguous identification for the parent account between the parent account owner and the parent account servicer.**Identification <Id>****Presence:** [1..1]**Definition:** A complex type which provides unique and unambiguous identification for the account between the account owner and the parent account servicer.**IBAN <IBAN>** TWIST: <parentAccountBBAN> 822: ACT06**Presence:** [1..1]**Definition:** International Bank Account Number (IBAN) - identifier used internationally by financial institutions to uniquely identify the account of a customer. Further specifications of the format and content of the IBAN can be found in the standard ISO 13616 "Banking and related financial services - International Bank Account Number (IBAN)" version 1997-10-01, or later revisions.**Note:**

- The IBAN is not necessarily the same as the account number commonly used by the FI. This account number is entered below in <Othr/Id>
- The IBAN as used here and the <Othr/Id> below are mutually exclusive. We recommend use of <Othr/Id>.

Other <Othr>**Presence:** [1..1]**Definition:** Complex type providing unique identification of an account, as assigned by the account servicer, using an identification scheme.**Identification <Id>** TWIST: <parentAccountBBAN> 822: ACT06**Presence:** [1..1]**Definition:** A code which, combined with the *Account Level*, uniquely identifies the relationship parent within the FI environment. Sometimes referred to as the Domestic Account Number or the BBAN.**Notes:**

- This is the element, not the IBAN element carried above, that receiving systems will use to uniquely identify the account within a receiving system database.
- The *Account Number* used for relationship parent accounts may be any alphanumeric identification that the FI chooses and may deviate from the FI's standard account numbering format.
- The *Account Number* should be in the same customer recognizable format as is used on FI statements and other documents.
- The *Account Number* is not the IBAN number although it may be the same as the IBAN.
- The *Account Number* may contain internal punctuation such as dashes and blanks, but must not contain leading blanks. In other words the number must be left justified in the element value.
- Account numbers (and *Account Level* values) must be consistent in format from month to month so that the receiving systems can recognize that this month's account statement belongs to the same account received last month. For example, to send an account number as "1-2345-6" one month and as "123456" the next month is forbidden.

SchmeName <SchmeNm>**Presence:** [0..1]**Definition:** Name of the identification scheme**Notes:** It is recommended that you do not use this complex type. The account number identification supplied above in <Othr/Id> follows the FI's own unique identification scheme which does not have to be defined.

Code <Cd>

Presence: [1..1]

Definition: Name of the identification scheme, in a coded form as published in an external list.

Notes: Not recommended for use. See above <SchmeNm>

Proprietary <Prtry>

Presence: [1..1]

Definition: Name of the identification scheme, in a free text form.

Notes: Not recommended for use. See above <SchmeNm>

Issuer <Issr>

Presence: [0..1]

Definition: Entity that assigns the identification.

Notes: Not recommended for use. It is assumed that the FI is the issuer. See above <SchmeNm>

Type <Tp>

Presence: [0..1]

Definition: A complex type that specifies the nature, or use of the account.

Code <Cd>

Presence: [1..1]

Definition: Enumerated code that specifies the type of account. Values are:

CashPayment	Account used for the payment of cash.
Charges	Account used for charges if different from the account for payment.
Commission	Account used for commission if different from the account for payment.
Tax	Account used for taxes if different from the account for payment.
CashIncome	Account used for payment of income if different from the current cash account.
CashTrading	Account used for trading if different from the current cash account.
Settlement	Account used to post debit and credit entries, as a result of transactions cleared and settled through a specific clearing and settlement system.
Current	Account used to post debits and credits when no specific account has been nominated.
Savings	Account used for savings.
OverNightDeposit	Account used for overnight deposits.
MarginalLending	Account used for a marginal lending facility.
NonResidentExternal	Account used for non-resident external.
MoneyMarket	Account used for money markets if different from the cash account.
Loan	Account used for loans.
Salary	Accounts used for salary payments.
Overdraft	Account is used for overdrafts.

Proprietary <Prtry>

Presence: [1..1]

Definition: Nature or use of the account in a proprietary free text form.

Currency <Ccy>

Presence: [0..1]

Definition: Identification of the currency in which the account is held.

Notes: Should only be used in case one and the same account number covers several currencies and the initiating party needs to identify which currency needs to be used for settlement on the account.

Name <Nm>

Presence: [0..1]

Definition: Name of the account, as assigned by the account servicing institution, in agreement with the account owner in order to provide an additional means of identification of the account.

Servicer <Svcr>

Presence: [0..1]

Definition: Complex type identifying the FI in which the parent account resides.

FinancialInstitutionIdentification <FininstnId>

Presence: [1..1]

Definition: Complex type providing unique and unambiguous identification of a financial institution, as assigned under an internationally recognised or proprietary identification scheme.

BICFI <BICFI> TWIST: <parentBankIdentifier>

Presence: [1..1]

Definition: Code allocated to a financial institution by the ISO 9362 Registration Authority as described in ISO 9362 "Banking - Banking telecommunication messages - Business identifier code (BIC)".

ClearingSystemMemberIdentification <ClrSysMmbld>

Presence: [0..1]

Definition: Complex type supplying Information used to identify a member within a clearing system.

Notes: This complex type is not recommended for use in the BSB.

ClearingSystemIdentification <ClrSysId>

Presence: [0..1]

Definition: Complex type specifying a pre-agreed offering between clearing agents or the channel through which the payment instruction is processed.

Code <Cd>

Presence: [1..1]

Definition: Identification of a clearing system, in a coded form as published in an external list.

Proprietary <Prtry>

Presence: [1..1]

Definition: Identification code for a clearing system that has not yet been identified in the list of clearing systems.

MemberIdentification <Mmbld>

Presence: [1..1]

Definition: Identification of a member of a clearing system.

Name <Nm>

Presence: [0..1]

Definition: Name by which an agent within the servicing FI is known and which is usually used to identify that agent.

PostalAddress <PstlAdr>

Presence: [0..1]

Definition: Complex type that provides information that locates and identifies a specific address as defined by postal services and used to contact the FI's agent.

Note: This complex type is defined by the ISO 20022 Message Component **PostalAddress6**

Other <Othr>**Presence:** [0..1]**Definition:** Complex type supplying unique identification of an agent, as assigned by an institution, using an identification scheme.**Note:** Complex type defined by ISO 20022 Message Component**GenericFinancialIdentification1****BranchIdentification <BrnchId>****Presence:** [0..1]**Definition:** Identifies a specific branch of the Parent account's FI.**Notes:** This component should be used in case the identification information in the financial institution component does not provide identification up to the branch level.*Identification <Id>***Presence:** [0..1]**Definition:** Unique and unambiguous identification of a branch of a financial institution.*Name <Nm>***Presence:** [0..1]**Definition:** Name by which an agent of the branch is known and which is usually used to identify that agent.**PostalAddress <PstlAdr>****Presence:** [0..1]**Definition:** Complex type that provides information that locates and identifies a specific address as defined by postal services and used to contact the branch's agent.**Note:** This complex type is defined by the ISO 20022 Message Component **PostalAddress6***CompensationMethod <CompstnMtd>* TWIST: <compensationMethod>**Presence:** [1..1]**Definition:** A code which specifies whether the account pays charges and taxes due to the Financial Institution and, if so, how they are paid. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values.

- **NOCP No** – The account does not pay any charges due. Some other account in the hierarchy is debited or invoiced for charges and taxes due.
- **DBTD Debited** – This account was debited for any charges or taxes due.
- **INVD Invoiced** – The account or summary was invoiced for charges and taxes due.
- **DDBT DelayedDebit** – The account will be automatically debited on a future date

Note: In a hierarchical structure, charging typically occurs only at a specific level. For example, if all lowest level detail accounts are charged at the detail level, then the higher level accounts or summaries present simple totals of the charges and taxes that occurred at the detail level. If detail account charges are totaled or calculated at an intermediate level and charged at that level, then the higher level accounts or summaries present simple totals of the charges and taxes that occurred at the intermediate level. There should be no recalculation of charges and actual debiting/invoicing at levels above where the actual charging occurs.**DebitAccount <DbtAcct>****Presence:** [0..1]**Definition:** An optional complex type that identifies the account which has been or will be debited for charges and taxes due.**Notes:** This element is typically used if the *Compensation Method* is **Debited** or **DelayedDebit***IBAN <IBAN>* TWIST: <iban>**Presence:** [1..1]**Definition:** International Bank Account Number (IBAN) - identifier used internationally by financial institutions to uniquely identify the account of a customer. Further specifications of the format and content of the IBAN can be found in the standard ISO 13616 "Banking and related financial services - International Bank Account Number (IBAN)" version 1997-10-01, or later revisions.**Note:** The IBAN is not necessarily the same as the account number commonly used by the FI. This account number is entered below in *<Othr/Id>*.

Other <Othr>**Presence:** [1..1]**Definition:** Complex type providing unique identification of an account, as assigned by the FI account servicer, using an identification scheme.*Identification <Id>* TWIST: <debitAccount>**Presence:** [1..1]**Definition:** A code which identifies the account or relationship parent within the FI environment. Sometimes referred to as the Domestic Account Number or the BBAN.**SchmeName <SchmeNm>****Presence:** [0..1]**Definition:** Name of the identification scheme**Notes:** It is recommended that you do not use this complex type. The account number identification supplied above in <Othr/Id> follows the FI's own unique identification scheme which does not have to be defined.*Code <Cd>***Presence:** [1..1]**Definition:** Name of the identification scheme, in a coded form as published in an external list.**Notes:** Not recommended for use. See above <SchmeNm>*Proprietary <Prtry>***Presence:** [1..1]**Definition:** Name of the identification scheme, in a free text form.**Notes:** Not recommended for use. See above <SchmeNm>*Issuer <Issr>***Presence:** [0..1]**Definition:** Entity that assigns the identification.**Notes:** Not recommended for use. It is assumed that the FI is the issuer. See above <SchmeNm>*DelayedDebitDate <DelydDbtDt>* TWIST: <delayedDebitDate>**Presence:** [0..1]**Definition:** The future date on which the named account will be automatically debited for charges and taxes due.**Notes:** This element is typically used if the *Compensation Method* is **DBTD Debited** or **DDBT DelayedDebit***SettlementAdvice <SttlmAdv>* TWIST: <settlementAdvice>**Presence:** [0..1]**Definition:** A free form message which advises the customer about the settlement of any charges and taxes due.**Notes:** Examples are "For settlement details, please see Summary Statement", "In reimbursement, account number 123-5555 at London Branch will be debited on the 17. March 2005".*AccountBalanceCurrencyCode <AcctBalCcyCd>* TWIST: <accountBalanceCurrencyCode> 822: CUR02**Presence:** [1..1]**Definition:** The ISO currency code used for the account's Balance Currency. Not to be confused with <CshAcct/Ccy> above.*SettlementCurrencyCode <SttlmCcyCd>* TWIST: <settlementCurrencyCode>**Presence:** [0..1]**Definition:** The ISO currency code default used for the account's Settlement Currency.**Note:** If the account is a member of a Billing Relationship, then this account and all other accounts in the relationship must have the same Settlement Currency Code. If the account is an intermediate or summary account that summarizes multiple billing relationships, then this element must not be present.

HostCurrencyCode <HstCcyCd> TWIST: <hostCurrencyCode>

Presence: [0..1]

Definition: The ISO currency code default used for the taxing authority's Host Currency.

Tax <Tax>

Presence: [0..1]

Definition: A complex type that describes the account's taxing parameters. If not present the assumption is that there are no taxes on this account.

TaxCalculationMethod <ClctnMtd> TWIST: <taxCalculationMethod>

Definition: Identifies the method used by the bank or taxing authority to calculate the taxes on this account's statement. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values.

- **NTAX NoTaxes** - No taxes are calculated or due on this statement. There is no Tax Section
- **MTDA BSBMethodA** - Line-by-line per service calculation and settlement currency translation.
- **MTDB BSBMethodB** - Line by line per service calculation with settlement currency translation performed on the statement tax total.
- **MTDC BSBMethodC** - Group tax calculation with group settlement currency translation.
- **MTDD BSBMethodD** Line-by-line per service calculation with all charges and taxes in the Pricing currency.
- **UDFD Undefined** - The tax calculation method is not identified.

Notes:

If the method is not known then the **Undefined** value should be used.

Region <Rgn> TWIST: <taxRegionCode>

Presence: [0..1]

Definition: Identifies the tax region code in which the account resides.

Notes: This code is equivalent to the <TaxRgn/RgnNm> element.

NonResidenceCountry <NonResCtry> TWIST: <taxRegionResident>

Presence: [0..1]

Definition: Complex type that Specifies whether the account owner is a resident of the tax region in which the account resides. Tax implications may be involved if account owner does not reside in the account's tax region.

Notes: If this complex type is not present then the account owner is assumed to be a resident of the tax region.

Country <Ctry> TWIST: <ownerResidence>

Presence: [1..1]

Definition: Identifies the account owner's resident country if the owner does not reside in the account's tax region.

Note: *Country* and *Area* cannot be used together. Choose one or the other.

Area <Area> TWIST: <ownerResidence>

Presence: [1..1]

Definition: Identifies the account owner's geographical region or area if the owner does not reside in the account's tax region.

Note: *Country* and *Area* cannot be used together. Choose one or the other.

AccountServiceContact <AcctSvcrCtct>

Presence: [1..1]

Definition: Complex type that identifies the FI individual to be contacted in case of problems of a business nature. The individual to be contacted in case of problems of a technical transmission nature is carried in the **BillingStatementGroup** Section.

NamePrefix <NmPrfx>

Presence: [0..1]

Definition: Specifies the terms used to formally address a person. Values are:

DOCT Title of the person is Doctor or Dr.
MIST Title of the person is Mister or Mr.
MISS Title of the person is Miss.
MADM Title of the person is Madam.

Name <Nm> TWIST: <bankContactName> 822: PER02 in Table 2

Presence: [0..1]

Definition: The name of the FI's contact for business problems.

PhoneNumber <PhneNb> TWIST: <bankContactPhone> 822: PER03/04 in Table 2

Presence: [0..1]

Definition: The telephone number of the FI's contact.

MobileNumber <MobNb>

Presence: [0..1]

Definition: The celll or mobile device number of the FI's contact.

FaxNumber <FaxNb> TWIST: <bankContactFax> 822: PER03/04 in Table 2

Presence: [0..1]

Definition: The facsimile phone number of the FI's contact.

EmailAddress <EmailAdr> TWIST: <bankContactEmail> 822: PER03/04 in Table 2

Presence: [0..1]

Definition: The email address of the FI's contact.

Other <Othr>

Prsence: [0..1]

Definition: Complex type that provides contact communication details in a non standard form. Use if normal contact is not available.

ChannelType <ChanTp>

Presence: [1..1]

Definition: The method of communication expressed as a code.

Identification <Id>

Presence: [0..1]

Definition: The communication value such as phone number or email address.

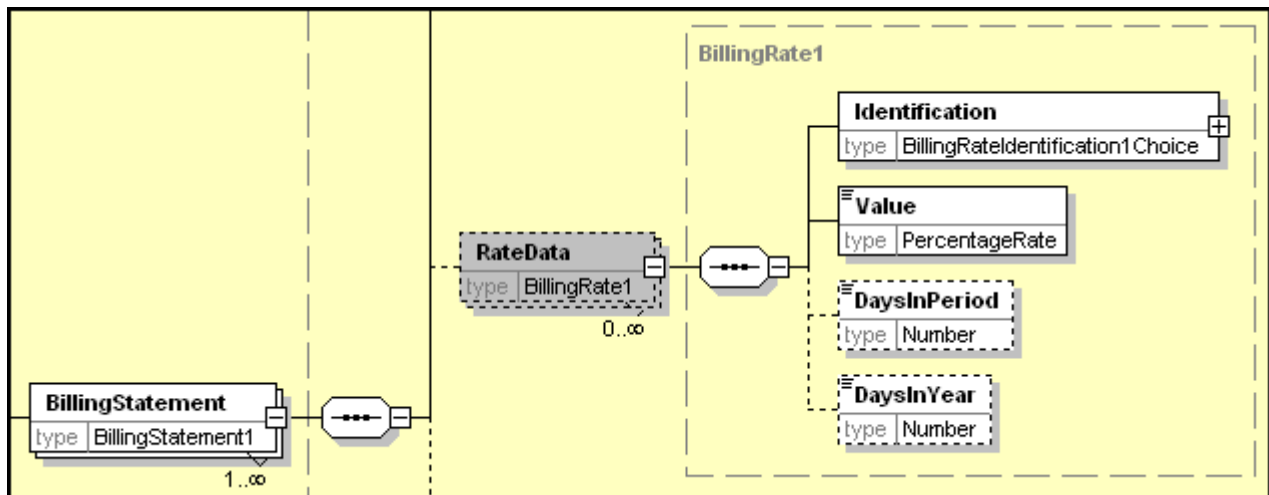
PreferredMethod <PrefrdMtd> TWIST: <prefMethod>

Presence: [0..1]

Definition: The preferred method used to contact the FI's contact for the specific tax region. Values are:

PrefrdMtd	TWIST Value
LETT	Letter
MAIL	Email
PHON	Phone
FAXX	Fax
CELL	

5.2.2 Rate Data Section Definition



RateData <RateData> TWIST: <rateinfo>

Presence: [0..n]

Definition:

Complex type that identifies the non tax, per annum rate and factor values as used in the statement along with any time dependent charge basis. Includes those rate and factors commonly used in the ANSI X12 822. The related AFP code is shown along with alternate names commonly used

Notes:

Included below are the rates and factors most commonly used in the 822 to support rate sensitive calculations. They are carried in the RTE segments of the 822 with an identifying code in RTE01.

Note that not all rates and factors need to be sent. The critical rates, those that are used in underlying rate sensitive calculations, must be sent with the number of decimal places equal to that actually used in the statement calculations.

RateData is the XML complex type. It is not required but may be repeated within a statement

Identification/Code <Id/Cd> TWIST: <rateIdentifier> 822:RTE01

Presence: [1..1]

Definition: Identifies the type of rate or factor. The table below shows the ISO 20022 external table values and the corresponding TWIST enumeration values.

Note: *Identification/Proprietary* <Id/Prtry> is available as an optional choice. We strongly recommend that it not be used. Use <Id/Cd> in order to maintain standard codes across all banks.

RateData/Id/Cd	TWIST Value
EALR	EarningsAllowanceRate
AEAR	AdjustedEarningsAllowanceRate
MULT	Multiplier
NGLO	NegativeLedgerOverdraftRate
NGCO	NegativeCollectedOverdraftRate
NLBO	NetLedgerBalanceOverdraftRate
NCBO	NetCollectedBalanceOverdraftRate
UFUR	UncollectedFundsUsageRate
ICDR	InterestCreditedRate
RSRV	ReserveRequirementRate
NXME	NextMonthEarningsAllowanceRate
ANXE	AdjustedNextMonthEarningsRate
NXMU	NextMonthMultiplier
FDIC	FDICRate
PRIR	PrimeRate
RRQR	ReserveRequirementRate-NonDDA
CDRA	CDRate
DINR	DeficiencyInterestRate
DSCR	DeficiencySurchargeRate

Descriptions of the values along with the AFP codes are:

EarningsAllowanceRate

RTE01 = 2, AFP code = 00 01 22

Earnings Credit Rate (ECR)

Per annum earnings rate applied to the current statement period's investable balance for calculation of the earnings allowance credit. The earnings allowance credit is used to offset the charges for balance compensable services. This rate has NOT been adjusted for reserves. The ECR, Not Net of Reserves, is calculated as:

$$\text{ECR, Not Net} = \text{ECR, Net of Reserves (00 01 20)} / (1 - \text{Reserve Rate})$$

$$5.0\% = 4.5\% / (1 - 10\%)$$

$$5.0\% = 4.5\% / .9$$

AdjustedEarningsAllowanceRate

RTE01 = 2A, AFP code = 00 01 20

Earnings Credit Rate (ECR) – Net of Reserves

Per annum earnings rate, adjusted for reserves, applied to the current analysis period's investable balance for calculation of the earnings allowance credit. The ECR, Net of Reserves, is calculated as:

$$\text{ECR, Net of Reserves} = \text{ECR, Not Net (00 01 22)} * (1 - \text{Reserve Rate})$$

$$4.5\% = 5.0\% * (1 - 10\%)$$

$$4.5\% = 5.0\% * .9$$

Multiplier

Carried in RTE03, AFP code = 00 01 24

Balance Requirement Factor

The collected balance required to offset \$1.00 of balance compensable service charges. This factor can be used to calculate the balance equivalent of balance compensable service charges.

The multiplier is calculated in one of three different ways depending on whether the Earnings Allowance Rate (ECR) is adjusted for reserves or not (net of reserves or not) and, in the case where the ECR is not adjusted for reserves, whether the multiplier is adjusted for reserves or not.

If the ECR is adjusted for reserves (net of reserves) the Multiplier is calculated as:

$\text{Multiplier} = \frac{\$1.00}{\text{Adjusted Earnings Allowance Rate} \times \left[\frac{\text{Days in Period}}{\text{Days in Year}} \right]}$
$\$218.04 = \frac{\$1.00}{.054000 \times \left[\frac{31}{365} \right]}$

If neither the ECR nor the Multiplier is adjusted for reserves the Multiplier is calculated as:

$$\text{Multiplier} = \frac{\$1.00}{\text{Earnings Allowance Rate} \times \left[\frac{\text{Days in Period}}{\text{Days in Year}} \right]}$$

$$\$196.24 = \frac{\$1.00}{.060000 \times \left[\frac{31}{365} \right]}$$

If the ECR is not adjusted for reserves but the Multiplier is, then the Multiplier is calculated as:

$$\text{Multiplier} = \frac{\$1.00}{\text{Earnings Allowance Rate} \times \left[\frac{\text{Days in Period}}{\text{Days in Year}} \right]} \times \frac{1}{(1 - \text{Reserve Rate})}$$

$$\$218.04 = \frac{\$1.00}{.060000 \times \left[\frac{31}{365} \right]} \times \frac{1}{.9}$$

NegativeLedgerOverdraftRate

RTE01 = 3, AFP code = 00 01 40

Negative Ledger Balance Interest Rate

Per annum interest rate applied to NEGATIVE ledger balances (AFP balance 00 00 03) for calculation of overdraft compensation.

NegativeCollectedOverdraftRate

RET01 = 4, AFP code = 00 01 41

Negative Collected Balance Interest Rate

Per annum interest rate applied to NEGATIVE collected balances (AFP balance 00 00 13) for calculation of overdraft compensation.

NetLedgerOverdraftRate

RTE01 = NB, AFP code = 00 01 42

Net Ledger Balance Overdraft Interest Rate

Per annum interest rate used to calculate overdraft compensation on an average net ledger balance which is negative (AFP balance 00 00 00). An average NET balance is negative when the sum of the daily ending POSITIVE and NEGATIVE balances is negative.

NetCollectedOverdraftRate

RTE01 = NC, AFP code = 00 01 43

Net Collected Balance Overdraft Interest Rate

Per annum interest rate used to calculate overdraft compensation on an average net collected balance which is negative (AFP balance 00 00 10). An average NET balance is negative when the sum of the daily ending POSITIVE and NEGATIVE balances is negative.

UncollectedFundsUsage Rate

RTE01 = UF, AFP code = 00 01 44

Per annum interest rate assessed on that portion of the account balance which is the difference between the average negative ledger and the average negative collected balance (AFP balance 00 00 15). This rate is used to assess compensation on the portion of the negative collected balance that represents the use of uncollected funds.

InterestCreditedRate

Per annum interest rate used to calculate the interest amount credited to a designated account. The amount of interest credited, if any, is reported in a Compensation Section with a *Compensation Identifier* of "Total Interest Credited". The balance excess against which this rate is applied is reported in a Balance Section with a *Balance Identifier* of "Excess/(Deficit) Collected Balance".

Note that this rate is not to be confused with the **Earnings Allowance Rates** discussed above. The rate described here is used to calculate an interest credit which posts directly to an account and which is not used to offset service charges

Value <Val> TWIST: <rateValue> 822: RTE02

Presence: [1..1]

Definition: Value of the percentage value or factor. The number of decimal places shown should reflect the actual number of decimal places used in calculations.

DaysInPeriod < DaysInPrd> TWIST: <daysInPeriod> 822: RTE04

Presence: [0..1]

Definition: The number of days in the statement period. Used along with *Days in Year* for time dependent per annum rate values.

