



Part of the Department
for Work and Pensions

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Combined Pension Forecasts

Technical guide

Contents

Introduction	1
1 The file delivery process	3
2 Types of delivery medium	4
3 How to send and receive files	6
4 Running the data test	12
5 Where to send your files	14
6 CPF Bulk Request File	15
7 CPF Bulk Reply File	20
8 Notifying you of our reply	28
9 Validation and exception handling	31
10 Data protection registration	33
11 CPF technical guide checklist	34
Glossary	37

Introduction

Purpose of this guide

This guide is for you if you are:

- An employer
- A Pension provider, eg a company that provides a personal or stakeholder scheme
- A trustee administrator; or
- An agent for a Pension provider.

It gives you the technical information you will need to manage the interface between you and The Pension Service's Combined Pension Forecasting scheme. It explains what you need to do in order to:

- put in place the systems and procedures required to take part in the Combined Pension Forecasting scheme;
- deliver files to us containing details of your employees or scheme members; and
- receive files from us containing the State Pension Forecast information.

What is a Combined Pension Forecast?

Combined Pension Forecasting consists of us giving you an estimate of:

- the State Pension that your scheme member may get at State Pension age, based on their National Insurance contribution record so far and
- the State Pension your scheme member may get when they reach State Pension age based on assumptions about their future National Insurance contributions.

so you can include it in the annual benefit statements you currently send out. We will provide this information to you free of charge.

Preserving the privacy and security of this data is as important to us as it is to you. We have designed the service with this in mind.

How does the scheme work?

You send us a data file containing the names, dates of birth, sex and National Insurance numbers of your employees or scheme members so that we can send you a forecast of their State Pension entitlement. You include the State Pension information we send you in the stakeholder, personal or occupational statements that you send to your scheme members.

How to contact us

Your first point of contact for additional support, or to answer any technical queries, is your Customer Account Manager.

You can get in touch by ringing **0870 010 1684**.

Assumptions

The assumption has been made in this document that you will negotiate a Registration Agreement with the CPF service covering the practical aspects of:

- consent procedures;
- data exchange and test;
- volumes and timing;
- handling rejections;
- statements, communications and enquiries;
- production schedules; and
- quality standards.

Further information

For further information on Combined Pension Forecasts and the benefits they can provide, please see *A guide to Combined Pension Forecasts (CPF 2)* available from our Customer Account Managers on **0870 010 1684**.

Contents of this guide

This guide contains the following topics:

- **Section 1** (*The file delivery process*) gives an overview of the interface between you and the CPF service.
- **Section 2** (*Types of delivery medium*) describes the five ways in which you can send us data files, together with their technical requirements, advantages and disadvantages.
- **Section 3** (*How to send and receive files*) explains the file naming conventions we use, and the processes involved in using each medium.
- **Section 4** (*Running the data test*) outlines the tests that you will need to carry out to confirm that you can send and receive files successfully.
- **Section 5** (*Where to send your files*) provides the addresses to be used for each medium.
- **Section 6** (*CPF Bulk Request File*) lists the formats in which we require you to send your data files to us.
- **Section 7** (*CPF Bulk Reply File*) lists the format of the reply file that you will receive from the CPF service.
- **Section 8** (*Notifying you of our reply*) describes how you will know when we have sent a Bulk Reply File to you.
- **Section 9** (*Validation and exception handling*) describes the validation checks that we run on your Bulk Request Files, and how exceptions are handled.
- **Section 10** (*Data protection registration*) explains what you need to do to conform to the rules of data protection registration.
- **Section 11** (*How to contact us*) gives you all the information you need in order to contact us for technical and business support.
- **Section 12** (*Technical guide checklist*).
- Finally, we have included a short **Glossary** of the terms and acronyms used in this guide.

1 The file delivery process

Introduction

This section gives an overview of the process used to exchange data files between you (the Pension provider/employer) and the CPF service.

The process

The process involves a two-way transfer of electronic files.

1. You send us a request file (referred to as a **CPF Bulk Request File**) containing a number of individual records (**Request File Detail Records**), each record representing a request for a Pension Forecast.
2. In response, we send you a reply file (a **CPF Bulk Reply File**) containing forecast reply records (**Reply File Detail Records**), each one corresponding to a request record in your original CPF Bulk Request File. Each Reply File Detail Record contains a current and projected assessment of State Pension entitlement. Section 7 explains what happens when a forecast reply record fails.

Figure 1 illustrates the file delivery process.

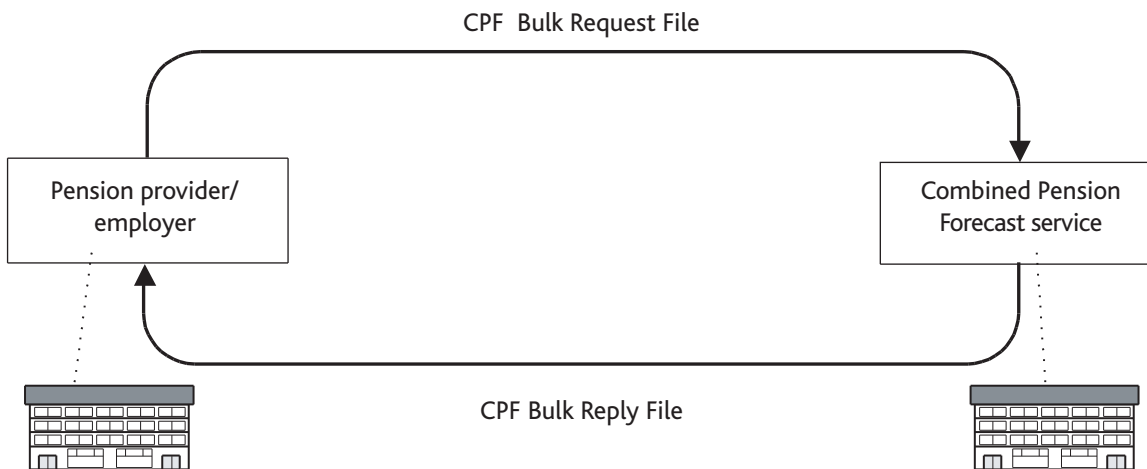


Figure 1 The file delivery process

Mandatory details

It is essential that you supply us with the following details about your scheme members/employees:

- surname or family name;
- forename(s) or initial(s);
- sex;
- date of birth; and
- national Insurance number.

