RECORD STRUCTURE – SURVEY OF DEPOSIT BANKS AND INVESTMENT FIRMS PROVIDING CUSTODY AND ASSET MANAGEMENT SERVICES (TIHA)

Version 2.0 (29 March 2018)

Valid from 1 January 2018

Financial Markets and Statistics

Version 2.0 (29 March 2018)

Version	Date	Valid	Details
1.0	15 April 2008		- First version
1.1	26 May 2008	From 1 June 2008	- Sector code list is changed to be based on Statistics Finland 2000 sector classification - Eurostat classification list is changed to the list of International organisations - Some definitions has been made for report-level validation rules
1.2	6 August 2008	From 1 September 2008	- Validation rules for SBS record fields 13, 14, 15, 19 changed - Some definitions have been made for validation rules of SBS record fields 31, 32, 34: fields must fulfil a given condition only if it is mandatory - Type of holder's identifier has been added to inter-row validation rules (section 4.3) - Examples corrected
1.3	21 November 2008	From 1 January 2009	- Some definitions have been made for general record descriptions (paragraph 4) - Identifiers have been added to report level validation rules (paragraph 4.3) - Data provider's identifier (field 3) of batch record must be the own business ID of the data provider - Validation rules for ISIN code (field 9) of SBS record changed: validation rules for 2 first characters have been deleted - Sector fields (fields 39,44) of SBS record allow codes with length of 6 characters - Type of holder's identifier (field 41) must be P if holder's sector (field 44) begins with '14' (households) - Example on reporting of holder's data has been added
1.4	25 August 2011	From 1 February 2012	- Record field descriptions and validation rules have been integrated in one table - Validation rules relating to each record field have been numbered. - Validation rule (002) has been added for batch record field 6, connecting the reporting period with the period in the name of the file
1.5	24 May 2013	From 1 February 2014	- Sector code list is changed to be based on Statistics Finland 2012 sector classification - A definition has been made for the right side of validation rule for SBS record field 6 (Instrument) - Validation rules (002 and 003) added in SBS record field 33 (Coupon rate). The rules relate to the value reported - The introduction section has been completed as regards legal provisions concerning the Bank's authority to obtain information

1.6	24 September 2015	From 1 November 2015	-	Validation rule (002) added in SBS record field 39 (Issuer sector). The rule relates to the instrument reported
1.7	30 June 2016	From 1 January 2017	-	Field 30 (Issue date) to be reported for debt securities without ISIN code.
1.8	30 September 2016	From 1 January 2017	-	Validation rule (003) added in SBS record field 34 (Coupon Frequency).
2.0	29 March 2018	From 1 January 2018	-	Validation rule (006) added in SBS record field 42 (Holder's Identifier).
			-	Validation rule (002) added in SBS record field 43 (Holder's Name).
			-	Validations in SBS record field 43 (Holder's Name) updated.

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1 INTRODUCTION

The Bank of Finland collects data from investment firms, mutual funds, companies, financial and insurance institutions, municipalities and the central government on a monthly basis on securities held in custody and securities-based assets and liabilities. This data is used particularly by the Bank of Finland, Statistics Finland and the European Central Bank (ECB) in the compilation of financial and balance of payments statistics for Finland and the euro area. In addition, the data is used for carrying out the ESCB-related tasks, such as monetary policy and prudential oversight. Statistical data is sent to EU and international institutions, of which the most important is the ECB. The statistics are published for use by the public on, for example, the Internet sites of the Bank of Finland and the ECB.

The Bank of Finland's authority to obtain information is based on the following legal provisions: sections 26 and 28 of the Act on the Bank of Finland (214/1998) and Council Regulation (2533/1998, as amended by Regulation 951/2009) concerning the collection of statistical information by the European Central Bank and the ECB Regulation ECB/2012/24 concerning statistics on holdings of securities. ECB guidelines ECB/2004/15 and ECB/2007/3 require a security-by-security data collection method.

