SIBS Forward Payment Solutions

Implementation Guide

MULTIBANCO Services

Bill Payments

Services Suppliers

Version: 01.00

Date: 2017-05-19

Status: Final

Classification: Restricted

Reference: DCSIBS170202

ISO 9001
ISO 20000
BUREAU VERITAS
Certification

Certification on AT2, SEPA and SWIFT Services

Document Info

Reference: DCSIBS170202
Document Title: Bill Payments
Version: 01.00
Status: Final
Classification: Restricted
Document Type: Implementation Guide

Related Documents

Reference	Title	Source
n.a		

Version History

Version	Date	Description	Author
01.00	2017-05-19	Document creation. Regarding the DCSPAG120570 document, which is replaced by this one, the following changes were made: • Section 1 Introduction: new footnote • Section 1.1 Background • Figure 4 – Data Flow • Section 3.3.3.1.1 AEPS - CLIENTS FILE (Observations) • Section 3.3.3.1.2 Schedule • Section 3.3.3.2.1 AEPE – RESPONSE FILE TO CLIENTS FILE (Observations) • Section 4.1 Participants Other editorial changes without technical impact.	Services Management

Table of Contents

List of Figures

List of Tables

1   Introduction

The Bill Payments service was conceived for Services Suppliers [1] to receive payments from their Clients, on-us[2] cardholders who can make the payments for the provided services through an electronic transactions network.

This service, developed, ruled and managed by SIBS Forward Payment Solutions (hereinafter designated "SIBS FPS"), can operate in any electronic transactions network. It is currently operating in MULTIBANCO network, managed by SIBS Forward Payment Solutions which is the Bill Payments service's preferential processor.

Within MULTIBANCO network, it permits the payment of services or products, through several channels – Automated Teller Machine (ATM), Point-of-Sale (POS), MB PHONE and Home Banking (Host-to-Host channel) – provided that the on-us card Issuers enable the Bill Payments feature in their issued cards.

1.1   Background

The Bill Payments service is an ever growing service which attracts more and more Services Suppliers, interested in benefiting from its advantages. It was created in the scope of the first project developed by SIBS Group, in 1985, the foundation of the Automated Teller Machines (ATM) network. Since then, any on-us cardholder has been able to benefit from a wide range of transactions, such as banknotes withdrawal, balance inquiry, account movements inquiry and cheques request.

Four years later, in February 1989, the Bill Payments was made available in MULTIBANCO ATM network. From the beginning, it became one of the most used services of MULTIBANCO network, as it allows the payment of utilities, insurances and other bills.

The Services Suppliers, adherent to the Bill Payments service can receive, on a daily basis – or three times a day, depending on the parameterization – information on the payments processed in MULTIBANCO network; the information is sent by SIBS FPS, which is the service's manager and regulator and also the electronic transactions network processor.

Besides SIBS FPS, the Bill Payments involve other participants, which can be Credit Institutions (Banks) or Acquirers (ex.: UNICRE or AMEX) – generically designated as Support Institutions (in the sense of being the Institutions that support the bank account held by the Services Suppliers) – with whom the Services Suppliers establish an agreement for the service.

---

[1] A Service Supplier is an entity who adheres to the Bill Payments service by signing an agreement with a Support Institution – a Bank or an Acquirer – and makes the service available for its Clients to pay for the service, with their on-us cards, using the Bill Payments service, operating in an electronic transactions network.

[2] On-us cards are cards that are stored in the SIBS FPS database and for whose Issuers SIBS FPS provides a processing service with a comprehensive range of functionalities.

1.2   Scope

This Implementation Guide describes the steps and requirements that must be complied with by the Services Suppliers that wish to adhere to the Bill Payments service. The implementation technical specifications are also specified in this guide, including a detailed structure of all the files exchanged between SIBS FPS and the Services Supplier.

Finally, this guide supplies a set of tests regarding the service's operations processed by SIBS FPS, comprising the correct and thorough procedures to perform them.

2   Service Adherence

A Services Supplier that wishes to receive payments, for their supplied services to the Clients, through MULTIBANCO Network, managed by SIBS FPS, must adhere to the Bill Payments service.

The adherence process must be directed by a Support Institution who is responsible for submitting the corresponding adherence forms to SIBS FPS[3].

SIBS FPS, which is responsible for the whole system's proper operation, guarantees its liability, provided that all the participants in the system comply with the good practices and a set of requirements and procedures.

2.1   Requirements

As the Bill Payments service preferential processor, SIBS FPS is responsible for the platforms' and MULTIBANCO network system's adequate operation. Nonetheless, the Services Suppliers must comply with some requirements and procedures.

2.1.1   Security

Data exchange (files, messages) between SIBS FPS' and the Services Suppliers' systems is made through channels and applications which guarantee the total security and liability of the communication flows.

For file exchange between SIBS FPS' systems and the Services Suppliers', the existing channels are privileged since they comply with necessary requirements; this allows resources optimization and guarantees the systemic security already in place.

For TCP/IP connections, technically simpler and cheaper, an end-to-end communications network must be established between SIBS FPS and its partners (the Services Suppliers).

TCP/IP connections, over dedicated lines, are necessary so that the Services Suppliers can benefit, with total security, from optional solutions such as MFT (MULTIBANCO File Transfer) and PRT (Real Time Protocol):

- The MULTIBANCO File Transfer was conceived by SIBS FPS to perform file transfer between SIBS FPS and the Services Suppliers, guaranteeing the absolute data integrity;

- The Real Time Protocol is an optional solution that allows the Services Supplier to receive a notification per each payment that is processed in real time, in MULTIBANCO Network, at the precise moment when the transaction occurs.

---

[3] See Forms in Annex C and Annex D, in this guide.

At last, the access to SIBS Portal, the interface through which SIBS FPS interacts with the Services Supplier, is also reliable in terms of security features, as only the Services Supplier and its Support Institution may manage business data.

2.1.2   Communications

Except for MFT and PRT options, all the operational communication is made through SIBS Portal, an online application developed by SIBS: Forward Payment Solutions.

This platform is available to the Services Suppliers, according to their specific profile access needs. This is a web-based application, accessed through a browse. To have access to SIBS Portal, the Services Supplier must adhere, by filling in a proper form and, after that, access profiles and users are configured.

In these terms, the authenticated user communicates with SIBS FPS through the data communications public network and accedes to the services supplied, according to the Services Supplier's parameterized profiles.

2.1.3   Software and Licensing

SIBS FPS owns copyright and other proprietary rights on the software and the services supplied to the users.

Whenever a Services Supplier wishes to broadcast information on the Bill Payments service among its Clients, it must inform SIBS FPS – or other company of SIBS Group dully designated for that – about the broadcast activities, including publicity campaigns; SIBS FPS can also assess promotional material, if necessary. The purpose of this is to safeguard the service's public image, by providing accurate and correct information to the public.

2.1.4   Legal Background

The Bill Payments service is ruled by the Portuguese and European Union law in force, particularly the Portuguese Decree-Law no. 317/2009, of 30th October, that transposes the Directive 2007/64/CE, of the European Parliament and the European Council into the Portuguese legislation.

According to the article 7 of the Decree-Law 317/2009, the entitled institutions to supply payment services are the credit institutions established in Portugal, or in any other Member-State of the European Union, that have been granted authorization to operate as payment institutions by the Portuguese Central Bank (*Banco de Portugal*).

In this sense, both Services Supplier and Support Institution, in the quality of payment institutions, must ensure that they comply with the legal rules in force, namely on what concerns the necessary authorization to operate as payment institutions, granted by the Portuguese Central Bank, the supervisor of credit institutions, financial companies and payment institutions.

2.2 Processes

The adherence process is the first step for implementing the Bill Payments service and it comprises a set of rules and stages that must be accomplished by the Services Suppliers, in cooperation with their Support Institutions.
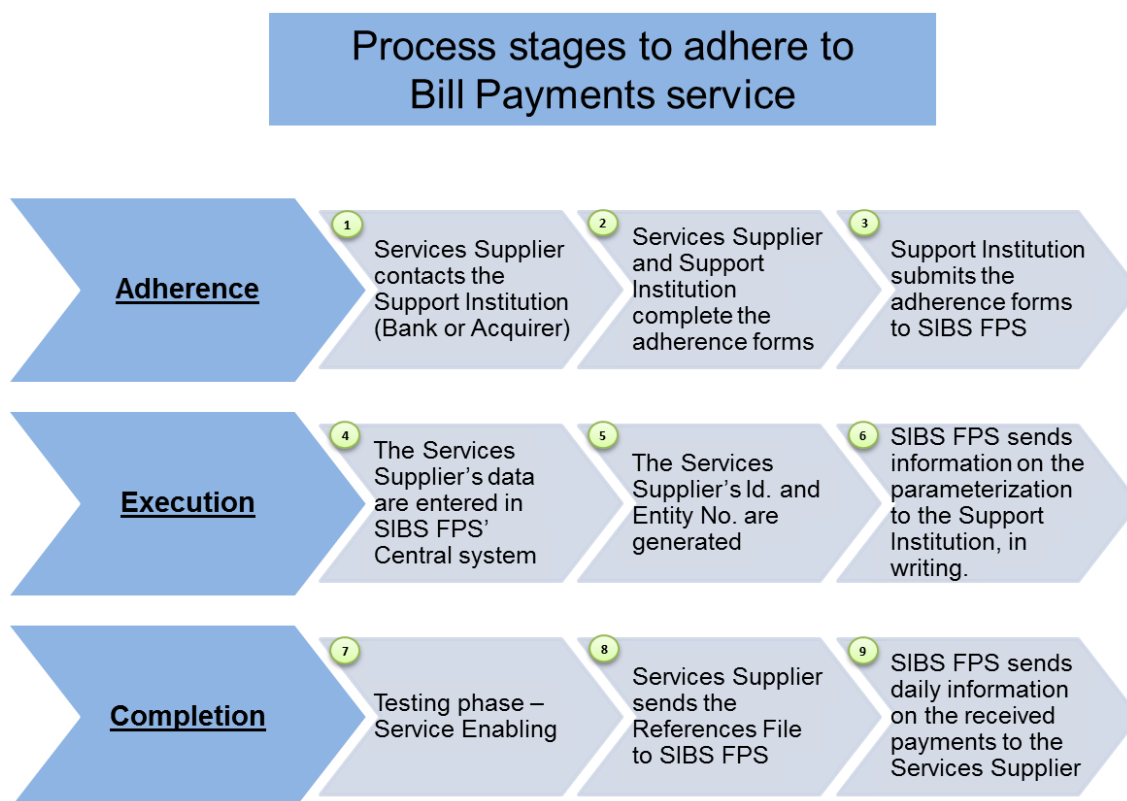
Figure 1 – Adherence to Bill Payments – Process Stages

To benefit from the Bill Payments service, the following stages must be completed:

1. In order to start the adherence process, the Services Supplier must contact a Support Institution (Bank or Acquirer)…

2. …who supplies the adherence form that must be fulfilled by the Services Supplier; in this form, basic identification data must be filled, as well as the Services Supplier(s)[4] characterization-related data to be parameterized in SIBS FPS system;

3. The Support Institution submits the adherence form to SIBS FPS…

4. …and SIBS FPS inserts the Services Supplier's data in the Central Processing System;

5. The supplied data will be the basis for the Entity's characterization (Entity No.) and the Services Supplier Id. generation in SIBS FPS' Central System…

---

[4] One Services Supplier can have more than one Services Supplier parameterized within MULTIBANCO system; this is the case of a Services Supplier that provides different services and has one Services Supplier characterized per each provided service.

6.   …and when the parameterization is complete, SIBS FPS informs the Services Supplier, in writing, on its characterization data;

7.   The process follows with System operation tests…

8.   …and, after going Live, the Services Supplier sends to SIBS FPS the Clients File (if the payments validation is based on this file);

9.   On a daily basis – or three times a day, if that is the Services Supplier's option -, SIBS FPS, the Third-Party Processor, provides information on the payments made to the Services Supplier in MULTIBANCO Network.

2.3   Contacts

Scope	Area	Contact
Operational and functional support (clarifications, suggestions and file retrieval)	Network and Operations Management Department Customer Support	sac.suporte@sibs.pt Phone: +351 218 434 198
Acceptance tests		
Questions and problems reporting		
Service's brand image rules	Corporate Office Communication	comunicacao@sibs.pt

3 Service Implementation

As a Third-Party Processor, SIBS FPS mandates the implementation of a set of minimum technical requirements, which have already been implemented by multiple Entities who benefit from numerous MULTIBANCO Network services.

3.1 Technical Requirements

Communications between SIBS FPS and the Services Suppliers, as well as with their Support Institutions, must be based on an end-to-end communication architecture, to allow the connections between the data processing centers of both participants, regardless of the involved computers' types and brands.