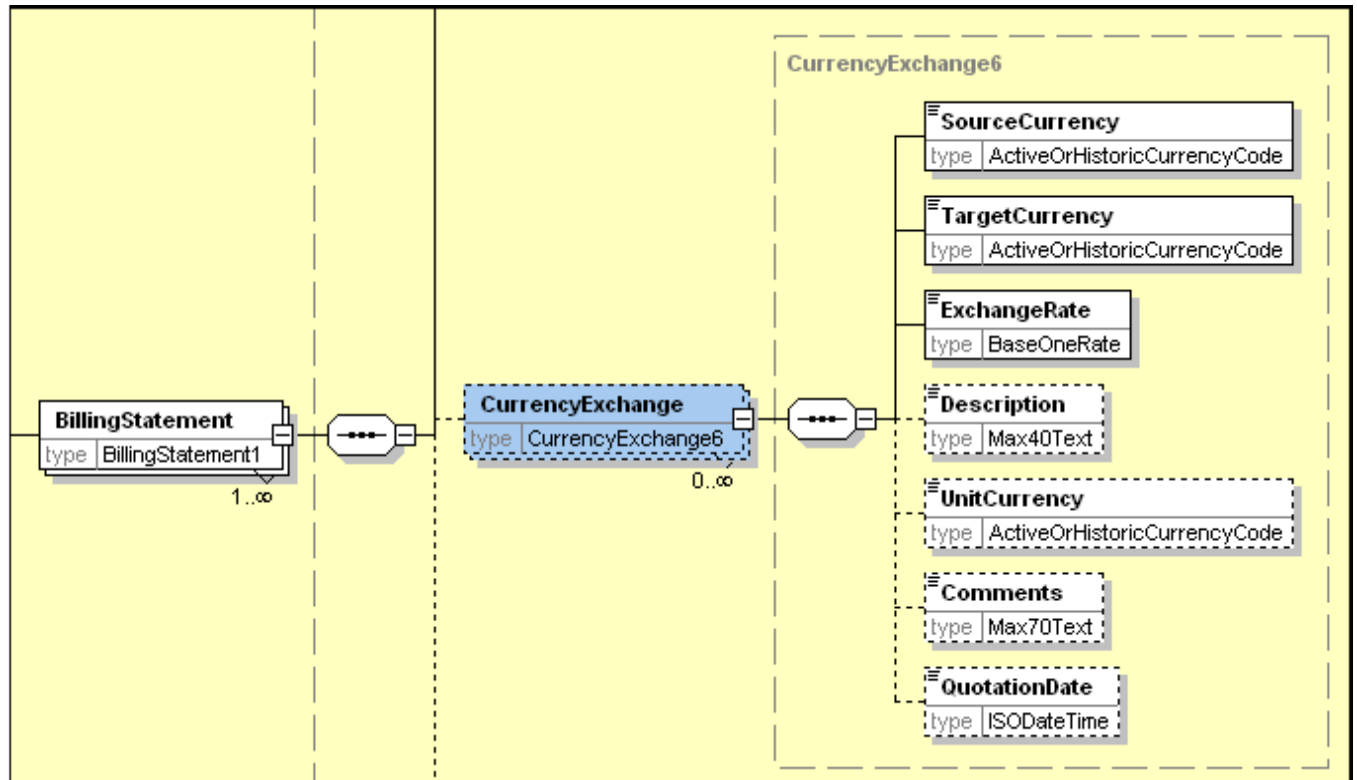
Notes: If *Days in Period* and *Days in Year* are absent then the number of days in the period and the number of days in the year (365 or 366) can be determined using elements *From Date* and *To Date* as contained in the **BillingStatement** section.

DaysInYear < DaysInYr> TWIST: <daysInYear> 822: RTE05

Presence: [0..1]

Definition: The number of days in the year. Used along with *Days in Period* for time dependent per annum rate values.

5.2.3 Currency Translation Section Definition



CurrencyExchange <CcyXchg> TWIST: <currencyTranslation>

Presence: [0..n]

Definition:

A complex type that identifies all translation rates between all currencies used in the statement. The presence of these rates enables recipients of the message to determine what rate value was used for currency translation. These sections do not recommend what source or method a financial institution should use to calculate their rates, but rather reflect the actual rates the financial institution used for their statement calculations.

This information enables recipients of the message to establish a cross-rate currency table for the statement.

Notes:

A Currency Translation Section is required for every unique currency translation within the statement.

CurrencyExchange is the XML complex type. It is not required but can be repeated within a statement.

SourceCurrency <SrcCcy> TWIST: <originalCurrency>

Presence: [1..1]

Definition: This field is the “from” currency in a currency translation. For example: GBP. The format is expressed using ISO currency codes.

TargetCurrency <TrgtCcy> TWIST: <targetCurrency>

Presence: [1..1]

Definition: This field is the “to” currency in a currency translation. For example: USD. The format is expressed using ISO currency codes.

ExchangeRate <XchgRate> TWIST: <translationValue>

Presence: [1..1]

Definition: This element is the translate rate at which one “from” currency is translated into another “to” currency. It should reflect the actual rates used by the financial institution’s billing system. For example, a EUR to USD translation at a rate of 1.30452. One Euro is converted to \$1.30452 in US Dollars.

Description < Desc> TWIST: <rateDescription>

Presence: [0..1]

Definition: A word description of the currency translation activity. The description should indicate a “from” and “to” currency. For example, “GBP to USD”. The format is typically expressed using ISO currency codes.

Notes: The unique specification of the “from” and “to” currencies involved should be made using the *Original Currency* and *Target Currency* elements.

UnitCurrency < UnitCcy> TWIST: <basis>

Presence: [0..1]

Definition: The currency utilized as the basis for the currency translation in the ISO code. The presence of this basis allows users to understand the “from” and “to” currencies. The UnitCurrency(basis) code always indicates the “to” currency.

Comments < Cmnts> TWIST: <comments>

Presence: [0..1]

Definition: This element is provided to hold comments that financial institutions wish to communicate to recipients of the statement to further clarify or add information about each currency translation. Each CurrencyExchange Section may have an optional *comments* element

QuotationDate < QtnDt>

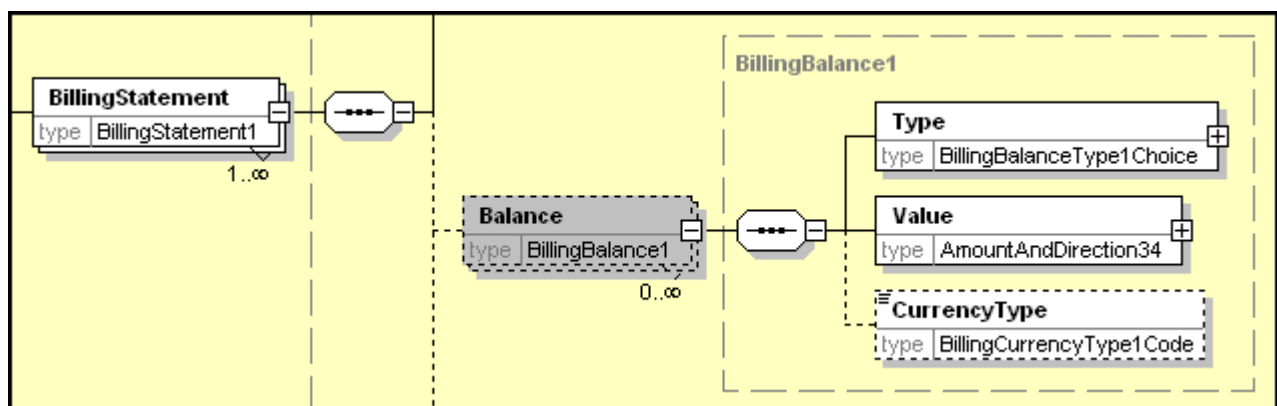
Presence: [0..1]

Definition: This optional element is provided to allow the financial institution to indicate the date on which the translation value was specified. In its absence, the user is to assume that the translation date is the last date of the statement period.

EXAMPLE

Source Currency	Target Currency	Exchange Rate	Description	Unit Currency	Comments	Quotation Date
GBP	USD	1.870000	GBP to USD	USD	Rate as of close of business on 2012/01/31	2012/01/31
USD	GBP	0.534759	USD to GBP	GBP		
EUR	USD	1.304520	EUR to USD	USD		

5.2.4 Balance Section Definition



Balance < Bal> TWIST: <balance>

Presence: [0..n]

Definition: A complex type that identifies the average value of various balances held within the account during the statement period. Included are balances commonly used in the ANSI X12 822 electronic statement. The related AFP code is shown along with alternate names commonly used.

Notes:

Many of these balances are used in the classic “Analysis” statement common in the United States market. These balances are used to illustrate and support the calculation of the “Earnings Credit Allowance” used to offset the charge for services and the calculation of a hard interest credited. Statements generated by Financial Institutions outside of the US which do not provide an “Earnings Credit Allowance” will not need to report these balances. Nevertheless all FIs are urged to report average ledger and collected balances at a minimum.

These balances are typically reported in the account’s **Account Currency**. As an option each balance may also be shown in the account’s **Settlement Currency**. As a further option, in those cases where all of the Service Sections in a statement use the same **Pricing Currency**, balances may be expressed in the **Pricing Currency**. Showing specific balances in the **Settlement Currency** allows the balance to be related to Compensation Section values which are typically reported in the account’s **Settlement Currency**. In the absence of the *Type* and *Currency Type* elements, the balance is assumed to be in the **Account Currency**. using the ISO code carried in the **AccountCharacteristics** section, *AccountBalanceCurrencyCode* element.

Balance is the XML complex type. It is not required but can be repeated within a statement.

Type/Code <Tp/Cd> TWIST: <balanceIdentifier> 822:BLN02

Presence: [1..1]

Definition: Identifies the type of balance. The table below shows the ISO 20022 external table values and the corresponding TWIST enumeration values.

Note: *Type/Proprietary* <Tp/Prtry> is available as an optional choice. We strongly recommend that it not be used. Use <Tp/Cd> in order to maintain standard codes across all banks.

TP/Cd	TWIST Value
LBAP	LedgerBal-AvgPositive
LBNM	LedgerBal-AvgNegative
LBAN	LedgerBal-AvgNet
FLBA	FloatBal-Avg
CBAN	CollectedBal-AvgNet
FLPP	BalAdjust-PriorPeriod-AvgFloat
CBAM	CollectedBal-AvgNegative
CBAP	CollectedBal-AvgPositive
UCFU	UncollectedFundsUsed
DABR	DemandDepositAccountBal-ReserveRequirement
IBAL	InvestableBal
BEQU	BalEquivalent
EDIB	ExcessDeficitInvestableBal
ABRR	AdditionalBal-ReserveRequirement
EDCB	ExcessDeficitCollectedBal
LBME	LedgerBal-MonthEnd
FDIC	FDICAssesmentBal
IBLB	InterestBearingLedgerBalance
IBNC	InterestBearingNetCollectedBalance
IBPC	InterestBearingPositiveCollectedBalance
IBNG	InterestBearingNegativeCollected Balance
IBRR	InterestBearingReserveRequirementBalance
IBIB	InterestBearingInvestableBalance

Value/Amount <Val/Amt>> TWIST: <balanceValue.amount> 822:BLN03

Presence: [1..1]

Definition: The absolute decimal value of the balance.

Sign: Given by *<.../Sgn>* which determines the sign of the value amount: True(positive) or False(negative)

CurrencyType < CcyTp> TWIST: <currencyType>

Presence: [0..1]

Definition: Identifies the currency type used to report the *Balance Value*. This is not the 3 character ISO currency code. The table below shows the ISO 20022 and the corresponding TWIST enumeration values.

Account is the default value enumeration value.

CcyTp	TWIST Value
ACCT	Account
STLM	Settlement
PRCG	Pricing

Balance Mathematical Relationships

Shown below are the balances commonly used in the 822 to develop the Investable Balance (AFP balance 00 00 40). They are carried in BLN03 of the 822 BLN segments within an LX loop. The AFP six character balance code is used in BLN02 to uniquely identify the balance. The balances are presented here in the sequential order in which they would appear on a paper statement. The mathematical relationship among the balances is indicated by "PLUS", "MINUS" or "EQUALS" operators which define the mathematical relationship among the balances.

Note that not all balances need be sent. The critical balances, those that support the calculation of the Investable Balance (AFP balance 00 00 40), must be sent in every statement even if the balance value is zero. These balances are indicated below with an asterisk (*).

Ledger Balance - Average Positive

AFP code = 00 00 01

Average Positive Ledger Balance, Average Positive Book Balance

The sum of only the daily ending POSITIVE ledger balances divided by the number of days in the statement period. Balances are net of current period adjustments. The ledger balance includes any deposit money that has not been collected, ie, money in float. Note that a POSITIVE balance is equal to the NET balance plus the NEGATIVE balance.

LESS

Ledger Balance - Average Negative

AFP code = 00 00 03

Average Negative Ledger Balance, Average Negative Book Balance

The sum of only the daily ending NEGATIVE ledger balances divided by the number of days in the statement period. The average negative balance, if present, is always positively signed. Balances are net of current period adjustments. Note that a NEGATIVE balance is equal to the POSITIVE balance less the NET balance. Note that a NEGATIVE Ledger Balance Interest Rate can be applied to this balance to develop an OD interest charge.

EQUALS

* Ledger Balance - Average Net

AFP code = 00 00 00

Average Net Ledger Balance, Average Net Book Balance

The sum of the daily ending ledger balances (both positive and negative) divided by the number of days in the statement period. A negative-signed value indicates a negative average NET balance. Balances are net of current period adjustments. The ledger balance includes any deposit money that has not been collected, ie, money in float. Note that a NET balance is equal to the POSITIVE balance less the NEGATIVE balance. Note that a NET Ledger Balance OD Interest Rate can be applied to this balance, if negative, to develop an OD interest charge.

MINUS

*** Float Balance – Average**

AFP code = 00 00 30

Average Float Balance

The sum of the daily dollar amount of items in the process of collection divided by the number of days in the statement period.

EQUALS

*** Collected Balance - Average Net**

AFP code = 00 00 10

Average Net Collected Balance

The sum of the daily ending collected balances (both positive and negative) divided by the number of days in the statement period. A negative-signed value indicates a negative average NET balance. If a reserve-adjusted earnings allowance/credit rate is used, this balance may be the same as the investable balance (00 00 40). Balances are net of current period adjustments. Collected balances represent deposit money that has been collected and excludes any money in float. Note that a NET balance is equal to the POSITIVE balance less the NEGATIVE balance. Note that a NET Collected Balance OD Interest Rate (00 01 43) can be applied to this balance, if negative, to develop an OD interest charge.

PLUS

Balance Adjustment - Prior Period - Average Float

AFP code = 00 00 61

Prior Period Float Adjustments/Collected balance adjustments

Sum of the adjustments to the average float in a prior period(s). A negative-signed value indicates a balance reduction. This balance can also be used to adjust the average collected balances since money in float has a direct effect on collected balances.

PLUS

*** Collected Balance - Average Negative**

AFP code = 00 00 13

Average Negative Collected Balance

The sum of only the daily ending NEGATIVE collected balances divided by the number of days in the statement period. The average negative balance, if present, is always positively signed. Balances are net of current period adjustments. Note that a NEGATIVE balance is equal to the POSITIVE balance less the NET balance. Note that a NEGATIVE Collected Balance Interest Rate can be applied to this balance to develop an OD interest charge.

EQUALS

Collected Balance - Average Positive

AFP code = 00 00 11

Average Positive Collected Balance

The sum of only the daily ending POSITIVE collected balances divided by the number of days in the statement period. Balances are net of current period adjustments. Collected balances represent deposit money that has been collected and excludes any money in float. Note that a POSITIVE balance is equal to the NET balance plus the NEGATIVE balance.

Uncollected Funds Used (memo)

AFP code = 00 00 15

That portion of the balance that is the difference between the average negative collected balance and the average negative ledger balance. This is used to isolate that portion of the negative collected balance that represents the use of uncollected funds. Balances are net of current period adjustments. Note that the Uncollected Funds Usage Rate can be applied to this balance to develop an Uncollected Funds OD interest charge.

LESS**Demand Deposit Account Balance - Reserve Requirement**

AFP code = 00 04 20

DDA Reserve Requirement

That portion of the demand deposit account balance that must be set aside by the bank to meet reserve requirements.

EQUALS*** Investable Balance**

AFP code = 00 00 40

Balance to Support Services, NIF Balance

Balance on which the earnings allowance/credit rate is applied. This value can be signed either positive or negative. A negative-signed balance indicates a shortage of investable funds and may result in a charge.

LESS**Balance Equivalent**

AFP code = 00 04 00

Service Balance Equivalent

Balance Equivalent - Total Service Charge

Balance required to offset the current analysis period's balance compensable service charges. The balance equivalent can be calculated in two different ways. The first simply multiplies the balance compensable service charge total by the multiplier:

$\frac{\text{Balance Equivalent - Total Service Charge}}{\text{Total Service Charge}} = \text{Multiplier} \times \text{Balance Compensable Service Charges}$
--

$\$176,499.02 = \$218.04 \times \$809.48$

The second calculation incorporates all of the elements of the multiplier calculation. **Note** that this calculation may result in a slightly different value due to the decimal precision and rounding used in the calculation:

$$\begin{array}{l} \text{Balance Equivalent -} \\ \text{Total Service Charge} \end{array} = \frac{\text{Balance Compensable Service Charges}}{\text{Adjstd Earnings Allowance Rate} \times \left[\frac{\text{Days in Period}}{\text{Days in Year}} \right]}$$

$$\begin{array}{l} \$176,499.57 \\ \text{(Note the difference)} \end{array} = \frac{\$809.48}{.054000 \times \left[\frac{31}{365} \right]} = \frac{\$809.48}{.0045863}$$

EQUALS

Excess/(Deficit) Investable Balance

AFP code = 00 04 10

Investable balance remaining after the balance required to offset the current analysis period's balance compensable service charges has been deducted. If negative (deficit), this represents the additional investable balance required to fully offset balance compensable service charges for the current period. If positive (excess), this represents the investable balance surplus after offsetting balance compensable service charges for the current period. Depending on the type of underlying account, a hard interest rate may be applied to a balance excess resulting in a hard interest credit to the underlying account.

PLUS

Additional Balances - Reserve Requirement

AFP code = 00 04 21

Additional Balance for Reserves

The difference between the excess/(deficit) investable balance and the excess/(deficit) collected balance due to the reserve requirement. This balance is not used if the account's Earnings Credit Rate is net of reserves. This may be used when the earnings allowance rate is not adjusted for reserves. It may be that reserves have been subtracted from the collected balance to determine the investable balance. Therefore, they must be *added back* to the excess/(deficit) investable balance to determine the *collected* balance position. The presentation of this calculation is optional.

It is calculated as:

$$\begin{array}{l} \text{Additional Balances-} \\ \text{Reserve Requirement} \end{array} = \left[\frac{\text{Excess(Deficit) Investable Balance}}{(1 - \text{Reserve Rate})} \right] \times \text{Reserve Rate}$$

$$-\$3,910.21 = \left[\frac{-\$35,191.87}{(1 - .10)} \right] \times .10 = -\$39,102.08 \times .10$$

EQUALS

Excess/(Deficit) Collected Balance

AFP code = 00 04 12

Collected balance remaining after the balance required to offset the current analysis period's balance compensable service charges has been deducted. If negative (deficit), this represents the additional collected balance required to fully offset balance compensable service charges for the current period. If positive (excess), this represents the collected balance surplus after offsetting balance compensable service charges for the current period.

Ledger Balance – Month End (memo)

AFP Code = 00 00 05

Value of the book or ledger balance at the end of the calendar month.

FDIC Assesment Balance (memo)

AFP Code = 00 00 50

That account balance used to calculate the FDIC assessment charge.

Other memo balances that can be used to show the base balance for the calculation of a hard interest credited

AFP Code = 00 00 70, Interest Bearing Ledger Balance

AFP Code = 00 00 71, Interest Bearing Net Collected Balance

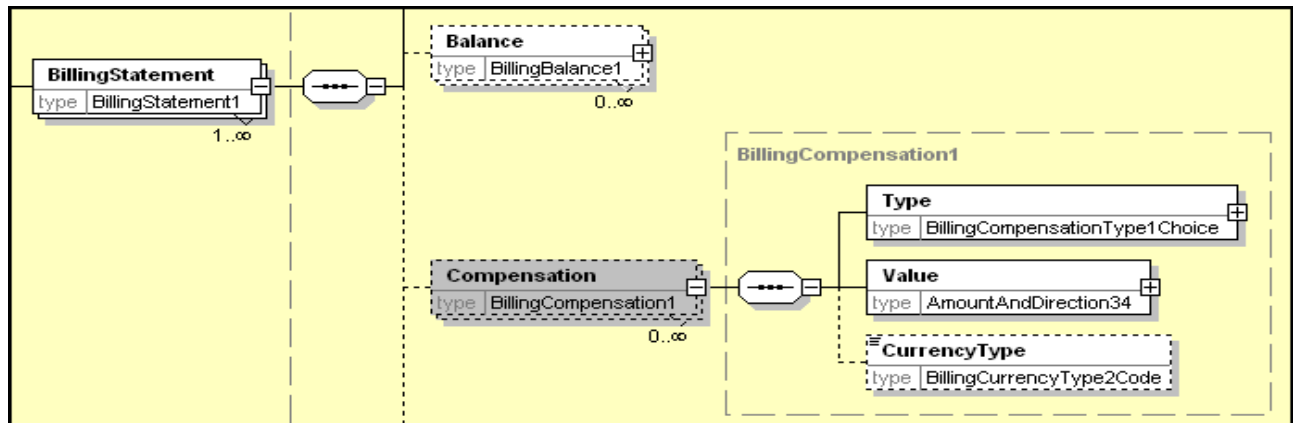
AFP Code = 00 00 72, Interest Bearing Positive Collected Balance

AFP Code = 00 00 73, Interest Bearing Negative Collected Balance

AFP Code = 00 00 74, Interest Bearing Reserve Requirement Balance

AFP Code = 00 00 75, Interest Bearing Investable Balance

5.2.5 Compensation Section Definition



Compensation <Cmpstn> TWIST: <compensation>

Presence: [0..n]

Definition:

Complex type that identifies the set of values and totals that are used to provide compensation information, service and tax totals. This section includes values and totals that are commonly used in the ANSI X12 822. Definitions and mathematical relationships are provided. The related AFP code is shown along with alternate names commonly used.

Notes:

The Compensation Sections are typically reported in the **Settlement Currency**. As an option each value may also be shown in the **Host Currency**. As a further option, in those cases where all of the Service Sections in a statement use the same **Pricing Currency**, values may also be expressed in the **Pricing Currency**. In the absence of the *Currency Type* and *Currency Code* elements, the value is assumed to be in the **Settlement Currency** using the ISO code carried in the **AccountCharacteristics** section, *Settlement Currency Code* element.

Many of these values and totals are used in the classic “Analysis” statement common in the United States market. These totals are used to illustrate and support the application of the “Earnings Credit Allowance” used to offset the charge for services. Statements generated by banks and branches outside of the US which do not provide an “Earnings Credit Allowance” will not need to report these value and totals.

Compensation is the XML complex type. It is not required but can be repeated within a statement.

Note that all values need not be sent. The critical values, those that support the calculation and derivation of “Service Charges Net Due This Statement” (AFP code 00 03 14) must be sent in every statement even if the value is zero. These values are indicated below in boldface.

Type/Code <Tp/Cd> TWIST: <compensationIdentifier> 822:BLN02

Presence: [1..1]

Definition: Identifies the type of balance. The table below shows the ISO 20022 external table values and the corresponding TWIST enumeration values.

Note: *Type/Proprietary <Tp/Prtry>* is available as an optional choice. We strongly recommend that it not be used. Use <Tp/Cd> in order to maintain standard codes across all banks.

TP/Cd	TWIST Value
EALL	EarningsAllowance
BACS	BalanceCompensableServices
EDAL	ExcessDeficitEarningsAllowance
EANA	EarningsAllowance-NetAdjust
SCAB	ServCharges-NetAdjust-BalCompensable
EDAA	ExcessDeficitEarningsAllowance-Adjusted
DEAD	DeficitEarningsAllowanceDueThisStmt
NBCS	Non-BalCompensableServices
SCAN	ServCharges-NetAdjust-Non-BalCompensable
WAIV	WaivedServices
SCDI	ServiceCharges-Discount
SCBT	ServiceChargesDueBeforeTax
TXSC	TaxableServiceCharges
TXTS	TaxTotalSum
CTND	ChargesAndTaxes-NetDueThisStmt
SCDB	ServiceCharges-Debited
SCIN	Servicecharges-Invoiced
SCCP	SettleChargeTtl-CurrentPeriod
PVCS	PreviouslyChargedServices
FREE	FreeServices
TICD	TtlInterestCredited
FESS	FeesPaid

Value/Amount <Val/Amt> TWIST: <CompensationValue.amount> 822:BLN03

Presence: [1..1]

Definition: The absolute decimal value of the compensation amount.

Sign: Given by *<.../Sgn>* which determines the sign of the value amount: True(positive) or False(negative)

Definition: Determines the sign of the value amount: True(positive) or False(negative)

CurrencyType <CcyTp>

Presence: [0..1]

Definition: Identifies the currency type used to report the *Compensation Value*. This is not the 3 character ISO currency code. The table below shows the ISO 20022 and corresponding TWIST enumeration values. STLM is the default value.

Compstn/CcyTp	TWIST Value
ACCT	Account
STLM	Settlement
PRCG	Pricing
HOST	Host

Compensation Mathematical Relationships

Shown below are the values most commonly used in the 822 to develop the "Service Charges Net Due This Statement" (AFB code 00 03 14). They are carried in BLN03 of the BLN segments within an LX loop. The AFP six character balance code is used in BLN02 to uniquely identify the balance. The values are presented here in the sequential order in which they would appear on a paper statement. The mathematical relationship among the values is indicated by "PLUS", "MINUS" or "EQUALS" operators.

Earnings Allowance

AFP code = 00 02 40

Earnings Credit

Value of balances maintained during the statement period which can be used to offset balance compensable service charges. This value must be sent if the bank is providing an earnings credit based on deposit balances. It is calculated as:

<p>Earnings Allowance =</p> $\text{Investable Balance} \times \text{Adjusted Earnings Allowance Rate} \times \left[\frac{\text{Days in Period}}{\text{Days in Year}} \right]$ $\$630.16 = \$137,400.55 \times .054000 \times \left[\frac{31}{365} \right]$
--

where the earnings allowance rate is either adjusted for reserves (net of reserves) or not adjusted.

LESS

Balance Compensable Services

AFP code = 00 03 31

Balance Compensable Service Charges, Analyzed Charges

Total amount of service charges that can be offset by an earnings allowance credit. Such services carry a *Payment Method* code of "Balance Compensable". This amount is included in **Settlement Charge Total - Current Period** (AFP code 00 03 00). This value must be sent if the bank is providing an earnings credit based on deposit balances.

