



Microsoft Dynamics® AX

Advanced bank reconciliation – processing and troubleshooting

White Paper

In Microsoft Dynamics AX 2012 R2, you can import electronic bank statements and reconcile the imported bank statements with bank documents.

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Introduction

In Microsoft Dynamics AX 2012 R2, you can import electronic bank statements and reconcile the imported bank statements with bank documents. If there are issues with the import process, this white paper provides some steps that can help you debug issues between .xslt files and the file being imported, and it also provides troubleshooting information.

Bank statements and companies

Microsoft Dynamics AX Application Integration Framework (AIF) is not company-specific and works across companies. Because of this, if the inbound port that is set up for the bank statement import is not restricted to a specific company (in the **Restrict to company** field on the **Security** FastTab), the bank statement is imported into the default company from your user profile.

For example, you are logged on to Company B, but your user profile's default company is Company A. In this case, if you are using an inbound port that is not restricted to a specific company, the bank statement is imported into Company A. However, if the inbound port is restricted to Company B, the bank statement is imported into that company, regardless of the default company assigned to your user profile.

Therefore, you might want to set up a separate inbound port for each company that you must import bank statements into.

Setting up number sequences for bank statement import

To make sure that you have assigned number sequences for all companies that you are importing bank statements into, use the **Cash and bank management parameters** form. (Click **Cash and bank management** > **Setup** > **Cash and bank management parameters**, and then click the **Number sequences** tab.) Set up number sequences for the statement ID, download ID, and reconcile ID.

Set up advanced bank reconciliation import

Before you can import electronic bank statements and reconcile the imported bank statements with bank documents, you must set up the advanced bank reconciliation import.

1. Open the **Bank accounts** form. (Click **Cash and bank management** > **Common** > **Bank accounts** > **Bank accounts**.)
2. Select the bank account to reconcile.

- On the **Reconciliation** FastTab, select the **Advanced bank reconciliation** check box.

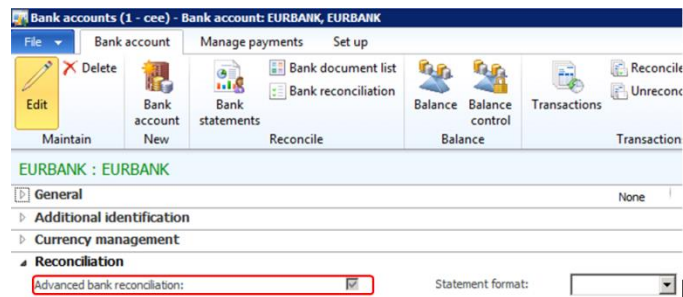


Figure 1 Bank accounts form

- Close the form.
- Open the **Inbound ports** form. (Click **System administration** > **Setup** > **Services and Application Integration Framework** > **Inbound port**.)
- Click **New**.
- In the **Adapter** field, select **Files system adapter**.
- In the **URI** field, select a location to put the bank files in.

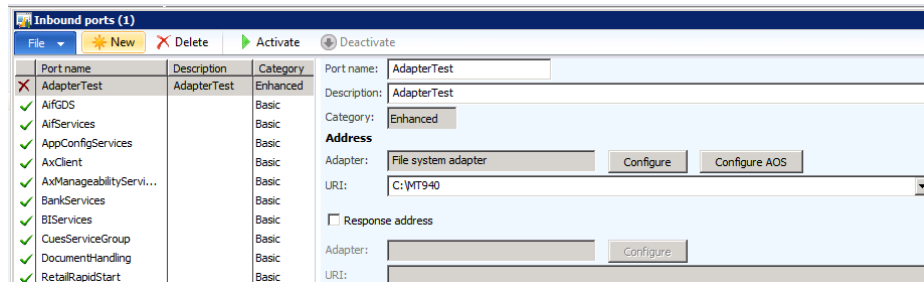


Figure 2 Inbound ports form

- On the **Service contract customizations** FastTab, click **Service operations**.