2 Types of delivery medium

Introduction

You can send us your data via several media types. This section describes the technical requirements of each type, together with its advantages and disadvantages.

Five media types

We will accept data in the following formats:

- Electronic Data Interchange (EDI);
- Sopra XFB Secure Transfer; or
- Physical media:
 - ◆ CD-ROM;
 - ◆ 4mm Digital Audio Tape (DAT) – either DDS1 or DDS2; or
 - ◆ 3.5" diskette.

EDI

If you decide to use EDI, you are already likely to have access to the required EDI technology in support of other EDI exchanges, for example submission of State Second Pension opt-out data into the National Insurance Services to Pension Industry (NISPI).

The primary technology requirements are access to an IBM Information Exchange Value Added Network (VAN) or a UK Administrative Management Domain (ADMD), and an X.400 Message Transfer Agent integrated with an EDI gateway.

Technical requirements

You will need:

- Support for EDIFACT syntax and translation to/from PENFOR message standard – please note, this message format is not described in this technical guide. The PENFOR message standard is described in the EDI guide which is available from your Customer Account Manager.
- Support for 1988 X.400 message relay to/from the IBM Information Exchange Value Added Network VAN – DWP address c=gb/ a=IBMX400/ p=IEEUR/ s=GBDWP/ g=GBDWP00 1; or
- A secure (minimum of 128bit 3DES encryption) connection with IBM Information Exchange.

Advantages of EDI

- It is a low cost option for organisations with prior access to the required technology.
- No additional security services are required for RESTRICTED content transfer.
- It offers fully automated, audited, end-to-end transfer.

The EDI gateway rigorously validates the format and structure of the data submitted, thus giving the CPF provider a high degree of confidence that a file successfully transmitted via EDI will be accepted as syntactically correct by the CPF system. Note: If there are any syntax errors in a file submitted by EDI then the whole file is rejected.

Disadvantage of EDI

EDI is expensive for organisations that do not already have the required technology.

Sopra XFB Secure Transfer

The Sopra XFB Secure Transfer option uses the Sopra Extended File Broker (XFB) product. This allows you to interface with DWP via the internet. You will use a Java applet on a PC desktop to interface securely with a web server administered by the CPF Service Delivery Centre (SDC).

Please note: There is also a technical guide supplement which is available from your Customer Account Manager.

Technical requirements

- You will need an internet-enabled PC.
- To use the XFB Workstation Java client you will need a suitable version of Java on your PC

Advantages of Sopra XFB Secure Transfer

- Transmission is secure.
- The graphic Windows-like interface is simple to use.
- The XFB workstation interface provides you with historical and status information.
- Little configuration of the workstation is required as the downloaded Java applet is pre-configured.
- You control the initiation of the file transfer process.
- It requires less manual intervention than physical media.

Disadvantages of Sopra XFB Secure Transfer

- It requires somebody to log in to action the 'SEND' and 'FETCH' functions.
- Adjustments may be needed to customer firewalls. (See SFT (Secure File Transfer) supplement.)

Physical media

The following three physical media types will be accepted:

- 4mm DAT;
- CD-ROM; and
- 3.5" diskette.

Technical requirements

The technical requirements for sending and receiving files are read and write capability for the agreed media type, i.e.:

- a PC/server with the appropriate drive installed (DAT drive, CD-writer drive or 3.5" diskette drive).

Advantages

- Only standard hardware is required.

Disadvantages

- There is a time delay between sending the request and receiving the reply.
- The media can be damaged or lost in transit.
- Security is poor.
- The interface cannot be fully automated.

3 How to send and receive files

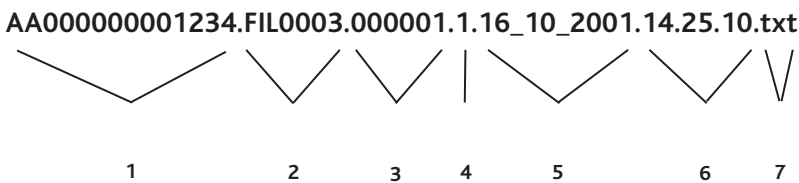
Introduction

The rules for sending and receiving data between you and the CPF service vary according to which media type (EDI, Sopra XFB Secure Transfer or physical media) you choose.

This section describes the process for each type, together with any constraints or encryption rules that apply.

Request File name

There are strict rules on the naming of files, which should be in the format illustrated in Figure 2. Please note that this is only an example of the file-naming convention.

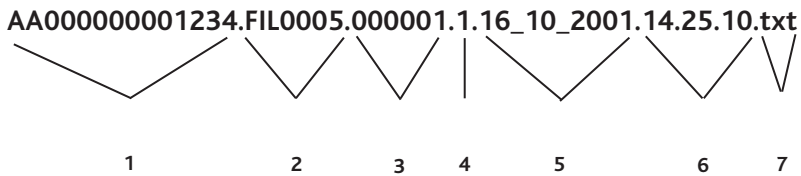


Field no.	Description
1	Contents of originating system from file header (your unique provider reference number)
2	File name (always FIL0003)
3	Contents of sequence number from file header (see description on page 16)
4	Which one of the five file transfer media types has been used. Please see media type table on page 7
5	Date stamp
6	Time stamp
7	File extension (always .txt)

Figure 2 CPF Request File naming convention

Reply File name

All Reply Files will be returned according to the file-naming convention shown in Figure 3.



Field no.	Description
1	Contents of originating system from file header (your unique provider reference number)
2	File name (always FIL0005)
3	Contents of sequence number from file header (see description on page 17)
4	Which one of the five file transfer media types has been used
5	Date stamp
6	Time stamp
7	File extension (always .txt)

Figure 3 CPF Reply File naming convention

Media type codes

The media codes are as follows.

Media type	Code
EDI	1
Sopra XFB Secure Transfer	2
CD-ROM	3
3.5" diskette	4
4mm DAT	5

EDI

File transfer process

The EDI interface with the CPF system will utilise EDIFACT syntax (the PENFOR message) carried as the first IA5 Text body part of an X.400 message, using the P2 Interpersonal Message content type. There is no support for X.435.

If your organisation has a direct secure connection with IBM Information Exchange, other submission protocols may be available – this must be discussed with your Customer Account Manager.