This document describes the record structure used in the submission of data by reporting institutions.

2 SUBMISSION OF DATA TO THE BANK OF FINLAND

The report sent to the Bank of Finland on a monthly basis contains a statement on the custody of such securities with and without ISIN codes whose holder resides in Finland or whose issuer is Finnish.

The reports must be submitted to the Bank of Finland on the 10th banking day of the month following the reporting month, at the latest.

The data to be reported is described in more detail in separate reporting instructions.[1]

2.1 DCS data transfer

The data is submitted by the reporting entity to the Bank of Finland using the provided DCS service (Data Collection Service). The DCS service is maintained by the service provider, ie the DCS operator.

The reporting entity is responsible for reporting the data on a monthly basis to the DCS operator. For the purposes of data transfer, it is crucial that reporting entities compile a file with record structures as presented in this document.

The DCS operator acts as an intermediary and provides a suitable technical service platform. The service provider ensures the technical integrity and correctness of the record structure and submits the validated data to the Bank of Finland.

When a correction needs to be made to a report that has already been sent, the entire report must be sent again to the DCS operator.

Separate instructions apply to reporting entities' procedures with the DCS operator.

2.2 Testing

Reporting may be tested by marking the contents of the report as test data (see batch record field 5). Test reports are sent to the operator in the usual manner.

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[1] Reporting instructions – Survey of deposit banks and investment firms providing custody and asset management services (TIHA), Bank of Finland.

2.3 Paper reports and dispatch of portable data media

The data is transferred primarily via the DCS operator. In exceptional cases, the reports may be sent using a separate portable data medium (such as CD) or on paper. These cases must be agreed on specifically with the Bank of Finland.

A paper report may be used to report a maximum of 10 securities.

If the report is sent using portable data media, a note must be appended, containing technical information on the data media. The data media must be protected sufficiently for mail handling purposes.

The data is only reported once, either via the DCS operator, in portable data media, or on a paper form.

3 REPORT FILE

Report files are created as CSV (Comma Separated Value) files using a semicolon as the separator.

The character set used in the file must be ISO-Latin-1 (code name ISO 8859-1).

3.1 File structure

The file consists of a *batch record* and a variable number of *content records* describing actual data to be reported. The batch record is on the first line of the file.

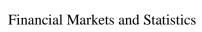| Record type	Record ID (field 1)
Batch record	000
Content record	SBS

3.2 Naming of file

The name of the file consists of the code identifying the survey, ie 'TIHA', the month subject to reporting and the reporting entity's business ID without hyphen.

TIHA_<YYYY><Frequency><MM>_<Business ID>.CSV

Example: February 2014 TIHA report:
TIHA_2014M02_01234562.CSV

3.3 Validation of file

The DCS operator validates the correctness of the report file. Validation is conducted at file, record and field level. Validation is performed in connection with data transfer and the reporting entity receives immediate feedback on possible errors.

In addition, the Bank of Finland conducts its own reviews on the content of files.

4 RECORD DESCRIPTIONS

The following general rules apply to the records:
- Fields are separated from each other with a semicolon (ASCII 59). There is no semicolon after the last field of the row.
- The contents of record fields may not contain quotation marks or CR (Carriage Return) or LF (Line Feed) characters.
- Records are separated from each other with the CR-LF character pair. The CR-LF character pair is added also to the last row of the file.
- Alphanumeric fields are demarcated with quotation marks. Quotation marks are not counted in the length of the field.
- Decimals, if any, of numeric values are separated with a comma.
- Numeric fields shall only include a negative sign.

Structure	Explanation
Number(x[,y])	Indicates numeric data. The maximum length of the field is given in parentheses. The number of potential decimals is shown with a comma. The comma and data after the comma are not obligatory if they are zeros. For example format 'Number(18,2)' indicates that the field may contain a maximum of 18 characters, of which 16 are integers and 2 decimals.
Char(x)	Indicates alphanumeric data comprising a fixed number of characters. The length of the field is given in parentheses. The value of the field is given either by leaving the field empty or entering the number of characters given in parentheses.
Varchar(x)	Indicates alphanumeric data comprising a variable number of characters. The maximum length of the field is given in parentheses.