EQUALS

Excess/(Deficit) Earnings Allowance

AFP code = 00 02 41

The difference between the earnings allowance and the balance compensable service charges. Excess allowance occurs when the earnings allowance exceeds the total balance compensable service charges. A Deficit allowance occurs when the total balance compensable service charges exceed the earnings allowance. Excess allowances may be carried forward into future statement periods at the bank's discretion. Deficit allowances are typically reflected as charges due to the bank in the form of Deficit Earnings Allowance Due This Statement (AFP code 00 02 47). This value must be sent if the bank is providing an earnings credit based on deposit balances.

PLUS

Earnings Allowance - Net Adjustment

AFP code = 00 02 43

Net value of balance and/or rate adjustments for prior periods to be applied to the current excess/(deficit) allowance.

PLUS

Service Charges - Net Adjustment - Balance Compensable

AFP code = 00 03 32

Balance Compensable Charge Adjustment

Net value of adjustments to balance compensable service charges for a prior period(s) to be applied to the current excess/(deficit) allowance.

EQUALS

Excess/(Deficit) Earnings Allowance – Adjusted

AFP code = 00 02 44

Adjusted Excess/(Deficit) Earnings Allowance

Excess/(deficit) earnings allowance for the analysis period plus or minus any net earnings allowance and/or balance compensable service charge adjustments. Note that in the absence of any Earnings Allowance Adjustments (AFP code 00 02 43) this balance is preferred instead of the Excess/(Deficit) Earnings Allowance (AFP code 00 02 41). This value must be sent if the bank is providing an earnings credit based on deposit balances.

Deficit Earnings Allowance Due This Statement

AFP code = 00 02 47

Amount due to the bank for balance compensable service charges which exceed the earnings allowance for the settlement period. This amount should be equal to the absolute value of the Adjusted Deficit Earnings Allowance (AFP code 00 02 44). This value must be sent if the bank is providing an earnings credit based on deposit balances.

PLUS

*** Non-Balance Compensable Services**

AFP code = 00 03 30

Non-Balance Compensable Service Charges, Hard Charges, Fee Based Charges

Total amount of service charges due as of this statement that are not eligible to be offset by an earnings allowance credit. Such services carry a *Payment Method* code of "Hard Charges". This amount is included in **Settlement Charge Total - Current Period** (AFP code 00 03 00).

PLUS

Service Charges - Net Adjustment - Non-Balance Compensable

AFP code = 00 03 33

Non-Compensable Charge Adjustment, Hard Charge Adjustment

Total of all service charge adjustments that are not eligible to be offset by an earnings allowance credit. This can be a positive-signed or negative-signed number.

LESS

Waived Services

AFP code = 00 03 40

Amount of service charges otherwise due that are waived on this statement. Such services carry a *Payment Method* code of "Waived". Note that this amount does not include line item free services (AFP code 00 03 36). This amount is included in **Settlement Charge Total - Current Period** (AFP code 00 03 00). Any such line item waivers or free services are not brought forward into the Compensation calculations. It is assumed that "waived" and "free" services are not taxed.

LESS

Service Charges – Discount

AFP code = 00 03 41

The total amount of any service charge discount.

EQUALS

Service charges Due Before Tax

AFP code = 00 03 11

The total amount of service charges due exclusive of taxes due.

Taxable Service Charges (memo)

AFP code = 00 03 13

The total amount of service charges that were subject to taxes.

PLUS

Tax Total Sum

AFP code = 00 03 60

Settlement Tax Total, , Sales Tax, Vat Tax

The Sum of all the individual tax values as contained in either the individual Service Sections or Tax Sections.

EQUALS

*** Charges and Taxes - Net Due This Statement**

AFP code = 00 03 14

Amount due to the bank for the settlement period, after all adjustments and deductions. Includes both service and tax charges. If nothing is due this value must be sent as zero.

Service Charges – Debited (memo)

AFP code = 00 03 50

Charges Debited This Statement

Amount of "service charges-net due this statement" (AFP code 00 03 14) that are directly debited from the customer's account.

Service Charges – Invoiced (memo)

AFP code = 00 03 A0

Charges Invoiced This Statement

Amount of "service charges-net due this statement" (AFP code 00 03 14) that are invoiced.

*** Settlement Charge Total - Current Period (memo)**

AFP code =00 03 00

Current Period Total Gross Charges

Total charges before credit for services provided during the current statement period. This total is the arithmetic sum of all charges listed in the *Settlement Amount* element of the Service Sections in the statement regardless of the *Payment Method* code . It includes all Balance Compensable charges, Hard charges, Previously Charged charges, Waived charges and Free charges. It does not include any tax charges related to the services.

Previously Charged Services (memo)

AFP code = 00 03 35

Invoiced Separately, Charged Separately, Service Charges - Not Assessed Through Analysis

Total amount of service charges as listed in the Service Sections but assessed previously and which, therefore, are not due. Such services carry a *Payment Method* code of "Previously Charged". This amount is included in **Settlement Charge Total - Current Period** (AFP code 00 03 00). Should be sent if there are any "Previously Charged" services in the Service Sections.

Free Services (memo)

AFP code =00 03 36

Total amount of service charges as listed in the Service Sections that are provided free of charge. Such services carry a *Payment Method* code of "Free". This amount is included in **Settlement Charge Total - Current Period** (AFP code 00 03 00). Should be sent if there are any "Free" service charges in the Service Sections. It is assumed that "waived" and "free" services are not taxed.

Total Interest Credited (memo)

AFP code = 00 00 76

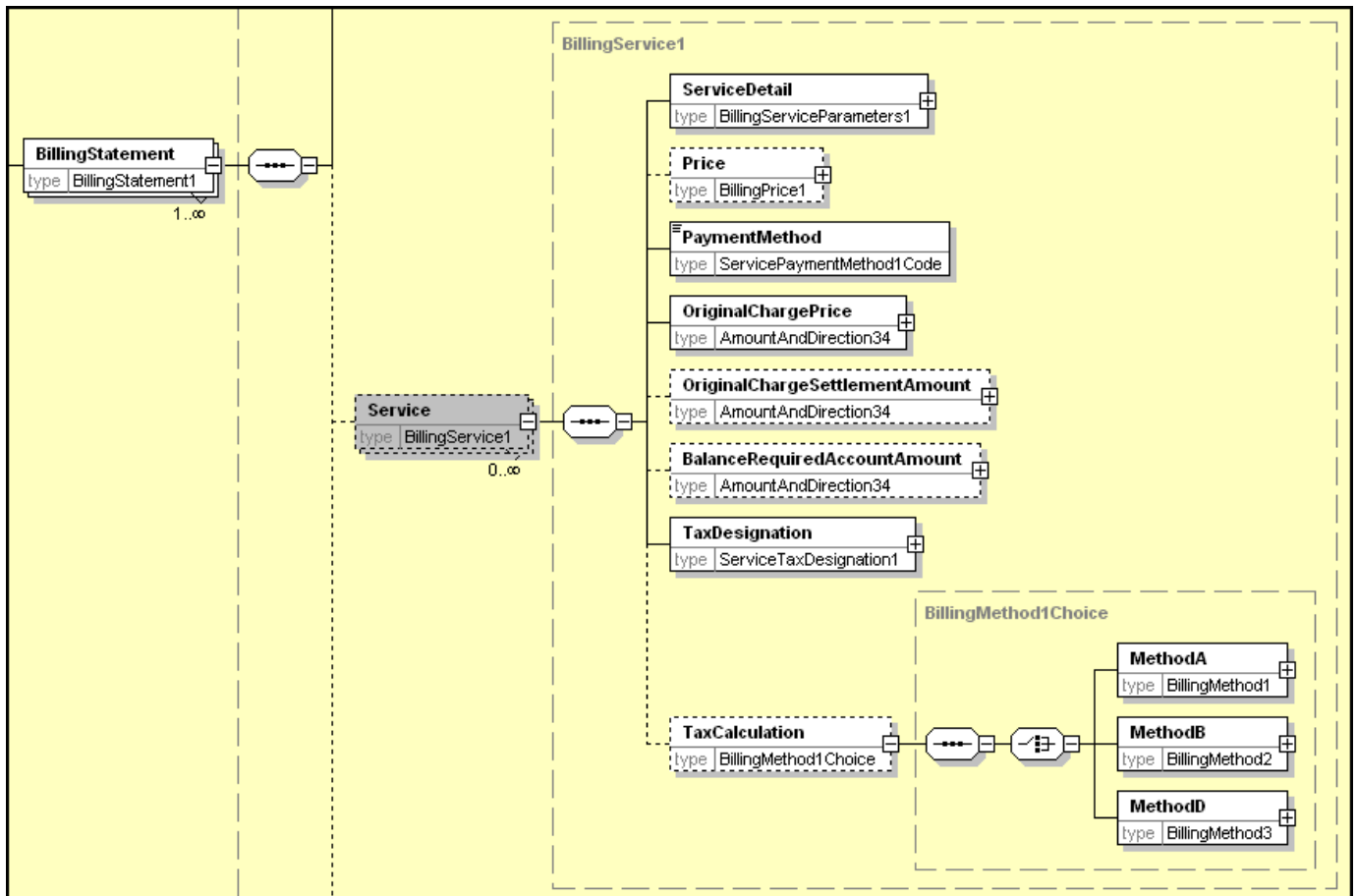
Total amount of interest credited to a designated account. The amount of interest credited, if any, is calculated by applying the Interest Credited rate against balance reported in a Balance Section with a *Balance Identifier* of "Excess/(Deficit) Collected Balance".

Fees Paid

AFP Code = 00 03 22

Charges from a prior billing period which have been paid.

5.2.6 Service Section Definition



Service <Svc> TWIST: <service> 822:SER

Presence: [0..n]

Definition:

Complex type which recounts all chargeable events that occurred for this account during the reporting cycle, typically a calendar month. They include charges that were previously debited or invoiced, charges that were waived or free, and charges which are due as of this statement. A "Service Section" is the equivalent of a line item service that would appear on a paper statement. These Service Sections supply the detail support for invoices and/or direct debits. If a service is taxable then the taxing detail for the service may appear in the service Section or Tax Section depending on the "Tax Calculation Method" used.

Notes:

There should be no duplicate Service Sections within a statement. A service is duplicated if there are two or more Service Sections with the same values in the *BankService/Identification* and *BankService/SubService/Issuer/Code* elements. Receiving systems will tend to add the values across duplicate services and strike an average price.

Various pricing methods (e.g. tiered) may cause a repeat of the *BankService/Identification* and *BankService/SubService/Issuer/Code* elements with the difference only being price. The presence of a service in multiple tax regions may also *BankService/Identification's* to be duplicated within a Service Section. Services may be repeated within a Tax region based on other criteria allowing segmentation (e.g. Where a service was processed (Site #1 vs. Site #2). A service should only be considered "duplicated" if all identification variables are identical. Even one variable that is different could be classified as a unique service.

Service is the XML complex type. It can be repeated within a statement.

Assumptions and Recommendations

1. Detail Accounts reside in a Tax region and each tax region has a designated Host Currency.
2. Taxes for a Tax region are calculated in the tax region's Host Currency and are paid to that tax region in the Host Currency.

3. The tax region designation is carried in the AccountCharacteristics Section. A single detail demand/current account has a one-to-one relationship with a tax region. A parent account within a hierarchy of accounts may also have an associated tax region but the Service Sections for this parent account statement may roll up from multiple child accounts residing in different tax regions. Therefore, for the sake of transparency, the tax region in which a service originated should be identified if the service is either Taxable, Zero Rated, or Exempt.
4. The Host Currency code must be carried in the TaxRegion Section. It may be carried in the AccountCharacteristics Section and in the Service Section.
5. A service is most commonly considered taxable if it is defined as taxable within a specific Tax Region, and if the service originated in that tax region. Therefore a service may be considered taxable if it originated within the detail account's tax region and if it is designated as taxable within that region. There may be exceptions to this assumption but, as a general principle, this assumption holds true for most tax regions found in the market today.
6. A service is typically not considered taxable if it originated in a tax region other than the region in which the account resides. Again, there may be exceptions to this assumption but, as a general principle, this assumption holds true for most tax regions found in the market today.
7. A service may have multiple tax types and rates in effect in a tax region (e.g. National VAT, Local VAT, per transaction fee)
8. The taxes are paid by the Financial Institution in the tax region's Host Currency and the Account or Relationship parent may pay the Financial Institution in the Settlement (Charging) currency.
9. The Settlement Currency is common across all accounts in a billing relationship. Multiple billing relationships, each with a different settlement currency, can roll up to a relationship summary account.
10. The Settlement Currency code is carried in both the Account Section and the TaxRegion Section since an account may not have a TaxRegion Section included in the statement.
11. All currency translations (USD to EUR, EUR to USD, etc.) required by the various currencies involved in the Service Sections are carried in the CurrencyExchange Sections. These represent the various currency translation values actually used by the bank. The standard makes no attempt to identify how the bank arrived at the actual translation values.
12. A service that charges a "Stamp Duty" ("number of items" times a "per item stamp charge") may be taxable or not. The Stamp Duty original charge is to be considered as just another service charge.
13. Services that are "Zero Rated" in a tax region for tax purposes are designated as such in the Service Section in the *TaxDesignation/Code* element. Since they do not require a tax rate calculation they are not listed in the Tax Section.
14. Depending upon which Tax Calculation method a financial institution has implemented, various tax related elements within a Service Section and TaxRegion Section may or may not be present in a statement. These methods are detailed in Chapter 12, Tax Calculation Methods. Note that the particular method used in a statement should be identified in the *AccountCharacteristics/Tax/CalculationMethod* element.

Currency Expressions for Original Charge, Service Tax Amount and Charge plus Tax

Every Service Section carries an *OriginalCharge/Price* element. If taxes are due on the service and Tax Calculation Method A, B or D is being used, then the Service complete tax calculation values should be present for the service. If Tax Calculation Method A is being used, then the *TotalCharge* complex type can also be included.

The BSB standard provides for the expression of these elements in a preferred currency. It also provides for the expression of these elements in alternate currencies. The following table illustrates the currencies available for expressing the elements.

Service Section Element	Pricing Currency Elements	Settlement Currency Elements	Host Currency Elements	Notes
Original Charge	<i>OriginalChargePrice</i>	<i>Original Charge SettlementAmount</i>	<i>ServiceChargeHostAmount</i>	Host Currency used only for Tax Calculation Methods A and B. Method D uses Pricing Currency.
Original Charge plus Tax	<i>TotalCharge/PricingAmount</i>	<i>TotalCharge/SettlementAmount</i>	<i>TotalCharge/HostAmount</i>	Tax Calculation Method A only. Settlement Currency preferred
Tax Amount Only	<i>ServiceTax/PricingAmount</i>		<i>ServiceTax/HostAmount</i>	Tax Calculation Methods A and B only. Host Currency preferred
Tax Amount by Tax ID #	<i>TaxIdentification/PricingAmount</i>		<i>TaxIdentification/HostAmount</i>	Tax Calculation Methods A and B. Host Currency preferred . Method D uses Pricing Currency only.

Expressing Credits and Refunds as Service Sections Using Negative Signs

Service credits and refunds can be expressed as Service Sections by negatively signing certain elements within the Service Section. The Service Description is free form and could briefly describe the service as "Refund", "Credit Adjustment", "Debit Adjustment", "Error correction Debit", etc. The BSB statement receivers will expect the math to be accurate and very well may have systems in place to recalculate the bank figures. Therefore the results of a debit service calculation should result in a positively signed charge and the results of a credit service calculation should result in a negatively signed charge. In order for the math calculation to result in a service credit (negatively signed charge) either the volume or the price must carry a negative sign.

ServiceDetail <SvcDtl>

Presence: [1..n]

Definition: A complex type that specifies the details to fully identify the bank service.

BankService <BkSvc>

Presence: [1..1]

Definition: A complex type that specifies the bank values used to identify the service.

Identification <Id> TWIST: <bankServiceId> 822: SER02 with SER01 = "ZZ"

Presence: [1..1]

Definition: The bank's own, internal service identification code. This is not the *CommonCode* discussed below. This is the bank's own code used to uniquely identify the service within the bank.

SubService <SubSvc>

Presence: [0..1]

Definition: An optional complex type used to distinguish between services that have the same bank *Identification <Id>*

Issuer <Issr>

Presence: [1..1]

Definition: A complex type defines the nature and value of the sub service code.

Code <Cd> TWIST: <subServiceQualifier> 822: SER02 with SER10

Presence: [1..1]

Definition: Qualifies the contents of the *SubService/Identification*. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values:

LBOX Lockbox – The *SubService/Identification* contains a lockbox number which identifies the lockbox using the service. Provides support for processing multiple lockboxes within one account.

STOR Store – The *SubService/Identification* contains a store number which identifies the store using the service. Provides support for processing multiple stores within one account.

BILA MutallyDefined – The meaning of the *SubService/Identification* is established by the trading partners.

SEQN SequenceNumber – The *SubService/Identification* is an arbitrary sequence number used to uniquely identify this Service Section and prevent duplicate Service Sections within this statement.

MACT MemberAccount – The *SubService/Identification* is the account number of a member of a relationship structure. This allows a parent statement to include the same service as rolled up from its member accounts and still avoid duplicate service identification within the statement.

Note: *Proprietary <Prtry>* is available as an optional choice. We strongly recommend that it not be used. Use <Cd> in order to maintain standard codes across all banks.

Identification <Id> TWIST: <subServiceCode> 822: SER11

Presence: [1..1]

Definition: A code used to further define a bank service. It is used to specify the value required by the Sub Service Qualifier, e.g., the actual lockbox number or store number.

Notes: A unique number can be used to differentiate between multiple appearances of the same service in a Relationship Parent statement that contains all the individual services from the member accounts. For example, the statement may contain multiple service sections, all referring to the same service but with differing prices representing the actual prices for the different member accounts. The value “MACT” can be used in the Sub Service Qualifier and the member’s account number can be placed here in order to eliminate duplicate services within the Relationship Parent statement.

Description <Desc> TWIST: <serviceDescription> 822: SER07

Presence: [1..1]

Definition: This is the bank’s service description. It is not the standard description related to the *Common Code*. It is the task of the systems that reside in the corporate recipient’s office to restate charges across banks using the *Common Codes* and the related common descriptions. Note that the common code descriptions are not sent in the electronic statement.

CommonCode <CmonCd>

Presence: [0..1]

Definition: A complex type that defines a standard reference code used to uniquely identify this service across banks. **This is not the bank’s internal Bank Service ID.** This is a universal standard code such as the AFP (Association for Financial Professionals) codes: “AFP” for the US standard code set and “AFPGBL” for the international standard code set. Note that corporations urge the banks to attach these codes to their services but it is not required. The software systems that reside in the corporate recipient’s office should have the ability to assign the proper code should the bank not send the common code or send a bad code

Issuer <Issr> TWIST: <commonCodeQualifier>

Presence: [1..1]

Definition: Defines the issuer of the *Common Code*. Allowed values are “AFP” or “AFPGBL”.

Identification <Id> TWIST: <commonCode> 822: SER02 if SER01 = “TE”

Presence: [1..1]

Definition: Standard reference code used to uniquely identify this service across financial institutions. This is not the financial institution’s internal bank service identification.

ServiceType <SvcTp> TWIST: <serviceType>

Presence: [0..1]

Definition: An optional element used to classify or organize different services by common characteristics.

Volume <Vol> TWIST: <volume> 822: SER06

Presence: [0..1]

Definition: The count or number of items (volume) involved in the charge.

Notes:

- This element is required unless price method is FlatCharge or BaseCharge.

- If this is a balance based charge (Overdraft Interest charge, FDIC charge) then this is the balance used to calculate the charge expressed in the *Pricing Currency*.
- If the volume field is used in a BalanceBased service to show a balance or some other amount, then the Price field should show the per annum rate.

Price <Pric>

Presence: [0..1]

Definition: A complex type that specifies the pricing aspects of the service.

Currency <Ccy> TWIST: <pricingCurrencyCode>

Presence: [0..1] Required if the Pricing Currency is different from the Account Currency.

Definition: The currency in which the *Unit Price* and *Original Charge - Price* are expressed. Use the ISO currency code.

UnitPrice/Amount <UnitPrc/Amt> TWIST: <unitPrice/amount> 822: SER05

Presence: [0..1]

Definition: The per item price used to calculate the charge expressed in the *Pricing Currency*.

Sign: Given by <..../Sgn> which determines the sign of the value amount: True(positive)or False(negative)

Notes:

- This element is required unless price method is FlatCharge or BaseCharge.
- If the service is balance based such as an Overdraft Interest charge then this is the per annum rate used to calculate the charge.

Method <Mtd> TWIST: <priceMethod> 822: SER08

Presence: [0..1]

Definition: A code which identifies how the charge was calculated. The absence of this code assumes that the charge is UnitPriced and calculated as the product of *Volume* times *Unit Price*. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values:

UPRC UnitPriced: The charge is calculated as the product of *Volume* times *Unit Price*. This is the default value.

STAM StampDuty: The service is specifically identified as a Stamp Duty for accounting purposes. The charge is calculated as the product of *Volume* times *Unit Price*

BCHG BaseCharge: A fee that is charged in addition to the *Volume* times *Unit Price* when one or more units of the service are provided.

DPRC DiscountPrice: The charge is calculated using a price which is lower than the quoted bank price.

FCHG FlatCharge: A fixed or variable (as is common in pass-through, packaged, or previously charged services) where this charge that is not tied to *Volume* or *Unit Price*. Flat Charge fees do not require a volume or Unit Price. The user may specify a *Volume* of "1", a *Unit Price* equal to the *Original Charge* value, and use a *Price Method* = "Unit Priced".

LPRC ListPrice: A single service section where the *Volume*, *Original Charge* and *Balance Required* are the totals of two or more pricing tiers. The *Unit Price* is either absent or an average price equal to the *Original Charge* total divided by the *Volume* total. Some FIs will combine all the individual line elements in a volume discount structure into a single **List Price** line item where other FIs will list each of the contributing tiers using the **Tiern Price Method**.

MCHG MinimumCharge: The lowest charge possible for the service. For example, the Unit Price is \$1 /unit , Volume is "1" and the minimum charge is \$5. The minimum of \$5 is actually charged.

MXRD MaximumReduction: The maximum charge possible for the service even though *Volume* times *Unit Price* exceeds the maximum reduction value.

TIRn Tiern: The line item represents a charge for one tier in a multi tier, volume discount charging structure. The "n" is a number in the range 1 through 9 which designates the tier used to charge out the volume that falls in that tier.

TPRC ThresholdPrice: (Equivalent to "range pricing") The Unit Price is determined by the total volume. The total *Volume* is matched against volume/price tiers. When the *Volume* is equal to or greater than a tier value, then that tier's *Unit Price* is used to charge out the entire *Volume*.

ZPRC ZonePrice: Indicates different prices for the same service. Typically used in a Relationship Summary statement where the same service has a different price for different accounts in the relationship.

BBSE BalanceBased: The charge is calculated as a balance times a per-annum rate multiplied by a time factor. The balance is placed in the *Volume* element and the per-annum rate is in the *Unit Price* element. The balance is typically expressed as an average daily balance and the time factor is expressed as the number of days in the month over the number of days in the year. Note that Appendix E describes how to present an overdrawn (debit) interest charge in a Service Section. BalanceBased is to be used for any volume that represents an amount, such as amount under management.

Rule <Rule> TWIST: <priceRule> 822: CTP segment

Presence: [0..1]

Definition: Indicates that the charge calculation is based on a particular rule. The rule name is carried here and is defined by the trading partners.

Note: *Price Rule* is typically used when none of the *Price Method* codes apply although some situations may require that both a *Price Method* and a *Price Rule* be identified in the same Service Section.

PaymentMethod <PmtMtd> TWIST: <paymentMethod> 822: SER09

Presence: [1..1]

Definition: A code identifying the disposition of the calculated charge. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values:

BCMP BalanceCompensable: This code is used in the USA and allows the bank to offset a service charge with interest earned on the deposit account balance. The actual charges arising from Balance Compensable services are always calculated and charged at month end.

FLAT HardCharge: The charge is not balance compensable and is due. In the absence of balance compensable charges in Europe, this would be the most commonly used code for services that are billed at month end.

PVCH PreviouslyCharged: The charge was previously assessed and is not part of the amount due as of this statement. This code is used for charges that were debited as the chargeable event took place.

INVS InvoicedSeparately: The charge was previously invoiced and is not part of the amount due as of this statement. This code is used for charges that were invoiced as the chargeable event took place.

WVED Waived: The charge is waived and not due. The waived amount must be placed in *Original Charge*.

FREE Free: The service is free, no charge, to the customer.

OriginalChargePrice/Amount <OrgnlChrgPric/Amt> TWIST: <originalChargePrice.amount>
822: SER04

Presence: [1..1]

Definition: Amount of the calculated charge expressed in the *Pricing Currency*. This value does not include any tax on the service.

Sign: Given by <...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

OriginalChargePriceSettlementAmount/Amount <OrgnlChrgSttlmAmt/Amt> TWIST:
<originalChargeSettlement.amount>

Presence: [0..1]

Definition: Amount of the calculated charge expressed in the Settlement currency. This value does not include any tax on the service.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

BalanceRequiredAccountAmount/Amount <BalReqrdAcctAmt/Amt> TWIST:
<balanceRequiredAccount.amount> 822: SER03

Presence: [0..1]

Definition: The average daily collected balance required to offset a Balance Compensable service charge, exclusive of taxes, expressed in the Account Currency.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

Notes: This element is used only for services whose Payment Method code is "Balance Compensable". If the required balance is not known or not applicable then this element should not be present.

TaxDesignation <TaxDsgnt>

Presence: [1..1]

Description: Complex type which identifies the taxable status of the service.