Once you have successfully carried out end-to-end connectivity testing and have gone through a formal 'conditions of connection' process, files can be sent and received via EDI as follows.

Stage	Description
1	You create a Bulk Request File containing records that include (at a minimum) the mandatory data required for each of your members/employees.
2	You submit the Bulk Request File in EDIFACT syntax to the DWP e-Business Gateway. The regularity and maximum size of these submissions will be predetermined as part of the approval process.
3	The DWP e-Business Gateway automatically confirms receipt, validates the syntax of the Bulk Request File, returns appropriate acknowledgements, and then passes the Bulk Request File to the CPF system for processing.
4	The CPF system: <ul style="list-style-type: none">• creates a Bulk Reply File; and• sends you a notification by Royal Mail that a Bulk Reply File has been sent to you.
5	The CPF system returns the Bulk Reply File to the DWP e-Business Gateway where it is transformed into EDIFACT syntax (the PENFOR message) and returned to you over X.400.

Please note: Your Customer Account Manager can provide you with an EDI guide.

Constraints on using EDI

The following constraint applies:

- the size of files being transferred to and from pension providers/employers means that either segmentation or compression will be required. The DWP preference is to utilise automatic compression.

Encryption of EDI

No additional encryption is required for RESTRICTED content transfer where connection is X.400-based.

Sopra XFB Secure Transfer

File transfer process

Once you have carried out end-to-end interoperability testing and have gone through a formal 'conditions of connection' process, files can be sent and received via Sopra XFB Secure Transfer as follows.

Stage	Description
1	You create a Bulk Request File containing records that include (at a minimum) the mandatory data required for each of your members/employees.
2	When your CPF Bulk Request File is ready to send, you log on to the CPF secure web server via an internet-facing firewall. The logon will be authenticated using Public Key Infrastructure (PKI) security, including the use of server-side X.509 certification.
3	You request a download of the XFB workstation component via your web server. (The workstation is a pre-configured Java applet that will act as the initiator [client] for the Sopra XFB Secure Transfers to the CPF system.)
4	You select the 'SEND' option, and the CPF Bulk Request File is transmitted to the XFB server on the secure web server from where it is forwarded to the CPF Service Delivery Centre (SDC).
5	The CPF system: <ul style="list-style-type: none">• generates a CPF Bulk Reply File; and• sends you a notification by Royal Mail that a Bulk Reply File has been produced.
6	The CPF Service Delivery Centre processes the CPF Bulk Reply File and forwards it to the XFB server on the secure web server.
7	You log on to the secure web server, download the XFB workstation client software and select the 'FETCH' option to retrieve the Bulk Reply File.

Please note: Your Customer Account Manager can provide you with a guide to Sopra XFB Secure Transfer.

Constraints on using Sopra XFB Secure Transfer

The following constraints apply:

- The format of the CPF Bulk Request File must conform to the specifications set out in Section 6 (*CPF Bulk Request File*). The name of the file must also conform to Section 3, 'Request file name'.
- The file must be saved in .txt format using the ASCII character set;
- You must use one of the following web browsers:
 - ◆ MS Internet Explorer 4.0 or higher; or
 - ◆ Netscape Navigator/Communicator 4.0 or higher; and
- Your firewall must be configured to allow Java downloads.
- The browser must be configured to use the Java run-time environment release 1.3.1-03 or later.
- The firewall must be configured to allow access to the Secure File transfer port on the DWP host (see SFT supplement).

Encryption and compression of Sopra XFB Secure Transfer

The following rule applies:

- security of data files using the Sopra XFB Secure Transfer option will be implemented via SSL version 3.0 utilising one of the RSA/3DES/MD5 algorithms with an encryption depth of 128 bytes.

Sending and receiving files by physical media

Once you have decided which of the three physical media types (4mm DAT, CD-ROM or 3.5" diskette) you will use, and have informed us of your choice, files can be sent and received via physical media as follows.

Stage	Description
1	You create a Bulk Request File containing records that include (at a minimum) the mandatory data required for each of your members/employees.
2	You save the Bulk Request File to the agreed physical media labelled with the following information: <ul style="list-style-type: none">• originating organisation name;• originating system (i.e. the provider reference number that we have given you);• destination system ('PFS');• file sequence number (from the file header);• creation date and time;• detailed record count (excluding header and footer); and• whether the file is 'live' or 'test'.
3	You send the file by mail to: CPF Operations Liaison Room M0048b Durham House Washington Tyne & Wear NE38 7RP.
4	Once we have received and processed the Bulk Request File, we will create a Bulk Reply File and save it to the agreed media.
5	We send you by Royal Mail the Bulk Reply File together with a Reply Notification. (See Section 8 <i>Notifying you of our reply.</i>)

Please note: You can use a 3.5" diskette only if you have fewer than 3,500 records. The file must not be split over more than one diskette.

CPF file generator

A tool for creating a CPF request file using Excel and an Excel spreadsheet example is available from your Customer Account Manager.

Constraints on using physical media

The file must be saved in .txt format using the ASCII character set.

Important: If you deviate from the agreed physical media and do not tell us, we will return the file on the media type agreed in the Registration Agreement.

4 Running the data test

The test process

Once the Registration Agreement between you and the CPF service has been completed, we will ask you to send us a small sample of data so that we can carry out compatibility checks.

This data test is a vital part of the registration process. Until the test has been completed successfully, your Registration Agreement will not be ratified and we will not be able to process your live Bulk Request File.

What is a data test?

The data test is the Department for Work and Pensions (DWP) way of making sure we can read and process your data and that you can read and process the returned file from the DWP prior to running the 'live' file. This only happens in the first year of you joining the service and does not have to be repeated every subsequent year. However, if you ever change your systems or processes you should consider repeating the data test to ensure that you have not made inadvertent changes that will affect the CPF bulk request files that you produce. It is a three-step process:

- step one: a check by the DWP of incoming files;
- step two: a check by the provider that they can read the return file; and
- step three: a connectivity test (this applies only if you plan to use EDI or Sopra XFB Secure File Transfer during live processing).

Step one: a check by the DWP of incoming files

You send us a CPF Test Bulk Request File holding up to 100 Request Records **which must contain dummy data**. The DWP's IT team will check that the file has a correct structure (accurate file name, header, record lengths) and that the data is in the right format.