In numeric fields the value zero is an acceptable mandatory value unless there is a specific validation rule in the field requiring a figure other than zero.

If there is no data to be entered in an alphanumeric field, the field can be left empty and without quotation marks.

Fields marked as 'Reserved' are left empty and without quotation marks.

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If there is no data to be entered in the last fields of a record, the semicolons ending the record can be left out.

If more than one code list may be used for reporting data in a specific field, the value entered in the field must be found in one of the code lists provided (for example, country code can be chosen from ISO 3166 standard or list of International organisations).

Not all values in code lists are necessary usable. For example, the sectoral classification is based on Statistics Finland's Classification of Sectors 2012, but not all sector codes are possible in this survey.

4.1 Batch record (000)

The batch record contains the general information on the report. The report always includes one batch report, and it is the first record in the file.

4.1.1 Fields in the record

Sequence	Field	Code list	Structure	Rule	Left side	Operator	Right side
1	**Record type** "000" = Batch record	1: Record type	Varchar(4)	001	Value of 000 record field 1 (Record type)	=	"000"
2	**Type of reporting entity's identifier** Y = 'Y-tunnus' denoting the Finnish business ID	3: Type of identifier	Char(1)	001	Value of 000 record field 2 (Type of data provider's identifier)	=	"Y"
3	**Reporting entity's identifier** Business ID without hyphen in format NNNNNNNN		Char(8)	001	Value of 000 record field 3 (Data provider's identifier)	=	Valid business ID
				002	Value of 000 record field 3 (Data provider's identifier)	in format	<NNNNNNNN>
4	**Survey code** TIHA = Survey of deposit banks and investment firms		Varchar(5)	001	Value of 000 record field 4 (Survey code)	=	"TIHA"

		providing custody and asset management services						
5	**Data type** N = Test file, not transmitted to the Bank of Finland T = Test file, transmitted to the Bank of Finland P = Production data	2: Data type	Char(1)	001	Value of 000 record field 5 (Data type)	=	"N", "T" OR "P"
6	**Reporting period** Month subject to reporting in format <YYYY>M<MM> (= year-letter M for monthly reporting frequency-month)		Char(7)	001	Value of 000 record field 6 (Reporting period)	in format	<YYYY>M<MM>
				002	Value of 000 record field 6 (Reporting period)	=	Part of file name "TIHA_<YYYY>M<MM>_<Data provider's business ID>.CSV" in format <YYYY>M<MM>
7	**Creation date** Date and time at which the report was created in format <YYYY><MM><DD><HH><MM> (= year-month-day-hour-minutes)		Char(12)	001	Value of 000 record field 7 (Creation date and time)	in format	<YYYY><MM><DD><HH><MM>
8	**Number of rows** Number of rows in the file including batch record		Number(10)	001	Value of 000 record field 8 (Number of rows)	=	Number of rows in the file
9	**Reporting entity's comment** Possible short comment by the reporting entity		Varchar(500)				

4.1.2 Example

The batch record in the example below indicates that the test report includes 1523 rows in February 2014. The test report is not transmitted to the Bank of Finland. It is used for validating the report format with the DCS operator.

```
”000”;”Y”;”01234562”;”TIHA”;”N”;”2014M02”;”201403021254”;1523;”This is test report.”
```

The batch record in the example below indicates that the report includes 1523 rows of production data in February 2014. The report is transmitted to the Bank of Finland.

```
”000”;”Y”;”01234562”;”TIHA”;”P”;”2014M02”;”201403021254”;1523;
```

4.2 Content record (SBS)

The actual data on securities held in custody are reported in content records.

