E-bill manual

PostFinance

E-invoice Customer Service

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Contents

1. Service description

1.1 Brief description of the service and document overview

PostFinance Ltd, in conjunction with Post CH Ltd and SIX BBS Ltd (eBill), provides an e-invoice solution based on the consolidator model. It is designed for the electronic transmission of invoices. In this document, invoices, invoice data and data are understood to be invoices, reminders, notifications and credit notes.

The PostFinance e-bill solution enables billers to send their customers electronic invoices in CHF, EUR, USD, AUD, CAD, DKK, GBP, JPY, NOK, SEK without media fragmentation.

Invoice recipients can either process electronic invoices via their e-banking or import them into their own finance software via different channels for further processing. PostFinance is thus primarily a transport system for invoice data.

PostFinance recommends that business customers download the data via data transfer. They can thus transfer the invoice data to their own software where further processes (e.g. processing accounts payable) can be optimized and automated. In the absence of the appropriate software, PostFinance recommends registering via e-finance on the Swiss banks' eBill portal.

The main advantages of e-bill lie in the fully-automated data processing possible on both sides and the associated high data quality achieved through an absence of media fragmentation and a continuous electronic data flow. This facilitates significant efficiency improvements with a high savings potential for invoice issuers and recipients.
The PostFinance e-bill solution is constantly developed in line with customer requirements and extended to include additional functions. PostFinance has entered into partnerships with various e-invoice providers for networking and will continually expand these.

Biller	PostFinance	Bill recipient
Bill creation and dispatch	**E-bill** — Payment data / Bill details / PDF Adobe / Additional data	**Automated bill processing and archiving without media fragmentation**
Booking, payment entry and archiving	PostFinance/Bank — **Payment transfer**	
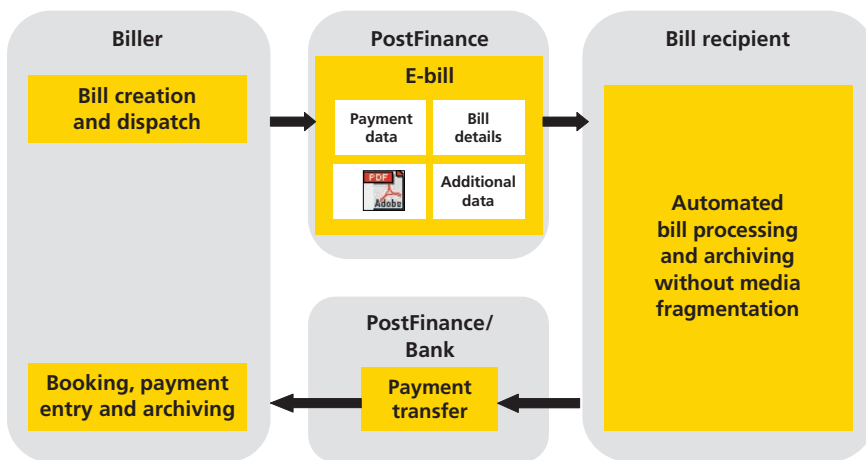
With the PostFinance e-bill solution, billers and recipients can automate their invoice processing.

The following sections are of particular interest to **billers:**
Section 1:   Service description
Section 2:   Registration and activation process for billers
Section 4:   Biller processes
Section 5:   PostFinance Ltd processes
Sections 7 to 11 Description of technical aspects
Section 12:   Data security
Section 13:   Data formats

Invoice **recipients** can consult the following sections:
Section 1:   Service description
Section 3:   Registration and activation process for invoice recipients
Section 5:   PostFinance Ltd processes
Section 6:   Invoice recipient processes
Section 11:   Communication
Section 12:   Data security
Section 13.4: Invoice data

1.2   E-bill process in brief

1. For an invoice recipient to be able to receive electronic invoices via PostFinance, he must register with the biller, i.e. he provides his subscriber number as for a change of address. To this end, PostFinance offers the billers the necessary tools which can be used via e-finance or the business interface.
2. As soon as the biller has stored the subscriber number in his customer database, he can send the electronic invoice to PostFinance.

3. Provision of data to the invoice recipient
   Via e-finance or e-banking (via eBill portal): the invoice recipient can view the invoices via e-finance or e-banking, issue a payment instruction or reject the invoice. On the due date, PostFinance makes the payment.
   Via data transfer: the invoice recipient downloads the invoice data from a defined communication channel and, after processing it, issues a payment order using his finance software (e.g. via EZAG).
   Via partners (see section 1.6)
4. The credits are entered in accordance with the process defined by the biller.

1.3 Scope

The functions of the PostFinance e-invoice solution begin when invoice data are sent from a biller's billing solution or accounts receivable system to PostFinance and end when an invoice recipient issues a payment instruction in e-banking or if the data are included in an accounts payable solution or when PostFinance has forwarded the invoice to a partner. The main functions of the e-invoice solution of PostFinance are:
– Conversion of the data into the format desired/required by the recipient,
– Data transport.

The PostFinance e-invoice solution is:
– not a billing solution,
– not a print system,
– not an accounts receivable system,
– not an accounts payable system,
– not a payment transaction system.

1.4 Service for billers

The service for billers includes the following:
– Customer administration, in particular the registration of invoice recipients and the provision of a tool that supports the registration or cancellation of invoice recipients with the biller.
– Receipt of the data delivered by the biller or submitted online via e-bill light and provision of processing messages.
– The option of automated data delivery.
– Option to receive registration, de-registration and processing records.
– Processing of data provided in accordance with the e-invoice manual.
– Digital signing of invoices.
– Provision of invoice data to the invoice recipient in accordance with the separate agreement with the latter.
– Data transfer to eBill for the eBill portal of the Swiss banks.
– Data transfer to other partners (see section 1.6).

1.5 Service for invoice recipients

1.5.1 Processing of e-bills via e-finance (eBill)
The service range includes access to the Swiss banks' eBill portal, which enables provision of the payment-relevant data and invoice details in PDF format. Structured user data from the bill is also integrated into the PDF, which enables partially automated further processing.

1.5.2 Delivery of e-bills via data transfer
Depending on the chosen channel, the service for invoice recipients includes the following points:
– Function enabling invoice recipients to register or cancel their registrations with billers.
– Invoice data are made available in accordance with the recipient's instructions
– The option of automating data delivery via web services.

1.6 Data transfer to partners

PostFinance works together with partners that offer equivalent e-bill solutions. An up-to-date partner list is available at www.postfinance.ch/e-bill.

Thanks to the connection between PostFinance and various partner systems, users of one system can exchange digitally signed invoices with users of another system.

Billers and invoice recipients only need to have a connection to the PostFinance system and thus benefit from the expanded group of participants thanks to the system links, without requiring any additional agreements with the partner (single point of contact).

1.7 Roles
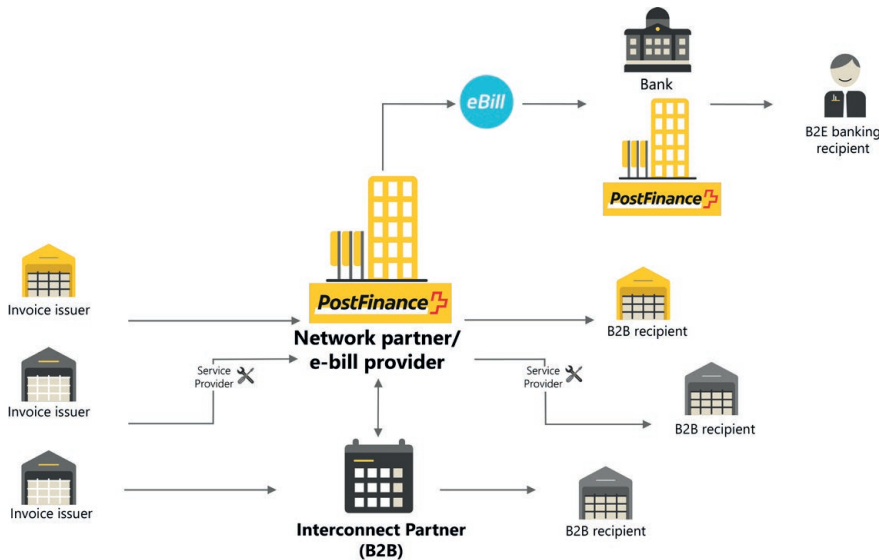
Overview of role allocations

1.7.1 PostFinance Ltd

PostFinance is a subsidiary of Swiss Post. It is responsible for the strategy, continued development and marketing of the PostFinance e-bill solution. PostFinance is the contractual partner for billers, invoice recipients and the eBill portal, for service providers (biller service providers and customer service providers) and partners who use the e-bill solution.

PostFinance is also responsible for process and system operations of the e-finance application and its functions.

1.7.2 Post CH Ltd

Post CH Ltd is a Swiss Post subsidiary. On behalf of PostFinance, it is responsible for developing, operating and support for the solution, including its interfaces to customers, service providers and partners.

1.7.3 Swiss banks' eBill (SIX BBS Ltd)

eBill is the standardized system of Swiss banks for electronically transferring invoices between billers and e-banking users.

1.7.4 Biller

A biller is the provider of services for which invoices are issued. Billers create the source data of the invoices delivered to PostFinance. These can be transmitted either directly by the biller or via a service provider.

1.7.5 Biller service provider (BSP)

A BSP is a contractual partner for billers who use the e-invoice solution via a BSP. The BSP offers its own billing services and can send electronic invoice data to PostFinance. The BSP is responsible for product management, marketing, consulting and sales of its billing services, as well as for the system operation and first-level support for BSP billers.

Alternatively, the BSP can also act as data provider on behalf of a biller who has a contract with PostFinance.

1.7.6 Customer service provider (CSP)

A CSP is a contractual partner for invoice recipients who use the e-invoice solution via a CSP. The CSP is responsible for product management, marketing, consulting and sales of its e-billing services, as well as for the system operation and first-level support for CSP customers.

1.7.7 Invoice recipient

Invoice recipients have made use of the biller's services and receive an invoice from the biller in return. They can download the invoice either via eBill, a service provider or via a channel supported by PostFinance.

1.7.8 Interconnect partners

PostFinance works together with partners that offer equivalent e-billing services. The latter forward invoice data of their customers, destined for recipients at PostFinance, to PostFinance. At the same time, the recipient identification shows PostFinance with which partner the recipient is registered and forwards the billing data to the corresponding partner system.

1.8 Transmission of electronic orders

With the PostFinance e-invoice solution it is also possible to transmit electronic orders. The order data can be submitted to PostFinance in a structured format. They can be converted into the desired format for the recipient and delivered to the supplier either by data transfer or via e-mail or fax (see section 15).