Code <Cd> TWIST: <taxDesignation>

Presence: [1..1]

Definition: A code identifying the taxable status of the service. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values:

XMPT Exempt: No taxes are due. This service is not repeated in the TaxRegion Section.

ZERO Zero Rated: The tax is due but at zero percent and a zero charge. This service is not repeated in the TaxRegion Section.

TAXE Taxable: One or more taxes are due on this service. The basic elements of this service are repeated in the TaxRegion Section if the account tax calculation method is "C".

Region <Rgn> TWIST: <servicTaxRegion>

Presence: [0..1]

Definition: The Tax Region associated with this service.

Notes: Enables the message recipient to relate the service to an individual Tax Region. This is particularly important when Service Sections for a parent relationship summary account statement roll up from multiple child accounts residing in different Tax Regions. Without this information it would be difficult to determine in which Tax Region the service was taxed.

TaxReason <TaxRsn> TWIST: <taxReason>

Presence: [0..n]

Definition: Complex type which provides free form explanations of the various tax codes used within the statement.

Code <Cd> TWIST: taxReasonCode

Presence: [1..1]

Definition: Reason why the service is taxed, in a coded form as used by the bank.

Explanation <Expltn> TWIST: taxReasonExplanation

Presence: [0..1]

Definition: Reason why the service is taxed, in a free-text form.

TaxCalculation <TaxClctr>

Presence: [0..1]

Definition: A complex type which supplies the tax rate and calculated tax values for services if the account's Tax Calculation Method is A, B or D. This complex type is not present for Tax Calculation Method C.

Notes: The following elements are present only if the financial institution calculated taxes for this statement using Tax Calculation Method A, B or D. Method A is a line-by-line Tax calculation and Settlement calculation. Method B is a Line-by-line tax calculation with conversion to the Settlement Currency occurring at a summary level. Method D is a line by line tax calculation where all charge and tax values are in the Pricing currency. Please see TaxRegion Section for details.

Depending on the Tax Calculation Method used by the account, this complex type will be followed by either **MethodA** or **MethodB** or **MethodD** complex type.

MethodA <MtdA>

Presence: [0..1] Present only for Tax Calculation Method A.

Definition: Complex type supplying rates and taxes for Method A

ServiceChargeHostAmount/Amount <SvcChrgHstAmt/Amt> TWIST:
<originalChargeHost/amount>

Presence: [1..1]

Definition: Amount of the original charge expressed in the Host Currency. The Host Currency is the currency in which the payment of tax obligations is usually submitted to the taxing authority. This is the same value as contained in *Original ChargePrice* and *Original ChargeSettlement* but expressed in the Host Currency This value does not include any tax amount. This value provides the basis for the tax calculations on this service.

Sign: Given by <...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

ServiceTax <SvcTax>**Presence:** [1..1]**Definition:** Complex type specifying the calculated tax in both the Host and Pricing currencies.*HostAmount /Amount <HstAmt/Amt>* TWIST: <serviceTaxHostAmount.amount>**Presence:** [1..1]**Definition:** The sum of all the individual taxes on the service expressed in the Host Currency. This is the sum of the individual *Tax ID # Amt - Host* elements. If there is only one tax on the service (one *Tax ID #* element) then this value is equal to the *Tax ID # Amt* value.**Sign:** Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)*PricingAmount /Amount <Pricg/Amt>* TWIST: <serviceTaxPriceAmount.amount>**Presence:** [0..1]**Definition:** This is the same value as carried in the *HostAmount /Amount* element but allows the sender to optionally express the value in the *Pricing Currency*.**Sign:** Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)**TotalCharge <TtlChrg>****Presence:** [1..1]**Definition:** Complex type specifying the total charge, service charge plus tax, in all three currencies – Host, Settlement and Pricing.*HostAmount /Amount <HstAmt/Amt>* TWIST: <totalChargeHostAmount.amount >**Presence:** [1..1]**Definition:** The sum of the *Original Charge Host* and the *Service Tax Amt Host* values. It represents the total charge for a service (including taxes) expressed in the Host Currency.**Notes:** This *Charge plus Tax* value is normally expressed in the Host Currency. This value may also be included here expressed in the Settlement Currency and Pricing Currency.**Sign:** Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)*SettlementAmount /Amount <Settlm/Amt>* TWIST: <totalChargeSettlementAmount.amount>**Presence:** [0..1]**Definition:** This is the same value as carried in the *Charge plus Tax Host* element but expressed in the Settlement Currency.**Sign:** Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)*PricingAmount /Amount <Pricg/Amt>* TWIST: <totalChargePriceAmount.amount>**Presence:** [0..1]**Definition:** This is the same value as carried in the *Charge plus Tax Host* element but expressed in the Pricing Currency.**Sign:** Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)**TaxIdentification <TaxId> TWIST: <taxIdentificationGroup>****Presence:** [1..3]**Definition:** Complex type which supplies from one to three individual taxes levied on the service. These are referred to as **Tax Identifier Elements**. There may be more than one tax assessed on a service depending upon the laws of the Tax Region. A financial institution may elect to combine all tax rates into one “all inclusive tax rate” for the Tax Region or list each individual tax separately. If there is only one “all inclusive tax rate” then only one set of Tax Identifier Elements would be present. If taxes are listed separately there may be a maximum of three sets of the Tax Identifier Elements for each individual Service. The BSB standard accommodates both approaches. This <TaxIdentification> complex type is required if the service is taxable and if the Tax Calculation Method is A, B or D.

Number <Nb> TWIST: <taxIdentifierNumber>

Presence: [1..1]

Definition: This is the identifying number of a specific tax in the tax region used to calculate the tax obligation. Each Tax Identifier is a unique tax or, if there is only one identifier, it may represent all taxes for a Tax Region. Tax Identifiers should be as granular as possible for transparency.

Description <Desc> TWIST: <taxDescription>

Presence: [1..1]

Definition: This is the name used to describe an individual Tax Identifier (e.g. National VAT).

Rate <Rate> TWIST: <taxIdentifierRate>

Presence: [1..1]

Definition: This is the rate used in the calculation to determine the tax obligation due for a specific *Tax Identifier* (e.g. .0300000000)

HostAmount /Amount <HstAmt/Amt> TWIST: <taxIdentifierHostAmount.amount>

Presence: [1..1]

Definition: The amount of the tax obligation for the specific *Tax Identifier* expressed in the Tax Region's Host Currency. Multiple appearances of this value, one for each of the three possible Tax Identifiers within the service are totaled in the *Service Tax Amt Host* element.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

PricingAmount /Amount <Pricg/Amt> TWIST: <taxIdentifierPriceAmount.amount >

Presence: [0..1]

Definition: This is the same value as carried in the *Tax Identifier Amount Host* element but allows the sender to optionally express the value in the *Pricing Currency*. Multiple appearances of this value, one for each of the three possible Tax Identifiers within the service are totaled in the *Service Tax Amt Host* element.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

MethodB <MtdB>

Presence: [0..1] Present only for Tax Calculation Method B.

Definition: Complex type supplying rates and taxes for Method B

ServiceChargeHostAmount/Amount <SvcChrgHstAmt/Amt> > TWIST:
<originalChargeHost/amount>

Presence: [1..1]

Definition: Amount of the original charge expressed in the Host Currency. The Host Currency is the currency in which the payment of tax obligations is usually submitted to the taxing authority. This is the same value as contained in *Original ChargePrice* and *Original ChargeSettlement* but expressed in the Host Currency This value does not include any tax amount. This value provides the basis for the tax calculations on this service.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

ServiceTax <SvcTax>

Presence: [1..1]

Definition: Complex type specifying the calculated tax in both the Host and Pricing currencies.

HostAmount /Amount <HstAmt/Amt> TWIST: < serviceTaxHostAmount.amount>

Presence: [1..1]

Definition: The sum of all the individual taxes on the service expressed in the Host Currency. This is the sum of the individual *Tax ID # Amt - Host* elements. If there is only one tax on the service (one *Tax ID #* element) then this value is equal to the *Tax ID # Amt* value.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

PricingAmount /Amount <Pricg/Amt> TWIST: <serviceTaxPriceAmount.amount>

Presence: [0..1]

Definition: This is the same value as carried in the *HostAmount /Amount* element but allows the sender to optionally express the value in the *Pricing Currency*.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

TaxIdentification <TaxId> TWIST: <taxIdentificationGroup>

Presence: [1..3]

Definition: Complex type which supplies from one to three individual taxes levied on the service. These are referred to as **Tax Identifier Elements**. There may be more than one tax assessed on a service depending upon the laws of the Tax Region. A financial institution may elect to combine all tax rates into one “all inclusive tax rate” for the Tax Region or list each individual tax separately. If there is only one “all inclusive tax rate” then only one set of Tax Identifier Elements would be present. If taxes are listed separately there may be a maximum of three sets of the Tax Identifier Elements for each individual Service. The BSB standard accommodates both approaches. This <TaxIdentification> complex type is required if the service is taxable and if the for Tax Calculation Method is A, B or D.

Number <Nb> TWIST: <taxIdentifierNumber>

Presence: [1..1]

Definition: This is the identifying number of a specific tax in the tax region used to calculate the tax obligation. Each Tax Identifier is a unique tax or, if there is only one identifier, it may represent all taxes for a Tax Region. Tax Identifiers should be as granular as possible for transparency.

Description <Desc> TWIST: <taxDescription>

Presence: [1..1]

Definition: This is the name used to describe an individual Tax Identifier (e.g. National VAT).

Rate <Rate> TWIST: <taxIdentifierRate>

Presence: [1..1]

Definition: This is the rate used in the calculation to determine the tax obligation due for a specific *Tax Identifier* (e.g. .0300000000)

HostAmount /Amount <HstAmt/Amt> TWIST: <taxIdentifierHostAmount.amount>

Presence: [1..1]

Definition: The amount of the tax obligation for the specific *Tax Identifier* expressed in the Tax Region's Host Currency. Multiple appearances of this value, one for each of the three possible Tax Identifiers within the service are totaled in the *Service Tax Amt Host* element.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

PricingAmount /Amount <Pricg/Amt> TWIST: <taxIdentifierPriceAmount.amount>

Presence: [0..1]

Definition: This is the same value as carried in the *Tax Identifier Amount Host* element but allows the sender to optionally express the value in the *Pricing Currency*. Multiple appearances of this value, one for each of the three possible Tax Identifiers within the service are totaled in the *Service Tax Amt Host* element.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

MethodD <MtdD>

Presence: [0..1] Present only for Tax Calculation Method D.

Definition: Complex type supplying rates and taxes for Method D

ServiceTaxPriceAmount /Amount <SvcTaxPricAmt/Amtt> TWIST:

<serviceTaxPriceAmount.amount>

Presence: [1..1]

Definition: This is the total amount of the tax due on this service expressed in the *Pricing Currency*.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

TaxIdentification <TaxId> TWIST: <taxIdentificationGroup>

Presence: [1..3]

Definition: Complex type which supplies from one to three individual taxes levied on the service. These are referred to as **Tax Identifier Elements**. There may be more than one tax assessed on a service depending upon the laws of the Tax Region. A financial institution may elect to combine all tax rates into one "all inclusive tax rate" for the Tax Region or list each individual tax separately. If there is only one "all inclusive tax rate" then only one set of Tax Identifier Elements would be present. If taxes are listed separately there may be a maximum of three sets of the Tax Identifier Elements for each individual Service. The BSB standard accommodates both approaches. This <TaxIdentification> complex type is required if the service is taxable and if the for Tax Calculation Method is A, B or D.

Number <Nb> TWIST: <taxIdentifierNumber>

Presence: [1..1]

Definition: This is the identifying number of a specific tax in the tax region used to calculate the tax obligation. Each Tax Identifier is a unique tax or, if there is only one identifier, it may represent all taxes for a Tax Region. Tax Identifiers should be as granular as possible for transparency.

Description <Desc> TWIST: <taxDescription>

Presence: [1..1]

Definition: This is the name used to describe an individual Tax Identifier (e.g. National VAT).

Rate <Rate> TWIST: <taxIdentifierRate>

Presence: [1..1]

Definition: This is the rate used in the calculation to determine the tax obligation due for a specific *Tax Identifier* (e.g. .0300000000)

PricingAmount /Amount <Pricg/Amt> TWIST: <taxIdentifierPriceAmount.amount>

Presence: [1..1]

Definition: The amount of the tax obligation for the specific *Tax Identifier* expressed in the *Pricing Currency*. Multiple appearances of this value, one for each of the three possible Tax Identifiers within the service are totaled in the *Service Tax Amt Host* element.

Sign: Given by <...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

Service Section Totals

These totals are derived by adding a variety of the Service Section elements within an account statement. They are discussed here for your reference but are actually contained in the **Compensation Sections** of the statement, and not in the **Service Sections**. These totals summarize values across all the Service Sections in a statement. (The 822 uses the BLN segment to hold these totals and the AFP balance codes to identify the various totals.) Only the **SCCP SettleChargeTtl-CurrentPeriod** value is required in the **Compensation Section**.

SCCP SettleChargeTtl-CurrentPeriod Total charges before any credit offset for services provided during the current statement period (AFP Balance code 00 03 00). This total is the arithmetic sum of all charges listed in the *Original Charge - Settlement* element of the Service Sections in the statement regardless of the *Payment Method* code. It includes all Balance Compensable charges, Hard charges, Previously Charged charges, Waived charges and Fee charges. It does not include any tax charges related to the services.

TXTS TaxTotalSum For Tax Calculation Methods A and B this is the sum of all the values in the *Service Tax Amt - Host* elements of the Service Sections (AFP Balance code 00 03 60). This is typically expressed in the Settlement Currency. For other tax calculation methods please refer to the Tax Section.

BACS BalanceCompensableServices The Sum of just those *Original Charge - Settlement* values marked "BCMP Balance Compensable" in the *Payment Method* element of the Service Sections (AFP Balance code 00 03 31).

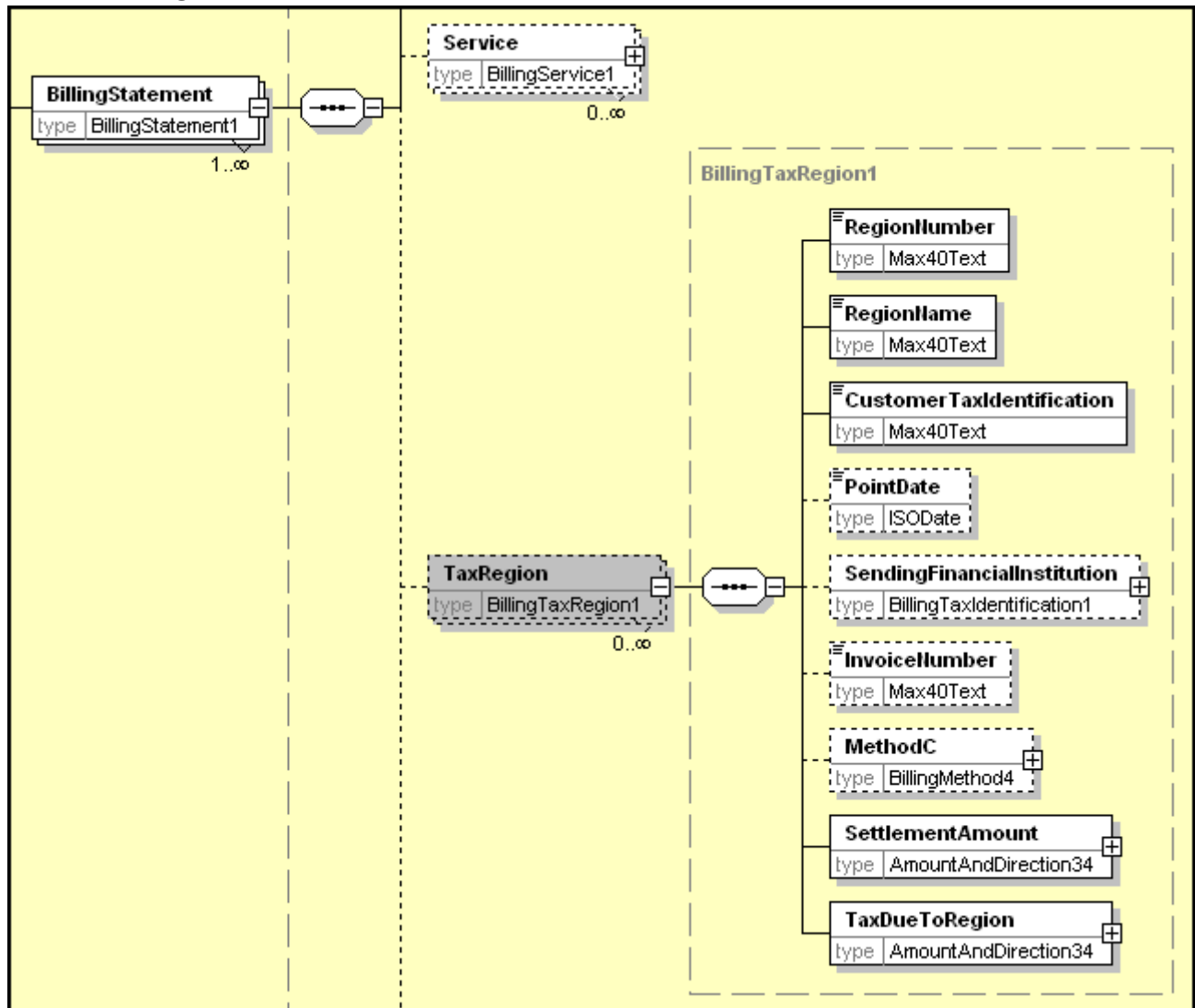
NBCS Non-BalCompensableServices The Sum of just those *Original Charge - Settlement* values marked “FLAT Hard Charge” in the *Payment Method* element of the Service Sections (AFP Balance code 00 03 30).

PVCS PreviouslyChargedServices The Sum of just those *Original Charge - Settlement* values marked “PVCH Previously Charged” in the *Payment Method* element of the Service Sections (AFP Balance code 00 03 35).

WAIV WaivedServices The Sum of just those *Original Charge - Settlement* values marked “WVED Waived” in the *Payment Method* element of the Service Sections (AFP Balance code 00 03 40).

FREE FreeServices The Sum of just those values *Original Charge - Settlement* values marked “FREE” in the *Payment Method* element of the Service Sections (AFP Balance code 00 03 36).

5.2.7 Tax Region Section Definition



TaxRegion <TaxRgn> TWIST: <taxRegion>

Presence: [0..n]

Definition:

Tax information is a critical element of a BSB message. The **Compensation**, **Services** and **TaxRegion** sections of the BSB message illustrate and summarize the taxing of an individual account or parent account for a reporting cycle (e.g. month). The goal is to provide information to the FI customers so that they can clearly understand the taxable activity associated with an account or relationship. The tax information included in these sections should not be considered as a tax invoice or notice, but rather as

information that may be used to reconcile against separately generated tax invoices and tax notices. This version of the BSB standard is defined for supporting taxes applied in an exclusive manner.

The **TaxRegion** complex type is optional but there may be more than one **TaxRegion** section within a statement.

Pricing, Host & Settlement Currencies

The Host Currency is the currency of the taxing authority to which the FI must submit taxes. Depending on the Tax Calculation Method used by the FI (A, B, C or D) the underlying service charge amounts may be translated from Pricing Currencies directly to the Host Currency for the calculation of tax payments. Tax payments are settled between the FI and the taxing authority in the Host Currency. The total amount of taxes due within a Tax Region as calculated in the Host Currency is typically converted to the account's Settlement Currency for collection by the FI from the customer.

Since a statement may involve more than one Tax Region each with its own Host currency, the **Compensation** section of the BSB message should be reporting tax related values only in the relationship Settlement currency. In the case of multiple Tax Regions within a statement each with their own Host currency, the actual tax values are reported in multiple **TaxRegion** sections of the BSB message in the Tax Region's Host currency.

Assumptions

The following assumptions have been used in the specification of the BSB sections relating to taxes:

1. Accounts reside in a Tax Region.
2. Some Tax Regions may or may not charge taxes on services.
3. A service is usually considered taxable if it is defined as taxable within a specific Tax Region, and if the service originated in that Tax Region. This assumption may change from the initial inception of the BSB standard due to changes in various tax policies and regulations found throughout the world.
4. Associated Rules:
 - a. Taxable Service: A service is usually considered taxable if it originated within the account's Tax Region and if it is designated as taxable within that region.
 - b. Non-taxable Service: A service is usually not considered taxable if it originated in a Tax Region other than the region in which the account resides.
 - c. Services that are designated as "waived" or "free" are not taxed because no charge is due to the FI.
5. Tax Regions should treat the taxable services in the same manner to calculate taxes (exclusive or inclusive).
6. A service or services may have multiple tax types (Tax IDs) and rates in effect in a Tax Region (E.g. National VAT, Local VAT, per transaction fee). The BSB provides for a maximum of three different tax types within a region.
7. Within a Tax Region multiple tax types (Tax IDs) apply equally to all taxable services. All taxable services within an account statement will have the same tax types applied.
8. All taxes arising from an account that resides in a Tax Region are paid to the Tax Region in the Tax Region's Host Currency. Depending on the method used to calculate the tax, the underlying service charge may be first translated from the Pricing currency to the Host currency before the tax is calculated.
9. A BSB **TaxRegion** section is only required if taxes are applicable for the account or relationship. Depending on the BSB Tax Calculation Method used by the FI (A, B, C or D), the **TaxRegion** section will contain more or less tax related information.
10. Tax Calculation Methods A, B, and D should use the **TaxRegion** Section for Tax Region general information, registration, invoice numbers and tax totals both in the Tax Region's Host currency and in the FI's Settlement currency.
11. Zero-Rated Services are not listed in the **TaxRegion** section, but can be identified from the data delivered in the **Service** section of the standard.

Tax Collection and Settlement Process Flow

The taxes generated from taxable services are submitted by the FI after collection from the customer to the Tax Region's taxing authority in the Tax Region's Host Currency. The FI's customer/owner of the Account or Relationship generating the tax obligation will settle with the FI in the Settlement (Charging) currency of the relationship. The customer may then submit a Tax Invoice or Tax Notice to the Tax Region's taxing authority to collect associated tax rebates depending on the specific rules and regulations for that Tax Region.

Tax Related Compensation Section Totals

If taxes are involved in a statement then the following summary totals must be present in the **Compensation** section of the BSB message independent of the Tax Calculation Method used by the FI:

- **SCBT ServiceChargesDueBeforeTax**. This is the sum of charges due exclusive of taxes. The related AFP compensation code is (00 03 11). It should be expressed in the Settlement currency.
- **TXSC TaxableServiceCharges** This is the total of taxable service charges. The related AFP compensation code is (00 03 13). It should be expressed in the Settlement currency.
- **TXTS TaxTotalSum** The sum of all the individual tax values as contained in either the **Service** or **TaxRegion** sections. This is the amount due to all the Tax Regions contained in the statement. The related AFP compensation code is (00 03 60). It should be expressed in the Settlement currency for payment to the FI. If there is only one Tax Region involved in the statement, it may also be available as expressed in the Tax Region's Host currency. Individual tax amounts due to the one or more Tax Regions involved in a statement should be reported in the **TaxRegion** sections using the Tax Regions' Host currency.
- **CTND ChargesAndTaxes-NetDueThisStmnt** This is the total amount due to the FI for the settlement period after all adjustments and deductions. It includes both service and tax charges. The related AFP compensation code is (00 03 14). It should be expressed in the Settlement currency.

Tax Related Rounding Discrepancies & Equivalent Fields

The BSB standard includes a wide variety of optional fields. These fields can represent the same value expressed in different currencies. For example, **TXTS TaxTotalSum** could optionally be expressed in the Pricing Currency, Host Currency, and Settlement Currency. Since each amount would represent the same tax obligation, an end user of the BSB statement might be inclined to try to 'verify' tax calculations by multiplying one field by the reported Currency Translation Rate(s) to derive one or more of the other values. This will frequently be impossible, as compounded rounding errors during independently performed calculations often prevent the perfect equivalency of the **TXTS TaxTotalSum** amounts and other fields.

The following example illustrates this fact:

Account 12345 is domiciled in the UK, and pays taxes in GBP. The holder of the deposit account is a U.S.-based company that settles in USD with the FI for services. Services provided to the account are priced in EUR. The translation rates used for the period are as follows:

EUR to GBP: 0.669991
EUR to USD: 1.20919
GBP to USD: 1.805396

The FI uses Tax Calculation Method A, in which taxes are calculated on a service-by-service basis. For taxation purposes, each service charge as priced in EUR is first converted to the Host Currency (GBP). The calculated VAT is converted from Host to Settlement Currency (USD) and then totaled. At each intermediate step, the FI's commercial billing system rounds to 2 decimal positions. Rounding occurs for each line item before totaling.

The following table shows how taxes would be calculated and assessed:

	Service Pricing (EUR)	Translation	Taxable Host (GBP)	Tax Rate	Tax Host (GBP)	Translation	Tax Amt Settlement (USD)
Service A	78.93	0.669991	52.88	17.50%	9.25	1.805396	16.71
Service B	232.45	0.669991	155.74	17.50%	27.25	1.805396	49.20
Service C	345.00	0.669991	231.15	17.50%	40.45	1.805396	73.03
Totals	656.38		439.77		76.96		138.94

Based on the BSB standard, the FI must report the **TXTS TaxTotalSum** in both Host (76.96 GBP) and in Settlement (138.94 USD) currencies.

However, the FI may optionally choose to display the **TXTS TaxTotalSum** in the Pricing Currency (EUR). Showing this amount would allow an end user of the statement to compare the 'all-in cost' of similar or identical services across financial markets. However, as shown in the above example, many commercial billing systems do not calculate taxes in the Pricing Currency as part of the actual tax calculation. As shown above the tax calculation is done after converting the taxable amount from the Pricing Currency (EUR) to the Host Currency (GBP).