10. In the **Select service operations** form, select the following entries in the **Remaining service operations** list, and move them to the **Selected service operations** list:

- BankStmtService.create
- BankStmtService.delete
- BankStmtService.find
- BankStmtService.getChangedKeys
- BankStmtService.getKeys
- BankStmtService.read

Note: These services are available only if the **Advanced bank reconciliation** check box is selected for a bank account in the **Bank accounts** form.

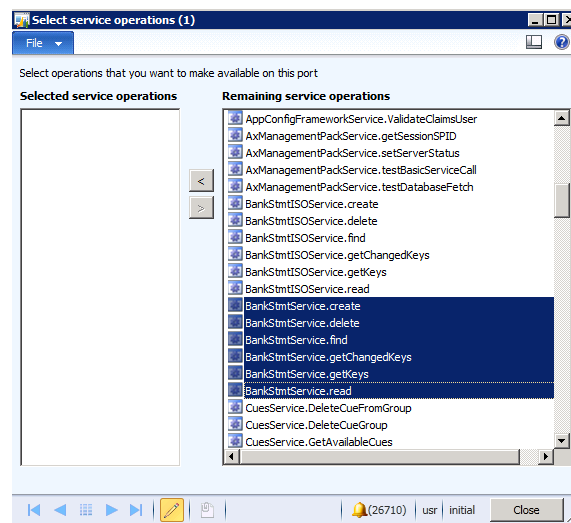


Figure 3 Select service operations form

11. Open the Application Object Tree (AOT) (press Ctrl+D), and expand the **Resources** node.

12. Locate the resources starting with **MT940**.

Note: This example is for the MT940 format, but there are also resources for the ISO20022 and BA12 formats.

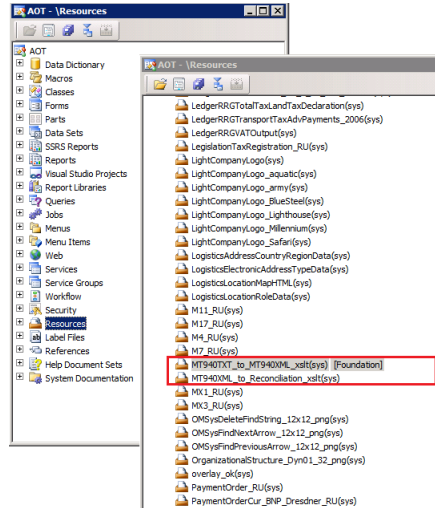


Figure 4 AOT Resources node

13. Right-click each resource, and then click **Open**. Then, in the **Preview** form, in the **File type** field, select **XML document**.

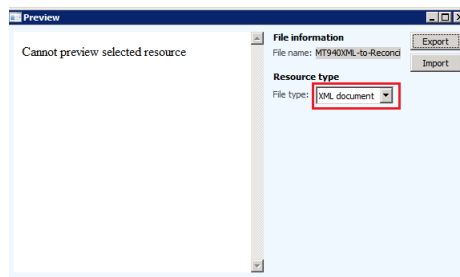


Figure 5 Preview form

14. Click **Export**, and then close the AOT.

15. In the **Inbound ports** form, on the **Processing options** FastTab, select the check box next to **Transform all requests**, and then click **Inbound transforms**.

Processing options

Upon error in batched requests: Continue

Process requests in parallel:

Validate document XML:

Replace existing documents on create:

Transform all requests: **Inbound transforms**

Preprocess service operation requests: Inbound pipelines

Post-process service operation responses: Outbound pipelines

Transform all responses: Outbound transforms

Apply value mapping: Value mapping

Manage document filters: Document Filters (h)

Figure 6 Inbound ports form

16. In the **Inbound transforms** form, click **Manage transforms**.

Inbound transforms (1) - Category: Enhanced

File New Delete Move up Move down Manage transforms

Transform name	Description
----------------	-------------

Transform name: []

Description: []

Type: XSL

Enter transform name [] Close

Figure 7 Inbound transforms form

17. In the **Manage transforms** form, create a new entry. In the **Type** field, select **XSL**.

- Click **Load**, and then browse for the Extensible Stylesheet Language Transformation (XSLT) files for the MT940 files. These files have the .xslt extension.