2. Registration and activation process for billers

2.1 Preconditions for participants

In order to use the PostFinance e-invoice solution as a biller, the following points must be satisfied/addressed:
– Biller's handling process (section 4)
– Registration and cancellation of invoice recipient (section 7)
– Visualization of invoice details (section 8)
– Receipt of processing report (section 9)
– Credit account (section 10)
– Communications to/from PostFinance (section 11)
– Data security (section 12)
– Generation of the required data (section 13)

So that invoices can be made available across the entire network, all invoice data including invoice details must be provided in a structured format. If invoices are only send to e-finance and e-banking customers (eBill), the data relevant to payment must be provided in a structured format together with a PDF file of the invoice.

If the PostFinance e-invoice solution is used, some of the biller's other internal processes may have to be adjusted. Points to be taken into consideration include prioritization of different delivery methods, communications measures and internal training of people involved in customer support.

2.2 Registration for billers

With registration, the e-bill subscriber conditions for business customers and the e-bill manual are accepted.

2.2.1 Registration via the eInvoicing portal
The eInvoicing portal provides online access to our e-billing services.
New customers can register here directly and create and manage users.
The eInvoicing portal is accessed via
www.postfinance.ch/e-bill

2.2.2 Registration for e-bill light
With the e-bill light online portal, electronic invoices can be created and sent online.
Registration for e-bill light is carried out via
www.postfinance.ch/e-bill

2.2.3 Registration via form
Registration is carried out using the "e-bill registration form" which can be downloaded from **www.postfinance.ch/e-bill**.

2.3 Biller activation with software tested with PostFinance for e-invoice

If the biller uses a software program with a standardized and tested interface to the PostFinance e-invoice solution, the setup process includes the following services:
– Sending of log-in details for web services and parameterization of the SFTP server for invoice issuers.
– Parameterization of the e-mail servers if feedback is provided by e-mail.
– Parameterization of the biller on the PostFinance eBill system.
– Configuration of the registration and cancelllation screen in four languages in accordance with the standard layout (see sections 13.2 and 13.3).

2.4 Biller activation without software tested PostFinance e-invoice

If the biller's software does not yet have an interface that has been tested for the PostFinance e-invoice solution, the following processes must be analyzed and defined separately. PostFinance assists the biller via the e-bill helpdesk (see SLA in the annex).

The following points are of particular interest to billers:

Points	Description
Registration and cancellation processes	Add new "subscriber number" field to database and indicate that the invoice is to be sent electronically. The PostFinance tool can provide assistance with the registration and cancellation process (see section 7).
Invoice details	Preparation of the invoice details using PDF (see section 8).
Data transmission	Choice of channel for data transmission (see section 11).
Data security	Selection of the login procedure and observance of the security provisions of PostFinance Ltd (see section 12).
Data format	Selection of the required data format (see section 13). In the event that a format other than yellowbill invoice is delivered, this shall be analysed as a priority. The time required for reconciliation and creation of an individual data conversion is approximately 8–12 weeks. The costs for creating individual data mapping for data conversion are set out in the eBill price list.

The invoice delivery interface is configured according to the defined parameters. The relevant data exchange process and the defined requirements are configured in the system.

The interface is tested in collaboration with the biller on the customer-integration system and prepared for transfer to the production systems. Particular care is taken to check the security of the data connection (see section 12). Tests must be announced in advance at the e-bill help desk.

After mutual acceptance, the interface goes live and the biller receives the definitive login elements.

2.5 Registration and activation for the Swiss banks' eBill system

eBill is a central platform for receiving e-bills via e-banking. It is operated on behalf of the participating Swiss banks by SIX BBS Ltd, a subsidiary of SIX Group Holding.

Invoice issuers who want to send e-bills to eBill can commission PostFinance to register them with eBill. The commissioning must be made in writing, either with a specification on the registration form or via mail.

Upon registration of the invoice issuer with eBill, the following details are transferred to eBill:
– Company name
– Name to be displayed on the e-bill
– Address
– Credit account (see section 10)
– Sector
– Company identification number (UID)

PostFinance has obliged SIX BBS Ltd to use these data exclusively for the provision of the eBill service.

This enables e-bills to be sent to customers who process their invoices via a bank affiliated with eBill (see section 5.6 and annex).

2.6 Software developers

Software developers who want to develop a standard PostFinance e-invoice interface can contact **software-info@postfinance.ch** for further information.

A list of software companies which have been tested for the PostFinance e-bill solution is available at www.postfinance.ch/software.

3. Registration and activation process for invoice recipients

3.1 Preconditions for participants

Requirements for the use of the PostFinance e-invoice solution by an invoice recipient:
– Access to e-finance from PostFinance is required for eBill
– Infrastructure for receiving e-invoices in a structured format and via a channel supported by PostFinance and further processing in the recipient's own financial software.

3.2 Registration for invoice recipients

With registration, the e-bill subscriber conditions for business customers and the e-bill manual are accepted.

3.2.1 Registration via eInvoicing portal
The eInvoicing portal provides online access to our e-billing services.
New customers can register here directly and create and manage users.
The eInvoicing portal is accessed via
www.postfinance.ch/e-bill

3.2.2 Registration via form
Registration is carried out using the "e-bill registration form" which can be downloaded from **www.postfinance.ch/e-bill**.

3.3 Registration for eBill via e-finance

Registration for eBill of Swiss banks is carried out solely via e-finance for private and business customers. Its use is governed in the subscriber conditions for use of e-finance.

3.4 Activation invoice recipient with software tested for the PostFinance e-bill solution

If the invoice recipient works with software that has a standardized and tested interface for receiving e-invoices from the PostFinance invoice solution, the registration process includes the following services:
– Sending of log-in details for web services and parameterization of the SFTP server for invoice recipients.
– Parameterization of the biller on the PostFinance eBill system.

3.5 Activation invoice recipient without software tested for the PostFinance e-bill solution

If the invoice recipient's software does not yet have an interface tested for the PostFinance e-invoice solution, the receipt and further processing of signed e-invoices must be facilitated in the recipient's own infrastructure. PostFinance will support the invoice recipient through the e-invoice help desk (see SLA in Annex). Upon request, appropriate test files can be provided.

The following points are particularly important for the invoice recipient:
Meaning:

Points	Description
Data transmission	Choice of channel for data transmission (see section 11).
Data security	Selection of the login procedure and observance of the security provisions of PostFinance Ltd (see section 12).
Data format	Selection of the required data format (see section 13).
	In the event that a format other than yellowbill invoice is requested, this shall be analysed as a priority.
	The time required for reconciliation and creation of an individual data conversion is approximately 8–12 weeks. PostFinance also reserves the right to invoice the costs for creating the mapping for data conversion.
	PostFinance also reserves the right to invoice the costs for creating the mapping for data conversion.

3.6 Registration with billers

Upon registering, invoice recipients can inform billers that they wish to receive their invoices in electronic form in future. Registration is possible via either eBill, the business interface or other means. Therefore, the decision to receive an electronic invoice always lies with the invoice recipient. Invoice recipients may cancel their registration with billers at any time. Invoice recipients inform billers of their e-bill subscriber number when they register. They may also need to provide additional information defined by the biller to assist with customer identification. Details of the options are described in section 7.

3.6.1 Registration via e-banking (eBill)
The invoice recipient can view the available billers in the eBill portal and add them to their billers.

3.6.2 Registration via eInvoicing portal
To initiate the registration process, the invoice recipient can see a "Register" button next to each biller which can be used to call up the corresponding registration screen. If the biller supports this, the recipient can supply additional information with the registration data which may be useful for subsequent invoice processing (see section 13.2.2). The business interface shows which billers the customer has already registered with.

3.7 Software developers

Software developers who want to develop a standard PostFinance e-invoice interface can contact **software-info@postfinance.ch** for further information.

A list of software companies which have been tested for the PostFinance e-invoice solution is available at www.postfinance.ch/software.

4. Billers' handling processes

4.1 Invoice data preparation

Invoice data are prepared in the biller's billing system or by a biller service provider.

4.2 Sorting of invoices, creation and delivery of invoice data

Based on the subscriber number entered in the customer database, the biller puts the electronic invoices through a separate billing run and transmits them in a data format supported by PostFinance to PostFinance (see section 13).

Invoices can only be delivered if a contractual relationship, a participation, a membership or a comparable relationship exists between the invoice issuer and the invoice recipient.

If invoices are delivered that are to be forwarded to an Interconnect partner (see section 5.7), the different addressing specifications must be observed. Details on this are set out in the technical specifications (see annex).

4.3 Visualization of electronic invoice details

The invoice details can be visualized with a delivered PDF document or one created by PostFinance (see sections 8.1 and 8.2).

4.4 Invoice attachments

With the submission of invoice data to PostFinance, it is possible to send invoice annexes in various formats along with invoice details in a PDF file. Annexes of this kind that relate to an individual invoice can be delivered only to recipients who are connected directly to the PostFinance e-bill (excluding eBill recipients) and via Interconnect.

PostFinance can submit invoice annexes to the eBill portal for publication on behalf of the biller. Further details are provided in the annex to this manual.

4.5 Instalment invoices

The biller can offer its customers the option of paying invoices in instalments. To this end, it is possible to form multiple instalment groups. The recipient can select one of the instalment groups in the eBill portal. If an invoice can be paid in instalments, the following details must be confirmed per instalment:
– instalment amount where the sum of the instalments does not need to correspond to the total amount of the invoice
– due date of the instalment
– ISR reference number or CreditorReference of the instalment

Instalments may be used only in combination with the ISR payment type or IBAN and the currencies CHF or EUR.

4.6 Checking data transmission

Transmitted data are processed within 24 hours. Directly after processing is completed, it is possible to check via the eInvoicing portal if the invoices have been processed correctly. Defective invoices are marked with the status "Invalid" and with the corresponding reason code, according to the processing report (see section 9). With normal system capacity utilization, this can take place approximately 2–4 hours after delivery of the data.

PostFinance generates at least once per processing day a processing report log for each billerID, which has to be checked by the biller. The processing report log shows whether the delivered invoices were able to be processed correctly and forwarded.

If invoices have been delivered to an Interconnect partner, (see section 5.7), it must be noted that invoices can be sent back by the partner as being undeliverable. This is notified in the processing log under "Rejected bills" (see section 9).

4.7 Searching for invoices

Billers can use the eInvoicing portal (see section 11.2.1) to view the status of the transmitted invoices in the "Search for invoices" menu item – taking the valid storage times into consideration. A cumulative selection can be made on the basis of the following criteria:
– Invoice recipient
– Due date
– Submission date
– Tracking no. – Invoice number
– Transaction number
– ISR reference number
– Creditor / QR reference
– Status
– Amount

The delivered file, the PDF, the sent file and the invoice status can be seen in the details.