If taxes were calculated and reported directly in the Pricing Currency, the following results would be obtained:

	Pricing Total (EUR)	Tax Rate	Tax Amount Service Pricing (EUR)
Service A	78.93	17.50%	13.81
Service B	232.45	17.50%	40.68
Service C	345.00	17.50%	60.38
Totals	656.38		114.87

The FI would report that the customer was liable for 114.87 EUR in taxes using the Pricing Currency. This amount could be allocated back into the underlying charges in order to provide an 'all-in' figure for comparison purposes.

There are drawbacks in reporting this number, however, in that an end-user of the BSB electronic statement might attempt to translate the **TXTS TaxTotalSum** as reported in Pricing Currency (114.87 EUR) to the **TXTS TaxTotalSum** as reported in Settlement Currency (138.94 USD).

Translating the **TXTS TaxTotalSum** in Pricing Currency to Settlement Currency yields the following results:

$$114.87 \text{ EUR} * 1.20919 = 138.90 \text{ USD}$$

This is four cents less than the actual amount of tax charged to the customer in USD as reported in the first example. The differential is directly caused by rounding at different points in the calculation. Should tax be reported in both Pricing Currency and Settlement Currency, end users may question the underlying tax calculations.

Rounding errors will be even more pronounced as the number of currencies increases in which services are priced and in which taxes are collected. Tax Calculation Methods B and C, by reducing the frequency of translations performed, can help to reduce this problem.

The BSB standard contains multiple fields that are optional. Reporting of optional fields should be done based on the judgment of the FI. It is encouraged that FIs share their calculation methodology with their customers so as to minimize confusion over fields that, while apparently equivalent, are not directly translatable.

Relationship of the TaxRegion Sections to the Statement

Two types of statements (accounts) exist:

- 1) A statement for a single account;
- 2) A statement for a parent or relationship account (which encompasses one or more single accounts).

A **TaxRegion** section must be included as part of a statement if taxes are calculated and charged at the statement (Account) level. If the statement uses **Tax Calculation Method A or D** then the **TaxRegion** section need contain only Tax Region general information, registration and invoice numbers. Tax values and totals are not required in the Tax Details section if the statement uses Tax Calculation Method A or D. The

TaxRegion section is typically included at the relationship level where taxes owed are calculated. However, the standard also supports the ability to represent the tax details at whatever level determined by the financial institution to satisfy customer relationship and taxing authority requirements. This may cause tax information to be shown at: 1) A relationship summary level only, 2) At individual account levels of a relationship only, 3) or both 1 and 2.

For example, if a statement (account) is assessed taxes at the individual account level, then the TaxRegion section is included in the individual account's statement. If tax calculations are occurring in a statement which represents a relationship or parent account, then the TaxRegion section(s) is included as part of the parent or relationship account statement and not at the sub-account level.

Whatever implementation method is selected, the hope is to enable users to understand the level at which the tax obligations were calculated in a relationship structure.

A parent or relationship account statement may have multiple TaxRegion sections (e.g. Tax Region UK1, BE1, etc).

Each TaxRegion section in a statement with multiple tax regions should have a unique *RegionNumber* *<RgnNb>* (No duplicates).

Tax Calculation Methods

The majority of FI billing applications calculate taxes based on one of four different methods. These methods are identified below and then detailed. Note that the particular method used in a statement must be identified in the **AccountCharacteristics** section *Tax/CalculationMethod* element. Depending upon which Tax Calculation Method an FI has implemented, various tax related elements within a **Service** section and **TaxRegion** section may or may not be represented in a statement. Regardless of which Tax Calculation Method is used, tax related summary totals must be reported in the **Compensation** section as discussed above.

Regardless of the Tax Calculation Method used, all methods should report, by Tax Region, the total amount of taxes due in both the Settlement currency *<TaxRgn/SttlmAmt/Amt>* and in the Host currency *<TaxRgn/TaxDueToRgn/Amt>*.

Method A – Line-by-line per service tax calculation and Settlement currency translation. Each service line (row) shows the complete calculation of the tax in the Host currency and translation of the service charge plus the tax amount to the Settlement currency. The **TaxRegion** section is used for Tax Region general information, registration and invoice numbers. Tax totals should be included in the **TaxRegion** section to specifically present the tax amount in both the Tax Region's Host currency and Settlement currency.

Method B – Line-by-line per service tax calculation. Each service line (row) shows the calculation of the tax in the Host currency only. Unlike Method A, the translation of the TSTS TaxTotalSum from Host to Settlement currency takes place on a summary basis and is reported in the **TaxRegion** section. This approach eliminates rounding errors inherent in Method A since the translation from Host to Settlement currency occurs at the summary level. The **TaxRegion** section is used for Tax Region general information, registration and invoice numbers. Tax totals are included in the **TaxRegion** section to specifically present the tax amount in both the Tax Region's Host currency and Settlement currency.

Method C – All tax calculations, currency translations and tax totals are reported in the **TaxRegion** section on a summary basis. The complete **TaxRegion** section is required.

Method D - This simple method of calculation requires that all services use the same Pricing currency so that the total tax value is the simple sum of individual service taxes – all in the same Pricing currency. It is similar to methods A and B in that the individual service tax is calculated at the individual line item service level. The **TaxRegion** section is used for Tax Region general information, registration and invoice numbers. Tax totals are included in the **TaxRegion** section and specifically present the tax amount in both the Tax Region's Host currency and in the Settlement currency.

	Method A	Method B	Method C	Method D
Description->	Line-by-Line Tax Calculation and Settlement Translation	Line-by-Line Tax Calculation Summary Settlement Translation	Summary Tax Calculation summary Settlement Translation	Line-by-Line Tax Calculation using Pricing currency throughout
Where Calculations are Performed →	All within the Service section	Calculate Tax- in the Service section. Translate to Settlement Currency - in the TaxRegion sSection.	All within the TaxRegion section	All within the Service section
How Taxes Are Calculated →	<p>For every individual Service – Line by Line (within each Tax Region):</p> <ol style="list-style-type: none"> 1. Convert "<u>Original Charge – Price Currency</u>" to "<u>Original Charge – Host Currency</u>". 2. Calculate Tax amounts using each individual "<u>Tax ID # Rate</u>" against the "<u>Original Charge – Host Currency</u>". 3. Total the taxes by each individual Service in the Host currency to create the "<u>Total Service Tax Amt</u>". <p>NOTES: Every service line may have a different Price Currency to Host Currency Translation.</p>	<p>For every individual Service – Line by Line (within each Tax Region):</p> <ol style="list-style-type: none"> 1. Convert "<u>Original Charge – Price Currency</u>" to "<u>Original Charge – Host Currency</u>". 2. Calculate Tax amounts using each individual "<u>Tax ID # Rate</u>" against the "<u>Original Charge – Host Currency</u>". 3. Total the taxes by each individual Service in the Host currency to create the "<u>Total Service Tax Amt</u>". <p>NOTES: Every line may have a different Service Currency to Host Currency Translation.</p>	<p>For every tax region:</p> <ol style="list-style-type: none"> 1. Sum all taxable services per individual price currency. This is your "<u>Total Taxable Charge Per Currency</u>" field. 2. Convert each "<u>Total Taxable Charge Per Currency</u>" to the Host Currency. This is your "<u>Host Tax Charge for Service Equivalent</u>" field. 3. Sum all of your "<u>Host Tax Charge for Service Equivalent</u>" fields. This total is your "<u>Total Host Currency Taxable Amount</u>." 4. Calculate Taxes by multiplying the "<u>Total Host Currency Taxable Amount</u>." With each unique "<u>Tax ID # Rate</u>". For each "<u>Tax ID #</u>" this produces the "<u>Total Tax for Tax ID #</u>" . 5. Add all the "<u>Total Tax for Tax ID # s</u>" together to determine the "<u>Total Tax Amount</u>". This amount is expressed in the Host Currency for each Tax Region. 	<p>For every individual Service – Line by Line (within each Tax Region):</p> <ol style="list-style-type: none"> 1. Calculate Tax amounts using each individual "<u>Tax ID # Rate</u>" against the "<u>Original Charge – Pricet Currency</u>". 2. Total the taxes by each individual Service in the Pricet currency to create the "<u>Total Service Tax Amt</u>". <p>NOTES: Every service line must have the same Price currency.</p>
Convert to Settlement Currency Method →	<p>For every individual Service - Line by Line (within each Tax Region):</p> <ol style="list-style-type: none"> 1. Add the "<u>Original Charge - Host Currency</u>" value and the "<u>Tax Amount - Host</u>" values. This is the "<u>Service Total</u>" in the Host Currency. 2. Convert the "<u>Service Total - Host</u>" amount to the "<u>Service Total - Settle</u>" using the Host to Settlement currency translation. <p>NOTE: The statement may have multiple Host Currency to Settlement Currency Translations if it is a Relationship parent statement with multiple tax regions.</p>	<p>Add all the "<u>Total Service Tax Amts</u>" (Per Tax Region). And populate the Total Tax Amount value in the Tax Section/Tax Calculation section. The total is now ready for translation into the Settlement Currency.</p> <p>Note: One Currency Translation.</p>	<p>Convert the "<u>Total Tax Amount</u>" value from the Host into the Settlement Currency for each individual Tax Region. This is the "<u>Settlement Amount Equivalent Tax</u>".</p> <p>Note: One Currency Translation per Tax Region.</p>	No need to convert to the Settlement currency if the Price and Settlement currencies are the same
Settlement Tax Total →	If there is only one Tax Region then the " <u>Tax Total Sum</u> " reported in the COMPENSATION SECTION is equal to the " <u>Total Service Tax Amt</u> " as expressed in the Settlement currency and/or the Host currency.	Total Taxes (SUM all individual Settlement Totals - already in Settlement Currency). This is the "Settlement Tax Total" and displayed in the COMPENSATION SECTION.	If there is only one Tax Region then the " <u>Tax Total Sum</u> " reported in the COMPENSATION SECTION is equal to the " <u>Settlement Amount Equivalent Tax</u> ". If there are multiple regions, sum all " <u>Settlement Amount</u>	If there is only one Tax Region then the " <u>Tax Total Sum</u> " reported in the COMPENSATION SECTION is equal to the " <u>Total Service Tax Amt</u> " as expressed in the Price currency.

	If there are multiple regions, convert all the different " <u>Total Service Tax Amt</u> " host values to the settlement currency and sum the results. This sum is the " <u>Tax Total Sum</u> " reported in the COMPENSATION SECTION.		<u>Equivalent Tax</u> values from each region. This sum is the " <u>Tax Total Sum</u> " reported in the COMPENSATION SECTION.	If there are multiple regions, convert all the different " <u>Total Service Tax Amt</u> " host values to the settlement currency and sum the results. This sum is the " <u>Tax Total Sum</u> " reported in the COMPENSATION SECTION
Implementation->	Used Primarily when Price, Host and Settlement currencies are different but the tax is calculated on a service line by service line basis. Subject to significant rounding errors.	Can be used to accommodate multiple currencies better than Method A. Fewer rounding errors versus Method A, but more rounding errors than Method C.	This method supports the ability to handle the most complex relationships and configurations. Most accurate in terms of eliminating rounding errors for multicurrency service environments.	Used Primarily when Price Currency, Host Currency and Settlement Currency are the same. Simplest approach.

Examples with Data Sources

The following examples display information and content that a user may receive for each of the four Tax Calculation Methods. These examples have been included to help users better understand the BSB implementation and what data could be potentially represented. This does not represent the format of a Tax Invoice or the ultimate format in which a corporate customer may wish to display the information for review.

All examples assume a single Tax Region (Belgium). Tax Calculation Method C assumes two pricing currencies (DKK and USD) and two specific taxes within the tax region.

Rate Translation values used in the examples should be contained in the **CurrencyExchange** sections.

Tax Region General Information

The **TaxRegion** section for all Tax Calculation Methods (A, B, C and D) should include Tax Region general information, registration and invoice numbers. The example illustrates a representative display. The **XML Type Complex/Simple** column identifies the source of the information in the XML **TaxRegion <TaxRgn>** sections.

XML Type Complex/Simple	Word Description followed by Data
RgnNb	Tax Region #: BE
RgnNm	Tax Region Name: Belgium Tax Region
CstmrTaxId	Customer Tax ID Number: XXXXXXXXXXXXXXXXXX
PtDt	Tax Point: 8 March 2005
SndgFi/VATRegnNb	Institution's VAT Registration Number: XXXXXXXXXX
SndgFi/TaxRegnNb	Institution's Tax Registration Number: XXXXXXXXXX
InvNb	Tax Invoice or Notice Number: 011705NP1237890123456

Tax Region Contacts

All Tax Calculation Methods (A, B, C and D) may include contacts available at the FI who can provide information concerning the Tax Region information being displayed. The example illustrates a representative display. The **XML Type Complex/Simple** column identifies the source of the information in the XML **TaxRegion** section.

XML Type Complex/Simple	Word Description followed by Data
SndgFi/TaxCtct/Nm	Tax Region Contact Name 1: John P. Keeting
SndgFi/TaxCtct/EmailAdr	Contact Email: John.Keeting@twistglofin.co.uk
SndgFi/TaxCtct/PhneNb	Contact Telephone Number: 011 44 123 4567 890
SndgFi/TaxCtct/MobNb	Contact Mobile Number: 011 44 123 4444 555
SndgFi/TaxCtct/FaxNb	Contact Fax Number: 011 44 123 4444 999
SndgFi/TaxCtct/FaxNb	Preferred Contact Method: Email

Tax Calculation Method A

Assumptions:

Tax Calculation Method: A

Use of **TaxRegion** section: Used for Tax Region demographic data and total tax amount in both the Host and Settlement currencies.

Line item tax: Calculated at line item level.

Single Tax ID# per Service

Single Pricing Currency : USD

Host Currency: GBP

Settlement currency: EUR

Price (USD) to Host (GBP) translation is 0.544

Host (GBP) to Settlement (EUR) translation is 1.40623

This example uses Tax Calculation Method A where all tax calculations take place at the line item service level. Note that although the example uses a single Pricing currency, it could just as well have used multiple pricing currencies since the **Original Charge Price** is converted to the Host currency before the tax is calculated.

In this example the **Tax Amount Host** is calculated at the service level using the **Original Charge, Host** as the basis. The **Service Total Host** is the simple sum of the **Original Charge Host** and **Tax Amount Host**. The **Service Total, Settle** is simply the **Service Total, Host** converted from the Host currency to the Settlement currency.

The total tax amount, Host currency, due to the Tax Region (80.49 GBP) and the total amount, charge plus tax, due to the bank (836.10 EUR) in Settlement currency are simple column totals. What's missing in the totals is the Total Service Charge Amount, exclusive of taxes, in the Settlement currency. This is an important figure. It must be divorced from tax calculations because taxes are due on a service independent of the charge disposition – waived, previously debited, invoiced, direct debited, or offset by earnings credits. Note that if the Pricing currency is the same as the Settlement currency, then this total is available in the **Original Charge, Price** column. What is also missing is the total tax amount in the Settlement currency. This can be derived by translating the 80.49 GBP amount in the Host currency to the Settlement currency. The total tax amount in both the Host and Settlement currencies should be reported in the **TaxRegion** sections.

Service Description	Units	Price Crncy	Unit Price	Original Charge, Price	Original Charge, Host	Tax ID	Tax ID Rate	Tax Amount, Host	Service Total, Host	Service Total, Settle
Bamtrac Support	1	USD	30.00	30.00	16.32	1	17.510	2.86	19.18	26.97
Hgh Value Clearing Pmt	86	USD	9.00	774.00	421.06	1	17.510	73.73	494.79	695.79
Low Value Clearing Pmt	16	USD	1.00	16.00	8.70	1	17.510	1.52	10.22	14.37
Swift Non Auto CHIPS	10	USD	10.00	100.00	54.40				54.40	76.50
Cashiers Check	5	USD	5.00	25.00	13.60	1	17.510	2.38	15.98	22.47
Totals					514.08			80.49		836.10

The **Compensation** section totals for this example would be:

- **TaxableServiceCharges** (00 03 13) in Settlement currency. Not available as a column total.
- **TaxTotalSum** (00 03 60) in Host currency, 80.49 GBP.
- **TaxTotalSum** (00 03 60) in Settlement currency. Not available as a column total.
- **Charges-Net DueThisStatement** (00 03 14) in Settlement currency. If there are no non taxable service charges due, then the value is 836.10 EUR.

Tax Calculation Method B

Assumptions:

Tax Calculation Method: B

Use of **TaxRegion** section: Used for Tax Region demographic data and total tax amount in both the Host and Settlement currencies.

Line item tax: Calculated at line item level.

Single Tax ID# per Service

Single Pricing Currency : USD

Host Currency: GBP

Settlement currency: EUR

Price (USD) to Host (GBP) translation is 0.544
 Host (GBP) to Settlement (EUR) translation is 1.40623

In this example the **Tax Amount Host** is calculated at the service level using the **Original Charge, Host** as the basis. The total service charge (514.08 GBP) and total tax amount (80.49 GBP) are simple column totals. Tax total currency translations take place at the summary level in the **TaxRegion** sections. Note that although the example uses a single Pricing currency, it could just as well have used multiple pricing currencies since the **Original Charge Price** is converted to the Host currency before the tax is calculated.

Service Description	Units	Price Crcy	Unit Price	Original Charge, Price	Original Charge, Host	Tax ID	Tax ID Rate	Tax Amount , Host
Bamtrac Support	1	USD	30.00	30.00	16.32	1	17.510	2.86
Hgh Value Clearing Pmt	86	USD	9.00	774.00	421.06	1	17.510	73.73
Low Value Clearing Pmt	16	USD	1.00	16.00	8.70	1	17.510	1.52
Swift Non Auto CHIPS	10	USD	10.00	100.00	54.40			
Cashiers Check	5	USD	5.00	25.00	13.60	1	17.510	2.38
Totals					514.08			80.49

The taxes due to the bank in the Settlement currency are calculated in the **TaxRegion** sections by translating from the Host currency to the Settlement currency.

Description	Host Currency	Host Amount	Translation Rate	Settlement Currency	Settlement Amount
Ttl Tax Due to Bank	GBP	80.49	1.40623	EUR	113.19

The **Compensation** section totals for this example would be:

- **TaxableServiceCharges** (00 03 13) in Settlement currency. Not available as a column total.
- **TaxTotalSum** (00 03 60) in Host currency, 80.49 GBP.
- **TaxTotalSum** (00 03 60) in Settlement currency, 113.19 EUR.

Tax Calculation Method C

Assumptions:

Tax Calculation Method: C

Use of **TaxRegion** section: Used for Tax Region demographic data and all tax related calculations.

Line item tax: Not available by individual service.

Two Tax ID#s per service

Two Pricing Currencies used: DKK and USD

Host Currency: EUR

Settlement currency: GBP

Price (DKK) to Host (EUR) translation is 0.134415

Price (USD) to Host (EUR) translation is 0.765096

Host (EUR) to Settlement (GBP) translation is 0.702074

Note: Rate Translation information is pulled from the CurrencyExchange sections. The rates used in this example are:

Taxable Services Detail Presentation

Taxable Services detail is present in the BSB only for Tax Calculation Method C. Only services marked as taxable would appear here. The BSB data source is TaxRgn/MtdC/SvcDtl/BkSvc.

Bank Service ID	Service Description	Volume	Price Currency	Unit Price	Original Charge, Price
1100	High Value Clearing Pmt – Auto	3	DKK	100.00000000	300.00
1000	Bamtrac Support	1	USD	30.00000000	30.00
1100	High Value Clearing Pmt – Auto	86	USD	9.00000000	774.00
1100	High Value Clearing Pmt – Auto	26	USD	8.50000000	221.00
1100	High Value Clearing Pmt – Auto	7	USD	8.00000000	56.00
1100	High Value Clearing Pmt – Auto	29	USD	8.00000000	232.00
1300	Low Value Clearing Pmt – Auto	16	USD	1.00000000	16.00
1500	Swift NonAuto CHIPS	10	USD	10.00000000	100.00
1600	Cashiers Check	5	USD	5.00000000	25.00

Tax Calculation Presentation

The calculation steps are as follows:

- Taxable charges in the first pricing currency, DKK, are summed (300.00 DKK) and then translated to the Host currency (40.33 EUR).
- Taxable charges in the second pricing currency, USD, are summed (1,454.00 USD) and then translated to the Host currency (1,112.45 EUR).
- The taxable charge total is summed in the Host currency (1,152.78 EUR)
- The first regional tax (Tax ID# 1) is applied to the taxable charge total resulting in 242.08 EUR.
- The second regional tax (Tax ID# 2) is applied to the taxable charge total resulting in 28.82 EUR.
- The total tax due is summed in the Host currency (270.90 EUR).
- The total tax due is translated to the Settlement currency (190.19 GBP)

The **XML Type Complex/Simple** column identifies the source of the information in the XML **TaxRegion** section.

Tax Mthd	XML Type Complex/Simple	Word Description followed by Data
C	TaxbISvcChrgConvs/ SrcAmt/Amt	Total Taxable Service Charge in (DKK): 300.00
C	TaxbISvcChrgConvs/ SrcAmt/currency attribute	Total Taxable Charge Currency: DKK
C	TaxbISvcChrgConvs/ HstAmt/Amt	Total Taxable Charge in Host Currency: 40,33
C	TaxClctn/TaxbISvcChrgConvs/ SrcAmt/Amt	Total Taxable Service Charge in (USD): 1454.00
C	TaxClctn/TaxbISvcChrgConvs/ SrcAmt/currency attribute	Total Taxable Charge Currency: USD
C	TaxClctn/TaxbISvcChrgConvs/ HstAmt/Amt	Total Taxable Charge in Host Currency: 1112,45
C	TaxClctn/ TtlTaxbISvcChrgHstAmt/Amt	Host Currency Taxable Amount (EUR): 1152,78
C	TaxClctn/TaxId/ Nb	Tax ID # : 1
C	TaxClctn/TaxId/ Desc	ID # Description: Standard Rate 1 VAT – Belgium
C	TaxClctn/TaxId/ Rate	Tax ID # Rate: 0.21000000
C	TaxClctn/TaxId/ HstAmt/Amt	Total Tax for Tax Identifier: 242,08
C	TaxClctn/TaxId/ Nb	Tax ID # : 2
C	TaxClctn/TaxId/ Desc	ID # Description: Standard Rate 2 VAT – Belgium

C	TaxClctn/TaxId/ Rate	Tax ID # Rate: 0.02500000
C	TaxClctn/TaxId/ HstAmt/Amt	Total Tax for Tax Identifier: 28,82
C	TaxClctn TtlAmt/Amt	Total Tax Amount (for Type C): 270,90
A,B, C,D	TaxRegion/ SttlmAmt/Amt	Settlement Amount Equivalent Tax: 190.19

The **Compensation** section totals for this example would be:

- **TaxableServiceCharges** (00 03 13) in Settlement currency. Not available in TaxRegion sections.
- **TaxTotalSum** (00 03 60) in Host currency, 270.90 EUR.
- **TaxTotalSum** (00 03 60) in Settlement currency, 190.19 GBP.

Tax Calculation Method D

Assumptions:

Tax Calculation Method: D

Use of **TaxRegion** section: Used for Tax Region demographic data and total tax amount in both the Host and Settlement currencies.

Line item tax: Calculated at line item level.

Single Tax ID# per Service

Single Pricing Currency : USD

Host Currency: GBP

Settlement currency: EUR

Price (USD) to Host (GBP) translation is 0.544

Host (USD) to Settlement (EUR) translation is 0.765

Note that this simple method of calculation and display requires that all services use the same Pricing currency so that the **Total Tax** value is the simple sum of individual service taxes – all in the same Pricing currency. Although not illustrated, this method allows for multiple Tax IDs per service. This method does not conform to Tax Calculation methods A, B or C. It is similar to methods A and B in that the individual service tax is calculated at the individual line item service level.

In this example the tax amount for taxable services is calculated at the service level using the service's Pricing currency (USD). The **Total Tax** (147.96) is summed in the Pricing currency and then added to the **Total Charge** to form the **Total Charge plus Tax** in the Pricing currency. Note that the **Total Charge** and **Total Charge plus Tax** are available as column totals in this example because all services are included, taxable and non taxable(Swift Non Auto CHIPS)

If the Host currency is different from the Pricing currency (GBP in this example) and the Settlement currency is different from the Pricing currency (EUR in this example), then the **Total Tax** is converted to the Host currency (GBP) and the **Total Due to Bank** is converted to the Settlement Currency (EUR). Note that this additional step is not required if the Pricing, Host and Settlement currencies are the same. In this case all the required totals are available as column totals as shown below. Note also that this example includes a non taxable service (Swift Non Auto CHIPS) and assumes that *all* services are shown. This allows the column totals as shown.

Service Description	Units	Price Cur	Unit Price	Original Charge, Price	Tax ID	Tax ID Rate	Tax Amount, Price
Bamtrac Support	1	USD	30.00	30.00	1	17.510	5.25
Hgh Value Clearing Pmt	86	USD	9.00	774.00	1	17.510	135.53
Low Value Clearing Pmt	16	USD	1.00	16.00	1	17.510	2.80
Swift Non Auto CHIPS	10	USD	10.00	100.00			
Cashiers Check	5	USD	5.00	25.00	1	17.510	4.38
Total Charge		USD		945.00			
Total Tax		USD		147.96			147.96
Total Charge plus Tax		USD		1,092.96			

If the Price, Host and Settlement currencies were all the same, then the **Compensation** section totals for this example would be:

- **ServiceChargesDueBeforeTax** (00 03 11) in USD, 945.00
- **TaxableServiceCharges** (00 03 13) not available as a column total.
- **TaxTotalSum** (00 03 60) in USD: 147.96
- **Charges-NetDueThisStatement** (00 03 14) in USD: 1,092.96

Conversions if Host and Settlement currencies are not the same as Price currency.