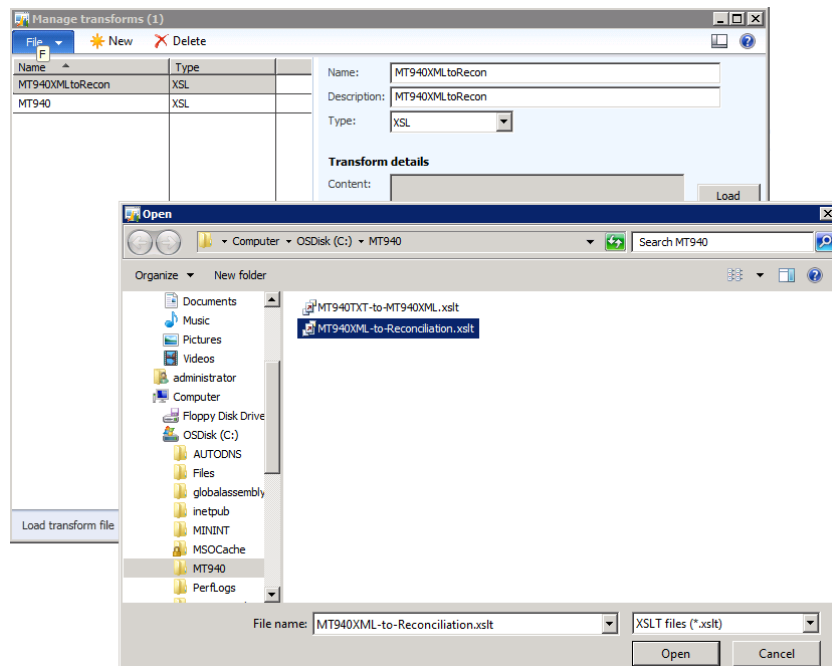


Figure 8 Selecting the resources

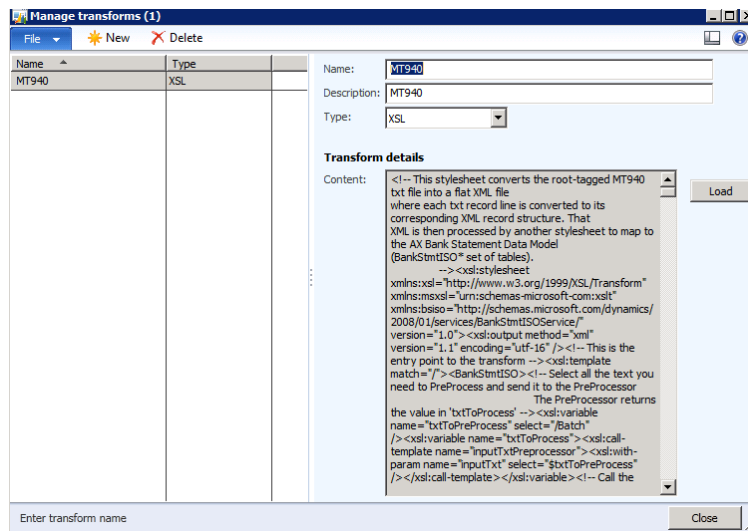


Figure 9 Viewing the transform details

- Repeat steps 12 through 18 for each resource.
- Click **Close**.

21. In the **Inbound transforms** form, create a new entry. In the **Transform name** field, select the XSLT entries. When you receive a warning message, click **Yes**.