4.8 Changes

4.8.1 Changes to invoice data transmitted
Electronic invoices can only be withdrawn or overwritten if they feature the status invalid. The following options are available for invoices which have already been processed by PostFinance.

4.8.2 Correction/cancellation of invoices by credit notes
The invoice has already been paid and is completely or partially credited using a reimbursement document. In this case, the following must be observed:
– Mark credit note in "PaymentType" field as "CREDIT" and in the "DocumentType" field as "CREDITADVICE".
– DocumentID and TransactionID must be different to the original invoice.
– Show amount in the "Summary" element in the "TotalAmountDue" field as zero or negative (not positive).
– Insert reference (e.g. invoice number) to the original invoice in the "FixedReference" field with ReferenceType "BillNumber".

4.8.3 Replace/roll over submitted invoices
Replacing or rolling over an invoice is only possible via eBill for e-invoices sent to e-banking customers. In this case, the following must be observed:
– The new invoice's DocumentID and TransactionID must be different to the original invoice.
– The original invoice's TransactionID must be added to the "FixedReference" field using the "BillNumber" reference type.

This information then replaces the original invoice on the eBill platform with the new invoice.

4.8.4 Reminders
Invoices can be set as reminders (REMINDER) via the DocumentType field. In this case, the TransactionID of the original invoice must always be entered in the "FixedReference" field with the "BillNumber" ReferenceType.

The result of this within eBill is that the referenced invoice is not replaced as per section 4.8.3, but the recipient decides upon approval whether to pay the invoice or the reminder.

4.9 Booking of incoming payments and accounts receivable management

Booking and notification of payment receipts takes place via the credit account specified in the invoice data (see section 10) in accordance with the regulations of the credit bank. Insofar as a special credit account is not used or a specific reference is not made for electronic invoices, no distinction between these and payment receipts from paper invoices is possible.

The entire accounts receivable management process including reminders is performed according to processes defined by the biller. The biller decides whether payment reminders for invoices originally issued in electronic form are to be issued electronically or on paper.

4.10 Storage of invoices

According to the legal provisions, the biller is responsible for storing invoices and acknowledges that the invoice data are, in principle, not archived by PostFinance.

The only exception to this is when using e-bill light. For billers who have registered via e-bill light (see section 2.3), PostFinance will store the signed PDF invoices for a period of 10 years and make them available via e-bill light. This data is then deleted after a maximum of 11 years. If subscription to e-bill light is cancelled, e-bills archived in this way will be deleted. The customer is responsible for downloading the archived e-bills beforehand or instructing PostFinance as to where to send them.

Where possible, PostFinance will provide the biller with the invoices bearing a digital signature in the format in which they were delivered to the invoice recipient for the purpose of archiving (see also section 5.8). These can be stored and archived with the originally delivered invoice data. PostFinance will discontinue this service in the 4th quarter of 2021 as it is no longer required in accordance with legal provisions, and therefore recommends that customers no longer use the service.

5. Processing operations at PostFinance Ltd

5.1 Receipt of invoice data

The biller can deliver data 24/7. It must be possible to process the data without manual intervention.

PostFinance processes the delivered data in the steps described below in accordance with the processing and delivery time limits in the service level agreement (see Annex) within 24 hours of receipt by PostFinance.

PostFinance maintains a transaction log for the purpose of transaction traceability.

5.2 Plausibility check and data conversion

The invoice data undergo a plausibility check in which the syntax (see yellowbill Invoice XSD format annex) and other checkable elements such as the ISR reference number, subscriber numbers, etc. are checked.

The biller is responsible for ensuring that the invoice data are correct. PostFinance does not check the business relationship or that the data are correct or complete, unless this is necessary to execute the order.

If necessary, PostFinance converts the delivered invoice data into the yellowbill invoice format or the format requested/required by the recipient (see sections 13.5.3 to 13.5.5).

5.3 Digital signature of the invoice

The e-bills are signed digitally by PostFinance or its partner, unless the recipient opts out of this. In particular, the signature guarantees the integrity of e-bills sent by PostFinance. Immediately after delivery, a plausibility check and any necessary conversion, the invoice data provided are used to generate individual invoices in the format requested by the recipient. This data as well as the PDF invoice detail are digitally signed individually with the advanced SwissSign certificate in the name of PostFinance, as per the W3C standard.

5.4 Provision of the processing report

The processing report which informs the biller of receipt and processing of the delivered invoice data includes information on the delivered, processed, signed, incorrect and forwarded invoices as well as invoices which have been rejected by the invoice recipient (for details, see section 9).

5.5 Provision of invoices intended for invoice recipients

PostFinance supplies invoice recipients connected directly to the e-invoice solution of PostFinance with the signed invoice data in the agreed delivery channel within 24 hours, or forwards the invoices on to the corresponding network partners.

5.6 Delivery to Swiss banks' eBill

PostFinance forwards invoices to eBill for recipients who received them via a bank affiliated with eBill in accordance with eBill's network partner interface. These can be viewed there directly once processing is complete.

From the format version yellowbill Invoice 2.0.3 onwards, it is possible to enter an e-mail address or a Swiss company identification number in the format CHE123456789 in the "AlternativeRecipientID" field for delivery to eBill, as an alternative to the eBillAccountID.

Further details are provided in the annex to this manual.

5.7 Delivery of invoices to Interconnect partners

PostFinance works with partners who offer equivalent
e-bill solutions (see section 1.6). Data intended for invoice recipients with a connection to an Interconnect partner system is forwarded to the relevant partner.

PostFinance provides the partner with the invoices within 24 hours, using the delivery method arranged with the partner. Please note that invoices can be returned by partners as undeliverable. In this case, reason code 50 is stated in a subsequent processing report with the corresponding original report by the partner.

Two addressing processes are supported for delivery to Interconnect partners.

5.7.1 One-stage addressing process

The invoice recipient's ID at its e-bill provider can be entered directly in the "eBillAccountID" field, provided that it is a 17-digit ID from a Swiss provider. The invoice is allocated to the correct provider via the prefix.

The process can currently be used for the following Swiss Interconnect partners:

– Prefix 4109 for Abacus Research AG, Abanet
– Prefix 4130 for Swisscom (Switzerland) Ltd, Conextrade trading platform
– Prefix 4150 for PENTAG Informatik AG

From the format version yellowbill Invoice 2.0.3 onwards, a different ID can be entered in the "AlternativeRecipientID" as an alternative. The invoice is allocated to the correct provider according to the pattern of the ID. Further details, in particular which patterns are supported, are provided in the technical specifications (see annex).

IMPORTANT NOTE: If the prefix of the eBillAccountID is 4101 or the pattern of the AlternativeRecipientID corresponds to an e-mail address or a company identification no., delivery is always made to the Swiss banks' eBill (see section 5.6). This means that two-stage addressing process must always be used for Interconnect deliveries to SIX Paynet Ltd (also prefix 4101).

5.7.2 Two-stage addressing process

The subscriber number which PostFinance has assigned to the provider is entered in the eBillAccountID field. This ID always has the prefix 4110.

The following information must also be entered:

Bill/Header/ReceiverParty/Network/NetworkName	Name of the recipient's provider
Bill/Header/ReceiverParty/Network/NetworkID	Recipient's subscriber number with his/her provider

Further details, in particular which ID is required for which partner, are provided in the technical specifications (see annex).

5.8 Return delivery of the signed invoices

PostFinance delivers the signed invoices to the biller for the purpose of archiving (see section 4.10) via the channel requested by the biller (see section 11).

E-bills that are delivered as a hybrid bill (PDF with integrated user data, ZUGFeRD) and e-bills that are delivered to SIX eBill via the network partner interface cannot deliver archive data.

PostFinance will completely discontinue this service in the 4th quarter of 2021 as it is no longer required in accordance with legal provisions, and therefore recommends that customers no longer use the service.

5.9 Data storage at PostFinance

PostFinance does not store invoices for longer than required for processing, mainly for data protection reasons. If the invoice data is forwarded to the eBill portal (see annex for details) or an Interconnect partner, the storage regulations of the partner system apply. Billers and invoice recipients are responsible for correct and complete long-term archiving of invoices (see sections 1.4, 4.10 and 6.4).

5.9.1 Processing data

Processing data and invoice details are irretrievably deleted from PostFinance's database 120 calendar days after the invoice due date or the last status change.

The deletion time is when the last status is changed **before** the invoice's term to maturity.
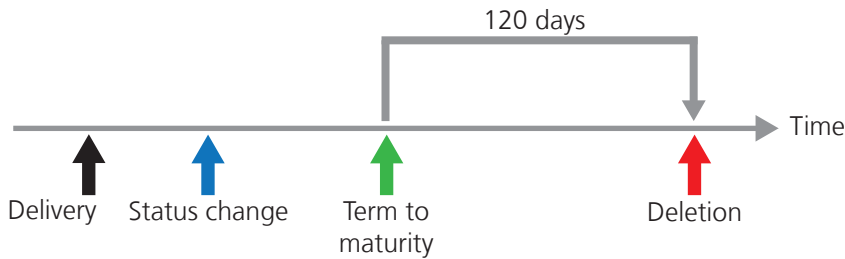
Status change deletion process before term to maturity

The deletion time is when the last status is changed **after** the invoice's term to maturity.
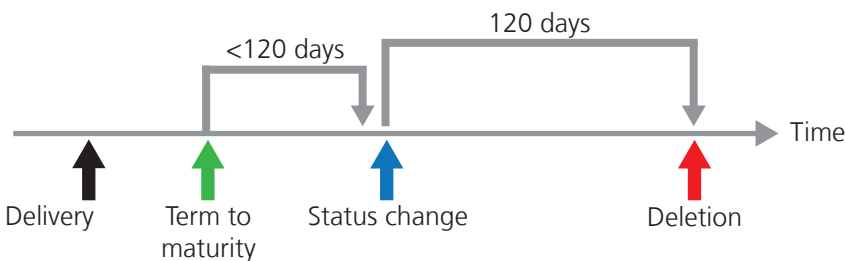
Status change deletion process after term to maturity

5.9.2 Data downloaded via eInvoicing portal, web services or e-finance

The data are available for up to 120 calendar days after the invoice due date or the date on which the data were created. They are available for a further 40 calendar days after download. The associated processing data are deleted as per section 5.9.1.

5.9.3 Data downloaded via SFTP or AS2

For data made available via SFTP or AS2, the same statements apply regarding storage or deletion for PostFinance as in section 5.9.1.