4.2.1 Content record fields

A content record includes the following fields:

Group	Sequence	Field	Code list	Structure	Rule	Left side	Operator	Right side
Record type	1	**Record type** SBS = Security-by-security record	1: Record type	Varchar(4)	001	Value of SBS record field 1 (Record type)	=	"SBS"
	2	Reserved						
	3	Reserved						
Classifications	4	Reserved						
	5	Reserved						
	6	**Instrument** Security classification code.	6: Instrument	Varchar(5)	001	Value of SBS record field 6 (Instrument)	=	"331", "332", "51", "511", "512", "513" OR "52"
	7	Reserved						
Instrument identification data	8	**Internal identification code** Internal unchangeable code used by reporting entity for security identification. For securities with ISIN code, preferably the same value as entered in field 9 (ISIN code).		Varchar(100)	001	Value of SBS record field 8 (Internal identification code)	=	Mandatory

	9	**ISIN code** Security's ISIN code in accordance with ISO 6166 standard. ISIN code has the following structure: • Length 12 characters • Characters 1-2: Letters • Characters 3-11: Alphanumeric characters • Character 12: Verification number for purposes of "Modulus 10 Double Add Double" calculation		Char(12)	001	IF value of SBS field 9 (ISIN code) is entered, the value	=	Valid ISIN code
	10	Reserved						
	11	**Instrument's name** Security's name as known by reporting entity.		Varchar(255)	001	IF value of SBS record field 9 (ISIN code) has not been entered, THEN value of SBS record field 11 (Instrument's name)	=	Mandatory
	12	Reserved						
Data on number and value	13	**Number of instruments** Number of individual instruments		Number(24,6)	001	IF value of SBS record field 6 (Instrument) begins with "5", THEN value of SBS record field 13 (Number of instruments)	=	Mandatory

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	14	**Total nominal value** Aggregated nominal value of individual security with ISIN or internal identification code. Reported in selected currency rounded to two decimal places.		Number(20,2)	001	IF value of SBS record field 6 (Instrument) begins with "33", THEN value of SBS record field 14 (Total nominal value)	=	Mandatory
	15	**Nominal currency** Currency code in which total nominal value is reported.	8: Currency (ISO 4217)	Char(3)	001	IF value of SBS record field 14 (Total nominal value) ≠ 0, THEN value of SBS record field 15 (Nominal currency)	=	Mandatory
	16	Reserved						
	17	Reserved						
	18	Reserved						
	19	**Total market value** Aggregated market value of security with ISIN or internal identification code. Reported in selected currency rounded to two decimal places.		Number(20,2)	001	Value of SBS record field 19 (Total market value)	=	Mandatory
	20	**Market currency** Currency code in which market value is reported.	8: Currency (ISO 4217)	Char(3)	001	Value of SBS record field 20 (Market currency)	=	Mandatory
	21	Reserved						
	22	Reserved						

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	23	**Dividends** Gross dividends paid to holder during the month. Reported in selected currency rounded to two decimal places.		Number(20,2)	001	IF value of SBS record field 6 (Instrument) begins with "51", THEN value of SBS record field 23 (Dividends)	=	Mandatory
					002	IF value of SBS record field 23 (Dividends) is entered, the value	≥	0
	24	**Dividend currency** Currency code in which dividends are reported.	8: Currency (ISO 4217)	Char(3)	001	IF value of SBS record field 23 (Dividends) is > 0, THEN value of SBS record field 24 (Dividend currency)	=	Mandatory
	25	Reserved						
	26	Reserved						
	27	Reserved						
	28	Reserved						
	29	Reserved						
	30	**Issue date** Issue date of the security in format YYYYMMDD.		Char(8)	001	IF no value is entered in the SBS record field 9 (ISIN code) AND the value of field 6 (Instrument) is "331" or 332" THEN the value of SBS record field 30 (Issue date)	=	Mandatory
					002	IF a value is entered in the SBS record field 31 (Maturity date), the value	is in format	<YYYY><MM><DD>