Step two: a check by the provider that they can read the file

A return file will then be issued to you. This gives you, the provider, the opportunity to make sure that you can read the forecast reply file information and rejection codes, but with dummy forecasts rather than real ones. You should use these in testing internal processes you have set up to handle the returned forecasts.

Step three: a connectivity test

The purpose of this test is to enable you to check that you have correctly configured your end of the electronic transfer mechanism so that you can send and receive files successfully.

Connectivity testing consists of two stages:

- You will be asked to configure your system to point at a CPF test system, and then to send a file to this and receive a file in return.
- You will be asked to configure your system to point at the CPF live system so that you can check that you can connect to it.

The procedure for carrying out the connectivity test will be discussed with you in detail before you sign the Registration Agreement.

What should I send on my data test file?

The test file should contain:

- header;
- up to 100 dummy records; and
- trailer.

The specification for each of these items is shown in Section 6 of this guide. The data test file should mirror exactly the format and structure of the live file. Please note that all dummy NINOs should end only with the suffix A, B, C D or space.

The file should be named in accordance with the standards in How to send and receive files.

What do I need to do if problems occur during the data test?

It is an essential part of the check that you correct the problems and resubmit the file for further testing. An important point to remember here is that the changes completed to ensure the data test is successful must also be made to the 'live' file otherwise this will fail.

CPF file generator

A tool for creating a CPF request file using Excel and an Excel spreadsheet example is available from your Customer Account Manager. This guidance should be used only if you are intending to use Excel during live processing.

How should I send in my test file?

The test file should be sent on the agreed physical medium for live data (3.5" diskette, CD-ROM or 4mm DAT). Physical media files should be labelled 'DATA TEST' with your provider name and 14-digit provider reference number. If you are not sure of your reference number, it will be noted on the top of your Registration Agreement. This will also be used when creating your file name/header.

If the agreed live media type is to be changed from one allowed media to another, a further test file should be submitted with the latest media type **BEFORE THE LIVE FILE IS SUBMITTED**.

Unless this happens the live file will fail initial validation.

When should I send in my test file?

A test window should already have been agreed with your Customer Account Manager. This will be in the Registration Agreement in the CPF Activity Plan. If you are not sure of your test file dates or wish to reschedule, please contact your Customer Account Manager on 0870 010 1684.

5 Where to send your files

Addresses

The DWP address to which you should send your Bulk Request File depends on the transfer medium you have chosen.

Transfer medium	DWP address
EDI	To be confirmed when you sign the Registration Agreement
Sopra XFB Secure Transfer	To be confirmed when you sign the Registration Agreement
CD-ROM, DAT and 3.5" diskette	CPF Operations Liaison Room M0048b Durham House Washington Tyne & Wear NE38 7RP

6 CPF Bulk Request File

Introduction

This section explains how the Bulk Request File that you send to us is structured. An example file is available on request from your Customer Account Manager.

File structure

The file consists of one Header Record followed by one or more Detail Records and one Trailer Record, as shown in Figure 4.

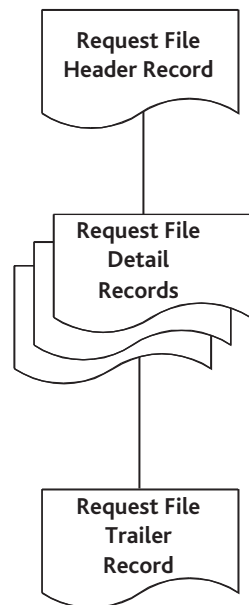


Figure 4 Structure of the CPF Bulk Request File

Record format

All records on the Bulk Request File must be 384 bytes (excluding the record delimiter), fixed length, ASCII text with standard end-of record delimiters, i.e. carriage return + line feed (CR+LF) on Windows-based platforms or line feed (LF) on Unix-based platforms. These delimiters are the standard defaults for text files on those platform types and therefore do not need to be explicitly added to the records. No field delimiters are required and no special or unprintable characters are permitted.

All text fields must be left-justified and space-filled (fillers).

Numeric fields must be right-justified with leading zeros.

The data in the Header, Detail and Trailer Records must be presented in the formats described in the rest of this section.

Request File Header Record format

Figure 5 lists the fields contained in the Request File Header Record, together with their validation rules.

Important:

- All data items on the Request File Header Record are mandatory.
- A failure on any field will cause the whole file to be rejected.

Field no.	Field name	Data type	Length	Description/validation
1	Filler	Integer	9	Value = 000000000
2	File sequence number	Integer	6	Sequence number for the Bulk Request File. First Live file = 000001. Thereafter incremented by 1 for each file sent.
3	Creation date	Date	8	Date stamp in the format: YYYYMMDD, where: Y = the year M = the month D = the day. Must be a valid date.
4	Creation time	Time	6	Time stamp based on the 24-hour clock and in the format: HHMMSS, where: H = the hour M = the minute S = the second. Must be a valid time.
5	Originating system	Alpha-numeric	14	Provider reference number, defined by the CPF service in the Registration Agreement.
6	Destination system	Alpha-numeric	14	'PFS' followed by spaces.
7	Filler	Alpha-numeric	327	Not used.

Figure 5 Format of the Request File Header Record

Request File Detail Record format

A separate Request File Detail Record is required for each person for whom you want a State Pension Forecast. Figure 6 lists the fields contained in the record together with their validation rules.

Important:

- All data items on the Request File Detail Record are mandatory except for 'Reserved' (Field 7), which is optional, and:
 - ◆ Allowable characters in surname and forenames are alpha (A–Z), apostrophe ('), full stop (.), hyphen (-) and space (). A full guide to surname/forename validation, with examples, is given on page 35.
 - ◆ Alpha characters in the NINO and Sex fields must be in upper case. The first character of Surname and Forenames must be in upper case.
 - ◆ Date of birth must be input in the correct format.
- If any of the fields in a particular record fail validation, it does not mean that the whole file will be rejected. However, we will not return a forecast for that person. (See Section 7 *CPF Bulk Reply File*, 'Reply File Detail Record format: Forecast status' (Field 9) for a list of rejection reasons.)
- If there are any invalid records in an EDI file, then the whole file will be rejected at the EDI gateway.