For file transfer purposes, SIBS FPS recommends the use of a proper application – MULTIBANCO File Transfer – that assures the total integrity of the exchanged data.

3.1.1 Multibanco File Transfer application (optional)

The dialog between two systems residing in different computers, to allow the file transfer (record sequences) between each other is vital for the development of any service supplied by SIBS FPS.

SIBS FPS developed its own application, MULTIBANCO File Transfer - MFT, to establish communications between data processing centers, regardless of the computers brands and types. The MFT application must operate over one dedicated line, for example, TCP/IP.

The MFT application guarantees the total integrity and liability of data delivered at its destination, keeping their precise original characteristics. The data representation code is the only element that can be converted (ASCII/EBCDIC or vice-versa), whenever the involved computers operate in different codes, or whenever the Services Supplier opts for the conversion.

The MFT application is supplied by SIBS FPS and subject to a specific purchase and maintenance agreement.

3.1.1.1 Basic Concepts

The MFT application lays on some basic concepts that support its architecture:

- **Remote Computer** – SIBS FPS' computer, with which the Services Supplier communicates to receive and/or send files;
- **Local Computer** – The Services Supplier's computer. It is identified by the number created by SIBS FPS and supplied with the documentation sent to the Services Supplier;
- **Local Entity** – Entity designation assigned by SIBS FPS for file transfer purposes;

- **Remote Entity** – The Remote Entity with which the Local Entity communicates to receive and/or send files.

Figure 2 shows a general view of the MFT application operation.
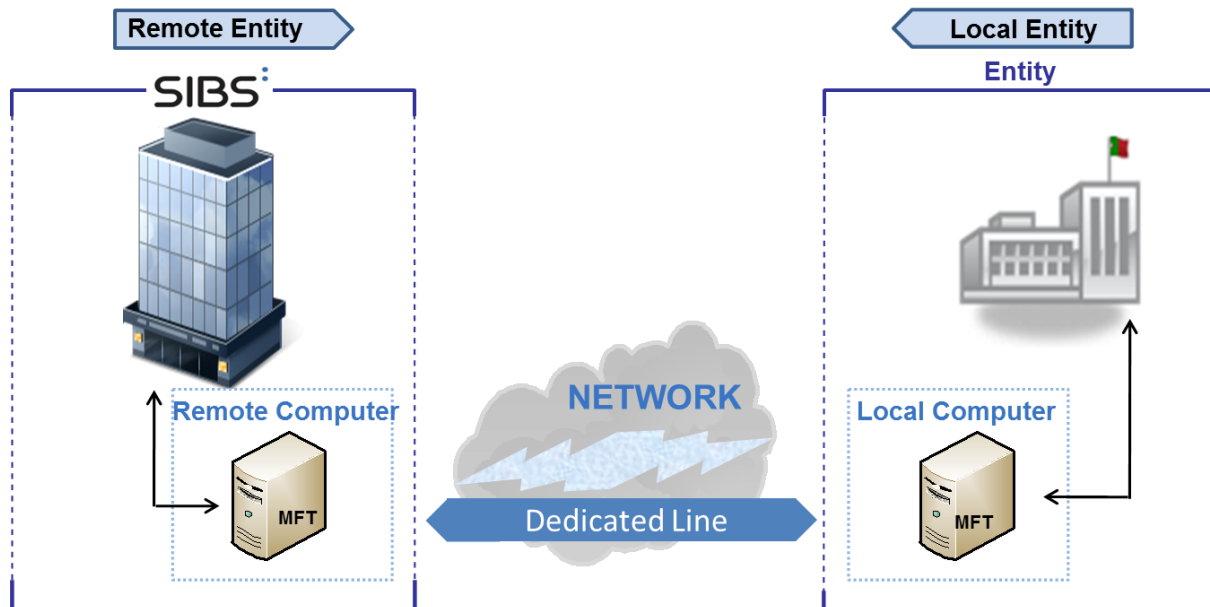
Figure 2 – MFT's Operation Overview

3.1.1.2   Installation Environment and Communications

SIBS FPS' MFT application was developed to run in platforms with a JVM (Java Virtual Machine) installed.

The MFT applications' software pack requires one dedicated communications line and the following minimum environment:

- OS390 (IBM) or ZOS;
- VTAM/NCP/NPSI or TCP-IP CICS Sockets;
- CICS TS 1.3 (or higher);
- COBOL LE/370 (release 1.2 or higher).

The connections between the computers that will use the MFT application can be over an IP network, based on the TCP protocol, namely for the MFT's standalone (Java) version. The host must have the TCP/IP sockets installed and configured, as well as the remaining environment.

In this case, the following minimum requirements must be complied with to install the MFT application:

- **Hardware**:
  - 1GB Hard Disk;
  - 1GB Memory;
  - 1,6 GHz Pentium III (or equivalent) processor.

- **Software*:***
    - Sun JVM (Java Virtual Machine), version 1.45;
    - Internet Explorer Browser, version 6.

The system must be protected with anti-virus software, with guaranteed periodical updates. An antispyware and a firewall enabling are also recommended.

- **Communications*:***
    - Minimum recommended bandwidth: 64kb CIR[5], which allows to install:
        - One single user;[6]
        - Multiple users in a local network.[7]

3.1.2   Real-Time Protocol (optional)

One real time channel can be established between SIBS FPS and the Services Supplier, based on a Real Time Protocol, i.e., an end-to-end connection operating over a dedicated line. This communication is enabled when a Bill Payment transaction is completed in MULTIBANCO Network.

Based on the Real Time Implementation Guide's technical specifications, supplied by SIBS FPS, the Services Supplier must ensure that the application responds to the transaction notifications received and sent by the processor. This application must perform several validations (ex.: numeric fields, etc.) and be prepared to respond to all messages, provided that these are correctly formatted.

The PRT application is supplied by SIBS FPS and subject to a specific purchase and maintenance agreement.

3.1.2.1   PRT Components

The PRT application allows a real time message exchanging and it is supported by some components, installed both at SIBS FPS and at the Services Supplier:

- **Central Processing System** – application server that processes MULTIBANCO network transactions, sending real time messages to the Services Supplier whenever necessary;
- **Remote System** – application installed at the Services Supplier which will receive, process and respond to the messages exchanged with the Central Processing System;
- **PRT Server** – installed both at the Central and the Remote Systems; it is responsible for establishing and maintaining the real time session on, as well as managing the message flow;
- **Sender** – part of the PRT server, the component responsible for sending messages originated at the Central System; it must always operate whenever a real time session is established with the Remote System;

---

[5] Committed Information Rate (bandwidth guaranteed by the operator).
[6] SIBS Extranet connection by commuted access (analogue line or ISDN) or frame-relay dedicated circuit.
[7] For instance, Ethernet local network connection (TCP/IP protocol) to SIBS Extranet.

- **Receiver** – part of the PRT server, the receiver component responsible for receiving messages originated at, and coming from, the Central System; it must always operate whenever a real time session is established with the Central System;

- **Session Monitor** – applicational component that allows monitoring and intervention in the real time active sessions, in any PRT server.

Figure 3 shows a general view of the PRT application operation.
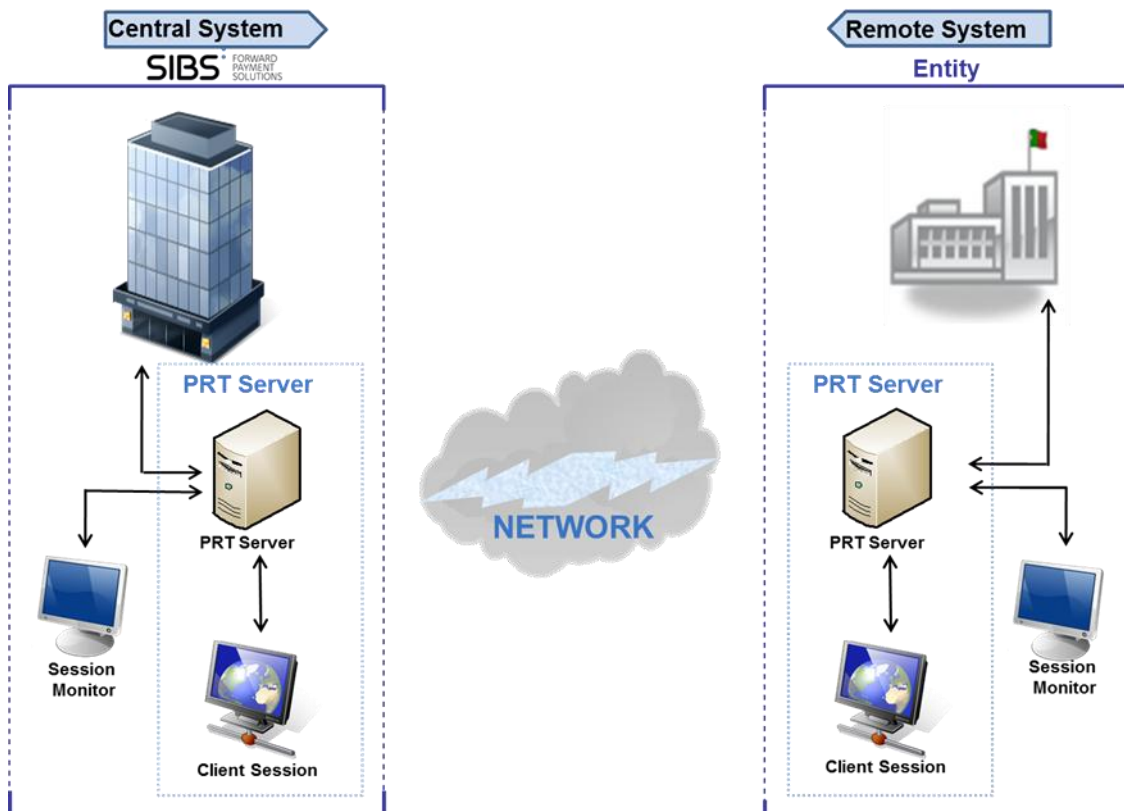
Figure 3 – PRT Application's Operation Overview

3.1.2.2 PRT Functions and Mechanisms

The PRT has the following functions:

- To control the sessions between the two applications in dialogue (opening/closure, traffic stop/restart);

- To transmit and deliver application data to the destination applications;

- To prevent the serialization of messages exchanged between the two applications, which allows the circulation of several messages simultaneously, with configurable limits, in order to prevent saturation on the requests receiving partner's side;

- To guarantee the integrity and retrieval of those messages whose request/response cycle is not completed under normal circumstances.

The PRT supports the following mechanisms in order to execute these functions:

- Data traffic opening, stop and restart procedures and session controlled closure;

- Identification, through a specific header added to each message, of the origin and destination computers for each message, as well as of the applications that receive the request and the corresponding response. The message header also allows to univocally identify each message;

- Recording the request and response messages, in each computer, in retrievable buffers, to allow repetition, if necessary, without having to submit each request, more than once, to the application in the receiver computer. This mechanism also guarantees that the response is always delivered to the correct/intended application, being perfectly identified by the request;

- Window-based mechanism that controls the sending of requests, according to the responses received; this allows to send several requests, without receiving less responses than the supposed number;

- Retrieval mechanism for messages whose response has not been delivered to the application in due time.

3.1.2.3 Installation Environment and Communications

To install the PRT application software, the following minimum environment must be in place:

- OS390 (IBM);
- TCP-IP CICS sockets;
- CICS TS 1.3 (or higher);
- COBOL LE/370 (release 1.2 or higher).

On what concerns communication, the connection between the computers where PRT will be installed is assured through an IP network (TCP protocol). IBM software, TCP-IP CICS Sockets Interface and the remaining TCP environment must be installed and configured in the host.

In addition to an IP address, a specific port must be used, regarding the computer where PRT is executed. The port must be defined and configured in compliance with the installation procedures.

The following minimum requirements are mandatory to perform the installation of the PRT application:

- **Hardware**
  - 1GB Hard Disk;
  - 1GB Memory;
  - 1,6 GHz Pentium III (or equivalent) processor.
- **Software**
  - Sun JRE (Java Runtime Environment), version 1.45.

The system must be protected with anti-virus software, with guaranteed periodical updates. An antispyware and a firewall enabling are also recommended.

- **Communications**
  - Minimum recommended bandwidth: 64kb CIR[8], which allows to install:
    - One single user[9];
    - Multiple users in a local network[10].

3.1.3   SIBS Portal

SIBS Portal (PSS) is an application developed by SIBS FPS and it is a channel through which both SIBS FPS and the Participants in MULTIBANCO network access to several services.

This interaction platform is made available to the Entities that agree the access with SIBS FPS. SIBS Portal is a web-based application, accessed through a browser, and the contractor Entities must submit an appropriate adherence form to SIBS FPS; subsequently, the Entities' users are parameterized.