Maturity and coupon rate	31	**Maturity date** Maturity date of security in format YYYYMMDD.		Char(8)	001	IF value of SBS record field 9 (ISIN code) is not entered AND value of SBS record field 33 (Coupon rate) is entered AND value of SBS record field 32 (Next coupon date) is not entered, THEN value of SBS record field 31 (Maturity date)	=	Mandatory
					002	Value of SBS record field 31 (Maturity date)	is in format	<YYYY><MM><DD>
	32	**Next coupon date** In format YYYYMMDD.		Char(8)	001	IF value of SBS record field 9 (ISIN code) is not entered AND value of SBS record field 33 (Coupon rate) is entered AND value of SBS record field 31(Maturity date) is not entered, THEN value of SBS record field 32 (Next coupon date)	=	Mandatory
					002	Value of SBS record field 32 (Next coupon date)	is in format	<YYYY><MM><DD>

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	33	**Coupon rate** Interest paid on the nominal value specified in the bond, rounded at maximum to four decimal places.		Number (22,4)	001	IF value of SBS record field 9 (ISIN code) is not entered AND value of SBS record field 6 (Instrument) begins with "33", THEN value of SBS record field 33 (Coupon rate)	=	Mandatory
					002	IF a value is entered in the SBS record field 33 (Coupon rate), the value	≥	0
					003	IF a value is entered in the SBS record field 33 (Coupon rate), the value	≤	100
	34	**Coupon frequency** Number of coupon payments a year, in integers.		Number (3)	001	IF value of SBS record field 9 (ISIN code) is not entered AND value of SBS record field 33 (Coupon rate) is entered, THEN value of SBS record field 34 (Coupon frequency)	=	Mandatory
					002	Value of SBS record field 34 (Coupon frequency)	≥	0
					003	Value of SBS record field 34 (Coupon frequency)	≤	52
Data on issuer	35	Reserved						
	36	Reserved						
	37	Reserved						
	38	Reserved						

	39	**Issuer's sector** Issuer's sectoral classification code in accordance with Statistics Finland 2012 sector classification as precisely as possible.	9: Sector	Varchar(6)	001	IF value of SBS record field 9 (ISIN code) is not entered, THEN value of SBS record field 39 (Issuer's sector)	=	Mandatory
					002	IF field 9 (ISIN code) of SBS record is left empty AND value of SBS record field 6 (Instrument) is "52" THEN value of SBS record field 39 (Issuer's sector)	=	"123", "124", "1241" OR "1242"
	40	**Issuer's home country** Issuer's home country in accordance with ISO 3166 standard or International organisations classification.	10: Country, ISO 3166 11: International organisations	Char(2)	001	IF value of SBS record field 9 (ISIN code) is not entered, THEN value of SBS record field 40 (Issuer's home country)	=	Mandatory
	41	**Type of holder's identifier** Y = Business ID X = X-identifier P = Personal identifier O = Other identifier	3: Type of identifier	Char(1)	001	Value of SBS record field 41 (Type of holder's identifier)	=	"X", "Y", "P" OR "O"
					002	IF value of SBS record field 44 (Holder's sector) begins with "14" (Households), THEN value of SBS record field 41 (Type of holder's identifier)	=	"P"
Data on holder	42	**Holder's identifier** - Business ID without hyphen in format <NNNNNNNN> - X-identifier in format X<NNNNNNNN> - If identifier is P, field value is Z99999999 - In other cases reporting entity's internal identifier for holder		Varchar(20)	001	Value of SBS record field 42 (Holder's identifier)	=	Mandatory
					002	IF value of SBS record field 41 (Type of holder's identifier) is "Y", THEN value of SBS record field 42 (Holder's identifier)	=	Valid business ID