Field no.	Field name	Data type	Length	Description/validation
1	Request sequence number	Integer	9	Sequence of the Detail Record within the CPF Bulk Request File. First record = 000000001. Thereafter incremented by 1 for each Detail Record. This sequence number will never be more than 999999999.
2	National Insurance number	Alpha-numeric	9	Customer National Insurance number. Format is: AANNNNNNS, where: A = alpha character A–Z N = number between 1 and 9 S = alpha character A–D or space.
3	Surname	Alpha-numeric	35	Customer surname (the first character of which must be A–Z) followed by sufficient spaces to fill 35 characters.
4	Forenames	Alpha-numeric	70	Customer forenames or initials separated by a single space and followed by sufficient spaces to fill 70 characters. The first character must be A–Z.
5	Date of birth	Date	8	Date of birth in the format: YYYYMMDD, where: Y = the year M = the month D = the day. Must be a valid and correct date.

Field no.	Field name	Data type	Length	Description/validation
6	Sex	Alpha	1	'M' or 'F'.
7	Reserved	Alpha-numeric	99	For use by you to hold the policy number, scheme ID, etc., if required. Unused characters should be filled with spaces. (Optional field.)
8	Filler	Alpha-numeric	153	Not used.

Figure 6 Format of a Request File Detail Record

Request File Trailer Record format

Figure 7 lists the fields contained in the Request File Trailer Record together with their validation rules.

Important:

- All data items on the Request File Trailer Record are mandatory.
- A failure on any field will cause the whole file to be rejected.

Field no.	Field name	Data type	Length	Description/validation
1	Filler	Integer	9	Value = 999999999
2	File sequence number	Integer	6	Sequence number for the file. First Live file = 000001. Thereafter incremented by 1 for each file sent. Should be the same as in the Request File Header Record.
3	Creation date	Date	8	Date stamp in the format: YYYYMMDD, where: Y = the year M = the month D = the day. Must be a valid date and match the creation date in the Request File Header Record.

Field no.	Field name	Data type	Length	Description/validation
4	Creation time	Time	6	Time stamp based on the 24-hour clock and in the format: HHMMSS, where: H = the hour M = the minute S = the second. Must be a valid time and match the creation time in the Request File Header Record.
5	Record count	Integer	9	Count of the Detail Records in the file (excluding the header and trailer), with leading zeros as required to fill 9 bytes.
6	Filler	Alpha-numeric	346	Not used.

Figure 7 Format of the Request File Trailer Record

7 CPF Bulk Reply File

Introduction

This section describes the two types of Bulk Reply File that you might receive from us, and explains how they are structured. An example of these files is available on request from your Customer Account Manager.

Primary and follow-up files

In response to the CPF Bulk Request File, the CPF service will send you a Bulk Reply File. There are two types of Bulk Reply File:

- primary; and
- follow-up.

The **Primary Bulk Reply File** contains a Reply Detail Record corresponding to each Request Detail Record in your Bulk Request File. It contains all the original records, whether or not the CPF service has successfully produced a forecast for them.

You will receive a Primary Bulk Reply File if the minimum tolerance of completed forecasts has been achieved by the due date. (This will have been agreed in your Registration Agreement.)

If the minimum tolerance has not been achieved (as might very occasionally happen after a system problem), your Customer Account Manager will telephone you to ask which of the following actions you would prefer us to take:

- return the Primary Bulk Reply File to you immediately, even though it contains some incomplete forecasts;
- return the Primary Bulk Reply File to you immediately, and send the straggler records to you in a **follow-up file** once the forecast process has been completed for them; or
- delay returning the Primary Bulk Reply File until all the forecasts have been completed, or an agreed extension period has expired.

Advice on file opening

It is assumed that you are using a Windows operating system or its equivalent. The file can be opened in wordpad or notepad or an equivalent text editor and saved as a text file (.txt).

Failed records

Those records without a successful forecast are given a rejection code indicating that they are either:

- null returns (because they could not be given a forecast); or
- not yet processed (forecast status code 07).

For a full list of rejection codes, see Figure 11 in this section.

File structure

The CPF Bulk Reply File consists of one Header Record followed by one or more Detail Records and one Trailer Record, as shown in Figure 8.

Please note: The structure of the primary files and the follow-up files is the same, with the type of file being indicated by a marker in Field 7 of the Reply File Header Record.

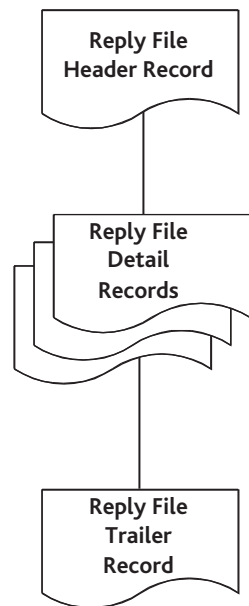


Figure 8 Structure of the CPF Bulk Reply File

Record format

All records on the Bulk Reply File are 384 bytes (excluding the record delimiter), fixed length, ASCII text with standard end-of record delimiters, i.e. carriage return + line feed (CR+LF) on Windows-based platforms or line feed (LF) on Unix-based platforms. These delimiters are the standard defaults for text files on those platform types and therefore do not need to be explicitly added to the records. No field delimiters are required and no special or unprintable characters are permitted.

All text fields are left-justified and space-filled.

Numeric fields are right-justified with leading zeros.

The data is presented in the formats described as follows.

Reply File Header Record format

Figure 9 lists the fields contained in the Reply File Header Record.

Field no.	Field name	Data type	Length	Description/validation
1	Filler	Numeric	9	Value = 000000000
2	File sequence number	Numeric	6	Matches the sequence number on the Bulk Request File.
3	Creation date	Numeric	8	Date stamp in the format: YYYYMMDD, where: Y = the year M = the month D = the day.
4	Creation time	Numeric	6	Time stamp in the format: HHMMSS, where: H = the hour M = the minute S = the second.
5	Originating system	Alpha-numeric	14	'PFS'.
6	Destination system	Alpha-numeric	14	Provider reference number, defined in the Registration Agreement (see page 6, 'Request File name').
7	Reply file type	Numeric	1	Numeric character. Options are: 0 = primary reply file 1 = follow-up file.
8	Filler	Filler	326	Not used.

Figure 9 Format of the Reply File Header Record

Reply File Detail Record format

Figure 10 lists the fields contained in the Reply File Detail Record.

The first seven fields match the first seven fields on the input Request File Detail Record. The subsequent fields supply the actual calculated forecast.