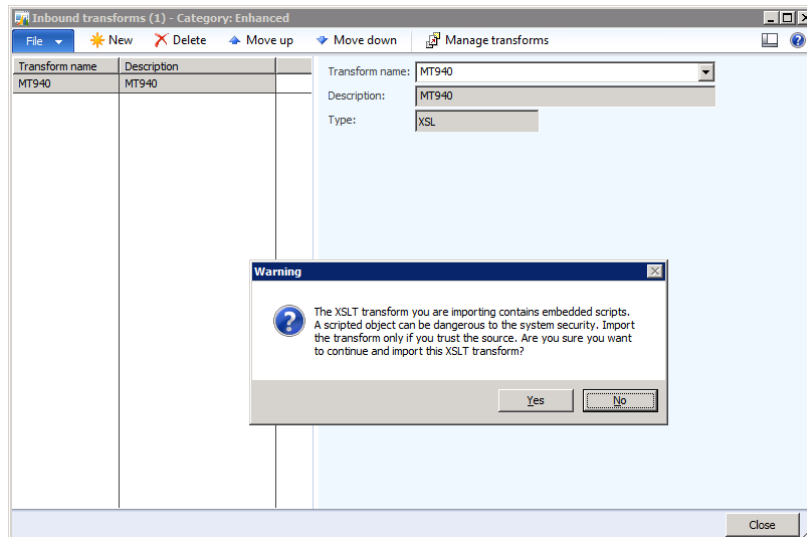


Figure 10 Inbound transforms message

22. The transforms that are entered should appear in the order that they will be processed in. To move a transform, select it, and then click **Move up** or **Move down**.
23. On the **Troubleshooting** FastTab, in the **Logging mode** field, select **Original document**.

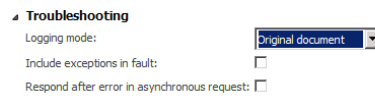


Figure 11 Inbound transforms form – Troubleshooting FastTab

24. On the **Security** FastTab, in the **Restrict to partition** field, select **initial**.
25. In the **Restrict to company** field, select the company that you are working in.

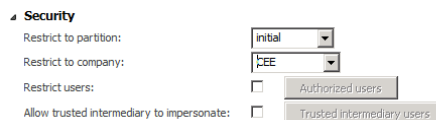


Figure 12 Inbound transforms form – Security FastTab

26. Click **Activate** to activate the inbound port.

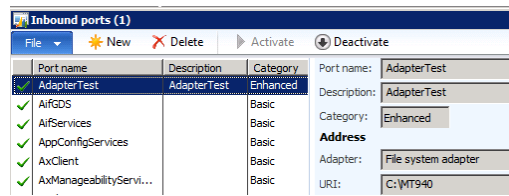


Figure 13 Inbound ports form

Import an electronic bank statement by using advanced bank reconciliation

After you've set up the advanced bank reconciliation import, you can import electronic bank statements.

1. Open the **Cash and bank management parameters** form. (Click **Cash and bank management** > **Setup** > **Cash and bank management parameters**.)
2. Click the **Bank reconciliation** link, and then select the options to use for advanced bank reconciliation.

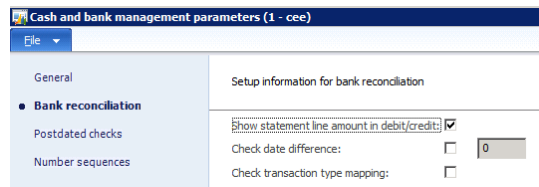


Figure 14 Bank reconciliation parameters

3. Click the **Number sequences** link, and then select a number sequence for **Reconcile ID**, **Statement ID**, and **Download ID**.

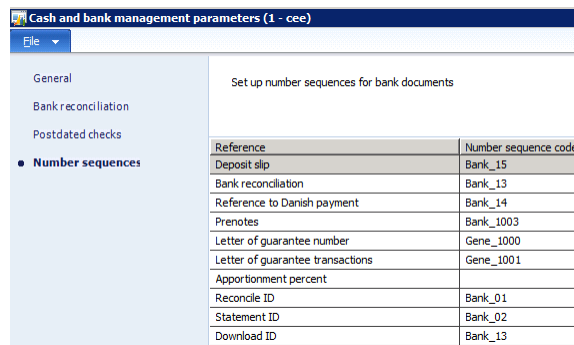


Figure 15 Number sequences parameters

4. Close the form.

- Open the **Bank statement format** form. (Click **Cash and bank management > Setup > Bank reconciliation > Bank statement format**.)
- Click **New** to create a new bank statement format.
- In the **Inbound port** field, select the inbound port that you created during the setup of advanced bank reconciliation import.