Description	"From" Currency	"From" Amount	Translation Rate	"To" Currency	Converted Amount
Tax Due to Host	USD	147.96	0.544	GBP	80.49
Tax Due to Bank	USD	147.96	0.765	EUR	113.19
Total Due to Bank	USD	1,092.96	0.765	EUR	836.11

The **Compensation** section totals for this example would be:

- **TaxableServiceCharges** (00 03 13) not available as a column total
- **TaxTotalSum** (00 03 60) in Host currency, 80.49 GBP.
- **TaxTotalSum** (00 03 60) in Settlement currency, 113.19 EUR.
- **ChargesAndTaxes-NetDueThisStrmnt** (00 03 14) in Settlement currency, 836.11 EUR. Available here only because the example includes all services, taxable and non taxable.

Tax Region Data Elements

RegionNumber <RgnNb> TWIST: <taxRegionNumber>.

Presence: [1..1]

Definition: A Tax Region # designates a particular unique zone of taxes assigned by taxing authorities. A Tax Region # is unique. Every account is considered to reside within a Tax Region, although some Tax Region's may not charge taxes on Services.

Element Name: *Tax Region Name*

RegionName <RgnNm> TWIST: <taxRegionName>

Presence: [1..1]

Definition: The name associated with a specific Tax Region #.

CustomerTaxIdentification <CstmrTaxId> TWIST: <customerTaxID>

Presence: [0..1]

Definition: The financial institution's customer's Tax ID Number. This is the number passed from the financial institution to the taxing authority to indicate the specific customer tied to the taxes calculated for this tax region and group of delivered services. It is typically the TAX ID tied to a customer's account.

PointDate <PtDt> TWIST: <taxPointDate>

Presence: [0..1]

Definition: The date on which the tax calculation was performed. This date can be used to verify the tax rate value on the calculation date.

SendingFinancialInstitution <SndgFi> TWIST: <fiContact>

Presence: [0..1]

Definition: This complex type presents Information relating to the Financial Institution, not the Tax Region.

VatRegistrationNumber < VATRegnNb> TWIST: <fiVATRegistrationNumber>

Presence: [0..1] Dependent upon the region's local taxing authority's requirements.

Definition: This element is an institution's VAT Registration Number as provided by the region's local taxing authority.

TaxRegistrationNumber < TaxRegnNb> TWIST: <fiTaxRegistrationNumber>

Presence: [0..1] Dependent upon the region's local taxing authority's requirements.

Definition: This element is the FI's Tax Registration Number (TRN) as provided by the tax region's local taxing authority.

TaxContact <TaxCtCt>**Presence:** [0..1]**Definition:** This complex type specifies the FI's contact details for the tax region. This contact works for the FI, not the tax region.*NamePrefix <NmPrfx>***Presence:** [0..1]**Definition:** Specifies the terms used to formally address a person. Values are:**DOCT** Title of the person is Doctor or Dr.**MIST** Title of the person is Mister or Mr.**MISS** Title of the person is Miss.**MADM** Title of the person is Madam.*Name <Nm>* TWIST: <name>**Presence:** [0..1]**Definition:** The name of the FI's contact for the specific Tax Region.*PhoneNumber <PhneNb>* TWIST: <phoneNumber>**Presence:** [0..1]**Definition:** The telephone number of the FI's contact for the specific Tax Region.*MobileNumber <MobNb>***Presence:** [0..1]**Definition:** The cell or mobile device number of the FI's contact for the specific Tax Region.*FaxNumber <FaxNb>* TWIST: <fax>**Presence:** [0..1] No**Definition:** The facsimile phone number of the FI's contact for the specific Tax Region.*EmailAddress <EmailAdr>* TWIST: <email>**Presence:** [0..1]**Definition:** The email address of the FI's contact for the specific Tax Region.**Other <Othr>****Presence:** [0..1]**Definition:** Complex type that provides contact communication details in a non standard form. Use if normal contact is not available.*ChannelType <ChanTp>* TWIST: <otherCommunication/channelCode>**Presence:** [1..1]**Definition:** The method of communication expressed as a code.*Identification <Id>* TWIST: <otherCommunication/value>**Presence:** [0..1]**Definition:** The communication value such as phone number or email address.*PreferredMethod <PrefrdMtd>* TWIST: <prefMethod>**Presence:** [0..1]**Definition:** The preferred method used to contact the FI's contact for the specific tax region. Values are:

PrefrdMtd	TWIST Value
LETT	Letter
MAIL	Email
PHON	Phone
FAXX	Fax
CELL	

InvoiceNumber <InvcNb> TWIST: <taxInvoiceNumber>

Presence: [0..1] No

Definition: A unique number that the customer can use to cross-reference between the Tax Region information and a Tax Invoice or Notice.

MethodC <MtdC>

Presence: [0..1]

Definition: A complex type that presents the tax values and calculations based on Tax Calculation Method C. This is present only if the account's tax calculation Method is "C".

ServiceDetail <SvcDtl> TWIST: <serviceDetail>

Presence: [1..n]

Definition: A complex type that lists just the taxable services present in the statement's SERVICE section. Used for Tax Calculation Method C only.

BankService <BkSvc>

Presence: [1..1]

Definition: A complex type that specifies the bank values used to identify the service.

Identification <Id> TWIST: <bankServiceId> 822: SER02 with SER01 = "ZZ"

Presence: [1..1]

Definition: The bank's own, internal service identification code. This is not the *CommonCode* discussed below. This is the bank's own code used to uniquely identify the service within the bank.

SubService <SubSvc>

Presence: [0..1]

Definition: An optional complex type used to distinguish between services that have the same bank *Identification* <Id>

Issuer <Issr>

Presence: [1..1]

Definition: A complex type defines the nature and value of the sub service code.

Code <Cd> TWIST: <subServiceQualifier> 822: SER02 with SER10

Presence: [1..1]

Definition: Qualifies the contents of the *SubService/Identification*. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values:

LBOX Lockbox – The *SubService/Identification* contains a lockbox number which identifies the lockbox using the service. Provides support for processing multiple lockboxes within one account.

STOR Store – The *SubService/Identification* contains a store number which identifies the store using the service. Provides support for processing multiple stores within one account.

BILA MutuallyDefined – The meaning of the *SubService/Identification* is established by the trading partners.

SEQN SequenceNumber – The *SubService/Identification* is an arbitrary sequence number used to uniquely identify this Service Section and prevent duplicate Service Sections within this statement.

MACT MemberAccount – The *SubService/Identification* is the account number of a member of a relationship structure. This allows a parent statement to include the same service as rolled up from its member accounts and still avoid duplicate service identification within the statement.

Note: *Proprietary* <Prtry> is available as an optional choice. We strongly recommend that it not be used. Use <Cd> in order to maintain standard codes across all banks.

Identification <Id> TWIST: <subServiceCode> 822: SER11

Presence: [1..1]

Definition: A code used to further define a bank service. It is used to specify the value required by the Sub Service Qualifier, e.g., the actual lockbox number or store number.

Notes: A unique number can be used to differentiate between multiple appearances of the same service in a Relationship Parent statement that contains all the individual services from the member accounts. For example, the statement may contain multiple service sections, all referring to the same service but with differing prices representing the actual prices for the different member accounts. The value "MACT" can be used in the Sub Service Qualifier and the member's account number can be placed here in order to eliminate duplicate services within the Relationship Parent statement.

Description <Desc> TWIST: <serviceDescription> 822: SER07

Presence: [1..1]

Definition: This is the bank's service description. It is not the standard description related to the *Common Code*.

Volume <Vol> TWIST: <volume> 822: SER06

Presence: [0..1] No

Definition: The count or number of items (volume) involved in the charge.

Notes:

- If the service doesn't involve a per item charge, e.g. a Flat Charge or a Base Charge, then this element is not required.
- If this is a balance based charge (E.g. Overdraft Interest charge or FDIC charge) then this is the balance used to calculate the charge expressed in the *Pricing Currency*.

UnitPrice/Amount <UnitPric/Amt> TWIST: <unitPrice/amount> 822: SER05

Presence: [0..1]

Definition: The per item price used to calculate the charge expressed in the *Pricing Currency*.

Sign: Given by <....>/Sgn> which determines the sign of the value amount: True(positive) or False(negative)

Notes:

If the service doesn't involve a per item charge, e.g. a Flat Charge or a Base Charge, then this element is not required.

If the service is balance based such as an Overdraft Interest charge then this is the per annum rate used to calculate the charge.

ServiceChargeAmount/Amount <SvcChrgAmt/Amt> TWIST: <originalCharge/amount>

822: SER04

Presence: [1..1]

Definition: Amount of the calculated charge expressed in the *Pricing Currency*. The value is exclusive of any tax.

TaxCalculation <TaxClctn> TWIST: <taxCalculation>

Presence: [1..1]

Definition: A complex type that reports total amount of service charge to be taxed in the Tax Region's Host Currency along with the supporting tax calculations. Used for Tax Calculation Method C only. One per tax region.

HostCurrency <HstCcy> TWIST: <hostCurCode>

Presence: [1..1]

Definition: This is the currency that all totals for taxable services must be converted to for calculating taxes owed for a tax region. This also is the currency in which the payment of tax obligations is usually submitted to the taxing authority. Use the ISO currency code.

TaxableServiceChargeConversion <TaxblSvcChrgConvs> TWIST: <taxHostConversion>

Presence: [1..n]

Definition: A complex type that reports conversion of taxable service charge totals from Pricing currencies to the Tax Region's Host Currency. This conversion must take place prior to applying the tax regions tax rates. Method C only.

Notes: Each Tax Region may have several Total Taxable Charge of Services totals for each currency utilized in the tax region.

SourceAmount/Amount *<SrcAmt/Amt>* TWIST: *<taxableSvcChargeAmount/amount>*

Presence: [1..1]

Definition: Represents the total of all taxable services in a specific Tax Region for a specific currency. For example, all Taxable Services for a Tax Region in Euro would be totaled here in the Euro currency.

Sign: Given by *<..../Sgn>* which determines the sign of the value amount: True(positive) or False(negative)

HostAmount/Amount *<HstAmt/Amt>* TWIST: *<taxableSvcChargeHostAmount/amount>*

Presence: [1..1]

Definition: This total is the equivalent of the taxable charge amount, *<SrcAmt/Amt>*, but is represented in the Host Currency after conversion.

Sign: Given by *<..../Sgn>* which determines the sign of the value amount: True(positive) or False(negative)

TotalTaxableServiceChargeHostAmount/Amt *<TtlTaxblSvcChrgHstAmt/Amt>* TWIST: *<totalTaxableSvcChargeHostAmount/amount>*

Presence: [1..1]

Definition: Represents the total of the all services subject to tax for a specific tax region. This field will equal the sum of all the separate *<HstAmt/Amt>* values for each individual currency. It is expressed in the tax region's Host currency. This total will be used to determine the total tax due by applying each of the possible three Tax ID # rates.

Sign: Given by *<..../Sgn>* which determines the sign of the value amount: True(positive) or False(negative)

TaxIdentification *<TaxId>* TWIST: *<taxCalculationList>*

Presence: [0..3] 1 required at a minimum.

Definition: This complex type provides for multiple specific taxes within the same Tax Region. These elements use the *TtlTaxblSvcChrgHstAmt/Amt* value as the basis of the calculation. Method C only.

Number *<Nb>* TWIST: *<taxIdentifierNumber>*

Presence: [1..1]

Definition: This is the identifying number of a specific tax in the tax region used to calculate the tax obligation. Each Tax Identifier is a unique tax or, if there is only one identifier, it may represent all taxes for a Tax Region. Tax Identifiers should be as granular as possible for transparency.

Description *<Desc>* TWIST: *<taxIdentifierDescription>*

Presence: [0..1]

Definition: This is the name used to describe an individual Tax Identifier (e.g. National VAT).

Rate *<Rate>* TWIST: *<taxIdentifierRate>*

Presence: [1..1]

Definition: This is the rate used in the calculation to determine the tax obligation due for a specific *Tax Identifier* (e.g. .0300000000)

TotalTaxAmount/Amount *<TtlTaxAmt/Amt>* TWIST: *<taxIdentifierTotalTaxAmount.amount>*

Presence: [1..1]

Definition: Represents the tax obligation in the Tax Region's Host Currency for a specific Tax Identifier (e.g. National VAT = 34,00). This field is expressed in the Tax Region's Host Currency.

Sign: Given by *<..../Sgn>* which determines the sign of the value amount: True(positive) or False(negative)

TotalTax /Amount <TtlAmt/Amt> TWIST: <totalTaxAmount/amount>

Presence: [1..1]

Definition: Total amount of all taxes for a specific customer within the tax region. This is a sum of the three possible individual Tax ID # s *<TtlTaxAmt/Amt>*. Expressed in the Tax Region's Host Currency. Method C only.

Sign: Given by <....*/Sgn*> which determines the sign of the value amount: True(positive) or False(negative)

SettlementAmount/Amount <SttlmAmt/Amt> TWIST: <settlementAmount/amount>

822: BLN code 00 0360

Presence: [1..1] Yes, for all Tax Methods A, B, C and D

Definition: This is the total tax amount due to the tax region expressed in the Account's Settlement (Charging) Currency. This total sums the individual service level taxes as calculated for each service by Methods A, B and D. The sum of these amounts across all Tax Regions for this statement is displayed as the **TXTS TaxTotalSum** in the **Compensation Section**.

Sign: Given by <....*/Sgn*> which determines the sign of the value amount: True(positive) or False(negative)

TaxDueToRegion/Amount <TaxDueToRgn/Amt> TWIST: <taxDueToRegion/amount>

822: BLN code 00 0360

Presence: [1..1]

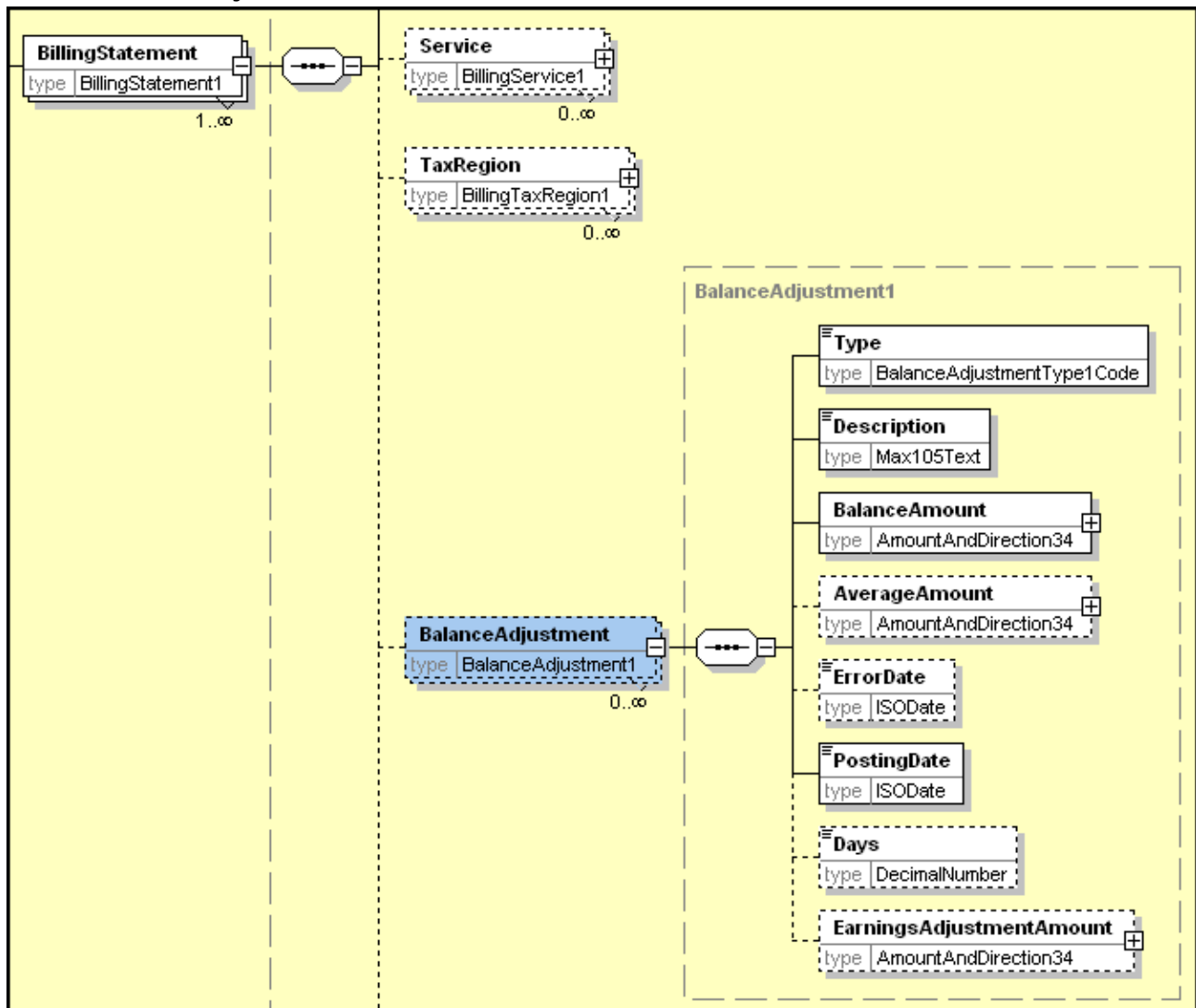
Definition: This is the total tax amount due to the tax region expressed in the tax region's Host currency. This total sums the individual service level taxes as calculated for each service by Methods A, B and D. It is the same value as *<TtlAmt/Amt>* as calculated for Method C.

Sign: Given by <....*/Sgn*> which determines the sign of the value amount: True(positive) or False(negative)

Note that the following three totals within a Tax Region all contain the same value but the value is expressed in different currencies:

XML Tag	Currency	Tax Method	Notes
TotalTaxAmount	Host	C only	Required for Method C
SettlementAmount	Settlement	A, B, C, D	Sums individual service taxes for A, B & D
TaxDueToRegion	Host	A, B, C, D	Sums individual service taxes for A, B & D

5.2.8 Balance Adjustment Section Definition



BalanceAdjustment <BalAdjstmnt> TWIST: <balAdjst>

Presence: [0..n]

Definition: One or more sections that identify balance or float adjustments to the account. They can reflect either adjustments to the current statement or adjustments to statements from prior reporting periods. They are used as memos to identify and describe the nature of the adjustments. The actual accounting item, the balance or credit which affects charging totals, should be present in either the Balance or Compensation Sections.

Notes:

If an adjustment spans multiple months, create a separate adjustment for each month. The *BalAdj Error Date* for the second and succeeding months should show the first day of the month, not the original error date.

Balances reported for the current period are typically net of adjustments. In this case Balance/Float Adjustments need not be submitted for current period balances. Trading partners should determine whether balances reported for the current period are net of adjustments or not.

The consequences of balance adjustments reported for prior statement periods may cause an earnings credit adjustment in accounts that offset charges with earnings credits. The net accounting effect of these earnings credit adjustments are reported in the current period statement's Compensation Section as "EANA Earnings Allowance-NetAdjst".

Type <Tp> TWIST: <adjustmentType> 822: ADJ01

Presence: [1..1]

Definition: Identifies the type of adjustment. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values:

LDGR Ledger The adjustment applies to the average ledger (book) balance.

FLOT Float The adjustment applies to the average ledger (book) balance.

CLLD Collected The adjustment applies to the average ledger (book) balance.

Description <Desc> TWIST: <adjustmentDesc> 822: ADJ07

Presence: [0..1]

Definition: A free-form description and clarification of the adjustment

BalanceAmount/Amount <BalAmt/Amt> TWIST: <adjustmentAmount.amount> 822: ADJ02

Presence: [1..1]

Definition: The amount of the adjustment. If the amount would reduce the underlying balance then the amount should be negatively signed. Expressed in the Account currency.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

AverageAmount/Amount <AvrgAmt> TWIST: <adjustmentAverage.amount> 822: ADJ03

Presence: [0..1]

Definition: The day-weighted net amount of the adjustment to the average collected balance over the statement period. For example, a Ledger adjustment of \$1,000 for a period of 19 days in March gives an average balance adjustment of \$612.90 = \$1,000 * (19/31). Expressed in the Account currency.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or minus(negative)

ErrorDate <ErrDt> TWIST: <adjustmentErrorDate> 822: ADJ04

Presence: [0..1]

Definition: The date the error occurred in the underlying deposit account. This is date on which the transaction causing the error was posted to the account, or the date on which it should have been posted but was not.

PostingDate <PstngDt> TWIST: <adjustmentPostDate> 822: ADJ05

Presence: [1..1]

Definition: The date on which the error was corrected in the deposit account. If the date is not know then use the last day of the month in which the error was corrected.

Days <Days> TWIST: <adjustmentDays> 822: ADJ06

Presence: [0..1]

Definition: The number of days within the period to which the adjustment applies. For example, if \$1,000 should have been posted to the deposit account on March 5 (the *Error Date*) but was actually posted on March 25 (the *Posting Date*), then the total number of days would be 19.

EarningsAdjustmentAmount/Amount <EarngsAdjstmntAmt/Amt> TWIST:

<creditAdjustment.amount

Presence: [0..1]

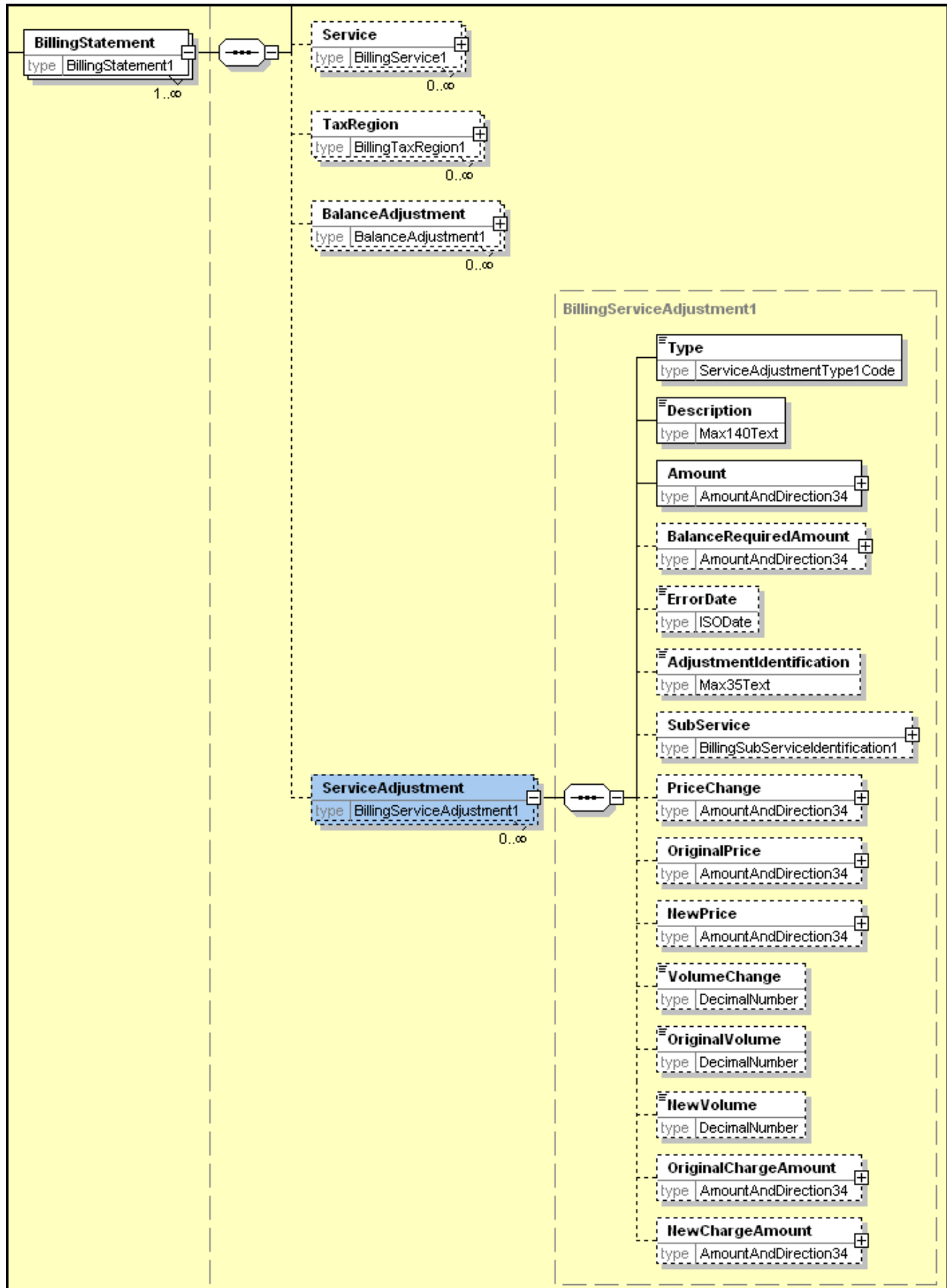
Definition: The earnings credit adjustment, debit or credit, resulting from this adjustment's effect on the average collected balance. If the amount would reduce the credit due then the amount should be negatively signed. Typically expressed in the Settlement Currency.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

Notes:

- Used only if the account can offset charges with earnings credits
- The net accounting effect of these earnings credit adjustments are reported in the current period statement's Compensation Section value "EANA EarningsAllowance–NetAdjust".

