CashAnalytics
A GTREASURY SOLUTION

Practical guide to bank reporting connectivity

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01: Introduction to bank connectivity

At present, many people who work in treasury and finance teams are burdened with a manual, slow, and administratively heavy task when they need to access bank account data.

Bank reporting connectivity offers a way to automate this process. Instead of the painstaking task of accessing and preparing the data manually, all key information is pulled automatically into the company's systems overnight, and reworked and reformatted to offer headline KPI numbers. This means that when treasury and finance professionals reach their desks in the morning, the reports are ready to go.

Those working in these teams may have heard of automated bank account reporting, but are unaware of how this is achieved. They may or may not be aware that they can access much of the information they need from electronic bank statements, and very few are aware that most large banks are able to set up secure, electronic file transfers to access this information automatically.

This guide demystifies the automation process and walks through how the technology actually works.

In our experience, when helping clients to set up and roll out new cash forecasting and liquidity reporting processes, we are generally asked the following questions about bank connectivity:

- What is involved in setting it up?
- Who do I talk to in the bank?
- What formats do the bank files come in?
- What are the security implications?
- How do our system providers leverage the automation of banking data?
- If we set this up what are the benefits?

This guide aims to answer the questions above and familiarise people with a simple technology solution to one of their day-to-day working frustrations.

02: Introduction to electronic bank statements

Electronic bank statements are a coded file that can be easily read by other systems.

They come in a variety of different file formats, a few of which are listed on the panel below.

It is important to note that, while this list of bank file types is not exhaustive, these are the most common file types being used by large banks and businesses.

LIST OF BANK FILES

BAI2	BTRS	ACH
EDIFACT	FEBRABAN	SAP IDoc
MT940	MT942	CAMT
SEPA	SWIFT Messages	

To introduce how electronic bank statements work, in the next section we'll run through two of the most common types, BAI2 files (mostly used in the USA), and MT940 files (mostly used in Europe).

Although each of the file types differ slightly, at a high level, they all contain similar data components, as can be seen in the table below.

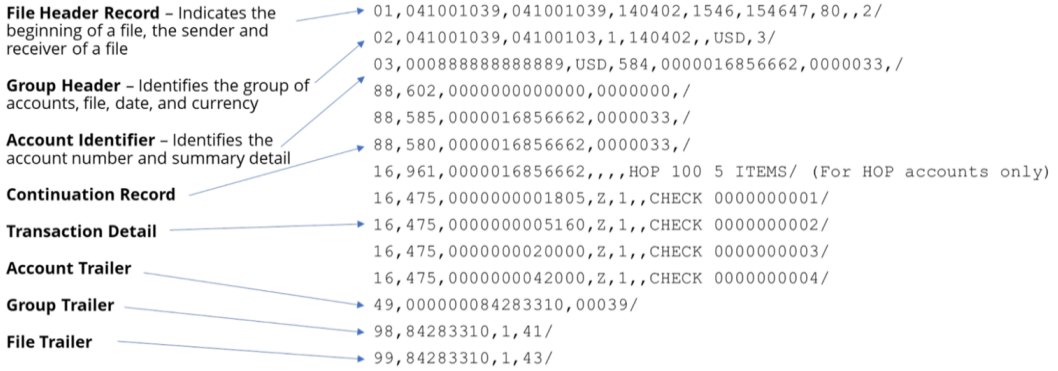
TYPICAL BANK FILE DATA COMPONENTS

Account Identifier	Transaction Type
Transaction Date	Transaction Amount
Custom Coding Structures	Reference Data
Opening Balance	Closing Balance

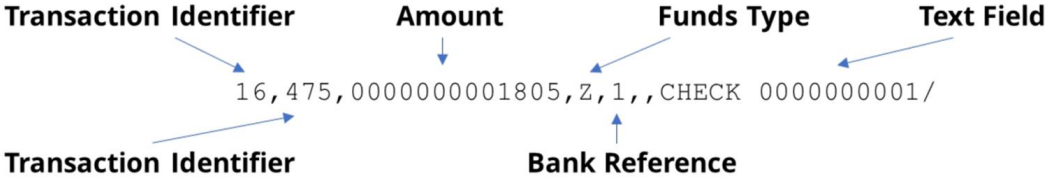
02.1: A close look at the BAI2 format

The BAI2 format is most widely used in the United States. It was developed by the Banking Administration Institute (BAI) and is used for cash balance and transaction reporting.