The Services Suppliers must guarantee the regular access to the PSS, as it is fundamental for the correct operation of the Bill Payments service. The PSS is the only channel through which the Services Suppliers have access to several functionalities and it is the backup for sending and receiving information to, and from, SIBS FPS.

SIBS FPS owns copyright and other proprietary rights on the software and the services supplied to the users.

The Services Suppliers are responsible for selecting, dimensioning and parameterizing the communications infrastructure, having in consideration the expected traffic intensity and number of concurrent users.

The system must not be configured with more than one network interface connected simultaneously.

The system's simultaneous connection to the Internet and to SIBS Extranet (VAN) is expressly forbidden; SIBS FPS reserves the right to immediately cease the PSS connection to the Services Supplier in case of breach of this rule.

3.2   Functional Diagram

The communication platforms used by SIBS FPS and the Services Suppliers allow to exchange messages and files.

Within the scope of the Bill Payments service, SIBS FPS sends one Payments File (**MEPS**) to the Services Suppliers, on a daily basis. For the Services Suppliers that choose to validate payments based on the Clients File (**AEPS**), SIBS FPS responds with a Response File (**AEPE**) and, if severe errors are detected in the **AEPS** file, a Reject File (**AEPR**) will be sent by SIBS FPS.

---

[8] Committed Information Rate (bandwidth guaranteed by the operator).
[9] SIBS Extranet connection by commuted access (analogue line or RDIS) or frame-relay dedicated circuit.
[10] For instance, Ethernet local network connection (TCP/IP protocol) to SIBS Extranet.

For the Services Suppliers who subscribe for the real time notification of payments (using Real Time Protocol), the exchange of messages (**E034** and **E134**) between SIBS FPS and the Services Supplier is also necessary.
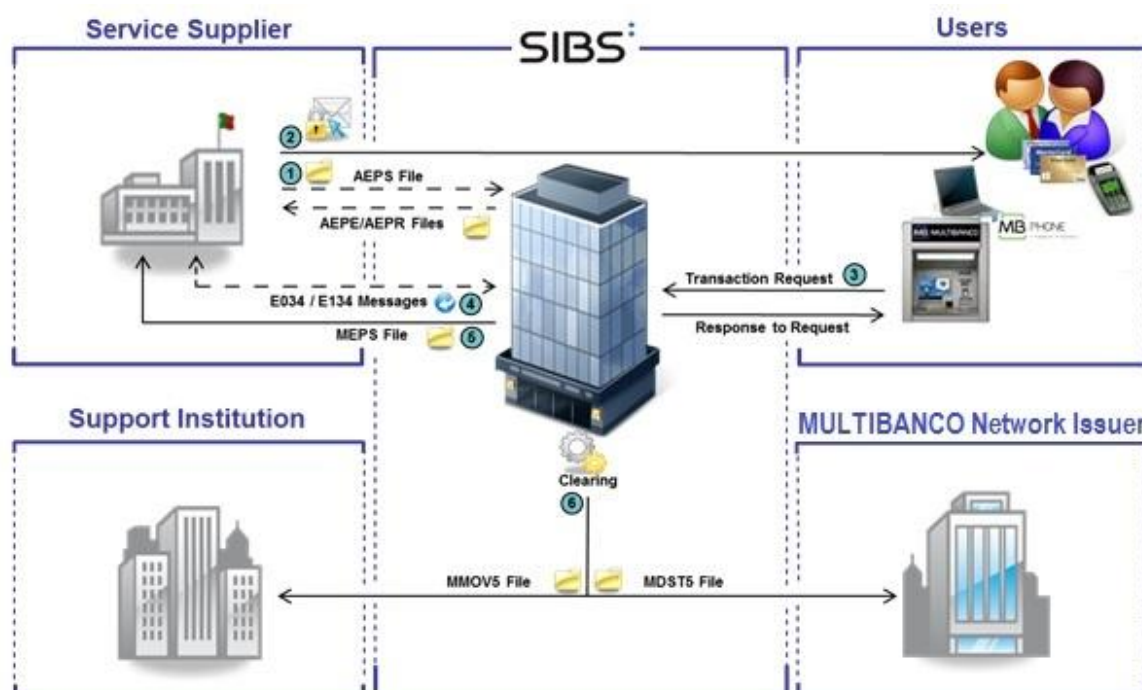
Figure 4 – Data Flow

1. Upon adherence to the service, the Services Suppliers may choose to send a Clients File (**AEPS**) to SIBS FPS, containing the payments References; SIBS FPS responds by sending the Response File (**AEPE**) or the Reject File (**AEPR**), if severe errors are detected that demand the total rejection of the **AEPS** file;

2. The Services Suppliers send invoices to its Clients where the three following fields are informed: **Service Supplier Id**.; payment **Reference**; due **Amount**;

3. At the moment of the payment transaction, SIBS FPS validates the on-us card data and the entered data by the Client; simultaneously, SIBS FPS requests the Issuer to check for the Client's account balance and sends the response to the channel where the transaction is occurring, approving or rejecting it.

4. The Services Supplier may choose to be notified in real time, i.e., at the moment of the payment completion; for this purpose, a payment notification message **E034** is sent by SIBS FPS and, consequently, the Services Supplier responds with a response message **E134** to the payment notification, to acknowledge the notification reception;

5. MULTIBANCO Clearing is processed by SIBS FPS, on a daily basis; thus, whenever Bill Payments have occurred in the MULTIBANCO network, SIBS FPS sends a Payments File (**MEPS**) to the Services Supplier, informing the processed payments.

6. Similarly, after the Clearing processing, SIBS FPS sends the following information to the other involved participants in Bill Payments service:

   a. The Transactions File (**MMOV5**), containing the accounting entries of the Services Supplier's bank account, is sent to the Support Institution (Bank or Acquirer);

   b. The Destinations File (**MDST5**), containing the debited amounts from the Clients accounts, are sent to the on-us card Issuer.

If the Services Supplier considers insufficient to receive one Payments File (**MEPS**) per day, it can choose to receive three files a day, containing, each one, the payments processed in the corresponding MULTIBANCO sub-closure. These transactions processing – which conclusion depends on the existing volume of transactions – occur (1) between 12:00 and 02:00 p.m., (2) between 08:00 p.m. and 10:00 p.m. and, (3) coincident with the Clearing process, i.e., between 11:00 p.m. and 02:00 a.m.

If applicable, by the end of each month, the Support Institution (Bank or Acquirer) sends an invoice to the Services Supplier, containing the detail on the daily charged fees for the Bill Payments service.

3.3   Technical Specifications

3.3.1   Check Digit Calculation (Module ISO 97-10)

The Services Supplier has three available methods to validate payments processed in MULTIBANCO network:

1. Check Digit validation;

2. Check Digit validation and Reference Group Management;

3. Clients File validation.

If the Services Supplier does not wish to send to SIBS FPS the Files containing the payment References, it can opt for the check digit validation, one simple and linear method, where the 8th and 9th reference digits included in the invoice are the only data to be taken into account.

The check digit calculation is based on the ISO 97-10 module applied on the three data fields: Services Supplier Id.; Reference; Amount. This method is described in the following sub-sections.

3.3.1.1   Polynomial Method

A weight is given to each digit of the number. The weight is obtained from the following formula:

- $\omega_i = 10^{i-1} \pmod{97}$[11]

  - where ω_i is the digit weight in order **i** having **i = 1** for the first rightmost position, including the check digits.

---

[11] x $\cong$ y (mod 97) means that y is the rest of the division of x by 97.

Each digit is multiplied by the respective weight and the products are summed.

The rest of the division from the total, by 97, must be deducted from 98 and the result is the check digits.

Table 1 – Polynomial Method

Order (i)	n	n - 1	(...)	3	2	1
Weight (ω_i)	10^{n-1} (mod. 97)	10^{n-2} (mod. 97)		3	10	1
Digit val. (a_i)	a_n	a_{n-1}		a_3		
Product	$w_n \times a_n$	$w_{n-1} \times a_{n-1}$		$3.a_3$		
Sum	$w_n \times a_n$ $+ w_{n-1} \times a_{n-1}$		$+ (...)$	$+ 3.a_3 = S$ (mod. 97)		

Check Digit: 98 - S (mod. 97)

Practical case to calculate the check digit for the number **1 2 4 1 7 1 7 8** :

Table 2 – Polynomial Method - Example

Order (i)	10	9	8	7	6	5	4	3	2	1
Weight (ω_i)	34	81	76	27	90	9	30	3	10	1
Digit val. (a_i)	1	2	4	1	7	1	7	8		
Product	34	162	304	27	630	9	210	24		
Sum	34	+162	+304	+ 27	+ 630	+ 9	+ 210	+ 24		= 1400

1400 $\cong$ **42** (mod 97)
Check Digit = 98 - 42 = **56**

3.3.1.2 Alternative Method

Demonstration:

- Where:
    - **j = 1, 2, ..., n** an index, where **n** is the total number of characters, including the check digits;
    - P_j **= 0**, where **j = 1**;
    - S_j **=** P_j **+** a_{n-j+1}, where a_{n-j+1} is the value of the digit in order **n-j+1**;
    - P_{j+1} **=** S_j **x 10**

Check Digits = 98 - P_n (mod 97).

Practical case to calculate the check digit for the number **1 2 4 1 7 1 7 8** :

Table 3 – Alternative Method - Example

Steps	$P_j + a_{n-j+1} = S_j$	S_j x 10 = P_{j+1} (mod. 97)
1st	0 + 1 = 1	10 x 1 = 10
2nd	10 + 2 = 12	12 x 10 = 23

Steps	$P_{j} + a_{n-j+1} = S_{j}$	$S_{j} \times 10 = P_{j+1}$ (mod. 97)
3rd	23 + 4 = 27	27 x 10 = 76
4th	76 + 1 = 77	77 x 10 = 91
5th	91 + 7 = 98	98 x 10 = 10
6th	10 + 1 = 11	11 x 10 = 13
7th	13 + 7 = 20	20 x 10 = 6
8th	6 + 8 = 14	14 x 10 = 43
9th	43 + 0 = 43	43 x 10 = 42

Check Digit = 98 - 42 = **56**

3.3.1.3 Example of Check Digit Calculation and its position in the Client's Invoice

Example:

Services Supplier Id.:	90150;
Reference (w/o CD)	123 123 4<u>XX</u>;
Amount	EUR 000 432 ,11.

Number for which the check digit will be calculated: **90150   123 123 4   000 432 11**

Table 4 – Check Digit Calculation - Example

Position	I	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Weight (ω_i)	W_i	51	73	17	89	38	62	45	53	15	50	5	49	34	81	76	27	90	9	30	3	10	1
Number	A_i	9	0	1	5	0	1	2	3	1	2	3	4	0	0	0	4	3	2	1	1		
P=$a_i * w_i$	P	459	0	17	445	0	62	90	159	15	100	15	196	0	0	0	108	270	18	30	3		
S= $\sum$ p	S	459+ 0+ 17 + 445 + 0 +62 + 90+159+15 +100 +15 +196 +0 + 0 + 0 + 108 + 270 +18+ 30 +3 = **1987**																					

1987 : 97 = 20 rest = **47**

Check Digit = 98 - 47 = **51**

Result:

Services Supplier Id.:	90150;
Reference (w/o CD)	123 123 4<u>51</u>;
Amount	EUR 000 432 ,11.

Table 5 – Weight Table to use as a reference

POSITION	WEIGHT	POSITION	WEIGHT	POSITION	WEIGHT	POSITION	WEIGHT	POSITION	WEIGHT
1	1	**7**	27	**13**	50	**19**	89	**25**	75
2	10	**8**	76	**14**	15	**20**	17	**26**	71
3	3	**9**	81	**15**	53	**21**	73	**27**	31
4	30	**10**	34	**16**	45	**22**	51	**28**	19
5	9	**11**	49	**17**	62	**23**	25	**29**	93
6	90	**12**	5	**18**	38	**24**	56	**30**	57

3.3.2 Messages

Within the Bill Payments service scope, whenever a payment transaction occurs in MULTIBANCO network, a real time notification causes a message exchange between SIBS FPS' PRT servers and the Service Supplier's.

3.3.2.1 Real-Time Messages

If the Services Supplier has opted for being notified of a transaction, in real time, at the moment of its adherence to the service, SIBS FPS sends him a payment notification message (**E034**) and the Services Supplier sends an acknowledgment response (**E134**) to SIBS FPS:

- **Message E034 – Payment Notification**:
    - Message sent, in real time, by SIBS FPS, per each payment transaction processed in MULTIBANCO Network;

- **Message E134 – Response to Payment Notification**:
    - Response sent by the Services Supplier, per each payment notification received from SIBS FPS; this message informs SIBS FPS if the Payment Notification message has been successfully received.