5.9.4 PostFinance business data

The data in the transaction journal (see section 5.1) is considered to be PostFinance business data and is thus archived according to PostFinance internal directives.

6. Invoice recipient's handling processes

6.1 Processing of electronic invoices via the eBill portal

The functions of the eBill portal for e-banking customers of banks affiliated with eBill are described at www.ebill.ch.

For details on accessing this via e-finance, go to the e-finance help pages.

6.2 Receiving electronic invoices via file transfer

The e-bills are provided by one of the following channels supported by PostFinance (see section 11 for details).

Channel	Characteristic
eInvoicing portal	Web portal for downloading individual invoices manually. Suitable only for small data quantities.
Web services	Method for automatically downloading e-invoices.
SFTP	Channel for automatically downloading e-invoices. Suitable for large data volumes.
AS2	Specific channel for delivering EDIFACT files.

6.3 Invoice processing

The downloaded invoice data can be scanned into the invoice recipient's ERP system for further processing, such as account assignment, approval, booking and storage. With the help of the financial software, a payment order can be prepared using existing payment methods (e.g. EPO).

6.4 Archiving digitally signed invoices

In accordance with legal requirements, invoice recipients are responsible for the storage of their own e-invoices delivered and further corresponding data (see section 1.5). Billers acknowledge that invoice details in particular will not be archived by PostFinance.

7. Registering and cancelling invoice recipients

In order to receive invoices electronically, the invoice recipient must register with the biller, i.e. he must notify the biller of his subscriber number (EBillAccountID), as for a change of address, which the biller enters into his customer database.

To register, the invoice recipient can call up a list of available billers on the eBill portal or the business interface and register/cancel.

Direct registration via e-finance can also be used as a simple means of acquiring invoice recipients. With several mouse clicks, an invoice recipient can register with a biller (see section 7.1).

Individual registrations or cancellations can be sent by e-mail or several registrations and cancellations in a day can be collected and delivered in a CSV file. Details are described in section 13.4.

7.1 Direct registration

Using account numbers stored in the biller's master data, an information text is displayed after the manual entry of a payment in e-banking in favour of this account provided that this function is supported by the corresponding financial institution:

> You are also able to receive and easily settle invoices from (name of biller) as eBills in e-finance.
> Register for eBill for (name of biller)

Example: Information text in e-finance

When the e-banking customer clicks on register, one of the following actions is triggered:

Condition	Action
Stored account number is an ISR or BISR number and The biller can receive and process direct registrations (see section 13.4).	Direct registration is activated. The biller automatically receives the relevant registration information with status 2 (direct registration) and specification of the ISR or BISR subscriber number and the ISR number of the payment which was previously entered manually by the customer (see section 13.4)
The stored account number is an IBAN number or The biller can receive and process direct registrations (see section 13.4).	The customer is shown the biller's registration page.

The credit accounts specified upon registration and activation are also used to access the aforementioned information text (see section 10).

In order to promote the use of e-bill among invoice recipients, PostFinance recommends that all billers use this form of registration as it is by far the most efficient solution.

7.2 Registration using the standard PostFinance registration screen

The standard registration screen is available in German, French, Italian and English.

If the invoice recipient clicks on "Add" in the eBill portal next to an biller, or on the "Register" button in the list of billers in the business interface, the PostFinance eBill system opens a standard registration screen. All the data required according to the biller's specifications is received here, then transferred to it. Apart from the EBillAccountID, last name and first name or company name, other details may be requested, such as the address, customer number, e-mail address or account assignment information. A detailed description of the standard registration screen is provided in section 13.2.

If the invoice recipient clicks on the "Register" button in the list of billers, the PostFinance eBill system opens a standard registration screen. Apart from the first name, last name or company name, an additional field can generally be defined which must be completed by the invoice recipient when cancelling the service. A detailed description of the standard registration screen is provided in section 13.3.

Individual registrations or cancellations can be sent by e-mail or several registrations and cancellations in a day can be collected and delivered in a CSV file. Details are described in section 13.4.

7.3 Look-up function
The invoice issuer can use the look-up function to initiate the registration for eBill himself/herself.

With eBill for private individuals, the unique identifier of the invoice recipient is the e-mail address, while with eBill for business, it is the company identification number (UID). To ensure that the look-up function for invoice recipients can be used in full, the invoice issuer is recommended to obtain customers' e-mail addresses or UIDs in advance and to declare when doing so that this information may be used for eBill.

A check can be carried out to determine whether delivery to eBill is possible for this customer using the mail address or the UID either manually via the eInvoicing portal (see section 11.2.1) or automatically via the web service (see section 11.2.2).

7.4 Registration with the invoice issuer

eBill recipients can register directly with the invoice issuer, e.g. on their web portal for eBill. The function can be integrated as follows using two web services (see section 11.2.2).

1. The invoice issuer asks the customer on its web portal for their mail address and whether they wish to use eBill.
2. The invoice issuer sends the first web service "InitiateEBillRecipientSubscription" with the customer's mail address.
3. The customer receives an activation code in their mail and enters it in the invoice issuer's web portal.
4. The invoice issuer sends the second web service "ConfirmEBillRecipientSubscription" with the activation code that the customer entered.
5. The invoice issuer receives the confirmation with the details as a response to the web service.

A detailed description of the web services and integration instructions can be downloaded from **www.postfinance.ch/e-bill**.

7.5 Cancellation

If the invoice recipient clicks on "remove" for an invoice issuer in the eBill portal or on the "unsubscribe" button in the business interface, PostFinance sends the unsubscribe details to the invoice issuer.

8. Visualization of invoice details

There is always a 1:1 relationship between the invoice data and the invoice details.

8.1 Visualization of invoice details using PDF provided

The biller can design the layout of the PDF files as he wishes but it may not contain any active elements, e.g. Java Script, ActiveX. With connecting links, please note that PostFinance deactivates these upon submission to the eBill portal for security reasons (see section 12).

To ensure optimum performance for the invoice recipient, PostFinance recommends that the individual PDF files should not exceed 150 KB.

PDF files are assigned to the invoice data via the BillerID and the TransactionID which together form a unique bill identifier. Thus the naming convention for PDF files is as follows:
<BillerID>_<TransactionID>.PDF

Because PostFinance cannot check definitely whether the details in the invoice data correspond to those of the PDF file, it is the biller's responsibility to ensure the correctness of the PDF file and to adhere to this naming convention.

The PDF files can either be delivered separately or integrated in the element "Appendix" in yellowbill Invoice as a referenced object as Base64 string with MimeType=x-application/pdfappendix. If the PDF files are delivered sep-arately, the order in which they are delivered makes no difference. Ideally, however, all invoices and their corresponding PDF files should be delivered on the same day. For further details concerning data delivery, please refer to section 11.

8.2 Visualization of invoice details using PDF generated by PostFinance

The biller can ask PostFinance to generate the invoice details. For this purpose, PostFinance generates a PDF from the submitted data exclusively by using a standard style sheet.

They contain the information required by law (including the addresses of the biller and invoice recipient, VAT number of the biller, invoice items, summary for each VAT set, etc.) but do not include the biller's logo.

It is not possible to make individual adjustments to the style sheet.

9. Processing report

The data delivery and processing is supported by a monitoring process. After processing is completed, PostFinance creates a processing log per billerID and processing day, which gives information about the processing.

9.1 Contents

The processing report contains the the following information:

OK_Signed	Contains the number of bills which have been processed without errors. Processed means: – Signed and sent to the recipient (see section 5.5) – Signed and forwarded to the eBill portal (see section 5.6) – Forwarded signed or unsigned to the Interconnect partner (see section 5.7) Please note that OK_Signed may also include non-signed bills. The name has been kept the same deliberately to avoid making any changes to the existing schema.
OK_Result	Optional choice, standard = no Contains the TransactionID for each invoice mentioned above (OK_Signed)
NOK_Result	Contains detailed information, including reason code for each NOK invoice (see reason code list in the technical scheme description).
RejectedBills	Contains all subsequently rejected bills. These might be: – Bills rejected by e-finance or e-banking customer via eBill – Bills returned by an Interconnect partner

9.2 Creation and delivery

As standard, the processing log is created and delivered for each calendar day in the night following the processing. Alternatively, it can be created and delivered per processed transaction, after its processing.

With the generation per calendar day, all invoices processed by the daily cut-off point (approximately 11 p.m.) are listed. If several status messages have been generated within the same processing day, only the last message will be displayed in the processing report, with the exception of refusal by the recipient (ReasonCode 25).

The processing log is created in XML format UTF-8-coded (www.utf-8.com). Further details on the layout, as well as on the individual processing messages (reason codes), can be found in the Annex.

The name of the protocol is as follows:

Report per calendar day
Name: Process_Protocol_[DDMMYYYYhhmm]_[BillerID].xml
Example: Process_Protocol_260220160220_41101000000225324.xml

Report per transaction
Name: Process_Protocol_[DDMMYYYYhhmm]_[BillerID]_[TransactionID].xml
Example: Process_Protocol_130420161920_41101000000225324_156333.xml

10. Credit account

In order to deliver e-invoices to PostFinance, at least one valid credit account should be registered. The following credit account types can be used:

– ISR (orange inpayment slip with reference number) of PostFinance
  (CHF or EUR)
– BISR (orange inpayment slip with reference number) of the Swiss banks
  (CHF or EUR)
– Postal account or bank account, the account number is specified using
  the IBAN number (all account currencies)
– QR-IBAN, data are provided via IBAN with IID (digits 5–9) between 30000
  and 31999 (CHF or EUR)

The biller has the opportunity to use up to n credit accounts for the e-bill. E-bills can only be delivered if the credit details on the invoice correspond to one of the stored credit accounts.

Please note: the credit accounts specified when opening are also automatically used for accessing the information text for direct registration (see section 7.1).

10.1 ISR – orange inpayment slip with reference number from PostFinance

The orange inpayment slip with reference number in CHF and EUR from PostFinance is described in the "ISR manual". This document may be downloaded from **www.postfinance.ch/isr**.

For e-invoice the following data are required:
ISR customer number   eg. 01-123456-1
Fixed bank name   PostFinance Ltd
Currency   CHF or EUR

When using ISR, the ISR PaymentType must be specified in the invoice.

10.2 BISR – orange inpayment slip with reference number from Swiss banks

Please contact your bank to receive further information about the accounts receivable solution BISR (orange inpayment slip with reference number) from the Swiss banks.