If the 'Forecast status' field is other than 'Successful', then the remaining fields on the record will be set to zero.

Important:

- You will specify one periodicity preference in the Registration Agreement. 'Periodicity' is the format in which the figures will be shown. For example, you may request that a forecast be shown in annual amounts.
- All data items on the Reply File Detail Record are mandatory except for the Fields 11 and 18. Field 11 will automatically be set to zero; Field 18 is unused and will be populated with zeros and decimal points.
- Fields 12 to 17 contain leading zeros and a decimal point, for example 000024.56.
- Allowable characters in surname and forenames are alpha (A–Z), apostrophe ('), full stop (.), hyphen (-) and space ().

Field no.	Field name	Data type	Length	Description/validation
1	Reply sequence number	Numeric	9	Sequence number matches the original Request Detail Record.
2	National Insurance number	Alpha-numeric	9	Customer's National Insurance number. Matches the original Request Detail Record.
3	Surname	Alpha-numeric	35	Customer's surname. Matches the original Request Detail Record.
4	Forenames	Alpha-numeric	70	Customer's forenames. Matches the original Request Detail Record.
5	Date of birth	Date	8	Customer's date of birth. Matches the original Request Detail Record.
6	Sex	Alpha-numeric	1	Customer's sex. Matches the original Request Detail Record.
7	Reserved	Alpha-numeric	99	Reserved data for use by you. Matches the original Request Detail Record. This may contain policy numbers, scheme IDs, etc.
8	State Pension age	Numeric	4	Age in years and months that retirement is due. Displayed as two separate fields: <ul style="list-style-type: none"> • Field 1: age in years • Field 2: number of months. For example, 2501 is 25 years and 1 month.

Field no.	Field name	Data type	Length	Description/validation
9	Forecast status	Numeric	2	Codes (mostly rejection codes) used to indicate the status of the forecast. The options are described in Figure 11.
10	Preferred periodicity	Numeric	1	Preferred periodicity at which the data in Fields 12 to 17 below are expressed. (This will be defined in the Registration Agreement.) The options are: 2 = weekly 4 = four-weekly 5 = monthly 6 = quarterly 7 = annually
11	Filler	Numeric	1	N/A-this field will be populated with a zero
12	Current total entitlement (1)	Numeric, in the format (6).(2)	9	Total State Pension entitlement expressed using the preferred periodicity.
13	Current basic State Pension (1)	Numeric, in the format (6).(2)	9	Total current basic State Pension entitlement expressed using the preferred periodicity.
14	Current additional State Pension (1)	Numeric, in the format (6).(2)	9	Total current additional State Pension entitlement, for example Pension Sharing on Divorce (PSOD) and graduated pension, expressed using the preferred periodicity.
15	Projected total entitlement (1)	Numeric, in the format (6).(2)	9	Total projected entitlement expressed using the preferred periodicity.
16	Projected basic State Pension (1)	Numeric, in the format (6).(2)	9	Total projected basic State Pension entitlement expressed using the preferred periodicity.
17	Projected additional State Pension (1)	Numeric, in the format (6).(2)	9	Total projected additional State Pension entitlement, for example PSOD and graduated pension, expressed using the preferred periodicity.
18	Filler	Numeric,	91	Not used.

Figure 10 Format of the Reply File Detail Record

Forecast status codes

The forecast status codes (given in Field 9 of the Detail Record) are shown in Figure 11.

Code	Name	Definition	What you should do
00	Successful	The record has received a successful forecast.	Advise your scheme member/employee of the Combined Forecast.
01	Data unavailable	Could be for various reasons. For example, the contribution account is held by the Isle of Man Government Office and is not automatically available for a CPF, or data cannot be retrieved from the National Insurance Recording System (this list is not exhaustive).	Advise your scheme member/employee to contact the Retirement Pension Forecast Team (telephone 0845 3000 168), which will explain the reason for rejection and offer a full forecast.
02	Non-match	A forecast has not been processed because the personal details of the scheme member/employee could not be traced.	Advise your scheme member/employee to either: <ul style="list-style-type: none"> confirm his or her personal details with you or with the Retirement Pension Forecast Team (telephone 0845 3000 168).
03	Overage	A forecast has not been processed because the relevant individual is within 4 months and 4 days of State Pension age.	Advise your scheme member/employee that the <i>actual</i> (rather than forecast) State Pension is in the process of being calculated. Refer him or her to the Retirement Pension Forecast Team (telephone 0845 3000 168) for more information if required.
04	Unable to process	Could be for various reasons resulting from a failure by the system to process the request. For example, the contribution account is corrupt or certain details required to perform the State Pension forecast calculation are not present.	Advise your scheme member/employee to contact the Retirement Pension Forecast Team (telephone 0845 3000 168), which will explain the reason for rejection and offer a full forecast.

Code	Name	Definition	What you should do
05	Unable to calculate	The rules that apply to the calculation of a State Pension forecast have failed, for example the graduated retirement benefit details are out of range, or current pre-75 qualifying years are out of range.	Advise your scheme member/employee to contact the Retirement Pension Forecast Team (telephone 0845 3000 168), which will explain the reason for rejection and offer a full forecast.
06	Date of death held	A forecast has not been processed because a verified date of death is held for the individual concerned.	Do not issue a CPF, but follow your usual procedure for dealing with scheme members/employees reported as dead.
07	Not yet processed	A forecast for this record has not been processed by the Reply File return date, but you have asked us to send you the Bulk Reply File anyway.	Once the Reply File return date has been reached, you may request the immediate return of the file together with all the records, even though some may be incomplete. If a record has not yet been processed, you can: <ul style="list-style-type: none"> • wait for a follow-up file showing all the straggler records from the original Bulk Request File. Each record will show a revised rejection code, and you should take the appropriate action for that code as described in this table; or • write off any records that have not yet been processed, and advise your member/employee to contact the Retirement Pension Forecast Team (telephone 0845 3000 168) for more information or a full forecast.
08	Over State Pension age	A forecast has not been processed because the individual concerned is over State Pension age.	Advise your scheme member/employee that he or she has reached State Pension age and should now contact the Retirement Pension Forecast Team (telephone 0845 3000 168) for more information.

Figure 11 Forecast status codes

Reply File Trailer Record format

Figure 12 lists the fields in the Reply File Trailer Record.