E034 – PAYMENT NOTIFICATION/E134 – RESPONSE TO PAYMENT NOTIFICATION

Field No.	Field Code	Field Name	Length	Rep.	Request (Pos.)	Response (Pos.)	Obs.
0001	MSG_TIP	Message Code	4	A	1	1	A)
1709	LOG_SIS	Log system Associated to the Transaction (new expanded code)	2	A	5	5	
0002	MSG_VER	Message Version	2	N	7	7	
0320	LOG_PERN01	Central Log Period Identification	4	N	9	9	
0117	LOG_NUMN01	Central Log Record Number	8	N	13	13	
0468	EPS_NUM	Services Supplier Identification	5	N	21	21	
0250	EPS_REF	Payment Reference	9	N	26		

Field No.	Field Code	Field Name	Length	Rep.	Request (Pos.)	Response (Pos.)	Obs.
0476	SIS_PSCMNT	Amount (Bill Payments)	10	N	35		
0233	EXT_MOECOD	Currency Code	3	N	45		
2148	SIS_DTHN01	Transaction Date/Time	12	N	48		
2158	TRM_EQPTIP	Terminal Type	2	A	60		
0006	TRM_IDE	Terminal Identification	10	A	62		
0323	TRM_REGNUM	Local Record Number	5	N	72		
0479	LOC_TRMABV	Terminal Address Location (Abbreviated)	15	A	77		
0205	EXT_NIF_CLI	Cardholder's Taxpayer Identification Number	9	N	92		
0686	SEE_FCTNUM	Invoice Number	8	N	101		
0012	MSG_RESTIP	Response Code	1	A		26	
3111	MSG_RESNUM	Services Supplier's Response Identification	12	N		27	
	Total				**108**	**38**	

Notes:

A) 'E034' - (Request) / 'E134' (Response)

3.3.3   Files

The files are characterized independently of the transfer type, i.e. either tele-transmitted or transported in a physical support, as an alternative solution.

The physical support is used as a resource solution only, in case of problems with the files' tele-transmission. Information on the file supports' characteristics that SIBS FPS is capable of processing shall be requested to SIBS FPS' Systems Planning and Operation unit.

All files exchanged between SIBS FPS and the participants in the Bill Payments service are organized in the following structure: a header record, which identifies the file, detail records and a trailer record that contains data obtained from the file's detail:

- One header record;
- Detail records;
- One trailer record.

3.3.3.1   Files sent by the Services Supplier

The Services Suppliers that choose to validate payments through Clients File (AEPS File) must send it to SIBS FPS.

3.3.3.1.1   AEPS - CLIENTS FILE

File Name	AEPS
Purpose	To inform the payment References. The payment References can be new records (insertion) or not (updating). They contain the processing code=80 (field 2400). To inform the payment References that the Services Supplier wants to remove from the file resident at SIBS FPS (delete record). These records' processing code=82 (field 2400).
Generation	The Services Supplier must send this file to SIBS FPS whenever it issues invoices to its Clients that can be paid through MULTIBANCO's Bill Payments service. The files (maximum 9 per day) must be sent until 24 hours prior to the payments start date. Due to operational reasons, the files must contain a maximum of 100.000 records.
Transfer Type	Tele-transmission.
File Type	ASCII
Length	50 characters. All records are the same length. The record must be completed with spaces if the useful data is shorter than the record's maximum length.
Structure	The file is constituted by three record types, ordered as follows: • Record Type 0 – File Header; • Record Type 1 – Detailed records; • Record Type 9 - File Trailer.
Order	In the first file sent by the Services Supplier, the field 2399 ("Latest File Identification") must be completely populated with zeros. In each generated file, the Services Supplier must fill the field 2399 ("Latest File Identification"), in order to control any possible transfer failures or duplicates. The detail records must be ordered by "Payment Reference" (field 0250), of fixed length and with CRLF delimiter. As the file's key is the "Payment Reference" field, duplicate payment references cannot occur.
Observations	SIBS FPS processes the file within the maximum next 24 hours after its reception, in order to update the Clients base-File. This file is accessed online through MULTIBANCO service. This 24 hour period counts from the end time of the file's correct reception at SIBS FPS. The fillers format must not be validated.

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
Header						
0111	FIC_REGCOD	Record Type	1	N	1	'0'
0102	FIC_NOMN01	File Name	4	A	2	'AEPS'
5219	COM_NUMN01_ORI	Originator Entity Identification	8	N	6	'9XXXXXXX'
5220	COM_NUMN01_DST	Destination Entity Identification	8	N	14	'50000000'
2398	FIC_SEQ	Processing Date	9	N	22	YYYYMMDDS
2399	FIC_SEQ_ULT	Latest File Identification	9	N	31	YYYYMMDDS
0468	EPS_NUM	Services Supplier Identification	5	N	40	
0233	EXT_MOECOD	Currency Code	3	N	45	'978'
	Filler		3	A	48	
			Total	50		
Detail Record						
0111	FIC_REGCOD	Record Type	1	N	1	'1'
2400	SIS_PRCCOD	Processing Code	2	N	2	'80' or '82'

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
0250	EPS_REF	Payment Reference	9	N	4	
0474	EPS_LIMDAT	Payment's Limit Date	8	N	13	YYYYMMDD
0473	SEE_MAXMNTN02	Payment Maximum Amount	10	N	21	9(8), 99; A)
1149	EPS_INIDAT	Payment Start Date	8	N	31	YYYYMMDD B)
5218	SEE_MINMNTN02	Payment Minimum Amount	10	N	39	9(8),99; C)
	Filler		2	A	49	
			Total		50	
Trailer						
0111	FIC_REGCOD	Record Type	1	N	1	'9'
0107	FIC_REGQNT	Records Total	8	N	2	
	Filler		41	N	10	
			Total		50	

Notes:

A) Payment Maximum Amount:

- If populated with nines ('9'), the System does not validate the maximum amount;
- If different from nines ('9'), the maximum amount accepted by the System is €99.999,99;
- The value cannot be lower than the minimum amount;
- If "PAYMENT MAXIMUM AMOUNT"="PAYMENT MINIMUM AMOUNT", the Client can only pay the indicated amount.

B) Payment Start Date:

- The date from which the Reference can be paid in MULTIBANCO network:
- If populated with zeros ('0'), the System does not validate this field;
- Must always be lower than the value indicated in field "Payment's Limit Date".

C) Payment Minimum Amount:

- Established minimum amount, from which the Client can make multiple payments until reaching the maximum amount:
- If populated with zeros ('0'), the System does not validate the minimum amount;
- It must always be lower than or equal to the value in field "Payment Maximum Amount".

3.3.3.1.2   Schedule

In order to ensure the service correct operation, the Clients Files (**AEPS**) must always be sent to SIBS FPS until 24 hours before the established payment start date. If files are received after this 24 hour term, they may not be processed within the Service Supplier's intended timings.

3.3.3.2 SIBS FPS Response Files

Upon reception of a Clients File (**AEPS**), SIBS FPS acknowledges its reception by sending, to the Services Supplier, one of the two following files:

- **Response File to Clients File** – AEPE:

    - Acknowledges the Clients File (**AEPS**) reception and processing. If errors occur, it informs the reject reason for each payment Reference;

    - If no errors occur, an "empty" file is generated, containing only the header and trailer records.

- **Reject File of Clients File – AEPR:**

    - This file is sent if severe errors occur which cause the AEPS File's total rejection.

3.3.3.2.1 *AEPE – RESPONSE FILE TO CLIENTS FILE*

File Name	AEPE
Purpose	To allow the Services Supplier to quickly identify error occurrences in the Clients File processing and the reason that caused each Reference's rejection. If the Response File to Clients File is composed of one Header record (record type=0) and one Trailer record (record type=9), without detail records, this signifies that the Clients File was well received and processed, without any error. If severe errors occur, the file is totally rejected. In this case, a specific Reject File – AEPR – is generated. If less severe errors occur, an AEPE File is generated, containing the details of each rejected record.
Generation	This file is generated after the reception and processing of the AEPS – Clients File.
Transfer Type	Tele-transmission.
File Type	ASCII
Length	100 characters. All records are the same length. The record must be completed with spaces if the useful data is shorter than the record's maximum length.
Structure	The file is constituted by three record types, sorted in the following order: • Record Type 0 – File Header; • Record Type 1 – Detailed records; • Record Type 9 - File Trailer.
Order	N/A
Observations	The file is available after the Clients File validation is concluded and within a maximum 24-hour term, after reception of the AEPS File. If the Services Supplier intends to correct the occurred errors, this must be done by sending a new AEPS File, with a new file sequence. The fillers format must not be validated.

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
Header						
0111	FIC_REGCOD	Record Type	1	N	1	'0'
0102	FIC_NOMN01	File Name	4	A	2	'AEPE'
5220	COM_NUMN01_DST	Destination Entity Identification	8	N	6	'9XXXXXXX'
5219	COM_NUMN01_ORI	Originator Entity Identification	8	N	14	'50000000'

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
2398	FIC_SEQ	Processing Date	9	N	22	YYYYMMDDS
2399	FIC_SEQ_ULT	Latest File Identification	9	N	31	YYYYMMDDS
0468	EPS_NUM	Services Supplier Identification	5	N	40	
3252	FIC_NUMN01_ORI	Original File	4	A	45	'AEPS'
3395	FIC_SEQ_ORI	Processing Date (Original)	9	N	49	YYYYMMDDS
	Filler		43	A	58	
				Total	100	
Detail Record						
0111	FIC_REGCOD	Record Type	1	N	1	'1'
2155	FIC_REGORI	Original Record	50	A	2	
4209	EPS_ERRCOD	Error Code	3	N	52	
4210	EPS_DSGERR	Error Description	33	A	55	
	Filler		13	A	88	
				Total	100	
Trailer						
0111	FIC_REGCOD	Record Type	1	N	1	'9'
0107	FIC_REGQNT	Records Total	8	N	2	
	Filler		91	N	10	
				Total	100	

3.3.3.2.1.1   Error Codes

	Code	Description	Rejects File
Header	P01	Invalid record type	Y
	P02	Header is not the first record	Y
	P03	Invalid file type	Y
	P04	Invalid origin Entity Id.	Y
	P05	Invalid destination Entity Id.	Y
	P06	Invalid processing date	Y
	P07	Invalid Latest File Id.	Y
	P08	Latest File Id. out-of-sequence	Y
	P09	Invalid Services Supplier	Y
	P10	Invalid currency code	Y
Detail	P01	Invalid record type	N
	P11	Invalid processing code	N
	P12	Invalid Reference	N
	P13	Duplicated Reference in the file	N
	P14	Invalid payment's limit date	N
	P15	Payment's limit date lower than current date	N

	Code	Description	Rejects File
	P16	Payment's limit date lower than start date	N
	P17	Invalid amount	N
	P18	Amount lower than minimum amount	N
	P19	Invalid start date	N
	P20	Invalid minimum amount	N
	P21	Detail records missing	N
Trailer	P22	Trailer is not the file's last record	N
	P23	Trailer record missing	N
	P24	Details number mismatch trailer	N

3.3.3.2.2 AEPR – REJECT FILE OF CLIENTS FILE

Field Name	AEPR
Purpose	To allow the Services Supplier to quickly notice the total rejection of the Clients File.
Generation	It is generated whenever the Clients File (AEPS) is totally rejected. Normally, it occurs when the header record's format is incorrect. The file is made available upon the Clients File (AEPS) validation conclusion, within a maximum 24-hour term.
Transfer Type	Tele-transmission
File Type	ASCII
Length	100 characters. All records are the same length. The record must be completed with spaces if the useful data is shorter than the record's maximum length.
Structure	The file is composed of three record types, sorted in the following order: • Record Type 0 – File Header; • Record Type 1 – Detailed records; • Record Type 9 - File Trailer.
Order	N/A
Observations	The filler format must not be validated, except if the "P08" (*a)*) error code occurs.

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
Header						
0111	FIC_REGCOD	Record Type	1	N	1	'0'
0102	FIC_NOMN01	File Name	4	A	2	'AEPR'
5220	COM_NUMN01_DST	Destination Entity Identification	8	N	6	A)
5219	COM_NUMN01_ORI	Originator Entity Identification	8	N	14	'50000000'
2398	FIC_SEQ	Processing Date	9	N	22	A)
2399	FIC_SEQ_ULT	Latest File Identification	9	N	31	A)
0468	EPS_NUM	Services Supplier Identification	5	N	40	A)
3252	FIC_NUMN01_ORI	Original File	4	A	45	A)
3395	FIC_SEQ_ORI	Processing Date (Original)	9	N	49	A)
	Filler		43	A	58	

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
			Total		100	
Detail Record						
0111	FIC_REGCOD	Record Type	1	N	1	'1'
2155	FIC_REGORI	Original Record	50	A	2	B)
4209	EPS_ERRCOD	Error Code	3	N	52	C)
4210	EPS_DSGERR	Error Description	33	A	55	
	Filler		13	A	88	
			Total		100	
Trailer						
0111	FIC_REGCOD	Record Type	1	N	1	'9'
0107	FIC_REGQNT	Records Total	8	N	2	
	Filler		91	N	10	
			Total		100	

Notes:

A) Populated with zeros.