For e-bill, the following data are required:
ISR customer number of the bank   e.g. 01-123456-1
Fixed bank name   e.g. Swiss Bank Ltd
Currency   CHF or EUR
BESR-ID   e.g. 123456

The BISR ID is a 6- to 11-digit subscriber number assigned by the bank. It corresponds to the first numbers of a valid ISR reference number used by the biller.
When using BISR, the PaymentType within the invoice must be indicated with ISR and the first digits of the reference number must match to the stored BESR-ID.

10.3 Postal account or bank account

For e-bill, the following data are required:
IBAN   e.g. CH6309000000250097798
Fixed bank name   e.g. Swiss Bank Ltd
Currency   e.g. CHF

When using IBAN, the PaymentType within the invoice must be indicated
with IBAN.

10.4 QR-IBAN

For e-bill, the following data are required:
IBAN: e.g. CH5130000001250090342
Bank name   e.g. PostFinance Ltd
Currency   CHF or EUR

When using the QR-IBAN, the PaymentType within the invoice must be
indicated with IBAN and a QR reference (27 digits) must be provided in the
CreditorReference field.

11. Communication

11.1 Overview of communications methods

11.1.1 Overview of biller channels and formats

The table below shows the formats and channels through which data can be sent to PostFinance by the biller and vice versa.

Channel	Data						
	XML yellowbill Invoice	QR-bill (PDF)	SAP IDoc Invoice 01	EDIFACT	Archive data Recipient format / PDF	Registration and de-registration data	Processing report
eInvoicing portal	S	S	S	S	–	R	R
Business interface	S	–	S	S	R	R	R
Web services	S	S	S	S	R	R	R
SFTP	S	S	S	S	R	R	R
AS2	S	–	S	S	–	–	R
E-bill light	S	–	–	–	R	R	R
E-mail	–	–	–	–	–	R	R

S = send; R = receive

11.1.2 Overview of invoice recipient channels and formats

The table below shows the formats and channels through which data can be transmitted to invoice recipients.

Channel	Data					
	PDF with eBill XML	yellowbill invoice XML	SAP IDoc in XML	EDIFACT	PDF	Letter bill X ZUGFeRD
eInvoicing portal	–	R	R	R	R	R
Business interface	–	R	R	R	R	R
Web services	–	R	R	R	R	R
SFTP	–	R	R	R	R	R
AS2	–	–	–	R	R	R
eBill Portal	R	–	–	–	R	–

R = receive

11.2 Communication methods

11.2.1 eInvoicing portal (posting and delivery)
The eInvoicing portal is a secure web application (https) via which settings can be configured and invoice data received/delivered to PostFinance.

The following functions are available on the eInvoicing portal:
– Manage master data
– Manage users
– Configure settings, e.g. for eBill
– Send or receive invoices
– Search for invoices
– Receive registration and de-registration data
– Download processing records
– Search for invoice issuers and recipients

When using the eInvoicing portal **(login via www.postfinance.ch/e-bill),** identification and authentication of the subscriber are carried out by a PostFinance login generated by the user themselves. If the user is also an e-finance user, they can also use their login details for e-finance.

The eInvoicing portal is designed to be multi-client capable, which means that several EBillAccountID or BillerID numbers can be processed per user.

Data records can be uploaded individually or in zipped batches. Successful delivery is confirmed to the user as soon as PostFinance receives the file. **The maximum file size for uploading via the eInvoicing portal is 5 MB per file.**

With the search function, it is possible to check after termination of processing (within max. 24 hours, with normal system capacity utilization after 2–4 hours) whether the invoices were processed correctly. The following invoice statuses are shown in the "Search for invoices" function:

Status	Description
Open	The invoice is available for invoice recipients, but has not been collected yet
In progress	The invoice is ready to be forwarded to a partner system
Rejected	The invoice has been rejected in e-finance by the invoice recipient
Completed	The invoice has been downloaded by the invoice recipient or forwarded to the eBill portal or an Interconnect partner
Missing details on the invoice	The invoice's PDF could not be assigned or has not yet been delivered
Invalid	There were errors when delivering the invoice. Please note the indicated error code. Further details can be found in the reason code list (see reason code table in the technical scheme description)
Deleted	The invoice has been given the status 'deleted' (expired processing period or manual deletion in specific cases)
Unsigned	The invoice is being processed and is awaiting signature

Data for download are always compressed into ZIP files for each delivery date. A data package is limited to 100 invoices, i.e. several data packages may be prepared for the same delivery date if there are large quantities of invoice data. The invoices can be downloaded at the latest as from the next Swiss Post working day after delivery, for a maximum of 120 days after payment due date. Invoice data downloaded via the eInvoicing portal are marked "Processed". Once downloaded, the files are still available for another 40 calendar days (see section 5.9.2).

The eInvoicing portal replaces the previous **business interface.** When logging in to the business interface, a function for migration to the eInvoicing portal is shown. Please note that access to the business interface will no longer be available by the end of 2021 at the latest.

11.2.2 Web services (posting and delivery)

Web services make it possible to organize automatic input and output of invoices. The user's (biller or invoice recipient) system must be configured accordingly. Thereafter it is no longer necessary to log in manually because the login data are transferred each time a request is made with the username. As an additional security element, a client/server certificate can be used when using the web services. To do so, the customer sends the necessary certificate to PostFinance in the currently valid form.

The web services can be implemented for example in the C# and Java programming languages. A detailed description of the web services and integration instructions can be downloaded from **www.postfinance.ch/e-bill**.

The maximum file size for uploading via web services is 5 MB per file. For delivery of several files in the same request, a maximum of 10 MB per request can be delivered.

The following web services are available:

General
– ExecutePing

For billers
– UploadFilesReport
– SearchInvoices
– GetInvoiceListbiller
– GetInvoicebiller
– GetProcessProtocolList
– GetProcessProtocol
– GetRegistrationProtocolList
– GetRegistrationProtocol
– GetEBillRecipientSubscriptionStatus
– InitiateEBillRecipientSubscription
– ConfirmEBillRecipientSubscription

For invoice recipients
– GetInvoiceListPayer
– GerInvoicePayer

Please note: the methods published prior to 2016 are no longer listed in this manual. These are still supported by the system for the time being. However, they are no longer in line with today's security standards and will therefore no longer be supported in the foreseeable future.

When downloading data, the "List" method must be used before calling up the corresponding "Get" method with the values returned by the "List" method.

Required data for billers	1. Method List data	2. Method Download data
Registration and cancellation data	GetRegistrationProtocol**List**	**Get**RegistrationProtocol
Query processing status	SearchInvoices	-
(Archive) invoices for billers	GetInvoice**List**Biller	**Get**InvoiceBiller
Processing log	GetProcessProtocol**List**	**Get**ProcessProtocol
Registration status of an eBill recipient (look-up)	GetEBillRecipient-SubscriptionStatus	-
Initiate eBill registration	InitiateEBillRecipient-Subscription	-
Confirm eBill registration	ConfirmEBillRecipient-Subscription	-

Required data for invoice recipients	1. Method List data	2. Method Download data
Invoices for invoice recipients	GetInvoice**List**Payer	**Get**InvoicePayer

Transport and security

Communication with the web service is established using the SOAP web service via HTTPS.

Authentication

For security reasons, this web service must be implemented on the basis of WCF.NET Security Extensibility. A valid username and password or a valid certificate must be provided in order to communicate with the web service.

11.2.3 File Delivery Services SFTP (posting and delivery)

The SFTP channel is suitable for large data quantities, and the following functions are available:

Biller	Invoice recipient
Upload invoices/credits	Download signed invoices/credits
Download signed invoices/credits	
Download registration and cancellation data	

The maximum file size for uploading via SFTP is 15 GB per file.

With large data quantities, the following requirements must be noted in accordance with the Swiss Post File Delivery Services manual, section 7.1: (see **www.postfinance.ch/manuals**)

– Large files (normally ASCII files) must be transmitted in compressed form. Sender and recipient (end-to-end) agree on the compression method to be used (e.g. ZIP, GZIP).
– A large number of files must be transmitted using a correspondingly large number of file transfers (put/get) for each FTP/SFTP login session. For example, with 1,200 files, run 10 FTP connections/logins each for 120 file transfers. If the number of logins during a given time unit is too big, the monitoring system of the FDS servers will automatically block the offending username for 15 minutes.

The maximum size per ZIP file is 15 GB, and the individual files in the ZIP file may not be larger than 5 MB.

The following directories are used for the e-bill:

Phase	Folder for delivery of invoice data by the biller	Folder for outgoing delivery of processing report, registrations, cancellations and signed data
Integration/test	ebill-outbox-t	ebill-inbox-t
Production	ebill-outbox	ebill-inbox

The SFTP UserID is ordered when the user is set up by PostFinance.

The SFTP connection is defined by the User ID and password.

Documentation about SFTP is available for downloading at
www.postfinance.ch/manuals.

11.2.4 E-bill light (posting)
With the e-bill light online portal (login via www.postfinance.ch/e-bill),
electronic invoices can be created and sent online. After online registration,
billers can use the following functions.
– Enter e-bills
– Quickly create bill
– Search e-bills
– Manage customers
– Settings

11.2.5 Swiss banks' eBill portal (delivery)
E-invoices can be viewed and processed in the eBill portal via e-finance or
e-banking.

11.2.6 AS2 (posting and delivery)
Specific channel for e-invoices in EDIFACT format.

11.2.7 E-mail (delivery)
Registration and cancellation data and processing reports can be delivered
to the biller by e-mail.

12. Data security

12.1 Login process and transport encryption

Channel	Login method	Transport encryption
eInvoicing portal	PostFinance login	SSL
Business interface	Username and password	SSL
Web services	Username and password	SSL
File Delivery Services	Username and password	SSH
AS2	Client/User certificate	SSL
E-bill light	Username and password	SSL
E-finance	Login security according to e-finance	SSL

The security standards for the web services are based on the OASIS WS-Security recommendations. Details of this are provided in the web services implementation instructions (see section 11.2.2).

12.2 Elimination of hyperlinks in the eBill portal

PDF invoices are converted as standard to PDF/A3 for submission to the eBill portal. This means that the recipient cannot directly select hyperlinks in the eBill portal.

13. Data formats

13.1 BillerID and EBillAccountID

In the eBill system from PostFinance, the **BillerID** is the unique identification number of a biller and the **EBillAccountID** is the unique identification number of a invoice recipient. These are issued by the relevant e-bill system.

Number structure: numeric, 17 digits
Structure: 41100000000872849

The first four digits identify the e-bill system which issued the ID. For the PostFinance eBill system, this is set to 4110. The last two digits are check digits that are calculated according to Modulo 97-10 (ISO 7064).

From the format version yellowbill Invoice 2.0.3 onwards, a different ID can be entered in the "AlternativeRecipientID" as an alternative. The invoice is allocated to the correct provider according to the pattern of the ID. Further details, in particular which patterns are supported, are provided in the technical specifications (see annex).