The diagram below shows what a BIA2 file looks like and explains the key coding components.



The individual transactions, and details relating to the transactions, are contained in the line(s) prefaced with 16. For a BAI2 file, each line prefaced with 16 represents a single transaction. Below we look at an individual transaction line and break down the key elements within a transaction for an example file.



From a reconciliation and classification perspective, the transaction and balance lines are most often of interest.

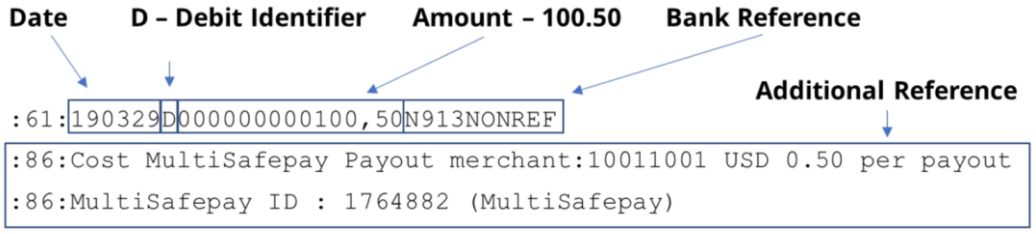
Breaking down the example above, we can see that it is a debit for $1,805 and has a text string of “CHECK 0000000001” which can be used for classification purposes (see section 6). The transaction identifier of 475 relates to the BAI2 classification code of “Check Paid”. By knowing this, it is quite straightforward to understand the data in the file.

02.2: A close look at the MT940 format

The MT940 format was developed by SWIFT and is used for end of day bank account balance and transaction reporting. Structurally the MT940 format is quite similar to the BAI2 format.

MT940s are composed of a header block and a transaction block, with each block containing specific elements and pieces of information. The diagram below highlights the key components in an MT940 file.

As shown above, each bank account transaction starts on a line that is prefaced with a :61 code. Below we break down an individual transaction and look at the key components.



The above the statement line includes the line commencing with the :61 identifier but also includes the follow on :86 transaction lines (which contain additional information).

We can see that for the transaction above it is a Debit of 100.50, dated the 29th March 2019, and has a detailed transaction reference in line 86.

With most electronic bank statement file types (including both MT940 and BAI2 files) it is important to note that the specifications may vary slightly and individual banks and financial institutions implement their own versions. Therefore, while the core of the statement and message will adhere to the same broad principles there may be subtle differences from bank to bank.

03: Methods of file communication

There are a number of different ways that bank account data can be transmitted electronically from a bank to a company and, correspondingly, from a company to a bank.

Technically speaking, these range from agreed multi-bank protocols, through to individual bank to customer arrangements.

Below we review some of the more common options that are available. These protocols can generally communicate all types of bank messages.

SFTP

Secure File Transfer Protocol (SFTP) is a protocol that supports the transportation of bank files in a secure and safe manner. Banks typically offer various flavours of file transfer that leverage this protocol, such Host to Host communication or Managed File Transfer (MFT).

From a technical perspective, each bank will typically specify the detail on what encryption protocols, ciphers and keys are supported by them.

For a service like MFT, typically the bank will provide access to a directory where a company's systems can either deposit a file (for payment purposes) or retrieve a file (for statement purposes). Each bank will have their own file naming conventions and file availability rules.

In the following section we look at the typical steps to set up a SFTP type file transfer between a company and a bank.