Field no.	Field name	Data type	Length	Description/validation
1	Filler	Numeric	9	Value = 999999999
2	File sequence number	Numeric	6	Matches the sequence number on the Bulk Request File.
3	Creation date	Numeric	8	Date stamp in the format: YYYYMMDD, where: Y = the year M = the month D = the day.
4	Creation time	Numeric	6	Time stamp based on the 24-hour clock and in the format: HHMMSS, where: H = the hour M = the minute S = the second.
5	Total record count	Numeric	9	Count of the Detail Records in the file (excluding the header and trailer).
6	Total valid forecasts	Numeric	9	Total number of records containing valid forecast results.
7	Total 'nil response'	Numeric	9	Total number of records rejected by the CPF system for whatever reason. This count excludes forecasts not yet processed (forecast status code 07).
8	Total outstanding	Numeric	9	Total number of records representing a forecast not yet completed. If this is a Primary Reply File, this number will equate to the number of records expected on the follow-up file (if requested).
9	Filler	Filler	319	Not used.

Figure 12 Format of the Reply File Trailer Record

8 Notifying you of our reply

Introduction

This section explains how we notify you that a Bulk Reply File has been sent to you. It also contains examples of the notification document used.

Purpose of the notification

The purpose of the reply notification is to let you know that the file has been sent.

How we send the notification

Every time we send you a Bulk Reply File containing State Pension Forecasts for your members/employees, we will also send you a reply notification. Whatever the medium used to send the Reply File, the notification will be delivered by Royal Mail.

If the file is being sent via a physical medium (CD-ROM, 3.5" diskette or 4mm DAT), the notification will be in the same packet.

Layout

The layout of the notification will vary according to whether the file is being sent electronically or via physical media.

Reply notification when medium is electronic

Figure 13 shows an example of the reply notification that we will send to you by Royal Mail when a Bulk Reply File has been transmitted to you electronically.

COMBINED PENSION FORECASTING	
Notification of CPF Reply File Return	
	COMBINED PENSION FORECASTING
PROVIDER CONTACT NAME	DEPARTMENT FOR WORK AND PENSIONS
PROVIDER TRADING NAME	TYNEVIEW PARK
PROVIDER ADDRESS LINE 1	BENTON
PROVIDER ADDRESS LINE 2	NEWCASTLE UPON TYNE
PROVIDER ADDRESS LINE 3	NE98 1BA
PROVIDER ADDRESS LINE 4	
PROVIDER ADDRESS LINE 5	Date
PROVIDER POSTCODE	
This document contains information regarding the CPF Reply File, which has been electronically transmitted to you on the date at the head of this notification.	
CPF provider name:	
ID:	
Date Bulk Request File received:	
Bulk Request File media type:	
Bulk Reply File type:	
Numbers of requests on Bulk Request File:	
Number of successfully processed outputs:	
Number of outstanding outputs:	
Number of rejection outputs:	
Total:	
Date processing completed:	
Date Bulk Reply File transmitted:	
If you have any queries about this notification, please contact your Customer Account Manager on 0870 010 1684.	

Figure 13 Example of a reply notification for electronic media

Reply notification when medium is physical

Figure 14 shows an example of the reply notification that we will send to you by Royal Mail when a Bulk Reply File has been transmitted to you physically.

COMBINED PENSION FORECASTING	
Notification to accompany CPF Reply File	
COMBINED PENSION FORECASTING	
PROVIDER CONTACT NAME	DEPARTMENT FOR WORK AND PENSIONS
PROVIDER TRADING NAME	TYNEVIEW PARK
PROVIDER ADDRESS LINE 1	BENTON
PROVIDER ADDRESS LINE 2	NEWCASTLE UPON TYNE
PROVIDER ADDRESS LINE 3	NE98 1BA
PROVIDER ADDRESS LINE 4	
PROVIDER ADDRESS LINE 5	Date
PROVIDER POSTCODE	
This document contains information regarding the Combined Pension Forecast Reply File, which accompanies this notification. This file has been returned to you on the date at the head of this notification.	
CPF provider name:	
ID:	
Date Bulk Request File received:	
Bulk Request File media type:	
Bulk Reply File type: Primary/Follow-up	
Numbers of requests on Bulk Request File:	
Number of successfully processed outputs:	
Number of outstanding outputs:	
Number of rejection outputs:	
Total:	
Date processing completed:	
If you have any queries about this notification, please contact your Customer Account Manager on 0870 010 1684 .	

Figure 14 Example of a reply notification for physical media

9 Validation and exception handling

Introduction

This section describes the validation checks that we carry out on your Bulk Request Files, and what happens if one of the checks fails. The section also explains what happens if we have not been able to process all the records by the agreed reply date.

CPF Bulk Request Files

Validation

When we receive a Bulk Request File from you, we validate it to ensure that:

- the file is readable;
- the customer details (such as date of birth and National Insurance number) are the same as those recorded on the National Insurance Recording System;
- the file uses the agreed format and character set;
- the provider ID on the Header Record matches a current, live CPF provider;
- the file has the correct sequence number and has arrived within the range of dates agreed in the Registration Agreement; and
- the number of records contained in the file is within the agreed limits.

Exception handling

The way we handle a failed validation depends on whether the failure relates to the complete Bulk Request File or to just one record within it.

Bulk Request Files

If a complete **Bulk Request File** has failed validation (resulting in all records being rejected), we will ask you to send the whole file again.

Request File Detail Records

If a single Request File Detail Record fails validation, the forecast status field in the Reply Record (Field 9) will indicate the reason. (See Section 6 *CPF Bulk Request File*.)

Depending on the circumstances, we will either send you a null return or state that the file has not yet been processed for a given reason.

CPF Bulk Reply Files

Early and late return of forecast replies

The Registration Agreement will have defined the maximum number of days allowed between our receiving your Bulk Request File and returning our reply.

If we have processed all the forecasts in the file before the agreed return date, we will send the file back early.

If all the forecasts are not processed by the agreed return date, your Customer Account Manager will ask whether you want us to:

- return the Primary Bulk Reply File to you immediately, even though it contains some incomplete forecasts;
- return the Primary Bulk Reply File to you immediately, and send the straggler records to you in a follow-up file once a completed forecast has been produced for them; or
- delay returning the Primary Bulk Reply File until all the forecasts have been received successfully, or an agreed extension period has expired.