13.2 Standard PostFinance registration screen

The registration forms are always generated in four languages (German, French, Italian and English). Each form is defined as a pop-up window including a standard button and is generated as a HTML page from an XML file and XSD file (style sheet).

MUSTER AG

Registration

Muster AG

3030 Bern
Phone 031 333 66 77
E-mail

I would like to receive my future invoices from the Muster AG electronically and relinquish any paper bills.

Fields marked with (*) are mandatory.

User data
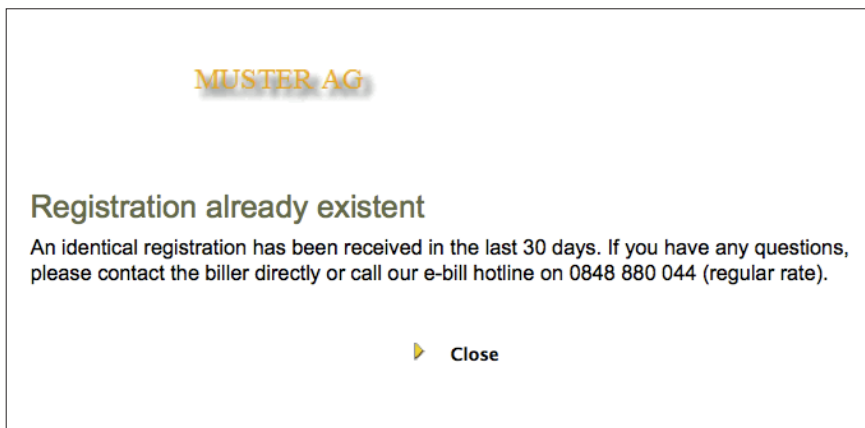
Given name*	Maria	Family name*	Bernasconi
Address, line 1*		Address, line 2	
ZIP*		City*	

Additional data

E-Mail*	
Customernumber	

▷ **Send**

Example of a registration form

Example of a confirmation window after registration

The registration form consists of three parts:
– **General section**, consisting of the logo (if available), the biller's address details and an explanatory text.
– **User data**, consisting of the invoice recipient's first and last name provided by the eBill system of PostFinance and additional address details to be completed by the invoice recipient.
– **Additional data**: the biller can define further data here to be completed by the invoice recipient (e.g. customer number or account assignment information).

13.2.1 User details

Last name	Description	Properties
FAMILYNAME	Last name	mandatory if no COMPANYNAME, max. 50 digits*
GIVENNAME	First name	mandatory if no COMPANYNAME, max. 50 digits*
COMPANYNAME	Company name	mandatory if no FAMILYNAME and GIVENNAME, max. 50 digits*
ADDRESS1	Address field 1	mandatory, maximum 40 digits
ADDRESS2	Address field 2	optional, maximum 40 digits
Postcode	Postcode	mandatory, numeric, 4 digits
CITY	Town	mandatory, maximum 40 digits
PHONE	Telephone number	optional, maximum 14 digits
FAX	Fax number	optional, maximum 14 digits
EMAIL	E-mail address	optional, e-mail conventions apply, maximum 40 digits

* This data is automatically retrieved from the eBill system from PostFinance or from SIX eBill. The biller can define whether or not they may be overwritten by the user. For companies the registration mask is automatically provided with the field COMPANYNAME in the place of FAMILYNAME and GIVENNAME. In addition, the "Contact" information is delivered in the GIVENNAME field.

The EBillAccountID number is not displayed in the form but supplied as described in section 13.3.

13.2.2 Additional data

The biller may define a maximum of four additional entry fields in line with his needs. They serve to associate the registration with the correct customer, e.g.:

Field name	Field type	Classification	Length
Customer number	Text field	mandatory	8 digits
Telephone number	Text field	optional	10 digits

These fields are defined as follows:
– Field name
– Field type
– Maximum length
– Validation rule (Regex)
– Error text if check NOK

The following field types may be used:
– Text field (text box)
– Checkbox (☑)
– Explanatory text (without input)
– Diagram (GIF, JPEG)

The validation rule (Regex) is composed of regular expressions (please refer to **www.regular-expressions.info**).

By default, the following regular expressions are applied:
– NotEmpty (input field may not be blank)
– ZIPCODE (postcode, 4 digits, numeric)
– E-mail (structure and @ provided)

The biller can select other validation rules for the additional data (e.g. insurance number check or credit card number check). However, it is not possible to check one field based on another field.

13.3 Registration and cancellation data (delivery)

Registration and cancellation data are delivered either individually by e-mail or grouped in a file. Data from direct registrations can only be delivered as a file.

13.3.1 Individual registrations or cancellation by e-mail

For each registration or cancellation, the corresponding data and the invoice recipient's EBillAccountID are sent to the biller in an e-mail.

Example of a registration:

```
From:      e-bill.help@postfinance.ch
To:        recipient@billing.ch
Subject:   eBill User registration
Message:   UserID;41100000001211282;FAMILYNAME;Muster;
           GIVENNAME;Max;ADDRESS1;Musterstr.1;
           ADDRESS2;Postfach;ZIP;6300;CITY;Zug;
```

Comments:
– For a registration "eBill User registration" is entered under "Subject", and for a cancellation "eBill User cancellation" is entered.
– The UserID corresponds to the invoice recipient's EBillAccountID.
– Any additional data agreed is delivered as well.

13.3.2 Several registrations or cancellations per day using a file

The data from direct registrations, registrations and cancellations are tracked consecutively in a daily CSV file and sent to the biller. In relation to umlauts and special characters, the CSV file is ANSI coded.

The file naming convention for registering and cancelling is as follows:
Name: subsc_[BillerID]_[DDMMYYYYhhmm].csv
Example: subsc_41101000000225324_040220200230.csv

Example for a CSV file:

UserID	FAMILY NAME	GIVEN NAME	ADDRESS1	ADDITIONAL DATA	Postcode	CITY	ISR CustomerNo	ISR ReferenceNo	Status
4110…	Sample	Max	Sample Street 1	Tel. 041456…	6300	Zug			1
4110…	Smith	Maria							3
4110…	Example	Screen	Test Street 4	Tel. 062444…	5000	Aarau			1
4110…	Example	Direct					011234561	8000723…	2

Parameters	Definition
UserID	Unique ID number of the invoice recipient, corresponds to the EBillAccountID, numeric, 17 digits
ISRCustomerNo.	ISR subscriber number of biller, numeric
ISRReferenceNo.	ISR reference number of the newly entered payment, numeric
Status	Indicates whether a registration, cancellation or a direct registration is being executed, numeric, 1 digit 1 = Registration 2 = Direct registration 3 = Cancellation

Any additional data agreed is delivered as well.

With direct registration (see section 7.1) the biller receives the EBillAccountID, family name, given name, ISR customer number and the ISR reference number of the newly entered payment order as well as a status code 2.

13.4 Invoice data

13.4.1 yellowbill invoice (posted by biller)

yellowbill Invoice is the standard format for structured invoice data and describes both the syntax and structure of electronic invoices (XML files). The format is based on the swissDIGIN standard (see section 13.5.7).

The following description relates to the yellowbill Invoice 2.0 format version. Older format versions of generation 1.2.x can continue to be used, taking into account the relevant limited utilization options.

The main elements when sending the XML file are the "Header" and the "Body" (see diagram below). The "Header" contains mainly internal system control data. The main contents are defined in the "Body".
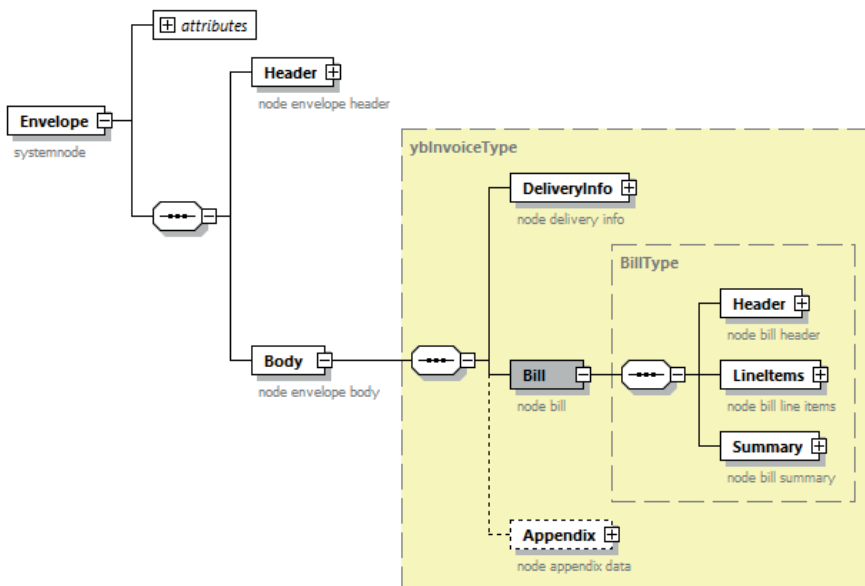
Graphical representation of XML yellowbill Invoice

– The "Body" consists of the elements "DeliveryInfo", "Bill" and "Appendix".
– The element "Delivery" contains specific key data for the system such as the unique number of the biller (BillerID) and of the recipient (eBillAccountID) or control data for bill presentation.
– The main invoice content is in the "Bill" element. This element is divided – similar to a paper bill – into the elements "Header" (address data of invoice recipient and issuer), "LineItems" (bill line items as on a paper bill) and "Summary" (summary per VAT rate).
– "PaymentData". The "PaymentType" field indicates how the invoice shall be paid.

ISR	invoice with payment by ISR at the post office or BISR at a bank (orange inpayment slip)
IBAN	Invoice with payment to a postal or bank account (red inpay ment slip or QR bill, indication of account number using IBAN)
DD	Invoice with payment of the amount by CH-DD Direct Debit or LSV
CREDIT	Credit advice, payment is made by separately
OTHER	Invoice, without indication of payment details

Combination options for the amount (positive or negative) and the payment method in the "PaymentType" field and their implications for the displaying of the invoice in the eBill portal:

TotalAmountDue	PaymentType		Display in the eBill portal
Positive or empty	ISR or IBAN		Invoice or reminder, depending on the DocumentType
Positive plus additional instalment information	ISR		Instalment invoice
Positive	DD		Notification
Positive	CREDIT	→	Not possible, triggers error code 17
Positive	OTHER		Notification
Negative	ISR or IBAN		Credit
0.00	ISR or IBAN		Notification
Negative or 0.00	DD		Notification
Negative or 0.00	CREDIT		Credit
Negative or 0.00	OTHER		Notification

In the "Appendix", any information can be provided by the biller. For instance, the invoice detail can be integrated directly into the appendix as a PDF (see section 8.1).