B) Presents the 1st record of the rejected file.

C) REJECT REASON (**P08**): if this reject reason occurs (Latest File Id. out-of-sequence), the Filler's detail record is populated with the sequence accepted as valid by SIBS FPS System.

3.3.3.3 Files sent by SIBS FPS

In the Bill Payments service, SIBS FPS informs the Service Supplier, on a daily basis, on the processed payments in MULTIBANCO network, by sending the following file:

- **MEPS – Payments File** – Informs the Services Supplier on all the payments processed within a Clearing period of the MULTIBANCO network.

SIBS FPS also sends information, on a daily basis, to the Support Institutions and to the on-us cards Issuers on the accounting/financial flows resulting from the payments processed in MULTIBANCO network:

- **MDST5 – Destinations File** – On a daily basis, after MULTIBANCO Clearing, the on-us cards Issuers are informed on the debits processed in their Client's bank accounts, the cardholders who made Bill Payments with their on-us cards in MULTIBANCO network;

- **MMOV5 – Transactions File** – On a daily basis, after MULTIBANCO Clearing, the Support Institutions are informed on the total amount to be credited to the Services Suppliers for the processed payments, after deduction of the respective applicable Fees.

3.3.3.3.1   MEPS – PAYMENTS FILE

File Name	MEPS
Purpose	To inform the Services Supplier on all the payments processed during MULTIBANCO Clearing period. This file contains the detail of each processed payment and the total amount to be credited to the Services Supplier's bank account.
Generation	It is generated on a daily basis, after MULTIBANCO Clearing conclusion, which occurs normally between 11:00 p.m. and 02:00 a.m. The Service Supplier may opt for receiving this file three times a day, at the end of each MULTIBANCO Clearing sub-closure, which conclusion depends on the existing volume of transactions. However, these files are made available normally between (1) 12:00 (noon) and 02:00 p.m., (2) 08:00 p.m. and 10:00 p.m. and, (3) coincident with the Clearing process, i.e., between 11:00 p.m. and 02:00 a.m.
Transfer Type	Tele-transmission
File Type	ASCII
Length	100 characters. All records are the same length. The record must be completed with spaces if the useful data is shorter than the record's maximum length.
Structure	The file is composed of three record types, sorted in the following order: • Record Type 0 – File Header; • Record Type 1 – Detailed records; • Record Type 9 - File Trailer.
Order	In the first file sent to the Services Supplier, the field 2399 ("Latest File Identification") is completely populated with zeros. In each generated file, the field 2399 ("Latest File Identification") contains the latest file identification, for the Services Supplier to control any possible failures in file reception or duplicates. If the payments destination bank account number is changed, separate files are created, one per each informed bank account.
Observations	The filler format must not be validated.

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
Header						
0111	FIC_REGCOD	Record Type	1	N	1	'0'
0102	FIC_NOMN01	File Name	4	A	2	'MEPS'
5219	COM_NUMN01_ORI	Originator Entity Identification	8	N	6	'50000000'
5220	COM_NUMN01_DST	Destination Entity Identification	8	N	14	'9XXXXXXX'
2398	FIC_SEQ	Processing Date	9	N	22	YYYYMMDDS
2399	FIC_SEQ_ULT	Latest File Identification	9	N	31	YYYYMMDDS
0468	EPS_NUM	Services Supplier Identification	5	N	40	
0233	EXT_MOECOD	Currency Code	3	N	45	'978'
2153	EXT_PCTIVA	VAT Rate	2	N	48	
	Filler		51	A	50	
			Total	100		
Detail Record						
0111	FIC_REGCOD	Record Type	1	N	1	'2'

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
2400	SIS_PRCCOD	Processing Code	2	N	2	'04'
0320	LOG_PERN01	Central Log Period Identification	4	N	4	
0117	LOG_NUMN01	Central Log Record Number	8	N	8	
2148	SIS_DTHN01	Transaction Date/Time	12	N	16	YYYYMMDDHHMM
0476	SIS_PSCMNT	Amount (Bill Payments)	10	N	28	9(8),99
2149	LOG_TARMNT	Fee	5	N	38	9(3),99 (VAT included)
2158	TRM_EQPTIP	Terminal Type	2	A	43	
0006	TRM_IDE	Terminal Identification	10	A	45	
0323	TRM_REGNUM	Local Record Number	5	N	55	PPMMM
0479	LOC_TRMABV	Terminal Address Location (Abbreviated)	15	A	60	
0250	EPS_REF	Payment Reference	9	N	75	
4202	LOG_ENVMRT_EPS	Transmission Mode	1	N	84	A)
4204	MSG_RESTIP_EPS	Response Code	1	A	85	'0', '4', '6'
3111	MSG_RESNUM	Services Supplier's Response Identification	12	N	86	B)
1709	LOG_SIS	Log System Associated to the Transaction (new expanded code)	2	A	98	D)
	Filler		1	A		
			Total	100		

Trailer

Field No.	Field Code	Field Name	Length	Rep.	Pos.	Obs.
0111	FIC_REGCOD	Record Type	1	N	1	'9'
0107	FIC_REGQNT	Records Total	8	N	2	
2416	EPS_TOTMNT_FIC	Transactions Total Amount	17	N	10	15 int., 2 dec.; C)
4190	FIC_TARMNTN01	Fees Total	12	N	27	10 int., 2 dec. (VAT included); C)
2539	FIC_IVAMNTN01	VAT Total	12	N	39	Zeros
	Filler		50	A	51	
			Total	100		

Notes:

A) Real Time Payments Notification:

- For the Services Suppliers without Real Time Payments Notification, the field 4202 is always populated with zero ('0').

B) Populated if "4202" ≠ 0.

C) Credit Amounts:

- When the Services Suppliers are debited the service Fees, SIBS FPS informs the Support Institution so that no credit is executed, corresponding to **Field 2416 - Field 4190**. When service Fees are not debited, SIBS FPS informs the Support Institution so that a credit is executed corresponding to the amount informed in **Field 2416**.

D) Log System Associated to the Transaction

- Possible values for **Field 1709** for Data Processing Center of **Lisbon**:

Code	Remarks
01	QUE
02	POS 01
03	INT.
04	BX. V.
05	ATM-OLO 01
06	PMB
07	ATM-OLO 02
08	POS 02
0A	Batch records
0C	SIDF
0D	POS 03
0E	POS 04
0F	ATM-OLO 03
10	ATM-OLO 04
11	FEP – ATM
12	FEP – POS
13	DISPUTES

- Possible values for **Field 1709** for Data Processing Center of **Viseu**:

Code	Remarks
51	QUE
52	POS 01
53	INT.
54	BX. V.
55	ATM-OLO 01
56	PMB
57	ATM-OLO 02
58	POS 02
5A	Batch records
5C	SIDF
5D	POS 03
5E	POS 04
5F	ATM-OLO 03
60	ATM-OLO 04

3.4   Data Dictionary

The following table describes the message and file fields of the Bill Payments service.

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
0001	MSG_TIP	MESSAGE CODE	4	A		This field identifies the message purpose and the nature of the data in it (Withdrawal Request, Response to Withdrawal Request, etc.), as well as the message type (card transaction, transaction with NIB (*Número de Identificação Bancária* – Bank Account Number), Merchant transaction, notification of Bill Payment to a Services Supplier, etc.).	
0002	MSG_VER	MESSAGE VERSION	2	N		The message version present in the field (0001) MSG_TIP or in the field (0470) MSG_TIP_H2H. The version of the message that is used by the Bank; this field allows SIBS FPS to support messages with different formats for the same service.	
0006	TRM_IDE	TERMINAL IDENTIFICATION	10	A		This field identifies the terminal where the transaction occurred. The structure of this field depends on the field (0003) TRM_TIP, which is also present in the message or in the record (see Annex A). The field (6216) TRM_IDEN01 is the numerical variable of this field.	
0012	MSG_RESTIP	RESPONSE CODE	1	A		This field informs the Bank's response to a transaction request.	0 – Transaction approved; 1 – Request for scenario downgrade; 4 – Non-approved transaction, for several reasons; 5 – Non-approved transaction: the BALANCE field indicates the

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
							maximum amount allowed for this transaction in particular; 6 – Applicational error; 7 – Card captured at the ATM: valid codes only for the authorization request messages; 8 – Declined: Card captured – suspected fraud; 9 – Authorized with request for identification; not applicable to records of messages exchanged in the host-to-host channel.
0102	FIC_NOMN01	FILE NAME	4	A		This field indicates the name of the file. Within the application, this is a unique name.	
0107	FIC_REGQNT	RECORDS TOTAL	8	N		This is a Trailer field and it is a detail record counter (record type different from '0' and '9') of the file's detail records.	
0111	FIC_REGCOD	RECORD TYPE	1	A		This is a code that distinguishes the different record types in a file.	0 – File's header record; 9 – File's trailer record.
0117	LOG_NUMN01	CENTRAL LOG RECORD NUMBER	8	N		This field identifies the record number of the CPU-SIBS Log File corresponding to the transaction. It is combined with the fields (0312) SIS_APLPDD or (1709) LOG_SIS, and (0320) LOG_PERN01, to univocally identify a record of the MULTIBANCO system. In the case of Authorizations, the Acquirer identification uses the 6 rightmost positions of the central log record.	
0205	EXT_NIF_CLI	CARDHOLDER'S TAXPAYER IDENTIFICATION NUMBER	9	N		This field indicates the Taxpayer Identification Number associated to the Cardholder or to the payment of a service.	

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
0233	EXT_MOECOD	CURRENCY CODE	3	N		This field indicates the currency code of the transaction, or the transaction's settlement. This field is populated in compliance with ISO 4217 code. The most frequently used code is '978' (EURO).	
0250	EPS_REF	PAYMENT REFERENCE	9	N		This field identifies the payment made by the Cardholder. Among other possible usages, the content of this field is printed on the invoices that can be paid through the Bill Payments transaction.	
0320	LOG_PERN01	CENTRAL LOG PERIOD IDENTIFICATION	4	N		This field identifies the SIBS FPS' log file number where the transaction has been recorded. This field, combined with the fields (0170) LOG_NUM and (0320) LOG_PERN01 or (1709) LOG_SIS, constitutes the transaction's unique key. SIBS FPS uses more than one log files per day, and therefore several transactions of different log files are included in the same MULTIBANCO clearing file: the log files of the day and, possibly, also those of previous days, if some event has prevented those logs' clearing.	
0323	TRM_REGNUM	LOCAL RECORD NUMBER	5	N		This field identifies the transaction record in the local accounting period – the terminal's field (0118) TRM_PERNUM – and that must be present on the transaction receipt, when it is produced. In POS receipts, this field's format is 00nnn.	
0468	EPS_NUM	SERVICES SUPPLIER IDENTIFICATION	5	N		This field identifies the Services Supplier (the payment creditor) in a Bill Payment or a Special Service transaction.	

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
0473	SEE_MAXMNTN02	PAYMENT MAXIMUM AMOUNT	10	N	8 int., 2 dec.	This field indicates the maximum amount informed by the creditor Services Supplier, which is associated to the Bill Payment's Reference. It can be zero ('0') if SIBS FPS does not have the information. The maximum amount, in EURO, for each payment at ATM is EUR 99.999,99.	
0474	EPS_LIMDAT	PAYMENT'S LIMIT DATE	8	N	YYYYMMDD	This field indicates the limit date to accept a service payment and it is informed by the creditor Services Supplier. The payment is accepted until 00:00 (midnight) of the payment's limit date, except for special cases, where it is accepted until the Clearing process start.	
0476	SIS_PSCMNT	AMOUNT (BILL PAYMENTS)	10	N	8 int.; 2 dec.	The amount associated to a specific Payment Reference (Bill Payment). It can be the amount already charged up to that date, or the amount paid in a certain transaction.	
0479	LOC_TRMABV	TERMINAL ADDRESS LOCATION (ABBREVIATED)	15	A		This field contains the city's abbreviated form, where the terminal is installed.	
0686	SEE_FCTNUM	INVOICE NUMBER	8	N		The number assigned by SIBS FPS after the transaction's completion. This number can be supplied by the Services Supplier or generated by SIBS FPS' system.	
1149	EPS_INIDAT	PAYMENT START DATE	8	N	YYYYMMDD	This field indicates the start date of the payment acceptance, informed by the creditor Services Supplier. The transaction is accepted from 00:00 (midnight) of the start date.	