5.2.9 Service Adjustment Section Definition



ServiceAdjustment <SvcAdjstmnt> TWIST: <serviceAdjst>

Presence: [0..n]

Definition:

One or more sections that identify line item service adjustments to the account. They reflect adjustments to statements from prior reporting periods. They are used as memos to identify and describe the nature of the adjustments. The actual accounting item, the adjustment amount which actually affects charging totals, should be present in a related Service Section or Compensation Section.

Notes:

The consequences of service adjustments reported for prior statement periods may cause a charge adjustment in the current statement reporting period. The net accounting effect of these charge adjustments are reported in the current period statement's Compensation Section as *Compensation Identifier* as either "SCAB ServCharges-NetAdjust-BalCompensable" or "SCAN ServCharges-NetAdjust-Non-BalCompensable".

Type <Tp> TWIST: <serviceAdjustmentType>

Presence: [1..1]

Definition: Identifies the type of adjustment. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values:

- **COMP Compensable** The adjustment applies to a service which is balance compensable. Earnings credits based on average balances maintained in the account can be used to offset the service charge.
- **NCMP Non-Compensable** The adjustment applies to a service which is not balance compensable. Balance based credits cannot be used to offset the service charge.

Description <Desc> TWIST: <ServiceAdjustmentDesc> 822: ADJ07

Presence: [1..1]

Definition: A free-form description and clarification of the adjustment

Amount <Amt <Amt/Amt> TWIST: <serviceAdjustmentAmt.amount> 822: ADJ02

Presence: [1..1]

Definition: The amount of the adjustment. If the amount would reduce charges due then the amount should be negatively signed, Expressed in the Settlement currency.

Notes: The accounting effect of this charge adjustment amount should be included in the statement's Compensation as either "SCAB ServCharges-NetAdjust-BalCompensable" or "SCAN ServCharges-NetAdjust-Non-BalCompensable".

Sign: Given by <...../Sgn> which determines the sign of the value amount: True(positive) or False(negative)

BalanceRequiredAmount/Amount <BalReqrdAmt/Amt> TWIST: <balanceRequired.amount> 822: ADJ03

Presence: [0..1]

Definition: The amount of average collected balance required to exactly offset a Compensable service charge adjustment amount as carried in the *Service Adjustment Amount* element. Expressed in the Account Currency.

Sign: Given by <...../Sgn> which determines the sign of the value amount: True(positive) or minus(negative)

Notes:

- Used only if the adjustment is to a Compensable service. See the *Service Adjustment Type* element above. Do not include if the Balance Required is not known.
- If the *Service Adjustment Amount* is negative, then this balance must be negatively signed.

ErrorDate <ErrDt> TWIST: <adjustmentErrorDate> 822: ADJ04

Presence: [0..1]

Definition: The date on which the situation causing the service adjustment occurred. If the date is not known then used the last day of the month in which the situation occurred or the date of the billing statement which reported the original service to which this adjustment applies.

AdjustmentIdentification <AdjstmntId> TWIST: <srviceAdjustmentId> 822:ADJ09

Presence: [0..1]

Definition: The bank's own, internal service identification code. This is the bank's own code used to uniquely identify the service within the bank.

Notes: This service identification code is used to relate this service adjustment back to the original service being adjusted and which appeared in a Service Section in a prior statement. This should be the same ID code that appeared in the *Bank Service ID* element within the original Service Section.

SubService <SubSvc>

Presence: [0..1]

Definition: An optional complex type used to distinguish between services that have the same bank *Identification* <Id>

Issuer <Issr>

Presence: [1..1]

Definition: A complex type defines the nature and value of the sub service code.

Code <Cd> TWIST: <subServiceQualifier> 822: ADJ16

Presence: [1..1]

Definition: Qualifies the contents of the *SubService/Identification*. The four character ISO 20022 enumeration values are shown first followed by the corresponding TWIST enumeration values:

LBOX Lockbox – The *SubService/Identification* contains a lockbox number which identifies the lockbox using the service. Provides support for processing multiple lockboxes within one account.

STOR Store – The *SubService/Identification* contains a store number which identifies the store using the service. Provides support for processing multiple stores within one account.

BILA MutuallyDefined – The meaning of the *SubService/Identification* is established by the trading partners.

SEQN SequenceNumber – The *SubService/Identification* is an arbitrary sequence number used to uniquely identify this Service Section and prevent duplicate Service Sections within this statement.

MACT MemberAccount – The *SubService/Identification* is the account number of a member of a relationship structure. This allows a parent statement to include the same service as rolled up from its member accounts and still avoid duplicate service identification within the statement.

Note: *Proprietary* <Prtry> is available as an optional choice. We strongly recommend that it not be used. Use <Cd> in order to maintain standard codes across all banks.

Identification <Id> TWIST: <subServiceCode> 822: ADJ17

Presence: [1..1]

Definition: A code used to further define a bank service. It is used to specify the value required by the Sub Service Qualifier, e.g., the actual lockbox number or store number.

Notes: This sub service code is used along with the *Sub Service Qualifier* to relate this service adjustment back to the original service being adjusted and which appeared in a Service Section in a prior statement. This should be the same sub service code that appeared in the *Sub Service Code* element within the original Service Section.

PriceChange/Amount <PricChng/Amt> TWIST: <priceChange.amount> 822: ADJ10

Presence: [0..1]

Definition: The change in the service price. A negative value indicates a price reduction. Expressed in the Pricing Currency.

Sign: Given by <...../Sgn> which determines the sign of the value amount: True(positive) or minus(negative)

OriginalPrice/Amount <OrgnlPric/Amt> TWIST: <originalPrice.amount> 822: ADJ11

Presence: [0..1]

Definition: The original service price. Expressed in the Pricing Currency.

Sign: Given by <...../Sgn> which determines the sign of the value amount: True(positive) or minus(negative)

NewPrice/Amount <NewPric/Amt> TWIST: <newChange.amount> 822: ADJ12

Presence: [0..1]

Definition: The new, adjusted service price. Expressed in the Pricing Currency.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or minus(negative)

VolumeChange <VolChng> TWIST: <volumeChange> 822: ADJ13

Presence: [0..1]

Definition: The absolute value of the change in the service volume.

OriginalVolume <OrgnlVol> TWIST: <originalVolume> 822: ADJ14

Presence: [0..1] No

Definition: The original service volume.

NewVolume <NewVol> TWIST: <originalVolume> 822: ADJ15

Presence: [0..1] No

Definition: The new, adjusted service volume

OriginalChargeAmount/Amt <OrgnlChrgAmt/Amt> TWIST: <originalCharge.amount>

Presence: [0..1]

Definition: The original service charge. Expressed in the Pricing Currency.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or minus(negative)

NewChargeAmount/Amt <NewChrgAmt/Amt> TWIST: <newCharge.amount>

Presence: [0..1]

Definition: The new, adjusted service charge. Expressed in the Pricing Currency.

Sign: Given by<...../Sgn> which determines the sign of the value amount: True(positive) or minus(negative)

6. Synonyms, Definitions, Codes & Options

This section defines and explains various elements of the ANSI X12 822 and TWIST BSB.

Analyzed Service Charge

A synonym for Balance Compensable service charge.

Hard Charge

A synonym for Non-Balance Compensable service charge.

Fee-Based Charge

A synonym for Non-Balance Compensable service charge.

Earnings Credit

A synonym for a positive Earnings Allowance.

Days in Period

Days

The number of calendar days in the calculation period. This value is typically in the range 28 through 31 and represents the number of calendar days in the month. It is used along with the Days in Year value to determine the time factor in interest and earnings allowance calculations.

It is carried in the 822 in RTE04 of the RTE segment.

It is carried in the TWIST BSB in *<RateInfo/daysInPeriod>*

It is carried in the ISO 20022 BSB in *<RateData/DaysInPeriod>*

Days in Year

Year

The number of calendar days in the year. This value is typically either 365 or 366. It is used along with the Days in Period value to determine the time factor in interest and earnings allowance calculations.

It is carried in the 822 in RTE05 of the RTE segment.

It is carried in the TWIST BSB in *<RateInfo/daysInYear>*

It is carried in the ISO 20022 BSB in *<RateDate/DaysInYear>*

Earnings Allowance Rate Option

The bank has the option of specifying whether the statements will use a reserve adjusted earnings allowance rate (00 01 20) or an unadjusted earnings allowance rate (00 01 22).

A reserve adjusted earnings allowance rate (ECR) is factored by the DDA reserve requirement rate and is, therefore, comparable to the rates quoted on reserve-free, interest earning investments such as CDs. An unadjusted ECR is not comparable because the balances to which the rate is applied are first reduced by the reserve requirement (currently 10%). You can convert an unadjusted ECR to an adjusted ECR, and vice versa, as follows:

Adjusted ECR = Unadjusted ECR * (1 - Reserve Rate)

$$5.4 = 6.0 * (1 - .10)$$

$$5.4 = 6.0 * .9$$

Unadjusted ECR = Adjusted ECR / (1 - Reserve Rate)

$$6.0 = 5.4 / (1 - .10)$$

$$6.0 = 5.4 / .9$$

ECR is net of Reserves The statement will use a reserve adjusted earnings allowance rate. All reserve calculations are eliminated from the statement.

ECR is NOT net of Reserves The statement will use an unadjusted earnings allowance rate. Reserve calculations are explicit in the statement.

Is Multiplier Reserve Adjusted?

This option specifies how reserves are to be treated if the Earnings Allowance Rate is unadjusted (not net of reserves). If the Earnings Allowance Rate is adjusted for reserves (net of reserves) then this option is not applicable. The options are:

ECR is net of Reserves The option is not applicable. This setting is forced by the Tutor when the Earnings Allowance Rate Option is set to "ECR is net of Reserves". The multiplier has been implicitly adjusted for reserves because the ECR has been adjusted.

Balance Required is adjusted The value of the multiplier has been grossed up by the reserve factor resulting in greater Balance Required values as compared to a non reserve adjusted multiplier. In this case the statement Average Collected Balance is reduced by the Balance Required to arrive at the Excess/(Deficit) Collected Balance.

Investable balance is adjusted The multiplier is not grossed up by the reserve factor which results in smaller Balance Required values as compared to a reserve adjusted multiplier. In this case the Excess/(Deficit) Investable Balance is adjusted by the Additional Reserve Requirement Balance to arrive at the Excess/(Deficit) Collected Balance.

The relationship between a reserve adjusted multiplier and a non reserve adjusted multiplier is:

Adjusted Multiplier = Non Adjusted Multiplier / (1 – Reserve Rate)

$$218.04 = 196.24 / (1 - .10)$$

$$218.04 = 196.24 / .9$$

Statement Period Starting Date

Statement Start Date

The starting date for which the statement is produced. Analysis statements are typically produced on a calendar-month basis from the beginning of the calendar month through the last day of the calendar month. In this typical approach balances and service volumes are aggregated over the entire calendar month – from the first to the end-of-the-month.

This value is carried in the 822 header section in DTM02 with the qualifier code of "150" in DTM01.

It is carried in the TWIST BSB in <Account/statementStartDate>

It is carried in the ISO 20022 BSB in <BllgStmnt/FrToDt/FrDt>

Note that all statements within an 822 transaction have the same statement starting and ending date.

Statement Period Ending Date

Statement Date

The ending date for which the statement is produced. Analysis statements are typically produced on a calendar-month basis as of the last day of the calendar month. In this typical approach balances and service volumes are aggregated over the entire calendar month – from the first to the end-of-the-month.

This value is carried in the 822 header section in DTM02 with the qualifier code of "151" in DTM01.

It is carried in the TWIST BSB in <Account/statementEndDate>

It is carried in the ISO 20022 BSB in <BlgStmnt/FrToDt/ToDt>

Statement Date - Days in Period

The number of days in the statement period. This is typically the number of days in the calendar month for which the analysis is produced – 28, 29, 30 or 31.

This value is used to derive the time factor, Days-in-Period / Days-in-Year , used in various time critical calculations.

Statement Date - Days in Year

The number of days in the year. This is typically the number of days in the calendar year for which the analysis statement is produced – 365 or 366.

This value is used to derive the time factor, Days-in-Period / Days-in-Year, used in various time critical calculations.

Overdraft Assessment Option

This option determines whether the statement will use average NET balances or average NEGATIVE balances to determine overdraft assessment charges. The options are:

Use NEGATIVE balances: The statement will use Average Negative Collected Balance (00 00 13) to calculate an overdraft assessment charge. In this case the "Interest Rate – Negative Collected Balance OD " must be set to a non-zero value and the Average Negative Collected Balance must be non-zero in order to calculate an assessment charge.

Use NET balances: The statement will use the Average Net Collected Balance (00 00 10) to calculate an overdraft assessment charge. In this case the "Interest Rate – Net Collected Balance OD " must be set to a non-zero value and the Average Net Collected Balance must be negative (less than zero) for the analysis period in order to generate an assessment charge.

Note that use of NET balances as compared to NEGATIVE balances will result in fewer overdraft assessment charges since the ending daily positive balances in the period will offset the ending daily negative balances.

Unit Price

Price per unit of service. If the service is balance and rate based, this field may contain the rate. The number of decimal places used should reflect the actual number of decimal places used in calculations.

This value is carried in the 822 in SER05.

It is carried in the TWIST BSB in <Service/unitPrice>

It is carried in the ISO 20022 BSB in <Svc/Pric/UnitPric>

Volume

Number of units. If the service is balance and rate based, this field may contain the applicable balance in whole dollars.

This value is carried in the 822 in SER06.

It is carried in the TWIST BSB in <Service/volume>

It is carried in the ISO 20022 BSB in <Svc/SvcDt/Vol>

Service Charge

Unit price multiplied by volume, unless there are other pricing considerations as indicated by the Price Method, <Svc/Pric/MtdPrice>.

This service charge value value is carried in the 822 in SER04.

It is carried in the TWIST BSB in <Service/originalChargePrice>

It is carried in the ISO 20022 BSB in <Svc/OrgnlChrgPric>

Service Charge - Negative Collected Balance Assessment

The charge for this type of service is calculated as:

$$\text{Charge} = \text{OD Balance} * \text{Rate} * (\text{Days in Period} / \text{Days in Year})$$

where the **OD Balance** is shown in dollars in the Volume column, **Rate** is a per annum rate shown in the Unit Price column, and the **(Days in Period / Days in Year)** time factor typically represents the true number of calendar days in the month and year. Some banks may use a (30/360) time factor. Some banks may use a (Days in Period / 365) time factor. Some banks may use a factor which depends on a balance aggregation scheme which is inaccurate when calendar month-end falls over a weekend or holiday. This sometimes results in a 32 day month.

The result is rounded to the nearest cent. This is typical. Some banks may round low (\$100.055 is rounded to \$100.05). Some banks may round high (\$100.054 is rounded to \$100.06). Some banks may truncate to the cent (\$100.055 and \$100.054 both result in \$100.05).

Balance Equivalent - Line Item Service

The balance equivalent for a balance compensable service is calculated as:

$$\text{Balance Equivalent} = \text{Service Charge} * \text{Multiplier}$$

where the result may be in rounded/ truncated cents or rounded/truncated dollars. There is no balance equivalent for a non-balance compensable service or a service that is free, waived or charged for outside of analysis.

This value is carried in SER03 or set to zero if the service is non balance compensable.

It is carried in the TWIST BSB in *<Service/blanceRequiredAccount>*

It is carried in the ISO 20022 BSB in *<Svc/BalReqrdAcctAmt>*

Split Message

It can happen that a single BSB message is too large to be transmitted as a single physical message. In this case the sender must split the single logical message into two or more physical messages which are transmitted individually. This is a "split message" situation. It is up to the receiver to reassemble the two or more physical messages back into the single logical message.

Appendix A – BSB Conversation Schematic

Logical Schematic

The schematic illustrates a single BSB conversation containing three statements. The conversation is originated by a single Financial Institution and is addressed to a single customer of the FI. The statements are for accounts held by the customer at FI locations.

XML Complex Type	Statement Related XML Complex Types	Statement Sections	Section Tree	Count	Notes
ISO Header				1	Always first in the message. An ISO 20022 common type that identifies the physical message Sender and Receiver
Bank Services Billing Statement				1	Begins the BSB conversation
	Billing Statement Group		Sender Receiver	1 to n	Identifies the FI originating the statements that follow and the receiver (customer) of the statements that follow.
	Billing Statement (first)		Statement dates and status	1 to n	Beginning of a customer statement for the previous Sender.
		Account Characteristics		1	Identifies the account owner of the statement & account level options
		Rate Data		0 to n	Per annum rate values other than tax rates
		Currency Exchange		0 to n	Currency translation factors
		Balance		0 to n	Average balances held by the account
		Compensation		0 to n	Charges and totals arising from services and taxes
		Service	Tax Identifiers within service	0 to n	Line item service values, one section per service. Provides for multiple taxes on the service.
		Tax Region	<ul style="list-style-type: none"> Taxable services within region Tax calculations by currency within region 	0 to n	Can contain multiple tax regions if a relationship parent statement. Required if statement uses Taxes
		Balance Adjustment		0 to n	Balance and Float adjustments
		Service Adjustment		0 to n	Service adjustments
	Billing Statement				An optional next statement for the same Sender & Receiver but a

	(second)				different account
		Account			
		~~~~~			
	<b>Billing Statement</b> (third)				An optional next statement for the same Sender & Receiver but a different account
		<b>Account</b>			
		~~~~~			
	ETC~~~~				More statements if necessary

Relationship Example

The following example illustrates a three-tier hierarchical relationship structure involving seven statements. There are two intermediate level statements, each with two detail level statements. The two intermediate statement roll up to a relationship parent summary statement. Charging occurs at the intermediate statement level. The summary parent simply adds the totals sent up by the intermediate level charging accounts. All seven statements are contained within a single message. Only the Account Sections are shown along with the pertinent elements.

Account Level	Account Number	Account Name	Parent Level	Parent Account Number	Compensation Method	Notes
Summary	REL9999	ABC Company Parent	null	null	No	Summary level account
Intermediate	INT7777	ABC Eastern Region	Summary	REL9999	Invoice	Charging occurs here
Detail	44-454-9	ABC East Payroll	Intermediate	INT7777	No	Points to parent
Detail	56-007-8	ABC East Payables	Intermediate	INT7777	No	Points to parent
Intermediate	INT5555	ABC Western Region	Summary	REL9999	Invoice	Charging occurs here
Detail	22-333-4	ABC West Payroll	Intermediate	INT5555	No	Points to parent
Detail	32-888-0	ABC West Payables	Intermediate	INT5555	No	Points to parent

Appendix B - Debit (Overdraft) and Credit Interest Considerations

The basic concept behind the Debit and Credit Considerations is that the bank customer pays interest on negative daily ending (overdrawn) balances and earns interest on daily ending positive balances. Interest paid by the customer is debit interest and can be viewed as an interest payment against a loan. Interest earned by the customer is credit interest and can be used to:

- offset service charges as is the custom in the US due to Regulation Q
- directly credit the deposit account.

The interest used to offset service charges is called the "Earnings Credit" in the US. Interest directly credited to the deposit account is the custom outside the US and in certain cases within the US. (With the proposed elimination of Regulation Q in the US, interest earned in a commercial deposit account can be directly credited to the account.)

Note that **net** balances (the sum of the daily, ending **positive** and **negative** balances over the period) are not in consideration here. The customer pays interest on daily ending **negative** balances only and earns interest on daily ending **positive** balances only.

Debit Interest in the BSB

Debit interest (interest charges based on deposit account balance overdraws) can be displayed on a billing statement as a line item service fee and transmitted in the BSB as a Service Section. (The majority of US banks display overdraft interest fees on billing statements as a line item service and transmit them in the 822 as a service (SER) segment.)

The paper statement display typically includes:

- the optional service code
- the description
- the dollar volume which is expressed as the average overdrawn balance during the period
- the per annum interest rate
- the charge
- the charge disposition status
- the balance required if the charge is compensable (compensable = can be offset by positive balances).

The example shown here assumes that the service is Balance Compensable and that no taxes are due. The service is shown as it might appear on a paper statement and then in a table that relates the paper display to the BSB Service Section. Note that, due to transparency requirements, the Service Section requires more fields than those that appear on the paper statement.

Code	Description-----	Volume	Price Rate	Charge	Stat	Balance Required
00 0211	OD Interest on Ledger Balance	1,000	4.5000%	3.82	Comp	4,497

Statement Column	Content Description	Corresponding Service Section Element	Element Value	Note
	The bank's own internal service code. This is required in order to uniquely identify the service.	<i>Bank Service ID</i>	J12345	1
Code	An optional, common standard code used to relate this service to the same service in other banks. The AFP Service Code set is used here.	<i>Common Code Qualifier</i>	AFP	2
		<i>Common Code</i>	00 0211	2
Description	The bank's service legend or description	<i>Service Description</i>	OD Interest on Ledger Balance	
Volume	The average, negative balance over the statement period expressed in the Pricing Currency.	<i>Volume</i>	1,000.00	3
	The ISO code identifying the currency used to express the Volume and the Charge	<i>Pricing Currency Code</i>	USD	
	Code specifying that the charge calculation is a "balance times rate" calculation and that the value in the <i>Volume</i> element is a balance and that the value in the <i>Unit Price</i> element is a	<i>Price Method</i>	Balance Based	3

	per annum rate.			
Price Rate	The per annum interest rate used to calculate the charge.	<i>Unit Price</i>	4.5000	3
Charge	The calculated charge expressed in the Pricing Currency rounded to the nearest cent.	<i>Original Charge - Price</i>	3.82	3
Stat	A code identifying the disposition of the calculated charge	<i>Payment Method</i>	Balance Compensable	4
Balance Required	This is the average collected balance required to offset the Charge expressed in the Account currency. This balance is included here since the <i>Payment Method</i> is Balance Compensable.	<i>Balance Required - Account</i>	4,497	4
	Although not required if no taxes are due on this service, it is included in the Service Section for transparency.	<i>Tax Designation</i>	Exempt	

Notes:

1. The bank's own internal service identification code is always required in the BSB in order for receiving systems to uniquely identify the service within the bank. The bank's internal ID codes are unique and therefore eliminate any duplicity within their service offering. There are situations where a *Sub Service Code* is required to differentiate the same service as used by different lockboxes or stores. This example does not demonstrate that situation.
2. The bank may, optionally, relate its service to a standard code set as a service to its customers. This allows the bank customer to relate and compare the service to the same service as used in other banks. In this example the Association for Financial Professionals (AFP) service code set is used. The *Common Code Qualifier* identifies the code set used and the *Common Code* carries the code value.
3. The bank uses the following formula to calculate the charge for this *Price Method* = Balance Based service.

$$\begin{aligned} \text{Original Charge - Price} &= \text{Volume} * \text{Unit Price} * \text{Time Factor} \\ 3.82 &= 1,000 * .045000 * 31/365 \end{aligned}$$

Where

- *Volume* = The average daily, negative balance over the period which is equal to the sum of the daily ending negative balances divided by the total number of days in the period.
 - *Unit Price* = The dollar-day weighted average per annum interest rate in the period.
 - *Time Factor* = The time factor used to calculate the interest in the period. In this example a factor of 31/365 was used where 31 is the number of days in the period (month) and 365 is the number of days in the calendar year. Note that these values should be carried in an appropriate Rate Section in order for the receiving system to verify the bank's calculation.
4. The bank has identified the disposition of the service charge as Balance Compensable. This means that the Earnings Credit amount as carried in a Compensation Section and greater than zero will be used to offset the \$3.82 charge for this service. In this case the *Balance Required* is provided to show the customer what average, daily collected balance is required to exactly offset the \$3.82 charge. The factor used to calculate the *Balance Required* should be carried in a Rate Section with *Rate Identifier* = Multiplier

Note that the BSB defines and supports everything required to transmit this debit interest as a Service Section. What is not available in the current BSB is the ability to transmit the daily ending balances in the period along with the debit rate active for each day. This information

would provide the transparency required if the customer is interested in proving the **Volume** and **Rate** and **Charge** values contained in the Service Section. In a static rate environment this daily balance/rate information loses value. In a fluctuating rate environment this daily balance/rate information becomes more valuable. Note that the daily ending balance information is available on the customer's deposit account statement and, if the billing period is the same as the deposit account statement cycle, the BSB billing statement need not repeat this information.

Credit Interest in the BSB

The "Earnings Credit" type of credit interest is fully supported within the BSB to insure that US banks can use the BSB to support their US customers. The BSB can be used if non US banks begin to use credit interest to offset service charges. The ability to report a hard interest credit amount is supported using the "Total Interest Credited" *Compensation Identifier* in the Compensation Section.

Appendix C – Implementation Recommendations

Single Calendar Month Reporting Cycle

We strongly recommend that all the statements contained in the ISO 20022 BSB message cover a single calendar month period. This provides a common time period and cycle to be used in variance and trend reporting and in summarizing results across the receiver's multiple banks.

Don't Send Optional Elements If They Have No Value

The BSB schema identifies all complex types and elements as either required or optional. If you have no specific value to send in an optional element, then do not include the element. Do not send the optional element with a filler value such as "string" or "str".

Zero Value Not the Same as a Null Value

If you do not have a particular value to send in a balance, price, charge or total element then do not include the element. In this case do not send a zero value. The receiving system will interpret a zero value as an actual, specific value of zero. It will interpret a "null" value (missing element) as something for which the sender did not have a specific value.

Use of a Period Instead of a Comma to Indicate the Decimal Location

Many receiving systems will assume that a period (".") is used to indicate the start of decimals in prices, rates and monetary value. Therefore you should avoid the use of the comma (",") for this purpose. A receiving system that assumes use of the period may not be able to interpret the value "123,45" as really meaning "123.45".