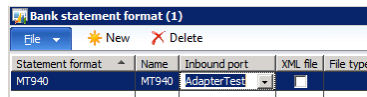


Figure 16 Bank statement format form

- Open the **Bank accounts** list page. (Click **Cash and bank management > Common > Bank accounts**.)
- Select a bank account, and then, on the **Action Pane**, click **Edit**.
- On the **Reconciliation** FastTab, select the **Advanced bank reconciliation** check box.

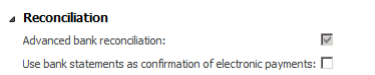


Figure 17 Advanced bank reconciliation

- On the **Action Pane**, click **Bank statements**.

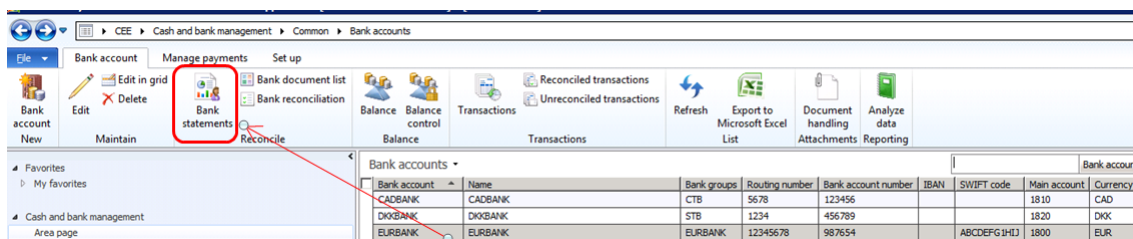


Figure 18 Bank accounts list page – Bank accounts form

- In the **Bank statements** form, click **Import statement**.
- In the **Import bank statements** form, click **OK**.

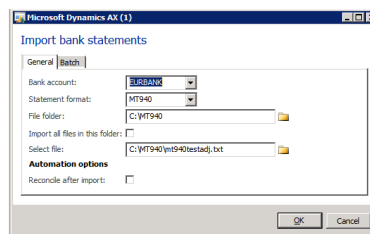


Figure 19 Import bank statements form

14. In the **Bank statements** form, after the bank statement is imported, click **Validate** to validate the bank statement.
15. On the **Action Pane**, click **Refresh**.
Note: Only bank statements with a status of **Validated** can be reconciled.
16. Select the bank statement, and then click **Edit** to open the **Bank statement** form, where you can view all the bank statement lines that were imported.

	Booking date	Status	Entry reference	Bank statement transaction code	Trading party	Debit amount	Credit amount
<input type="checkbox"/>	3/17/2012 12:00:00 am	Booked		N196		5.00	0.00
<input type="checkbox"/>	3/17/2012 12:00:00 am	Booked		N196		14.00	0.00
<input type="checkbox"/>	3/17/2012 12:00:00 am	Booked		N196		15.00	0.00
<input type="checkbox"/>	3/17/2012 12:00:00 am	Booked		N196		19.00	0.00
<input type="checkbox"/>	3/17/2012 12:00:00 am	Booked		N196		27.00	0.00
<input type="checkbox"/>	3/17/2012 12:00:00 am	Booked		N196		28.00	0.00

Figure 20 Bank statement form

Reconcile a bank statement by using advanced bank reconciliation

After you've imported an electronic bank statement and validated that statement in the **Bank statements** form, you can reconcile the bank statement by using the **Bank reconciliation worksheet** form.

1. Open the **Bank reconciliation journal** form. (Click **Cash and bank management** > **Journals** > **Bank reconciliation**.)
2. Click **New** to create a new bank reconciliation journal.
3. In the **Bank account** field, select the bank account that the bank statement was imported for.