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
1709	LOG_SIS	LOG SYSTEM ASSOCIATED TO THE TRANSACTION (NEW EXPANDED CODE)	2	A		This field contains the code used in each transaction's message and detail records and it indicates the transactional subsystem where the transaction occurred. It corresponds to the expanded version of the field (0312) SIS_APLPDD. This field may not be populated (space characters) in records generated at MULTIBANCO clearing, resulting from aggregated values calculation, for which no record is created in SIBS FPS' log file.	Possible values for the Data Processing Center of Lisbon: 01 - QUE; 02 - POS 01; 03 - INT.; 04 - BX. V.; 05 - ATM-OLO 01; 06 - PMB; 07 - ATM-OLO 02; 08 - POS 02; 0A – Batch records; 0C - SIDF; 0D - POS 03; 0E - POS 04; 0F - ATM-OLO 03; 10 - ATM-OLO 04; 11 - FEP - ATM; 12 - FEP - POS; 13 - DISPUTES; Possible values for the Data Processing Center of Viseu: (non-applicable codes for the LOG in DB2): 51 - QUE; 52 - POS 01; 53 - INT.; 54 - BX. V.; 55 - ATM-OLO 01; 56 - PMB; 57 - ATM-OLO 02; 58 - POS 02;

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
							5A - Batch records;
							5C - SIDF;
							5D - POS 03;
							5E - POS 04;
							5F - ATM-OLO 03;
							60 - ATM-OLO 04.
2148	SIS_DTHN01	TRANSACTION DATE/TIME	12	N	YYYYMMDD HHMM	The transaction's execution date and time (ex.: 200212311245).	
2149	LOG_TARMNT	FEE	5	N	3 int.; 2 dec.	The fee agreed with the Credit Institution for the service supply, applied to the transaction. The fee amount includes the applicable VAT rate.	
2153	EXT_PCTIVA	VAT RATE	2	N		This field contains the VAT rate that SIBS FPS applies to the Services Supplier. For example, if the Services Supplier is established in Portugal, this field must have the value '23' (for the VAT rate of 23%), or '00', if the Services Supplier is exempted from VAT.	
2155	FIC_REGORI	ORIGINAL RECORD	130	A		This field contains the rejected record of the original file. The field length is variable.	
2158	TRM_EQPTIP	TERMINAL TYPE	2	A		This field contains the code that identifies the terminal type.	01 - ATM; 02 - POS or AMB (Access to MULTIBANCO); 04 – Mobile phone; 05 – Communicated from a Bank's host.
2398	FIC_SEQ	PROCESSING DATE	9	N	YYYYMMDDS	This field contains the date of the file transfer (SIBS FPS Clearing Date), added of one digit that corresponds to the file sequence on that day (ex.: 200404301).	

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
2399	FIC_SEQ_ULT	LATEST FILE IDENTIFICATION	9	N	YYYYMMDDS	This field identifies the latest generated and transferred file. It is constituted by the processing date plus the file's sequence number in that day (ex. 200412311).	
2400	SIS_PRCCOD	PROCESSING CODE	2	N		This field contains the code that identifies each transaction's type.	04 – Credit Transaction. 80 – Client Insertion/Updating 82 – Client Deletion 90 – Debit Transaction 99 – Transaction of non-accountable value.
2416	EPS_TOTMNT_FIC	TRANSACTIONS TOTAL AMOUNT	17	N	15 int.; 2 dec.	The total amount of the processed transactions (processing code=04), contained in the transactions file.	
2539	FIC_IVAMNTN01	VAT TOTAL	12	N	10 int.; 2 dec.	This field indicates the VAT total amount. If the applied fee already includes VAT, this field is populated with zeros ('0').	
3111	MSG_RESNUM	SERVICES SUPPLIER'S RESPONSE IDENTIFICATION	12	N		This field represents the transaction's identification number at the Services Supplier's system. It corresponds to the number assigned by the Services Supplier and must univocally identify the transaction within the Services Supplier's system.	
3252	FIC_NOMN01_ORI	ORIGINAL FILE	4	A		This field identifies the file. Within the application, this is a unique file (version of field 0102 FIC_NOMN01).	
3395	FIC_SEQ_ORI	PROCESSING DATE (ORIGINAL)	9	N	YYYYMMDDS	This field contains the file's transfer date (SIBS FPS clearing date), added of one digit that corresponds to the file's sequence on that day. Ex.: "201504301" (version of field (2398) FIC_SEQ).	

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
4190	FIC_TARMNTN01	FEES TOTAL	12	N	10 int.; 2 dec.	This field contains the amount that results from the product of the Fee (field (2149) LOG_TARMNT) multiplied by the detail records number (field (0107) FIC_REGQNT). This field includes the VAT rate, if it is applicable to the relevant fee.	
4202	LOG_ENVMRT_EPS	TRANSMISSION MODE	1	N		The mode used for transmitting the transaction to the Services Supplier.	0 – The transaction was not sent in real time; 1 – The transaction was sent to the Services Supplier in real time and received a positive response; 2 - The transaction was sent to the Services Supplier in real time and no response was received until the daily Clearing; 3 - The transaction was sent to the Services Supplier in real time and received a negative response.
4204	MSG_RESTIP_EPS	RESPONSE CODE	1	A		This field contains the response type that the Services Supplier sent to a real time transaction. This field is populated only if the Services Supplier responded to the system's managing Entity, i.e., if the field (4202) LOG_ENVMRT_EPS is populated with the values '1' or '3'.	0 – Transaction approved by the Services Supplier; 4 – Transaction declined by the Services Supplier for several reasons (format errors); 6 - Transaction declined by the Services Supplier due to applicational error (the Services Supplier was not able to approve the transaction, due to in-house reasons).
4209	EPS_ERRCOD	ERROR CODE	3	N		This field indicates the code assigned to the identified error.	
4210	EPS_DSGERR	ERROR DESCRIPTION	33	A		This field contains the description of the occurred error.	

No.	Field Code	Field Name	Length	Rep.	Format	Description	Values
5218	SEE_MINMNTN02	PAYMENT MINIMUM AMOUNT	10	N	8 int.; 2 dec.	This field contains the minimum amount that the Client can pay. It cannot be higher than the amount indicated in field 0473.	
5219	COM_NUMN01_ORI	ORIGINATOR ENTITY IDENTIFICATION	8	N		This field contains the identification number of the Entity who originated the file. SIBS FPS assumes the value "50000000".	
5220	COM_NUMN01_DST	DESTINATION ENTITY IDENTIFICATION	8	N		This field contains the identification number of the Entity to which the file is destined. The value of this field is the Services Supplier's identification number in MULTIBANCO system.	

4   Testing

Prior to the Bill Payments service enabling, and in order to guarantee its correct operation, acceptance tests must be performed between SIBS FPS and the Participants.

Testing shall be performed in SIBS FPS' Pre-Production environment (SPP). However, for some simpler cases, and in order to speed up processes, after an accurate case-by-case analysis, testing may be executed in Production environment.

4.1   Participants

Testing procedures regarding the Bill Payments service must be performed by the following participants:

- **Services Supplier**
The supplier of a service that is paid by the Clients – on-us cardholders – through the Bill Payments service, operated and processed in an electronic transactions network.

- **Support Institution**
An institution that participates in an electronic transactions network and agrees with the Services Supplier the offer (to the Services Supplier's Clients) of the Bill Payments service; through this service, the Clients pay for the supplied services' invoiced amounts. The Support Institution can be a Bank or an Acquirer.

- **SIBS FORWARD PAYMENT SOLUTIONS – SIBS FPS**
SIBS FPS ensures the conception and management of MULTIBANCO Services, as well as the management of the card scheme acquiring activity in ATM and POS networks. SIBS FPS is also responsible for the operational processing of an electronic network of payments and transactions, assuring the total integrity and security of the transmitted data between the several Participants in the whole system.

4.2   Testing Support Information

4.2.1   Pre-requirements

The following equipment and interfaces are required for testing the Bill Payments service:

- SIBS Portal;
- MULTIBANCO File Transfer application;
- Real Time Protocol application;
- On-us test cards;
- Automated Teller Machine (ATM), in Pre-Production environment (SPP);
- Point-of-Sale (POS), in Pre-Production environment (SPP).

These pre-requirements do not demand any computer development on the Participants side, except for any necessary changes to the applications installed in their systems.

4.2.2   Testing Environment

Testing shall be performed in SIBS FPS' Pre-Production environment (SPP). However, for some simpler cases, and in order to speed up processes, after an accurate case-by-case analysis, testing may be executed in Production environment, but only with the consent and participation of the Services Suppliers and their Support Institutions.

4.2.3   Schedule

The MULTIBANCO Clearing system's Closure in the SPP environment (Tests) occurs daily at 10:00 p.m. This environment is unavailable for testing, on a daily basis, between 06:30 p.m. and 08:00 p.m. Whenever the SPP system is unavailable, Participants will receive a notification in due time.

4.2.4   Contacts for Testing Support

Scope	Area	Contact
Acceptance Tests	Network and Operations Management Department Customer Support	sac.suporte@sibs.pt

4.3   Test Scripts

4.3.1   Bill Payments Validations

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Valid Check Digit or Valid Check Digit and Reference Group Management**	
	• The Services Supplier sends an e-mail with 10 to 12 References for check digit validation;	• The Check Digit calculation is verified and confirmed as invalid.
	• SIBS FPS generates a file with simulated payments (**MEPS** File) and sends an e-mail to the Services Supplier with valid check digit information and the necessary procedures to receive the **MEPS** File;	• The Services Supplier requests the "Services Supplier" enabling and receives the Payments File (**MEPS**).
Services Supplier / SIBS FPS	**Invalid Check Digit or Invalid Check Digit and Reference Group Management**	
	• The Services Supplier sends an e-mail with 10 to 12 References, for Check Digit validation;	• The Check Digit calculation is verified and confirmed as invalid.
	• SIBS FPS informs the Services Supplier on the invalid Check Digit;	• The Services Supplier sends new References for testing with valid check digit calculation.

Participants	Description	Expected Output
	• SIBS FPS generates a file with simulated payments (**MEPS** File) and sends an e-mail to the Services Supplier with valid check digit information and the necessary procedures to receive the **MEPS** File;	• The Services Supplier requests the "Services Supplier" enabling and receives the Payments File (**MEPS**).
Obs.: If tests occur in the Production environment, a file named "**REPS**" will be used to validate the communications structure.		
Services Supplier / SIBS FPS	**Clients File-based validation – without errors**	
	• The Service Supplier transfers the test **AEPS** file with 10 to 12 References;	• SIBS FPS checks the file, field by field, and confirms its validity, without any error.
	• SIBS FPS generates an "empty" **AEPE** Response File, transmits it to the Services Supplier and sends an e-mail informing the procedures to enabling the "Services Supplier";	• The Services Supplier receives the **AEPE** file and requests the "Services Supplier" enabling.
	Clients File-based validation – with errors	
	• The Service Supplier transfers the test **AEPS** file with 10 to 12 References;	• SIBS FPS checks the file, field by field, and confirms its invalidity, with the presence of errors.
	• SIBS FPS generates the **AEPE** Response File with the errors marked in the fields;	• The Services Supplier receives the **AEPE** file, corrects the errors and sends a new valid file, without any error.
	• SIBS FPS generates an "empty" **AEPE** Response File, transmits it to the Services Supplier and sends an e-mail informing the procedures to enabling the "Services Supplier";	• The Services Supplier receives the **AEPE** file and requests the "Services Supplier" enabling.
Obs.: If tests occur in the Production environment, a file named "**TEPS**" will be used to validate the communications structure.		

4.3.2   Check Digit Validation – Data Management (PSS)

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Data Management - Check Digit validation – Enter Reference Group**	
	• In the PSS, follow the menu path: Services Suppliers > Payments References > Enter Reference Group;	• PSS displays the "Enter Reference Group" screen.
	• Enter the Entity Code + Reference Limits + Payment Dates and press the button "Enter";	• Successfully entered data (Reference Group).
Services Supplier / SIBS FPS	**Data Management - Check Digit validation – Query Reference Group**	
	• In the PSS, follow the menu path: Services Suppliers > Payments References > Query Reference Group;	• PSS displays the "Query Reference Group" screen.
	• Enter Entity Code + Reference Number and press the button "Query";	• PSS displays the "Query Reference Group" screen (with the queried data).