					003	IF value of SBS record field 41 (Type of holder's identifier) is "Y", THEN value of SBS record field 42 (Holder's identifier)	is in format	\<NNNNNNNN\>
					004	IF value of SBS record field 41 (Type of holder's identifier) is "X", THEN value of SBS record field 42 (Holder's identifier)	is in format	X\<NNNNNNNN\>
					005	IF value of SBS record field 41 (Type of holder's identifier) is "P", THEN value of SBS record field 42 (Holder's identifier)	=	"Z99999999"
					006	Value of SBS record field 42 (Holder's identifier)	\<\>	Personal identification number
	43	**Holder's name** Holder's full name. In the case of individuals, the field can be left blank or report eg "households".		Varchar(100)	001	IF value of SBS record field 41 (Type of holder's identifier) is "X" or "O", THEN value of SBS record field 43 (Holder's name)	=	Mandatory
					002	Value of SBS record field 43 (Holder's name)	\<\>	Personal identification number
	44	**Holder's sector**	9: Sector	Varchar(6)	001	IF value of SBS record field 41 (Type of holder's identifier) IS NOT "Y",	=	Mandatory

		Holder's sectoral classification code in accordance with Statistics Finland 2012 sector classification.				THEN value of SBS record field 44 (Holder's sector)		
	45	**Holder's home/taxation country** Holder's home/taxation country in accordance with ISO 3166 standard or International organisations classification.	10: Country, ISO 3166 11: International organisations	Char(2)	001	Value of SBS record field 45 (Holder's home/taxati on country)	=	Mandatory

4.2.2 Example

Examples of a content record.

SBS example 1: Data on custody of a security with an ISIN code.

ISIN code has been used as internal identification code. The holder is a company identified with business ID.

```
"SBS";;;;;"51";;"FI0003021865";"FI0003021865";;;;120;;;;;;;7689,83;"GBP";;;120,10;"GBP";;;;;;;;;;;;;;
"Y";"12345678";;;"FI"
```

SBS example 2: Data on custody of a security without an ISIN code.

```
"SBS";;;;;"33";;"JVK1";;;"JVKABC";;;120400,1;"GBP";;;;130120;"GBP";;;;;;;;;;;"20141231";;1,5;2;;;;;
"12231";"SE";"Y";"12345678";;;"FI"
```

SBS example 3: Data on holdings of individuals

Holdings of a security with an ISIN code when the holder is an individual (household). Individuals' holdings of one ISIN code are summed up by holder's country. In the example the holdings of the same ISIN code by Finnish and Swedish individuals have been presented as separate rows.

```
"SBS";;;;;"51";;"FI0003021865";"FI0003021865";;;;10000;;;;;;100000;"GBP";;;1000;"GBP";;;;;;;;;;;;;;;
"P";"Z99999999";;"14";"FI"
"SBS";;;;;"51";;"FI0003021865";"FI0003021865";;;;5000;;;;;;50000;"GBP";;;500;"GBP";;;;;;;;;;;;;;;
"P";"Z99999999";;"14";"SE"
```

4.3 Report-level validation rules

The following validation rules do not relate to individual rows but pertain to the report on the whole. Empty field is also considered to be a value.

Rule TIHA.SBS.R1

- The same internal identification code (field 8) has always same values in the following fields, when data is entered:
    - Instrument (field 6)
    - ISIN code (field 9)
    - Nominal currency (field 15)
    - Issuer's sector (field 39)
    - Issuer's home country (field 40)

Rule TIHA.SBS.R2

- Holdings of one holder (excluding holders identified with a personal identification code) must be reported on one row. One file can contain only one row that has same values in the following fields, when data is entered:
    - Internal identification code (field 8)
    - Type of holder's identifier (field 41)
    - Holder's identifier (field 42)
    - Holder's home/taxation country (field 45)

Rule TIHA.SBS.R3

- If the type of holder's identifier (field 41) is Y, X or O, the same holder identifier (field 42) has always same values in the following fields:
    - Holder's sector (field 44)
    - Holder's home/taxation country (field 45)