Account ID Versus IBAN

The <AcctChrtcs/CshAcct/Id/Othr/Id> element is required to uniquely identify an account. This is not the same as the IBAN element. If the accounts IBAN is actually used by the FI to identify the account, then this IBAN should be placed in the <AcctChrtcs/CshAcct/Id/Othr/Id> element.

Missing Critical Account Codes

The <BllngStmnt/AcctChrtcs> complex type should carry the following elements even though the current BSB version does not require them. This is particularly important if the account statement services are taxed in any way.

- **SettlementCurrencyCode** the currency in which the account pays the bank for service charges and taxes
- **HostCurrencyCode** The currency in which the bank pays the account statement taxes to the tax region
- **TaxCalculationMethod** Indicates the method used in calculating the taxes. The services contained in this statement clearly indicate that taxes are due on some services.
- **TaxRegionCode** Identifies the default tax region in which the taxes are due.

Missing Tax and Total Information

Although the **Balance**, **Compensation** and **TaxRegion** complex types are not required by the BSB schema, they are none the less critical. Totals of charges and taxes should appear in the **Balance**, **Compensation** and **TaxRegion** complex types. The receiving system can't be asked to guess and derive its own totals of charges and taxes due.

Service Identification Codes

The BSB schema allows the user to identify each individual line item service within a statement with two different codes. One is required and the other is optional. Both of these codes are contained in the **<BllngStmt/Svc>** complex type.

Required

The required code is the bank service ID. This is the unique service identification code used by the bank's billing system to identify the service. The element is identified in the BSB schema as: **<BllgStmt/Svc/SvcDtl/BkSvc/Id>**.

If there is more than one service in the statement using the same bank service ID then the sub service code **<BllgStmt/Svc/SvcDtl/BkSvc/SubSvc/Id>** must be used to distinguish between the services using the same bank service ID code.

Optional

The BSB schema provides a place for an optional "Common Code" and an issuer to identify which common code set is used. Use of the common code in the **<BllngStmt/Svc>** complex type is optional. The common code issuer element is **<BllgStmt/Svc/SvcDtl/BkSvc/CmonCd/Issr>**.

At the current time there are only two common code sets. They are identified as "AFP" for the US domestic code set and "AFPGBL" for the global code set.

The actual code is carried in **<BllgStmt/Svc/SvcDtl/BkSvc/CmonCd/Id>**. If the sender chooses not relate a service to a common code, then the issuer and code elements should not be sent.

Note that the AFP and AFPGBL code sets are proprietary. They can be used by any bank or financial institution in their BSB output files for a one time charge. This one time charge allows the bank or FI unlimited use of the codes in any and all customer BSB files. The AFP Service Codes are available from the AFP. Web: <http://www.afponline.org/servicecodes/>

Avoid Duplicate Services

The services within a statement must be unique based on the bank service ID code **<BllgStmt/Svc/SvcDtl/BkSvc/Id>** and the sub service code **<BllgStmt/Svc/SvcDtl/BkSvc/SubSvc/Id>**. This unique identification is required by receiving systems so that they can properly track individual services over time and within the same statement. If two or more services within a statement use the same bank service ID code and no sub service code, then the receiving system will either overlay the previous service with the next or aggregate the values contained in the duplicate services under one service.

Do not assume that the service description elements are used by the receiving system to differentiate services.

Inclusion of Summary Accounts in a BSB message

The BSB provides for multiple statements within a single message. The only restriction is that they all belong to the same "Receiver", typically a bank customer, and that they are all for the same statement month. Therefore you can send any number of detail statements and summary statements within the same BSB message as long as they all belong to the same receiver (customer).

The **<AcctChrtcs/AcctLvl>** element is used to indicate the account level within a hierarchy such as Detail, Intermediate or Summary, and the **<AcctChrtcs/CshAcct/Id/Othr/Id>** carries the account number or identifier used to identify the account or relationship. Note that the combination of account level and account number must be unique within the same BSB message since receiving systems typically use these elements to uniquely identify the accounts within their databases. If two different statements use the same account identification, then the second statement into the receiving system for the same bank and date will overlay the first.

Unique Statement Identification

The BSB message has a single role. That is to send the billing statement in electronic format so that the receiver can drive it into his data processing system. Therefore the BSB content must lend itself to this requirement. It is critical that every statement in every BSB be uniquely identified as to originating bank, account level, account number and statement date. These are the elements used within receiving systems to form the unique database key. The receiver (customer) will always want to uniquely identify a statement based on the bank in which the account resides, the account or relationship number used to identify the account and the statement date.

The BSB elements used to provide this unique identification are as follows.

Originating Bank: <BkSvcsBllgStmnt/BllgStmntGrp/Sndr/Id/OrgId/AnyBic> or <BkSvcsBllgStmnt/BllgStmntGrp/Sndr/Id/Fild/BICFI>

This element is extremely important since it uniquely identifies the sending bank to the receiver's data processing system and forms part of the receiver's database key. We recommend using the first element above to uniquely identify the originating FI.

This is a code used to uniquely identify the originating FI. In a typical situation all the statements (accounts) within the **BillingStatementGroup** would reside in this institution. In those situations where one or more accounts in the **BillingStatementGroup** are domiciled in different FIs or branches but use the same services and prices, then the <AcctSvc> complex type in the <AcctChrtcs> complex type identify the domicile bank - the bank in which the account actually resides.

Account: <BkSvcsBllgStmnt/BllgStmntGrp/BllgStmnt/AcctChrtcs/...>

The **AccountCharacteristics** complex type uniquely identifies the account. The <AcctChrtcs/AcctLvl> is used to indicate the account level within a hierarchy such as Detail, Intermediate or Summary. The <AcctChrtcs/CshAcct/Id/Othr/Id> is strongly recommended to carry the account number or identifier used to identify the account or relationship. Even if you are using the standard IBAN to uniquely identify the account, we still recommend using <AcctChrtcs/CshAcct/Id/Othr/Id> to identify the account within the BSB. Note that the combination of account level and account number must be unique within the same BSB message since receiving systems typically use these elements to uniquely identify the accounts within their databases. If two different statements use the same account identification, then the second statement into the receiving system for the same bank and date will overlay the first.

Statement Date: <BkSvcsBllgStmnt/BllgStmntGrp/BllgStmnt/FrToDt/ToDt>

Indicates the ending date in a statement period, typically the last day of the calendar month.

Note that the format for these elements must be the same month after month after month. You cannot chose to identify the domicile bank with one id and a different id the next. You cannot choose to submit an account number with dashes one month and with no dashes the next. You cannot chose to use one date format one month and a different date format the next.

Validation Advice

When validating an XML message against the approved schema (XSD), a variety of situations are checked before the message can be termed "well formed" and validated. This validation has nothing to do with the actual data content of the XML elements but rather with the structure and spelling of the elements. The following situations are checked:

- **Sequence:** The schema defines the sequence in which the various complex types and elements are to be presented.
- **Spelling:** Upper case, lower case, imbedded blanks and spelling are all checked. For example "BillingStatementGroup" will not be recognized as a valid element because the schema says it must be spelled as "BillingStatementGroup"
- **Occurrences:** The schema defines whether the presence of a complex type or element is required or not, and then if there can be multiple appearances.

- **Enumerations:** Many simple elements have a set of allowed values called enumerations. These enumerated values are the only values that will be accepted and then only if properly capitalized and spelled.

Multi Branch Handling

Introduction

In today's banking environment many global banks, both current and emerging, have locations in different countries around the world. Typically these "branches" have their own unique ID code be it a USA Federal Reserve Routing (R&T) code, a Canadian Financial Institution Routing Number or a SWIFT Bank Identification (BIC) code. Although these branches are all part of a single global bank, they retain their own unique identity to a great degree. This unique identity includes:

- Identification code
- Legal name
- Demographic information
- Officer and contact information
- Preferred currency code
- Line item service ID codes
- Service descriptions (legends)
- Service taxing calculations
- Service price list
- Service charge calculations

Although all part of a single global bank, each branch may present its own codes, prices and characteristics to its own customers even though the same customer may have accounts in many of the parent bank's branches.

Branch Diversity

The BSB provides for the statementing of a single parent customer with accounts in many branches of a single bank, all within a single BSB message (file). For example, if I am ABC Company with headquarters in London and I bank at World Bank, I may have accounts in the USA, German, French and Spanish World Bank branches. Each account will have its own unique account number and, more importantly, each account will be billed according to the unique practices of the various branches. My USA account uses the USA branch service codes and prices. Likewise, the other national branches use their own service codes and prices. In addition, the USA branch will deal in balance based earnings credits whereas the other non USA branches will not. The USA branch currency is USD and the other branch currencies vary by location. Some branches tax some services and others tax different services or none at all. Contact information is different for each branch and so is the branch demographic information. In the face of this diversity, how is all this branch variable information to be communicated to me at ABC Company headquarters in my single, monthly BSB from World Bank? If I am to make full use of the BSB electronic billing statement, I must know the differences between all the branches which in turn determine how I am being billed by each branch. Finally, in summary every month, I want to determine average and total prices across all my accounts in a single currency and what is my tax treatment from country to country.

How BSB Handles the Diversity

The BSB standard provides a way to communicate all this diverse branch information within a single BSB message. In addition, the BSB structure corresponds to the way most corporate receiving systems organize the account and statement data contained in the BSBs (and 822s). A receiving system will organize, or key, its data based on the domicile bank unique ID, the account number within the domicile bank and the statement date. The domicile bank is that bank/branch in which the account resides and which services the account. The domicile bank ID must be unique within the database (remember the customer will be dealing with many banks). The domicile bank master record must contain all the data that distinguishes one bank or branch from another such as demographic data, contact information, service codes and prices – in effect the

list presented in the **Introduction**. The problem is that it can be difficult to understand how to use the BSB to communicate all the branch diverse information.

Examples

The BSB standard is an XML message. It is composed of various complex types designed to communicate specific information. The following example illustrates a single BSB message containing two statements domiciled in the same bank/branch. The physical message is originated and sent by a single sender as indicated in the **ISO 20022 Header** (*World Bank* in this example) and is addressed to a single receiver as indicated in the **ISO 20022 Header** (*ABC Company Headquarters* in this example). In this case the physical message sender and receiver are the same as the originating FI and receiver as identified in the **Billing Statement Group**. The statements are for accounts held by the customer, ABC Company.

The **Bank Services Billing Statement** complex type begins the BSB message. The **Billing Statement Group** complex type identifies the domicile bank in which the accounts that follow reside and which originated the statements (*World Bank Germany* in this example). The **Billing Statement Group** identifies the domicile bank's unique ID code (R&T, Canadian or SWIFT code). The **Billing Statement Group** is the only complex type which contains the domicile bank's ID code and all the demographic and contact information associated with the domicile bank. The **Billing Statement Group** also identifies the domicile bank customer or customer subsidiary whose accounts and statements follow (*ABC Company Berlin Subsidiary* in this example). It is assumed that all the statements that follow up to the next **Billing Statement Group** use the domicile bank's service codes, price list, taxing calculations and preferred currency codes. If an account and statement are domiciled in a different branch using different characteristics, *WORLD Bank Spain* for example, then a new **Billing Statement Group** complex type must be initiated in order to identify the new domicile branch.

Accounts Domiciled in the Same World Bank Branch

XML Complex Type	Statement Related XML Complex Types	Statement Sections	Count	Notes
ISO 20022 Header			1	Always first in the message. An ISO 20022 common type that identifies the physical message Sender, <i>World Bank</i> , and Receiver, <i>ABC Company</i>
Bank Services Billing Statement			1	Begins the BSB conversation.
	Billing Statement Group	Sender Receiver	1	Identifies the FI bank or branch originating the statements that follow, <i>World Bank Germany</i> , and the receiver (customer) of the statements that follow, <i>ABC Company, Berlin subsidiary</i> .
	Billing Statement (first)	Statement dates and status	1 to n	Begins a customer statement
		Account characteristics	1	Identifies the account: <i>ABC Company Berlin Receivables</i>
		~~~~~		Statement information
	Billing Statement (second)			An optional next statement. Since we have not initiated a new <b>Billing Statement Group</b> complex type, it is assumed that this account and statement are domiciled in the bank/branch

				identified in the previous <b>Billing Statement Group</b> and use the same services, prices and characteristics.
		<b>Account Characteristics</b>		A different account, <i>ABC Company Berlin Administration</i> , for the same Receiver
		~~~~~		Statement information
end				End of BSB message

The following example illustrates a single BSB message containing two statements domiciled in different branches. The physical message is originated and sent by a single sender as indicated in the **ISO 20022 Header** (*World Bank* in this example) and is addressed to a single receiver as indicated in the **ISO 20022 Header** (*ABC Company Headquarters* in this example). The statements are for accounts held by the customer, *ABC Company*.

Accounts Domiciled in Different Branches of the Same World Bank

XML Complex Type	Statement Related XML Complex Types	Statmnt Sections	Count	Notes
ISO 20022 Header			1	Always first in the message. An ISO 20022 common type that identifies the physical message Sender, <i>World Bank</i> , and Receiver, <i>ABC Company</i>
Bank Services Billing Statement			1	Begins the first BSB conversation.
	Billing Statement Group	Sender Receiver	1	Identifies the FI bank or branch originating the statements that follow, <i>World Bank Germany</i> , and the receiver (customer) of the statements that follow, <i>ABC Company, Berlin subsidiary</i> .
	Billing Statement	Statement dates and status	1 to n	Beginning of a customer statement
		Account Characteristics	1	Identifies the account: <i>ABC Company Berlin Receivables</i>
		~~~~~		Statement information
	<b>Billing Statement Group</b>	<b>Sender Receiver</b>	1	Identifies the FI bank or branch originating the statements that follow, <i>World Bank Spain</i> , and the receiver (customer) of the statements that follow, <i>ABC Company, Spanish subsidiary</i> .
	<b>Billing Statement</b>	<b>Statement dates and status</b>	1 to n	Beginning of a customer statement
		<b>Account characteristics</b>	1	Identifies the account: <i>ABC Company Spanish Receivables</i>
		~~~~~		Statement information.
end				End of BSB message

Bad Practice

A global bank sending a BSB to a company with accounts in multiple branches can be tempted to use a bad practice. In this approach the <AcctSvcr> complex type located within the <AcctChrtcs> complex type is used to identify the domicile bank and the message contains only a single **BillingStatementGroup**. Now the message contains no information unique to the various branches identified by the account level <AcctSvcr>s. The receiving systems have no option but to assume that all the service codes, the price list, the currencies, the demographic information, the contacts and tax calculations all relate to the single bank identified in the single **BillingStatementGroup**. This is fine if the domicile banks all use the same service codes, price list, currencies, demographic information, contacts and tax calculations as the bank identified in the **BillingStatementGroup**. But this is not the case in most all situations.

Summary

- The **BillingStatementGroup** complex type is the only type that contains bank level legal name, demographic information, officer and contact information. Receiving systems assume that all the accounts and statements that follow up to the next **BillingStatementGroup** use the same service codes, service legends, price list, service charge calculations and tax calculations used by the bank identified in the previous **BillingStatementGroup**.
- If a BSB message contains accounts/statements from different branches within the same global bank and these branches use different services, prices and processing characteristics, then a new **BillingStatementGroup** complex type must initiate the statements for each new branch.
- Do not use the <AccSvcr> located within the <AcctChrtcs> complex type to indicate the domicile bank unless all domicile banks/branches use the same service codes, price list, currencies, demographic information, contacts and tax calculations as the bank identified in the previous **BillingStatementGroup**.

Calculating a Single Currency Translation Value from Multiple Daily Values

A situation can develop where, for example, a service is priced in Euros (Pricing Currency) but the account Settlement currency and, possibly, Host currency are different. The BSB provides the ability to communicate the currency translation values between currency pairs via the Currency Translation complex type. The problem is that the Currency Translation type does not provide for multiple translation values for the same currency pair during the course of a month. The Currency Translation type does not carry an "as of date". The assumption is that the value sent by the bank for this currency pair is the translation value used as of the statement date.

In the situation where there are multiple currency conversion values during the course of a month, even daily, the recommended solution is for the bank to aggregate the charges for the month in all currencies. Then, at month end, divide the currency pair charge totals to establish an "average" currency translation for the month. For example, given a two day month and charges totaled for the same value in three currencies, we have the following situation:

Day	EUR Charge	USD Charge	GBP Charge
1	25.00	30.00	20.00
2	25.00	29.00	19.00
Total	50.00	59.00	39.00

Therefore the "average" currency translation values are given by:

EUR to USD = $59.00/50.00 = 1.1800000$

EUR to GBP = $39.00/50.00 = 0.7800000$

Message Pagination

It can happen that a single BSB message is too large to be transmitted as a single physical message. This can happen if the sender is transmitting too many individual statements within a single BSB message or if

the number of **Service** sections within a statement is extremely large. In this case the sender must split the single logical message into two or more physical messages which are transmitted individually. This is a split message situation. In this scenario the initial BSB message is termed the “logical” message and the two or more portions that are split apart and transmitted individually are termed the “physical” messages. If the initial message is not split, then the logical and physical messages are the same. It is up to the receiver to reassemble the two or more physical elements of a split message back into the single logical message.

When a message is split, pagination must be used in all the physical elements. Pagination is used to link together the various physical elements so that the receiver can reassemble the constituent parts of the split message back into the original, logical message. In this process strict guidelines must be followed.

- Pagination must be used and it must be agreed upon by both the sender and receiver.
- A message can be split only within the **Service** sections of a statement and then no splitting is allowed within a particular **Service** section. This means that there can be no splitting before the first **Service** section of the current statement and none after the **Service** sections up to the end of the original logical message or the start of the next **Service** sections. In practical use, no other section or numbers of sections would, by themselves, be large enough to force a maximum message volume situation in the sender’s environment.
- Across the various physical elements of a split statement, the following elements must be used to maintain linkage and sequence across the elements:
 - **ReportIdentification** – Must be the same across all physical elements.
 - **MessagePagination** - Must use **PageNumber** and **LastPageIndicator** to indicate the proper sequence of the various pages (physical messages).
 - **GroupIdentification** – Must be the same for an individual group that is split into more than one physical element
 - **StatementIdentification** – Must be the same for an individual statement that is split into more than one physical element.
- There is no guarantee that the various physical elements of a split message will be transmitted or received in the original, proper sequence. Therefore the receiver system must be prepared to link together the physical elements in the proper sequence or to otherwise account for and total all the various data elements.
- Totals of data within a particular physical element should not reflect the totals of just the data that is contained in that element. In other words, all the totals as originally carried in the non split message remain unchanged. For example, the **Compensation** sections should contain totals gathered across all **Service** sections, not just those **Service** sections that are contained in a particular physical message.
- All physical messages must be well formed. This means that all the physical messages which constitute the original logical message must each, individually, conform to the BSB schema requirements. All required elements must be present, in the proper internal sequence, and properly spelled. The non required elements that are present in the original logical message should be present only once, and then in the sequence that they appear in the original logical message. The following table identifies those **Data Elements** that must be present and the complex types in which they reside. The required elements are indicated by “Yes” in the **Data Element** column.

BSB Required Elements	Data Element
BankServicesBillingStatement	
ReportHeader	
ReportIdentification	Yes
MessagePagination	
PageNumber	Yes
LastPageIndicator	Yes

BillingStatementGroup	
GroupIdentification	Yes
Sender	
Name	Yes
Identification	
OrganisationIdentification	
AnyBIC	Yes
FinancialInstitutionIdentification	
BICFI	Yes
Receiver	
Name	Yes
Identification	
OrganisationIdentification	
AnyBIC	Yes
FinancialInstitutionIdentification	
BICFI	Yes
BillingStatement	
StatementIdentification	Yes
FromToDate	
ToDate	Yes
CreationDateTime	Yes
Status	Yes
AccountCharacteristics	
AccountLevel	Yes
CashAccount	
Identification	
IBAN	Yes
Other	
Identification	Yes
CompensationMethod	Yes
AccountBalanceCurrencyCode	Yes
AccountServicerContact	Yes

Appendix D– Mapping Between the ISO 20022 BSB, TWIST BSB and the 822

A spreadsheet is available together with this MUG on the ISO 20022 web page, “ISO 20022 camt086 TWIST BSB and ASC X12 822 Segment Mapping – Nov 2012.xlsx” which provides a tag and segment mapping between and among the ISO 20022 BSB, the TWIST BSB and the 822. It will prove useful in those efforts which involve modification of existing creation or receiving systems in order to create or receive the new ISO 20022 BSB standard. The correspondence between the BSB and TWIST enumerations are contained above within the MUG document. The relevant columns in this spread sheet are:

- **B,C,D,E,F,G,H,I - Message Item** These columns provide the English name equivalent of the information to the right. The various columns are used to indicate, on an indented basis, the XML hierarchical structure of the data. The columns toward the left are complex types. The columns toward the right devolve into basic data elements
- **K – Or** This column indicates an “Or” relationship between columns of the same indentation. An “Or” relation means you must include one or the other of the elements – not both.
- **L – XML Tag** Contains the lowest level XML tag in the possible hierarchy. In many cases this will be a complex type tag with “branches” to the right.
- **M- Mult** Indicates whether this element is required or not and the maximum number of iterations allowed. Values are: **[0..1]** not required but only one allowed if present. **[0..n]** not required but a maximum given by “n” if present. **[1..1]** required but only one. **[1..n]** required but a maximum given by “n”.
- **N – Message Component** Indicates that the data element is a predefined ISO 20022 structure.
- **O- Data Type/Code** The ISO 20022 classification of the data element.
- **P – Message Item Definition** A brief definition of the element. Please consult the body of the MUG above for a full definition and use advice.
- **Q – ISO Path** The full ISO 20022 path to the final data element on the right. If this element is a complex type, the path will end before a basis data element is reached.
- **R – TWIST BSB Path** The corresponding data element. This is the full TWIST path to the final data element on the right. If this element is a complex type, the path will end before a basis data element is reached. Note that if a row in this column is blank, then there is no corresponding TWIST element.
- **S – 822 Segment** The corresponding 822 segment. Note that if a row in this column is blank, then there is no corresponding 822 segment.
- **T – Data** A “d” in this column means that this is a basic data element, it is not a complex type. The data in a basic data element should be captured by the receiving system.

Appendix E – Sample BSB Demonstration Message

A sample BSB message instance is available in the [Catalogue of ISO 20022 messages](#) on the ISO 20022 website together with the XML schema. This BSB message for account number 666777 is designed to illustrate the basic handling of balances, compensation values, services, taxes and currencies within the CAMT.086 BSB message. It also includes demographic and contact information. It is well formed and should be accepted by any receiving system with no validation errors. It consists of two major sections: the business application header <AppHdr> and the billing statement section <BkSvcsBllgStmnt>.

The application header contains only the minimum required elements. The statement section contains a variety of data, both required and optional, for a single statement.

- The domicile bank is “Twist Bank” with BIC “TWIST409978”.
- The receiver is “ABC Corporation” with BIC “USINFRP”.
- The statement is for “Demonstration Account Method C” with bank account number “666777”
- The period ending date is May 31, 2003.
- The account does not use balances to pay fees. Therefore there is no earnings credit amount.

The demonstration account:

- Is designed to demonstrate Tax Calculation Method C where taxes are calculated on the sum of the taxable service charges.
- The account uses two tax regions and Host currencies: **GB2121234** Great Britain - **GBP** & **DKK123456** Denmark - **DKK**
- Four pricing currencies are used: **GBP**, **DKK**, **EUR** and **USD**.
- There are two taxes levied on the services taxed in Great Britain– a VAT tax and a City tax
- Taxable services are displayed in <TaxRgn>, <SvcDtl> for each of the two tax regions.

The account characteristics are:

Logical Name	Tag/Enumeration	Data
Sending Bank	<Sndr><Nm>	Twist Bank
Sending Bank ID	<OrgId><AnyBic>	TWIST409978
Receiver	<Rcvr><Nm>	ABC Corporation
Receiver ID	<OrgId><AnyBic>	USINFRP
Statement Ending Date	<FrDt><ToDt>	2003-05-31
Account Number	<Othr><Id>	666777
Account Name	<Name>	Demonstration Account Method C
Tax Method	<Tax><ClctnMtd>	Method C
Comp Method	<CompstnMtd>	Delayed Debit
Account Currency	<AcctBalCcyCd>	USD
Settlement Currency	<SttlmCcyCd>	GBP
Host Currency	<HstCcyCd>	GBP
Currency Exchange	<CcyXchnng>	GBP to USD at 1.8
Currency Exchange	<CcyXchnng>	DKK to USD at 0.288
Ledger Balance-Avg Net	“LBAN”	337,935.48 USD
Collected Balance-Avg Net	“CBAN”	266,096.77 USD
Taxable Service Charges	“TXSC”	235.60 GBP
Settle Charge Ttl-current Period	“SCCP”	325.6 GBP
Service Charges Due Before Tax	“SCBT”	325.60 GBP
Tax Total Sum	“TXTS”	38.30 GBP
Tax Total Sum	“TXTS”	68.94 USD
Charges & Taxes Due This Stmt	“CTND”	363.90 GBP
Non Balance Compensable SVCs	“NBCS”	325.6 GBP
Total Services	<Svc>	7
Exempt Services	“XMPT”	2

Taxable Services	"TAXE"	5
Tax Region Number	<TaxRgn><Rgnb>	DKK123456
Tax Region Name	<TaxRgn><Nm>	Denmark
Taxes Per Service	<TaxId>	One - VAT tax
Tax Due to Region	<TaxDueToRgn>	6.20 DKK
Tax Region Number	<TaxRgn><Rgnb>	GB2121234
Tax Region Name	<TaxRgn><Nm>	Great Britain
Taxes per service	<TaxId>	Two-Vat and City
Tax Due to Region	<TaxDueToRgn>	37.31 GBP