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Data Management - Check Digit validation - Change Reference Group**	
	• In the PSS, follow the menu path: Services Suppliers > Payments References > Query Reference Group;	• PSS displays the "Query Reference Group" screen.
	• Enter Entity Code + Reference Number and press the button "Query";	• PSS displays a screen with the query result.
	• Select one Reference Group, make the necessary changes and press the button "Change".	• PSS displays a message confirming the successful change operation.
Services Supplier / SIBS FPS	**Data Management - Check Digit validation - Delete Reference Group**	
	• In the PSS, follow the menu path: Services Suppliers > Payments References > Query Reference Group;	• PSS displays the "Query Reference Group" screen.
	• Enter Entity Code + Reference Number and press the button "Query";	• PSS displays the "Query Reference Group" screen (with the queried data).
	• Press the button "Delete" in the Reference Group to be eliminated;	• PSS assumes the deletion operation (of the selected Reference Group).

4.3.3   Bill Payments in MULTIBANCO ATM network

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Bill Payments at ATM**	
	• Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services (*PAGAMENTOS E OUTROS SERVIÇOS*) > **Bill Payments** (*PAGAMENTO DE SERVIÇOS/COMPRAS*);	• The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	• Select the option "*SIM*" (Yes) to obtain a Receipt;	• The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*); ▪ Reference (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	• Insert the three required data, according to the data available in the tests Database, or according to the correct check digit; confirm at the end of the insertion (key *CONFIRMAR*);	• The ATM processes the transaction; prints the Receipt and displays a screen to proceed with one of the following: "Other Operations" (*OUTRAS OPERAÇÕES*) or "Eject Card" (*RETIRAR CARTÃO*).
	• Choose "Eject Card" (*RETIRAR CARTÃO*).	• The on-us card is ejected.

4.3.4 Bill Payments in MULTIBANCO POS network

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Bill Payments at POS**	
	• At the POS menu, select the option "MB SPOT – Bill Payments" (*MB SPOT - PAG. SERVIÇOS*);	• The POS displays a screen with the message: "MB Card payment? (PAG. CARTÃO MB?) and the options 1-Yes and 2-No (1 – SIM, 2-NÃO).
	• Choose the option "1- SIM" (Yes), by pressing the key "1"; insert the card for chip reading;	• The POS displays a screen with the message "Insert Services Supplier Id. (IDENTIFICAÇÃO ENTIDADE).
	• Enter the Services Supplier Id. and confirm, by pressing the key "OK";	• The POS displays a screen with the message "Insert Payment Reference" (IDENTIFICAÇÃO REFERÊNCIA).
	• Enter the Reference and confirm, by pressing the key "OK";	• The POS displays a screen with the message "Amount" (MONTANTE).
	• Enter the Amount, according to the data available in the tests Database, or according to the correct check digit; confirm, by pressing the key "OK";	• The POS displays a screen with the message "Enter PIN" (INTRODUZA O PIN).
	• Enter the PIN and confirm, by pressing the key "OK";	• The POS communicates with SIBS FPS system to complete the payment and prints the RECEIPT.

4.3.5 Bill Payments in Real Time

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Bill Payments at ATM, in Real Time**	
	• Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services (*PAGAMENTOS E OUTROS SERVIÇOS*) > **Bill Payments** (*PAGAMENTO DE SERVIÇOS/COMPRAS*);	• The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	• Select the option "*SIM*" (Yes) to obtain a Receipt;	• The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*); ▪ Reference (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	• Insert the three required data, according to the data available in the tests Database, or according to the correct check digit; confirm at the end of the insertion (key *CONFIRMAR*);	• The ATM processes the payment and communicates with SIBS FPS central system; the central system sends a real time payment notification message (**E034**) to the Services Supplier, through the PRT application.
	• The PRT server installed at the services Supplier receives the notification message and acknowledges its reception, by sending one **E134** message to SIBS FPS;	• The ATM processes the transaction; prints the Receipt and displays a screen to proceed with one of the following: "Other Operations" (OUTRAS OPERAÇÕES) or "Eject Card" (RETIRAR CARTÃO).
	• Choose "Eject Card" (*RETIRAR CARTÃO*).	• The on-us card is ejected.

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Bill Payments at POS, in Real Time**	
	• At the POS menu, select the option "MB SPOT – Bill Payments" (MB SPOT - PAG. SERVIÇOS);	• The POS displays a screen with the message: "MB Card payment? (PAG. CARTÃO MB?) and the options 1-Yes and 2-No (1 – SIM, 2-NÃO).
	• Choose the option "1- SIM" (Yes), by pressing the key "1"; insert the card for chip reading;	• The POS displays a screen with the message "Insert Services Supplier Id. (IDENTIFICAÇÃO ENTIDADE).
	• Enter the Services Supplier Id. and confirm, by pressing the key "OK";	• The POS displays a screen with the message "Insert Payment Reference" (IDENTIFICAÇÃO REFERÊNCIA).
	• Enter the Reference and confirm, by pressing the key "OK";	• The POS displays a screen with the message "Amount" (MONTANTE).
	• Enter the Amount, according to the data available in the tests Database, or according to the correct check digit; confirm, by pressing the key "OK";	• The POS displays a screen with the message "Enter PIN" (INTRODUZA O PIN).
	• Enter the PIN and confirm, by pressing the key "OK";	• The POS communicates with SIBS FPS central system; the central system sends a real time payment notification message (**E034**) to the Services Supplier, through the PRT application.
	• The PRT server installed at the services Supplier receives the notification message and acknowledges its reception, by sending one E134 message to SIBS FPS;	• The POS prints the RECEIPT.

4.3.6   Negative Tests in MULTIBANCO ATM network

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Insertion of invalid data in ATM – Clients File-based validation**	
	• Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services (*PAGAMENTOS E OUTROS SERVIÇOS*) > **Bill Payments** (*PAGAMENTO DE SERVIÇOS/COMPRAS*);	• The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	• Select the option "*SIM*" (Yes) to obtain a Receipt;	• The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*); ▪ Reference (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	• Insert invalid data (Services Supplier, Reference, Amount), and confirm at the end of the insertion (key *CONFIRMAR*);	• The ATM communicates with SIBS FPS central system and verifies that the inserted data are invalid, relatively to the Clients File data. The ATM displays a screen with the message "The inserted data are incorrect. Please try again." (*DADOS INDICADOS NÃO ESTÃO CORRECTOS. TENTE NOVAMENTE*), and the card is ejected.

Participants	Description	Expected Output
Services Supplier/ /SIBS FPS	**Insertion of invalid data in ATM – Check Digit validation**	
	• Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services > **Bill Payments** (*Pagamento de Serviços/Compras*);	• The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	• Select the option "*SIM*" (Yes) to obtain a Receipt;	• The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*); ▪ Reference (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	• Insert invalid data (Services Supplier, Reference, Amount), and confirm at the end of the insertion (key *CONFIRMAR*);	• The ATM validation detects that invalid data was inserted and displays a screen with the message "The inserted data are incorrect. Please try again." (*DADOS INDICADOS NÃO ESTÃO CORRECTOS. TENTE NOVAMENTE*).
	• Reinsert incorrect data once again (Services Supplier, Reference, Amount), and confirm at the end of the insertion (key *CONFIRMAR*);	• The ATM validation detects that invalid data was inserted and displays a screen for a new data insertion, with the message "The inserted data are incorrect. Last attempt." (*DADOS INDICADOS NÃO ESTÃO CORRECTOS. ÚLTIMA TENTATIVA*).
	• Reinsert incorrect data, for the 3rd time (Services Supplier, Reference, Amount), and confirm at the end of the insertion (key *CONFIRMAR*);	• The ATM validation detects that invalid data was inserted, displays a screen with the message "The inserted data are incorrect." (*DADOS ESTÃO INCORRECTOS*) and ejects the card.
Services Supplier / SIBS FPS	**Use of the "CANCEL" function**	
	• Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services (*PAGAMENTOS E OUTROS SERVIÇOS*) > **Bill Payments** (*PAGAMENTO DE SERVIÇOS/COMPRAS*);	• The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	• Select the option "*SIM*" (Yes) to obtain a Receipt;	• The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*); ▪ Reference (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	• Select the option "*ANULAR*" (Cancel);	• The ATM cancels the operation, ejects the on-us card and displays a screen with the message "Transaction cancelled on your request." (*OPERAÇÃO INTERROMPIDA POR SUA ORDEM*).
Services Supplier / SIBS FPS	**Card operation with insufficient account balance**	
	• Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services (*PAGAMENTOS E OUTROS SERVIÇOS*) > **Bill Payments** (*PAGAMENTO DE SERVIÇOS/COMPRAS*);	• The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	• Select the option "*SIM*" (Yes) to obtain a Receipt;	• The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*);

Participants	Description	Expected Output
		▪ Reference (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	● Insert the three required data, according to the data available in the tests Database; confirm at the end of the insertion (key *CONFIRMAR*);	● SIBS FPS system, after communicating with the on-us card Issuer, detects insufficient balance of the account associated to the on-us card; the ATM cancels the operation, ejects the on-us card and displays a screen with the message "The operation has been cancelled due to insufficient account balance." (OPERAÇÃO CANCELADA. O SALDO DISPONÍVEL NÃO PERMITE REALIZAR O PAGAMENTO).
Services Supplier / SIBS FPS	**Outdated Reference relatively to the payment's limit date indicated in the Clients File**	
	● Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services (*PAGAMENTOS E OUTROS SERVIÇOS*) > **Bill Payments** (*PAGAMENTO DE SERVIÇOS/COMPRAS*);	● The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	● Select the option "*SIM*" (Yes) to obtain a Receipt;	● The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*); ▪ Reference's limit date has exceeded the payment's limit date indicated in the Clients File (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	● Insert the three required data, according to the data available in the tests Database; confirm at the end of the insertion (key *CONFIRMAR*);	● SIBS FPS system verifies that the Reference's limit date has been exceeded. The ATM cancels the operation, ejects the on-us card and displays a screen with the message "Payment's limit date has been exceeded." (*PAGAMENTO ESTÁ FORA DE PRAZO*).
Services Supplier / SIBS FPS	**Reference outdated over than a week relatively to the payment's limit date indicated in the Clients File**	
	● Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services (*PAGAMENTOS E OUTROS SERVIÇOS*) > **Bill Payments** (*PAGAMENTO DE SERVIÇOS/COMPRAS*);	● The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	● Select the option "*SIM*" (Yes) to obtain a Receipt;	● The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*); ▪ Reference's limit date exceeded for more than a week, according to the payment's limit date indicated in the Clients File (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	● Insert the three required data, according to the data available in the tests Database; confirm at the end of the insertion (key *CONFIRMAR*);	● SIBS FPS system verifies that the Reference's limit date has been exceeded for more than a week. The ATM cancels the operation, ejects the on-us card and displays a screen with the message "Incorrect data" (*DADOS ESTÃO INCORRECTOS*).

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Operation confirmation timeout**	
	• Insert on-us test card > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Payments and Other Services (*PAGAMENTOS E OUTROS SERVIÇOS*) > **Bill Payments** (*PAGAMENTO DE SERVIÇOS/COMPRAS*);	• The ATM displays a screen asking if the cardholder wishes to obtain a Receipt, at the end of the operation (*PRETENDE RECEBER UM TALÃO?*).
	• Select the option "*SIM*" (Yes) to obtain a Receipt;	• The ATM displays the screen to insert the three data fields: ▪ Services Supplier Id. (*ENTIDADE*); ▪ Reference (*REFERÊNCIA*); ▪ Amount (*MONTANTE*).
	• Insert the three required data, according to the data available in the tests Database, or according to the correct check digit; **do not confirm** at the end of the insertion;	• Due to inactivity during the operation, a timeout occurs in the system. The operation is cancelled, a screen is displayed with the message "Due to communication problems the operation cannot be completed." (*POR DIFICULDADES DE COMUNICAÇÃO NÃO PODEMOS EFECTUAR O SEU PEDIDO*), and the MB SPOT card is ejected.

4.3.7   Obtaining Copy of the Receipt

Participants	Description	Expected Output
Services Supplier / SIBS FPS	**Obtain a copy of the Payment's Receipt**	
	• Insert on-us test card with which the Bill Payment was executed, in an ATM > enter card PIN (*MARQUE O CÓDIGO PESSOAL*) > Other Payments and Services (*OUTROS PAGAMENTOS E SERVIÇOS*) > **Inquiries** (*CONSULTAS*);	• The ATM displays a screen with several types of Inquiry.
	• Select "**Card Operations in MULTIBANCO Network**"(*OPERAÇÕES DO CARTÃO NA REDE MULTIBANCO*);	• The ATM displays a screen with the options: "**Latest Operations**" (*ÚLTIMOS MOVIMENTOS*), "**Operations prior to a specific Date**" (*MOVIMENTOS ANTERIORES A UMA DATA*); "**Receipt Copy**" (*2ª VIA DE TALÃO*).
	• Select "**Receipt Copy**" (*2ª VIA DE TALÃO*);	• The ATM displays a screen with a field where the original operation date (day and month) must be entered.
	• Enter day and month of the original operation	• The ATM displays a screen with the operations executed in MULTIBANCO network, on the indicated date,
	• Press the key of the intended operation to obtain the Receipt Copy;	• The ATM prints the Receipt with the payment's details; the header presents the label "**Receipt Copy**" (*2ª VIA DE TALÃO*).
	• The ATM displays a screen to proceed with one of the following: "Other Operations" (*OUTRAS OPERAÇÕES*) or "Eject Card" (*RETIRAR CARTÃO*).	• Select the "Eject Card" (*RETIRAR CARTÃO*); the on-us card is then ejected.