Bank account	Reconcile ID	Description	Currency	Cut-off date	Statement ID	Ending balance	Net amount	Reconciled
EURBANK	BA_000005	EURBANK 987654	EUR	4/3/2013	7802/01	70,216.00	108.00	<input checked="" type="checkbox"/>

Figure 21 Bank reconciliation journal form

4. Click **Lines** to open the **Bank reconciliation worksheet** form, where you can reconcile bank statement lines with bank document lines.

- To match a bank statement line and a bank document line, in the **Open statement lines** group, select the check box for the bank statement line. Then, in the **Open bank documents** group, select the check box for the bank document line to match to it.

Bank reconciliation worksheet (1 - cee) - Reconcile ID: BA_000005, EURBANK

File Run matching rules Refresh Subtotal Reconcile Print reconciliation sta...

3A_000005: Cut off date:4/3/2013 Bank:EURBANK 987654 Currency:EUR

Open documents

Match Mark as new

Open statement lines Total amount: 108.00 | Open amount: 108.00 | Matched amount: 0.00

Statement ID	Bank transaction code	Booking date	Debit	Credit	Trading party	Document number	Reference No.	Status	Reversal
<input checked="" type="checkbox"/>	7802/01	N196	3/31/2012	5.00			NONREF	Booked	<input type="checkbox"/>
<input type="checkbox"/>	7802/01	N196	3/31/2012	14.00			NONREF	Booked	<input type="checkbox"/>
<input type="checkbox"/>	7802/01	N196	3/31/2012	15.00			NONREF	Booked	<input type="checkbox"/>
<input type="checkbox"/>	7802/01	N196	3/31/2012	19.00			NONREF	Booked	<input type="checkbox"/>
<input type="checkbox"/>	7802/01	N196	3/31/2012	27.00			NONREF	Booked	<input type="checkbox"/>
<input type="checkbox"/>	7802/01	N196	3/31/2012	28.00			NONREF	Booked	<input type="checkbox"/>

The amount 5.00 of 1 statement lines are marked

Open bank documents Total amount: 216.00 | Open amount: 216.00 | Matched amount: 0.00

Document type	Document number	Date	Bank transaction type	Debit	Credit	Company	Related party type	Related party name
<input checked="" type="checkbox"/>	Others	4/2/2012		5.00			None	
<input type="checkbox"/>	Others	4/2/2012		14.00			None	
<input type="checkbox"/>	Others	4/2/2012		15.00			None	
<input type="checkbox"/>	Others	4/2/2012		19.00			None	
<input type="checkbox"/>	Others	4/2/2012		27.00			None	
<input type="checkbox"/>	Others	4/2/2012		28.00			None	
<input type="checkbox"/>	Others	3/15/2013		108.00			None	

The amount 5.00 of 1 bank documents are marked

Matched documents

Unmatch Show all bank documents

Matched statement lines

New	Statement ID	Bank transaction code	Booking date	Debit	Credit	Trading party	Document number	Reference No.	Status	Reversal
This grid is empty.										

Matched bank documents

Document type	Document number	Date	Bank transaction type	Debit	Credit	Correction amount	Company	Related party type	Related party name
This grid is empty.									

Line details

Unique key, allocated to importing a bank statement if it has not a statement ID specified.

EUR | usr | cee | initial Close

Figure 22 Bank reconciliation worksheet form

6. Click **Match**.

When a bank statement line and a bank document line are matched, the lines move to the **Matched statement lines** group on the **Matched documents** FastTab.