The XML data in yellowbill Invoice format must be supplied in the UTF-8 character set **(www.utf-8.com).**

The naming convention of the invoice data is:
<BillerID>_<TransactionID>.XML

One XML file is generated for each invoice/credit note. The maximum file size is 2 MB, taking into account the size limitations depending on the delivery channel (see section 11).

The biller must check the contents of the invoice data before uploading them.

A conformity check against the schema can be performed at any time at the following web page: https://www.corefiling.com/opensource/schemaValidate/ For a detailed description of the yellowbill Invoice schema, see the Annex to this document.

13.4.2 PDF invoice detail (posted by biller)
The PDF invoice detail can be delivered by the biller as a separate PDF or provided as an appendix in the yellowbill Invoice. Another option is for PostFinance to be instructed to create the bill details (see section 8).

With the separate delivery, please note that the status of the invoice remains in "incomplete" status until the corresponding PDF invoice detail can be assigned by the system. This is reported in the processing log with Reason Code 13. If the PDF cannot be allocated within 15 days, the transaction will be deleted in the system and reported in the processing log with Reason Code 24.

13.4.3 QR-bill (delivery by invoice issuer)

A QR-bill can be delivered as a PDF file instead of in XML and PDF format (see 13.4.1 and 13.4.2) . An e-bill is created from the data in the QR code.

The following points must be noted:
– The alternative eBill procedure according to the publicly available specification of SIX on the "Use of the alternative eBill procedure in the Swiss QR code" must be shown in the QR code.
– The integration of the "syntax definition of the billing information (S1) in the QR-bill" of Swico is also recommended as this produces better data quality for B2B invoices.
– Only e-bills without invoice items can be created.

13.4.4 RGXml (yellowbill invoice), Version 1.2.7
  (delivery to invoice recipient)

When a signed e-bill is delivered, the data are enclosed by the signature envelope. The structure of this "envelope" is XMLdsig according to W3C – the schema of it can be downloaded at www.w3.org/TR/xmldsig-core/xmldsig-core-schema.xsd .

Within the core schema, there are various XML objects with own XML schemas:
– The invoice itself is in the object "RGXml", which in turn comprises the elements "DeliveryInfo", "Bill" and "PaymentDate". The "Bill" element contains the elements "Header", "LineItems"; and "Summary". The contents of the above are the same as the yellowbill Invoice schema, version 1.2.7.
– The object "PDFInvoice" contains the PDF of the invoice encoded in base64.

```
<Signature Id="RGXmlSignature" xmlns="http://www.w3.org/2000/09/xmldsig#" xmlns:xsi="
http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="
http://www.w3.org/2000/09/xmldsig#Ablageort:\schemas\xmldsig-core-schema.xsd">
    <SignedInfo>
    <SignatureValue>Ty2M6Bdvje8iVa1AJkU0tX6wlsOz8NUpjt4wg+s</SignatureValue>
    <KeyInfo>
    <Object Id="SignatureProperties">
    <Object Id="RGXml" MimeType="text/xml" Encoding="none">
        <RGXML eBillID="411000000823952" xmlns="">
            <DeliveryInfo>
            <Bill>
                <Header>
                <LineItems>
                <Summary>
            </Bill>
            <PaymentData>
        </RGXML>
    </Object>
    <Object Id="Manifest">
    <Object Id="PDFInvoice" MimeType="application/pdf" Encoding="base64">JVBERi0xLjQgDSXi48/TDQ</Object>
    <Object Id="SignatureVerificationProtocol" MimeType="text/xml" Encoding="none">
        <SignatureVerificationProtocol Version="V1.0.0" xmlns="">
            <Info>
            <Verification State="ok">
                <SignatureVerification State="ok" Standard="xmldsig">
                <SignerCert State="valid" CRLCheck="ok">
                <RevocationInfo RequestDate="2009-05-06T06:23:07" CRLMode="online">
            </Verification>
        </SignatureVerificationProtocol>
    </Object>
</Signature>
```

XML structure of a signed e-bill

As standard, the PDF of the invoice is additionally delivered as a separate file. If required, this separate delivery can be omitted.

13.4.5 ZIP container with yellowbill invoice, Version 2.0.3 (delivery to invoice recipient)

For the signed B2B data delivery, a compressed ZIP container is created per invoice, which can contain the following files. The invoice recipient can define which of these files he intends to receive. As standard, all existing files are delivered.

The name of the ZIP file is: "<BillerID>_<TransationID>.zip"

Structured data (signed)	The structured files are either yellowbill Invoice 2.0.3 signed or another structured and signed data format requested by the recipient (e.g. EDIFACT).
	In the case of XML, the name of the signed, structured file is: <BillerID>_<TransactionID>.sig.xml
	The structure of the signed yellowbill Invoice 2.0.3 is identical to RGXml, Version 1.2.7 (see section 13.4.2), i.e. with an envelope of XMLdsig and the object RGXml. In this case, the layout of the delivered RGXml is identical with the yellowbill Invoice 2.0.3 (see section 13.4.1) layout used for the data delivery.
	The invoice detail (signed PDF) is not contained in this as a PDFInvoice object in XMLdsig, but is always a separate file in the ZIP container.
Invoice detail (signed PDF)	The signed PDF is also delivered with the structured data.
	The name of the signed PDF is: <BillerID>_<TransactionID>.PDF
	It contains the content of the delivered MimeType=x-application/pdfappendix.
	The signature on the PDF can be checked via Acrobat Reader, as well as using the online signature check at www.postfinance.ch/e-invoice.
Appendix files	Appendix files contain 0-n attachments
	The name of the appendix file is: <BillerID>_<TransactionID>_apxNN.<Extension>
	NN = sequential numbering starting with 01, regardless of the file type. The file type (<Extension>) is set according to the mime type. If this is not possible, no file extension is used.
	There are no limitations with regard to file types, which can be contained in the appendix. All mime types can be used on the list published under the following address: http://www.iana.org/assignments/media-types/index.html
Source data	The delivered source file corresponds to the file originally delivered to PostFinance. The file name is retained from the delivery. The delivered invoice detail as a PDF file is not considered a source file and is therefore not delivered here.
	Upon receipt of signed data, a signature check is conducted. If the check is negative, it is sent back to the sender. Accordingly, PostFinance guarantees that the signature on the source file is valid and correct.
	For the purpose of full traceability of the transaction for authorities, the source file must be archived by the invoice recipient with the processed invoice data.

13.4.6 Other input or output formats

Apart from the yellowbill Invoice format, PostFinance also supports the SAP IDoc Invoice, Fakture X (ZUGFeRD) and EDIFACT formats (link to GS1-Standard invoice 01B, Ideal Invoice).

There is also an opportunity to have any data formats that correspond to a machine-readable structure converted by PostFinance for the data delivery. The relevant data format/implementability of the data conversion must be clarified beforehand.

It should be noted that for the use of such formats, an individual mapping table must always be created. Detailed clarifications and the subsequent programming and testing of such mapping tables generally takes 2–4 months, with PostFinance incurring an expenditure of between 5 and 10 person days. The costs for creating individual data mapping for data conversion are set out in the e-bill price list.

Your PostFinance customer advisor will be pleased to make you an offer that is tailored to your requirements.

13.4.7 Archive data (delivery to biller)

PostFinance shall provide the biller with digitally signed invoices for the purpose of archiving. These can be stored and archived with the originally delivered invoice data. PostFinance plans to discontinue this service in the near future, as it is no longer required in accordance with the legal requirements, and therefore recommends that customers no longer use the service.

The naming of the archive file is as follows:
 <BillerID>_<TransactionID>_sig.xml

The allocation of the archive file to the originally delivered invoice data can always take place using the TransactionID.

The archive file will always be delivered to the biller in the format that has been delivered to the recipient. The invoice recipient is generally free to select the receiving format. This means that it can be a third-party format (e.g. EDIFACT) or an invoice that has been digitally signed by an Inter-connect partner (see section 5.7).

Such a file cannot necessarily be read and interpreted by the biller. PostFinance provides the tools with which the signature can be checked and the format can be made readable, if necessary. If necessary, the e-bill help desk can provide assistance.

13.4.8 swissDIGIN (swiss digital invoice)

Under the leadership of the Fachhochschule Nordwestschweiz (University of Applied Sciences Northwestern Switzerland), eight large Swiss companies and the main e-invoice service providers standardized their electronic invoice content requirements and documented them in the swissDIGIN standard. The standard, which is not specific to any particular industry, helps to promote electronic invoice exchange between companies in Switzerland. These activities are supported by the Commission for Technology and Innovation (CTI) of the Swiss Federal Office for Professional Education and Technology (OPET). The swissDESIGN standard has also been approved as an associated eGovernment standard by the association for support and development eCH.

The documentation may be downloaded from www.swissdigin.ch. The swissDIGIN partners promote the exchange of information, maintenance and dissemination of the standard on the swissDIGIN forum.

14. Sending orders

14.1 Transmission of order to PostFinance

Orders are transferred to PostFinance in an agreed format. PostFinance provides a web service for this.

On receipt, the orders are given the status "Received". By means of a return code, the ordering party can verify that the transfer has been successful. The processing status can be ascertained by querying the order status. If the transfer was not successful, the orderer must resend the data.

PostFinance ensures that an order can be received and forwarded only once. The order number serves as the unique reference for this.

PostFinance temporarily stores the order for seven days. It is possible to check the order status during this period. The orders are then deleted.

14.2 Transmission of order to suppliers

An order is delivered to a supplier using an agreed format and channel, i. e. it is possible for the data to be converted from the orderer's format into the supplier's format.

Order confirmations and other messages cannot be sent via PostFinance.

14.3 Order status

The order status can be checked using a web service. This is made available with the following structure:
– Order number
– Status (received, delivered)
– Time stamp

For further information about sending orders, please contact the specialists at the e-bill helpdesk.

15. Annex

– **Service Level Agreement** (see following pages)
– **Data delivery to Swiss banks' eBill** (see following pages)
– **Terms and abbreviations** (see following pages)

In addition the following technical documentations which can be downloaded at www.postfinance.ch/e-bill.