Please note that if your request file is delayed, this may mean the late return of your reply file.

10 Data protection registration

What is Data Protection Registration?

Any organisation with an IT system that holds information about individuals must register this fact with the Data Protection Registrar.

This section explains the implications of this when you sign up for CPF.

What information should you register?

You must inform the Registrar of the following details:

- the types of information you receive and the data subjects to which they relate;
- how the information will be used, or any changes to that use;
- a description of the persons or organisations to whom the data may be disclosed; and
- the names or descriptions of any countries or territories outside the European Economic Area (EEA) to which the controller of the data transfers or intends to transfer the data.

How the Combined Pension Forecast affects Data Protection Registration

Once you have registered with us to produce CPFs, it will be your responsibility to check your existing Data Protection Registration to see if it needs to be updated to include State Pension Forecast information.

You can do this by contacting the Data Protection Registrar and discussing any amendments that need to be made before you receive the first CPF Bulk Reply File from us.

Address of the Data Protection Registrar

The Registrar's address is as follows:

The Information Commissioner
Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF

Telephone: 01625 545745

E-mail: mail@dataprotection.gov.uk

Internet: www.dataprotection.gov.uk

11 CPF technical guide checklist

First file

No.	Check	Yes/No
1	Have you successfully completed a data test?	
2	If you are using Secure File Transfer or EDI, have you successfully completed a connectivity test?	

All files

No.	Check	Yes/No
1	In the file you are going to submit, is the number of forecast requests no more than 10% more than the number you agreed with your Customer Account Manager?	
2	Are you sending the request file so it arrives on the date agreed with your Customer Account Manager?	
3	Is the media type you are using the same type you specified in your Registration Agreement?	
4	Is the file name in the correct format? See Section 3.	
5	Is the sequence number correct? If this is the first live file you have submitted then the sequence number must be 000001, otherwise it must be 1 greater than the last file that you successfully submitted. Note: If a file you submitted is rejected and you then resubmit the file, or submit a new file, it must have the same sequence number as the rejected file.	
6	Are all records in the file 384 bytes in length (excluding the record delimiter)? Note: This includes the Header and Trailer Record.	
7	Is the date of birth in the correct format?	
8	Do the surname and forenames contain only allowable characters, alpha (A–Z), apostrophe ('), full stop (.), hyphen (-) and space ()?	
9	Are all mandatory fields in upper case where required – ie alpha characters in the NINO and Sex fields must be in upper case and the first character of Surnames and Forenames must be in upper case?	

Validation rules for surnames and forenames

Surname and forenames fields supplied by CPF providers will be required to conform to the following rules if a forecast request is to proceed.

1. A surname must be present.
2. The only allowable characters are: alphabetic (A–Z, a–z), apostrophe (’), full stop (.), hyphen (-) and space ().
3. The first character must be alphabetic and upper case (A–Z).
4. The last character must not be punctuation, i.e. not apostrophe (’), full stop (.) or hyphen (-).
5. Consecutive punctuation characters are not allowed, i.e. the following character strings must not be present: (’), (.’), (’-), (-’), (-.), (-.), (’), (.’), (--).
6. Consecutive spaces are not allowed unless they are trailing spaces used to pad out the field.
7. For surnames only, spaces before or after punctuation are not allowed, i.e. the following character sequences must not be present: (’), (.), (-), (’), (.), (-).

The following table provides examples of names that would fail one or more of the above rules, and gives an alternative that would pass.

Failed name	Rule violated	Alternative valid name
DE_AGOSTINI	2	DE AGOSTINI
de BONO	3	DE BONO
-Harvey	3	Harvey
WILSON.	4	WILSON
O.’CONNOR	5	O’CONNOR or O CONNOR
HARVEY--JONES	5	HARVEY-JONES
Creighton Ward	6	Creighton Ward
St. JOHN	7 (Surname only)	ST.JOHN or ST JOHN
O’ HARE	7 (Surname only)	O’Hare or O Hare
WRIGHT- PHILLIPS	7 (Surname only)	WRIGHT-PHILLIPS
D’ ARTAGNAN	7 (Surname only – would pass as a forename)	D’ARTAGNAN

File Header Record

No.	Check	Yes/No
1	Is the Header Record the first record in the file?	
2	Do the file sequence number, creation date, creation time and originating system match the details in the file name?	

File Detail Records

No.	Check	Yes/No
1	Are the sequence numbers in ascending order, without any gaps?	
2	Do the surname and forenames contain only allowable characters, alpha (A–Z, a-z), apostrophe ('), full stop (.), hyphen (-) and space ()?	

File Trailer Record

No.	Check	Yes/No
1	Is the Trailer Record the last record in the file?	
2	Do the file sequence number, creation date, creation time and originating system match the details in the file name and the File Header?	
3	Does the record count equal the number of Detail Records in the file (not including the Header and Trailer Record)?	

If you answered 'No' to any of the above questions, please contact your Customer Account Manager on **0870 010 1684**.

Glossary

The following terms and abbreviations are used in this document:

Term	Definition
CPF	Combined Pension Forecast
CPF Bulk Reply File	The file that we return to you containing the pension forecasts you have requested in the CPF Bulk Request File
CPF Bulk Request File	A file containing the pension forecasts requested in a CPF Bulk Request File received from a Pension provider
DWP	Department for Work and Pensions
EDI	Electronic Data Interchange
Follow-up Bulk Reply File	A CPF Bulk Reply File containing forecasts relating to any records that have been previously returned in the primary file with the forecast status set at code 07 'Not yet processed'
Pension provider	An organisation that provides an occupational pension, a stakeholder pension or a personal pension, or that is an administrator or trustee of a pension
Periodicity	The frequency at which customer pension entitlement data is expressed in the CPF Bulk Reply File
Primary Bulk Reply File	A CPF Bulk Reply File containing responses to all the forecast requests you have sent in a CPF Bulk Request File. The response will indicate whether a forecast has been successfully produced, is still awaiting production, or cannot be produced
PSOD	Pension Sharing on Divorce
SDC	Service Delivery Centre
Sopra XFB Secure Transfer	A secure method of sending files via the internet

For more copies of this guide you can phone
0870 010 1684.

You can also access this leaflet on the internet at
<http://www.thepensionservice.gov.uk/resourcecentre/cpf/home.asp>

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