03: Methods of file communication, continued

EBICS

Electronic Banking Internet Communication Standard (EBICS) is a European transmission protocol developed in Germany for sending and receiving payment and statement information via the internet. Since its inception, its use has extended to France, and the majority of German and French banks support its implementation. Similar to SWIFT, EBICS facilitates bank to bank and bank to company communication.

SWIFT

Society for Worldwide Interbank Financial Telecommunication (SWIFT) was set up in 1973 by over 200 banks, to enable financial institutions and corporates to send and receive financial messages on the SWIFT network. Companies can go through a process to join the SWIFT Network and obtain a SWIFT Code, also known as a Bank Identifier Code (BIC). Joining SWIFT is a detailed process for a company, and typically takes at least 6 months.

Rather than connect to SWIFT directly, a company can use a SWIFT bureau. A bureau is effectively a middleware solution that enables corporates to avoid having to set up the full swift infrastructure. There are specialist third party swift bureaus, and banks also provide this service. For example the company's main banking partner could act as a collector of SWIFT messages from other banking partners.

04: Practical steps to set up banking connectivity

The diagram below shows, from a practical perspective, the typical steps involved in setting up banking connectivity directly with your bank.

Not all banks will follow the process in this exact order, but based on our experience this is a representative overview of the key steps.

Individual banks will have their own process, the details of which can be easily obtained from your bank relationship manager. In terms of timelines, setting up an SFTP communication process and receiving files would take approximately 4-6 weeks.

Initiate contact with bank relationship manager	
Bank sends data requests form/questionnaire	The bank will include details on the options they provide such as data push/pull requirements, frequency of transmission and encryption security details
Return form with technical details and requirements	Your technical partner will assist at this stage to align with company security protocols
Bank provides test details	This would typically be access to a test site with test credentials and details on what a successful test looks like
Test connection works	Using the details in the previous step, a successful test is carried out
Final documentation sign-off for go-live	Your technical partners and the bank exchange the go-live security credentials and keys
Production security credentials exchanged	Final security signoff between you, your bank and your technical partner

05: Automation and connectivity tools

An understanding of how electronic bank statement data is structured offers a window into how automated cash forecasting and liquidity reporting solutions work.

As outlined in the introduction, connecting bank reports directly to treasury and finance systems offers great benefits. When used with the right software solutions, bank reporting connectivity can offer real-time visibility over cash balances and flows, and enable touch of a button headline KPI reporting and dashboards.

They key point, of course, is that bank reporting connectivity is only a part of a fully automated software solution. It is the first step towards a fully automated process that frees the corporate treasury and finance team from the administrative portion of their tasks, and enables them to focus more closely on higher value analytics activities.

CashAnalytics has extensive experience in helping large companies, working in a range of industries, to automate their cash forecasting and liquidity reporting processes. If you would like to see how this would work for your company, please contact us to schedule a demo.

View the CashAnalytics product walkthrough

To get a closer look at our software, and to see how it works, please see our product walkthrough at:

cashanalytics.com/overview

See the walkthrough

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About CashAnalytics

CashAnalytics is a dedicated cash forecasting & liquidity reporting software solution.

Our mission is to help large companies to better understand their current and future liquidity positions.

We are differentiated from other software providers through the depth of functionality and intuitive interface of our solutions, the speed at which they can be rolled out and the ease with which they can be integrated with existing systems, as well as the high level of ongoing support we provide to clients.

We have developed a thorough yet efficient set-up process that enables quick and easy roll-out of our software. During this process, comprehensive project management with senior members of the CashAnalytics team ensures smooth collaboration across a company's business units with minimal impact on day-to-day operations.

To see our software in action, and to see the value it can help you to deliver, contact us to book a demo now.

General: info@cashanalytics.com
Sales: sales@cashanalytics.com
Support: support@cashanalytics.com

Head Office: +353 1 524 0552
UK: +44 203 773 9684
USA: +1 646 358 3451

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