5 List of Acronyms

Acronym	Full Name	Source
AEPE	Response File	Functional Diagram
AEPR	Reject File	Functional Diagram
AEPS	Clients File	Functional Diagram
AMEX	American Express	Background
ASCII	American Standard Code for Information Interchange	Multibanco File Transfer application (optional)
ATM	Automated Teller Machine	Introduction
CIR	Committed Information Rate	Installation Environment and Communications
E034	Payment Notification Message	Functional Diagram
E134	Response to Payment Notification Message	Functional Diagram
EBCDIC	Extended Binary Coded Decimal Interchange Code	Multibanco File Transfer application (optional)
GB	Gigabyte	Installation Environment and Communications
GHz	GigaHertz	Installation Environment and Communications
IBM	International Business Machines (Corporation)	Installation Environment and Communications
ISDN	Integrated Services Digital Network	Installation Environment and Communications
MDST5	Destinations File	Functional Diagram
MEPS	Payments File	Functional Diagram
MFT	Multibanco File Transfer	Security
MMOV5	Transactions File	Functional Diagram
POS	Point-of-Sale	Introduction
PRT	*Protocolo Real Time* (Real Time Protocol)	Security
PSS	*Portal de Serviço SIBS* (SIBS Portal)	SIBS Portal
REPS	File sent by SIBS FPS with payments simulations, for testing purposes	Test Scripts - Bill Payments Validations
SPP	*Sistema de Pré-Produção* (Pre-Production System/ environment)	Testing
TCP/IP	Transmission Control Protocol/Internet Protocol	Security
TEPS	Test file to simulate the Clients File - AEPS	Test Scripts - Bill Payments Validations
VAT	Value-Added Tax	Files sent by SIBS FPS - MEPS – PAYMENTS FILE

Annex A. Terminal Data (Relationship between the Terminal Identification Fields - 0003, 0006, 0007)

Possible values for field (0003) TRM_TIP	Structure of field (0006) TRM_IDE	Data included in field (0007) LOC_TRM
A – Automated Teller Machine (ATM)	0000AAAANN (branch code + ATM Id.) or BBBBAAAANN (bank + (branch code + ATM Id.)	Name (25) + Location (15)
B – Point-of-Sale (POS)	00NNNNNNNN (POS Id.)	1st and 4th lines of the shop data (name1+ location)
C – ATM in another country	Value supplied by the Acquirer	Value received from the foreigner Acquirer Name (25) + Location (15)
D – POS in another country	Value supplied by the Acquirer	Value received from the foreigner Acquirer Name (25) + Location (15)
E – Low-Value Terminal	Populated with zeros	
F - Unicre Terminal	Value supplied by Unicre	Value received from Unicre
G – Bank Terminal	Bank terminal Id.	1st and 4th lines of the shop data
H – Entity Terminal	Entity terminal Id.	1st and 4th lines of the shop data
I - *Reserved*		
J – Access to MULTIBANCO	PINpad Id.	'ACCESS TO MULTIBANCO'
K – MB PHONE	0TTTTTTTTT (phone number)	'MB PHONE'
L – Bank's Host	= field 471 (IDMSGBAN - 10 rightmost positions) received through the Bank > SIBS session	Bank short name (25 characters) + DPC Code (1 digit)
M - Internet	zeros or 00NNNNNNNN (POS Id.)	Internet or 1st and 4th lines of the shop data (name1+ location)
N - Kiosks		
Y – International Payments System	Not applicable.	Not applicable.
W – Virtual POS Transactions File	00NNNNNNNN (Virtual POS Id.)	1st and 4th lines of the shop data (name1+ location)

Annex B.   Forms Filling Instructions

Any Services Supplier that wishes to adhere to the Bill Payments service, operating in MULTIBANCO Network, must require the adherence to a Support Institution, either a participant Bank in MULTIBANCO System, or an Acquirer (ex.: UNICRE, AMEX).

The adherence Forms 1 and 2 must be completed by the Services Supplier and validate by the Support Institution. The Support Institution must submit them to SIBS FPS, in digital form, duly completed and signed. This data will be entered in SIBS FPS central system.

For Form 2, besides the Services Supplier signature and stamp, the Contractor Institution's signature and stamp are also mandatory.

- **FORM 1 – SERVICES SUPPLIER DATA**
    - The purpose of Form 1 is to enter/validate/update the Services Supplier's data in MULTIBANCO System;
    - Failure to complete, or the incorrect completion, of section 1 ("Legal Person Registration Number") causes the process to be returned to the Contractor Institution (the Support Institution), due to the importance of this element.

- **FORM 2 - SERVICES SUPPLIER'S CHARACTERIZATION IN THE BILL PAYMENTS SERVICE**

    (1) Form's purpose:
    - In section 1, it is required to select between the registration of a new Services Supplier and the update to an already characterized Services Supplier in MULTIBANCO System. If this latest option is selected, the Services Supplier Id. is mandatory and only the sections directly related to the characterization updates must be completed.
    - As a Services Supplier can establish an agreement with an Acquirer and with a Bank for the same Services Supplier Id., in case of a new agreement, the "Updates to the characterization of a Services Supplier already characterized" option must be selected and the Shop Id. field must be completed.

    (2) Registration Sequential No.:
    - This section is mandatory if the Services Supplier requests the registration of more than one Services Supplier Id.

    (3) Payment Type:
    - Please select the most adequate Payment type relatively to the service supplied by the Company. The Payment Type codes have been assigned by the Portuguese Central Bank (*Banco de Portugal*) and are also applied to Clients Services Supply. These codes are used for statistical purposes.
    - The exception to the above point goes to the "**90 – Credit Card**" code. In this case, the code informs the Institutions that support credit cards balance settlement. In MULTIBANCO System, the cards that are conditionally authorized to perform Bill Payment transactions cannot make payments to the Institutions assigned to this code. The Contractor Institution must use this code very cautiously.

    (4) "Payments File" Transmission:
    - This section refers to the data exchange mode between the Services Supplier and SIBS FPS.

    (5) Payment Validation:
    - In this section, please select the most adequate payment validation method for the Services Supplier's provided service.

    (6) Transaction Validation:
    - This section is intended for facilitating the Services Supplier's collection control, to avoid duplicate payments of the same unique Reference in MULTIBANCO System.

    (7) Payment Notification:
    - In this section, the Services Supplier can choose the most adequate form of keeping up to date on what concerns its Clients' payments.

Annex C.   Services Supplier Data – adherence form 1

(View Form 1 on next page.)

BILL PAYMENTS
ADHERENCE FORM
AGREEMENT WITH _____

FORM 1

(Acronym of the Contractor Institution)

The data supplied in this Form will be entered in MULTIBANCO System.

SERVICES SUPPLIER DATA

(Fill in one character per space; please do not exceed the available spaces.)

1. **Legal Person Registration Number**[12].. |__|__|__|__|__|__|__|__|__|

(Fill in the registration number as registered in the Central Register of Legal Entities. This number is mandatory to avoid data duplicates in MULTIBANCO System.)

2. **Name** .... |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

(The Services Supplier's complete name.) |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

3. **Short Name** .... |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

(The Services Supplier's short name or acronym.)

4. **Address** .... |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

(The Services Supplier's head office address.) |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

5. **Location** .... |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

(The Services Supplier's head office location.)

6. **Postal Code** .... |__|__|__|__| - |__|__|__| |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

(The Services Supplier's head office postal code.)

7. **Contact Person** .... |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

(The person in charge for contact purposes.)

8. **Contacts** (Please supply the Contact Person's communication data to be used by SIBS FPS, if needed.)

   Phone |__|__|__|__|__|__|__|__|__| **Fax** |__|__|__|__|__|__|__|__|__|

   E-mail |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

9. **Standard Industrial Code**[13]

   (Fill in the SIC associated to the Legal Person Registration Number)

SIC: |__|__|__|__|__| _____

(Standard Industrial Code)   (Description)

_____/_____/_____   _____

(Date)   (Services Supplier Signature/Stamp)

_____

[12] *Número de Pessoa Coletiva*
[13] *Código de Atividade Económica - CAE*

Annex D.   Services Supplier's Characterization in Bill Payments service – adherence form 2

(View Form 2 on next page.)

BILL PAYMENTS	FORM 2
ADHERENCE FORM	

AGREEMENT WITH _____
(Acronym of the Contractor Institution)

The data supplied in this Form will be entered in MULTIBANCO System.

SERVICES SUPPLIER'S CHARACTERIZATION IN BILL PAYMENTS SERVICE

SIBS FPS will assign a Services Supplier Identification number ("Services Supplier Id.) within the Bill Payments service. Please fill in the required fields. After entering these data in MULTIBANCO System, SIBS FPS will send a document to the Services Supplier informing the Company Id. and the Services Supplier Id. (except for characterization updates of a Services Supplier already characterized in MULTIBANCO System).

1. Select one option

1.1. Registration of a new Services Supplier .... ☐

1.2. Updates to the characterization (functionalities and/or agreement terms)

  of a Services Supplier already characterized .... ☐

  (In this case, please complete ONLY the sections where the updates will take place.)

  1.2.1. Updates to the Services Supplier Id. ....|__|__|__|__|__|

    (In case of a "Payment Validation" update, this can cause the Services Supplier Id. modification and, consequently, the need to restart the certification process with SIBS FPS.)

2. Registration Sequential No. .... |__|__|

  (Mandatory, if the characterization of more than one Services Supplier Id. is requested.)

3. Payment Type

☐	51 – Water	☐	60 – Insurances	☐	69 – Water/Sewage
☐	52 – Gas	☐	61 – Membership Fees	☐	70 – Telecommunications
☐	53 – Electricity	☐	64 – Collections/Recoveries	☐	90 – Credit Card
☐	54 – Gas/Electricity	☐	65 – Credit Purchases	☐	99 – Other Services
☐	55 – Telephone	☐	67 – Sewage	☐	Specify _____

4. "Payments File" Transmission

4.1. The Services Supplier already communicates with SIBS FPS through the File Transfer application and intends to use it for the Bill Payments service .... ☐

  4.1.1. Designation of the File Transfer entity to be used _____

4.2. New access to the File Transfer application between SIBS FPS and the Services Supplier .... ☐

4.3. File sending/reception will be performed by another Entity. Specify _____
                                                                (Fill in the Entity's name)

5. Payment Validation
  (Select the payment validation method to be performed by MULTIBANCO system.)

5.1. Check Digit .... ☐

5.2. Check Digit and Reference Group Management .... ☐

5.3. Clients File .... ☐

5.4. Daily Maximum Amount – Clients File .... ☐

6. Transaction Validation

6.1. Duplicate payments validation ……… ☐ 6.1.1. No. of days for validation …….……………….. |__|__|__|

> (MULTIBANCO system validates if the payment has already occurred in the previous **n** days and does not allow its duplication in that time period. Fill in the number of days.)

6.2. No duplicate payments validation ….. ☐

7. Payment Notification

7.1. Receive one real time message notification after each payment (one file per day) ……………………… ☐

7.2. Receive one real time message notification after each payment (three files per day) ……………… ☐

7.3. Receive only the daily file, informing all the processed payments …………………………………… ☐

7.3. Receive three files per day, informing all the processed payments ………………………………… ☐

8. NIB[14]

8.1. NIB |__|__|__|__| - |__|__|__|__| - |__|__|__|__| - |__|__|__|__| - |__|__|__|__| - |__|

> (Fill in the Bank Account Number to be credited for the payment transactions.)

_____

(Services Supplier Signature/Stamp)

_____

(Contractor Institution Signature/Stamp)

System Data	**Services Supplier Id.**
Merchant Id.: |__|__|__|__|__|__| Shop Id.: |__|__|__|__|__|	
(to be completed by the Contractor Institution) Fee Code |__|__|__|	_(to be completed by SIBS FPS):_ |__|__|__|__|__|__|

_____

[14] Bank Account Number (_Número de Identificação Bancária_)