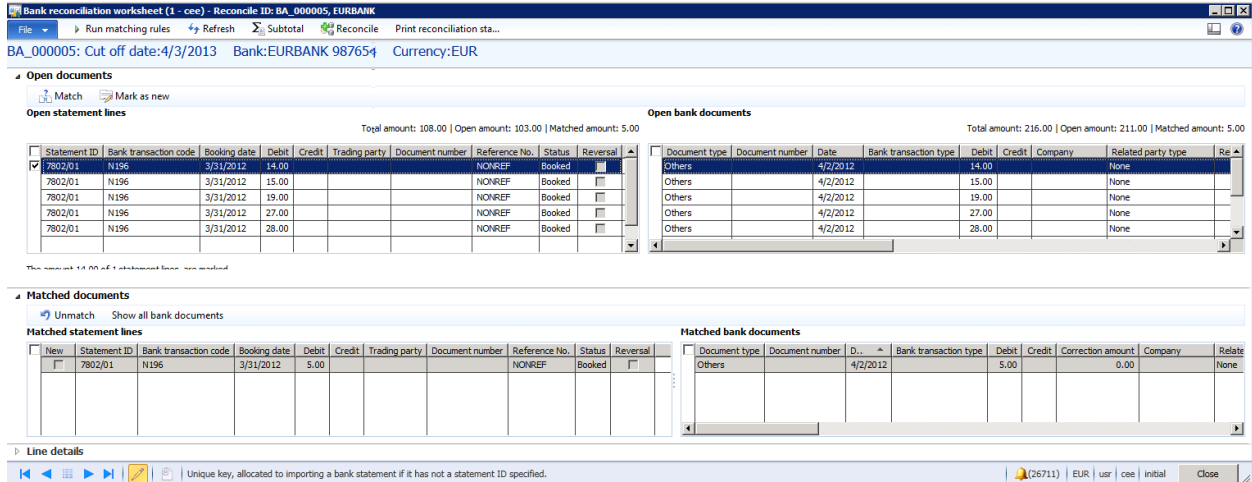


Figure 23 Bank reconciliation worksheet form – Matched statement lines

Note: To unmatch the matched lines and move the lines back to the **Open statement lines** group and the **Open bank documents** group, select the lines, and then click **Unmatch**.

7. On the **Open documents** FastTab, you can view open statement lines and open bank documents that are available for reconciliation.
8. On the **Matched documents** FastTab, you can view the bank statement lines and bank document lines that have been reconciled.
9. On the **Line details** FastTab, you can view the details of a line that is selected in the **Open statement lines** group.

Troubleshooting issues during the import of bank statements

As you use the import bank statement functionality that was introduced with advanced bank reconciliation in Microsoft Dynamics AX 2012 R2, you might encounter issues such as the following:

- Issues between the file being imported and the .xslt files being used to transform the data
- Number sequences that are not set up
- Bank statements that are not imported into the correct company

Debugging issues between .xslt files and the import file

Use the following information to debug an .xslt file. When you import an MT940, BAI2, or other type of text file, you first need to prepare the file for debugging. This is done automatically in Microsoft Dynamics AX, but you need to complete the debugging manually outside of Microsoft Dynamics AX.

If you are importing an XML file, start with step 2, because your file is already in the proper format.

1. In a text editor such as Notepad, open the file to import. Because this is a text file, you must add the content XML header so that the file can be used by the .xslt file.

Add this information to the top of your text file:

```
<?xml version="1.0"?>  
<Batch><![CDATA[
```

Add this information to the bottom of your text file:

```
]]></Batch>
```

2. Save the file.
3. In Microsoft Visual Studio, open the .xslt file. This .xslt file is used to convert the raw file to a flat XML file. Open the properties sheet (click **View > Properties Window**), and select the file from step 1 as your input file.

Note: The MT940 and BAI2 imports use two XSLT transforms – one to transform from text file to XML and another to transform from XML to the reconciliation format. Most problems occur in the transform from text file to XML.

4. In Visual Studio, add breakpoints where needed, such as at the **rowToFields** section.
5. Start the debugger by clicking **XML > Start XSLT Debugging** or **DEBUG > Start XSLT Debugging**. Use standard debugging commands such as **Step into**, **Step over**, **Step out**, and **Continue** to move within the .xslt file.
6. In the **Output** window, monitor the output, and compare it with your expected output.
7. Make any necessary changes to the .xslt file, and then save your changes. Then reload the changes into your transform within AIF to make them work in Microsoft Dynamics AX.
8. When you've finished debugging, if you added the debugging text to your file in step 1, remove that text before you try to import your file.

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