For billers (delivering the e-bill)
– yellowbill invoice 2.0.3 XSD format
– Description of yellowbill invoice 2.0.3 in table format (xlsx)
– Description of addressing types and special requirements
– Sample invoices (XML)

For billers (providing the processing report)
– ProcessProtocol XSD format
– Sample processing report
– Reason code table for the processing report

For invoice recipients (providing the e-bill)
– yellowbill invoice 2.0.3 XSD format
– Sample invoices (zip file with signed yellowbill invoice 2.0.3)

Service Level Agreement (SLA)

System availability and maintenance window

Services	Services	Comments
Machine time	7/24 hours	Minus maintenance window
Availability	99.5% per quarter	Only total down-times are included.
Maximal contiguous down-times: – Total down-time – Partial down-time	 max. 12 hours max. 24 hours	

Malfunctions reported during operating hours will be remedied within the agreed down-times for total and partial down-times. The agreed downtimes include the response time and the report that the malfunction has been remedied. The restoration time for data records depends on their size and cannot be guaranteed.

Maintenance win-dow	Activities	Comments
Server	Back-up of the application and database	Daily
	Back-up of system data	Once a week, each Sunday between 2 a.m, and 6 a.m. The storage period is 30 days. In the event of restoring, the data can only be restored back to the previous back-up.
Maintenance	Maintenance required for technical reasons	Maintenance required for application For maintenance of general IT infrastructure there is a 4-hour service window, usually on Sundays between 2 a.m. and 6 a.m.
	Application-based maintenance	Maintenance required for application-related reasons will be discussed in advance with and announced to the persons concerned.

Processing status and delivery periods

The delivered invoice data are processed within 24 hours after receipt by PostFinance and are then available to the recipient.

The processing log (see section 9) is made available to the biller as follows:
Log per calendar day: It is made available on the day following completed processing log per transaction: The log is made available following completed processing

The registration file (see section 13.3) is prepared on a daily basis in the night and made available to the biller for collection.

E-bill help desk

PostFinance has tasked Post CH Ltd with providing support for the e-bill service. Support services are free of charge for subscribers in accordance with the present SLA.

Contact unit for support:
E-bill help desk
Tel. +41 800 111 101
E-mail e-bill.help@postfinance.ch

Availability times	Monday to Friday	Saturday and Sunday	Response time
1st-level support	8 a.m. to 6 p.m.	No availability	Immediate

Services	Activities
Call handling	– Receipt of errors, problems and queries – Electronic entry of reports – Solution communicated to subscribers
Problem handling	– Dealing with and solving errors, problems and queries at the various support levels
Coordination	– Appoint problem owner – Set priorities and forward them

Reporting

With the monthly invoice, subscribers receive information on the number and type of data processed.

Data delivery to Swiss banks' eBill

General

PostFinance is a network partner of Swiss banks' eBill. Provided an invoice issuer has commissioned PostFinance to do so, invoices for recipients received via a bank affiliated with eBill are transferred by PostFinance to eBill using the eBill network partner interface.

Choice of primary network partner

eBill enables an invoice issuer to submit e-bills to eBill via any network partner. When the network partner creates a new invoice issuer that does not yet exist in eBill, they become the primary network partner.

If an invoice issuer has more than one network partner, they must define the primary network partner and inform them accordingly. The selected primary network partner transfers this information to eBill. The invoice issuer is responsible for determining the primary network partner independently of the chronological sequence of the connection.

The following functions are executed exclusively via the primary network partner:
– Managing the invoice issuer master data incl. credit account information
– Managing the invoice issuer annexes
– Delivery of registrations and cancellations of invoice recipients
  with an invoice issuer (see section 13.3)

Registration of the invoice recipient with the invoice issuer

To transfer e-bills from an invoice issuer to an invoice recipient, a connection must be established between both parties in eBill. The connection is designated as "Delivery permission" and the operation as "Registration".

Various registration options are supported by PostFinance:
1. Invoice recipient-driven registration
– Direct registration from online banking (see section 7.1)
– Registration via eBill portal (see section 7.2)

2. Invoice issuer-driven registration
– Look-up (see section 7.3)

Transfer of business case data to SIX eBill

After validation of the invoice data sent from the invoice issuer to the network partner, PostFinance transfers that data to eBill according to the eBill interface description. Confirmations of the results of the validation and the transfer to eBill are included in the processing log (see section 9). The same applies to any subsequent eBill confirmations.

In the overall interest of the eBill ecosystem, the invoice issuer is required to submit e-bills at least five days before their due date.

Business cases submitted to eBill and their statuses are only visible to the network partners via which they were submitted.

Data storage in eBill

eBill only stores invoice issuer data that is submitted by the network partner via the network partner interface.

Business case data (e-bills) remain available on the eBill portal for 180 days after the due date, or from the creation/document date, if this is more recent.

Invoice annexes and logo of the invoice issuer

The biller can submit invoice annexes to PostFinance for publication on the eBill portal. PostFinance transfers these to eBill on behalf of the biller, specifying the period for which it is to be published on eBill. Invoice annexes can be published in German, French, Italian and English.

The biller can submit its logo to PostFinance for publication on the eBill portal. PostFinance transfers this to eBill on behalf of the invoice issuer. The invoice issuer thereby authorizes PostFinance and eBill to use the logo for the purpose of publication on the eBill portal. The logo can be published in German, French, Italian and English.

Invoice annexes and logos for the eBill portal can be submitted via e-mail to the PostFinance e-bill helpdesk.

Cancelling and de-registering an invoice issuer

When an invoice issuer is cancelled and de-registered, they are first set to inactive in eBill. They can then no longer submit any business cases and are no longer included in the list of invoice issuers for the eBill portal. However, it remains guaranteed that invoice recipients can still process existing e-bills in eBill.

The invoice issuer data are deleted automatically 366 days after de-registration from eBill. It is possible to change network partner without loss of invoice issuer data for a period of 366 days after de-registration.

Support

Support queries related to the use of eBill must always be directed to the PostFinance e-bill helpdesk.

Abbreviations/terms

Abbreviations / terms	Description
AS2	Communication report for EDIFACT messages
Availability	System availability as a percentage during a certain time period. This generally covers the entire year. Only total down-time is taken into account, not partial down-time.
B2B	Business-to-Business
B2C	Business-to-Consumer
Bill presentation	Invoice visualization
Biller	Person or company who has rendered a service and issues an invoice for it; is equivalent to payment recipient.
BillerID	Unique identification number for billers in the PostFinance eBill system
BISR	Inpayment slip with bank reference number
BSP	Biller Service Provider
CSP	Customer Service Provider
CSV	Comma Separated Value CSV is a system-independent file format for exchanging tables between spreadsheet programs and databases (MS Excel, MS Access, etc.).
eBill	Name and brand of the infrastructure of the Swiss financial market for electronic invoices sent to e-banking customers. Name of the portal via which e-banking customers will be able to process their e-bills.
E-bill	Electronic bill Function in e-finance
EBillAccountID	Unique identification number for invoice recipients in the eBill system from PostFinance
E-finance	PostFinance's e-banking application **www.postfinance.ch/e-finance**
EDIFACT	Electronic Data Interchange for Administration, Commerce and Transport UN/EDIFACT (ISO 9735) is an international standard for the presentation of business and commercial data for the electronic exchange of data between companies.
eInvoicing portal	https-Portal (Web-GUI) The eInvoicing portal provides invoice issuers and recipients with a central platform for the use of PostFinance's e-bill solution. Login via **www.postfinance.ch/e-bill**
ERP	Enterprise Resource Planning System for planning and control of a company's entire value chain
EPO	Electronic payment order
FDS	File Delivery Services
HTML	HyperText Markup Language Standardized page description language for www sites
HTTP	HyperText Transfer Protocol Protocol for communication between web servers and web browsers
HTTPS	HyperText Transfer Protocol Secure (128-bit encrypted) Protocol for secure communication between web servers and web browsers
Invoice recipient	Person or company who has received a service and receives an invoice for it; is equivalent to payer.
ISR	Orange inpayment slip with reference number
KB	Kilobyte
Machine time	Time during which the system is in operation after deducting the maintenance window. The following applies: 7×24 – maintenance window = machine time

Abbreviations / terms	Description
Maintenance window	The time in which technical, application or similar work is carried out on the system for maintenance or services. The system is unavailable during this period.
MB	Megabyte
Network partner / NWP	Partner of SIX that submits e-bills for its customers to eBill based on the eBill role model.
Partial down-time	See down-time
PDF	Portable Document Format
Post CH Ltd	Subsidiary of Swiss Post, operator of e-bill solution of PostFinance, on behalf of PostFinance
The PostFinance E-bill system	System description for the PostFinance E-bill solution
SAP IDoc	SAP Intermediate Document Format for transmitting data from a SAP system.
Service provider	A provider that submits e-bills to PostFinance for its customers (biller service provider), or that receives e-bills from PostFinance for its customers (customer service provider).
SFTP	Secure File Transfer Protocol Enables files to be transferred encrypted between different computers or servers via a network.
SIX BBS Ltd	Subsidiary of SIX Group Holding which operates the eBill platform on behalf of Swiss banks.
SSL	Secure Socket Layer SSL is a protocol developed by Netscape for encrypting Internet connections and authenticating users. SSL provides a secure end-to-end connection. Subscriber biller or invoice recipient of structured data with e-invoice solution of PostFinance Ltd.
Swiss Sign AG	Subsidiary of Swiss Post, distributor of legally accepted digital signatures.
Total down-time	See down-time
TransactionID	Transaction identification number unique to the biller (alphanumeric, max. 50 digits). Together with the BillerID this constitutes a unique bill identification.
URL	Uniform Resource Locator A URL is a generally valid address of a resource (e.g. a file) on the Internet. This unique address consists of a protocol name (e.g. http://), the name of the server on which the resource is located (e.g. postfinance.ch), the name of the service providing the resource (e.g. www) and the actual name of the resource.
UTF-8	Unicode Transformation Format-8 character set **www.utf-8.com**
W3C	World Wide Web Consortium The W3 Consortium is an association of prominent companies, developers and organizations acting on and for the Internet with the goal of simplifying the technologies used online by adopting web standards. **www.w3c.org**
Web services	A service provided to users via the web and which makes use of, for example, XML and https to do this. Web services differ from the classic services on the web in that they are designed for automated use and not use by people. A further aim of web services is to provide interoperability, i.e. web services should be usable in a standardized way and able to interact with each other, regardless of the operating system or programming language, etc. The basis of this interoperability is a standardized communication protocol.
XML	Extensible Markup Language
XSD	Extensible Schema Definition
yellowbill Invoice	XML format for incoming and outgoing data from the PostFinance e-bill solution.
ZIP	Format for compressed files, which reduces the space requirements on the one hand and functions as a container file on the other hand, in which several related files can be combined.
ZUGFeRD	Submission/delivery method for e-bills. This German acronym stands for "Central User Guide of the Forum for Electronic Invoicing in Germany".