



Adra Match Ltd

# Reconciliation Best Practice

*Technical whitepaper*

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## Introduction

This whitepaper highlights some of the challenges with transaction reconciliation and discusses various ways to approach the challenge, including what the industry considers as best practice. But first of all, what is reconciliation? The definition of reconciliation, in this context, is the process of comparing or matching corresponding transactions between two sets of data that ultimately should be identical. Transactions found in one of the data sets but not in the other are said to be outstanding. In order to find the real difference between the two data sets you must first match off all the transactions that are in fact a match, to find the transactions that are outstanding. Further, the outstanding transactions need to be investigated to find the reason why they are actually outstanding. Since you have to invest a lot of time and effort in matching all the correct items before you can even start the process of investigation the exceptions, you normally get a very high efficiency increase in automating the process. And if automating reconciliations can hugely increase the efficiency of the reconciliation process, one must wonder why it is that so few organizations have yet done so. Most organizations have implemented a system for book keeping, but the easiest part to automate, i.e. controlling the systems, is still very often a manual or semi manual spreadsheet process.

## Different reconciliation challenges but similar process

The first challenge in getting any reconciliation automated is to get hold of the data or data sets that need to be reconciled. Let's say you would like to automate your bank reconciliation. First you need to download the statement from the banks website for a given period, and then you need to export the corresponding general ledger from your accounting system for the same period. The next step is to start the process of ticking off corresponding transactions. When all matching transactions are ticked off you are left with a list of exceptions. The exceptions need to be investigated and the correct action needs to be taken. The

transactions remaining after the investigation then go into a report, signed off and archived. The previous example was for bank reconciliation, but the same simple 4 step process applies to all types of reconciliation:

1. Gather the sets of data that need to be reconciled
2. Tick off all transactions that match
3. Investigate and possibly correct the exceptions
4. Create the report, sign off and archive

This process applies to all kinds of transaction matching processes, ie. bank reconciliation, statement reconciliation, credit card reconciliation, sub ledger reconciliation, inter company reconciliation and so on. Basically – any data set that should match another set of data, whether it is financial transactions, inventory, lease agreements - whatever, could and should be automated. By doing this you could easily see a quick win which could turn into a long term big win.

## Data collection challenge

One reason why many organizations have yet not automated the reconciliation process could be the seemingly complex process of data collection. As discussed previously, the first task of the reconciliation process is to gather the data. Depending on which system to be reconciled the process of getting to the data can vary a lot, but normally the easiest way is to export or print the data from the source system. There is a wide selection of other ways of getting the data, like extracting data directly from the database using either pull or push technologies. It could also be sending data across with a FTP service or a secure FTP service. Furthermore, one of the newer techniques is XML web services. All these methods are valid, but the quickest and easiest way of getting to the data is to use simple text files or CSV files. Everybody is familiar with using files and most computer systems containing data can export a selection of data to a file. However, the lack of standards or the fact that the few standards that exist are far too complex to use, has lead to a multitude of file types and structures.

But even if files are in a multitude of formats and structures it should contain the all the properties of a transaction that you need, and all that needs to be done is to map the different elements into a clear structure. Creating this clear structure is really not more difficult than to look into the files and identify the key elements such as, the date, the amount, the reference, the text and other useful elements and then map this to the same element field in a new file or database. This is commonly known as converting the data and when this is done, your data collection challenge has been overcome.

Most of the reconciliation tools have a file / data converter that can handle all types of format and structures, and if not such a tool can be bought separately. This is the easiest way of getting all the different files into a reconciliation system.

### **Maximizing the automatic matching rate**

When the data collection challenge has been overcome, all the data is in a standard clear format and you are ready to start the second task of the reconciliation process. This task is to tick off everything that matches so you can finally start doing what you are supposed to, i.e. investigate the exceptions. However in order to do so, you will need to maximize the automatic matching. The first step that needs to be taken is to find the element, or elements, of the transaction that make up the unique matching reference. Normally this is quite easy to find. In most reconciliation types a clear unique reference already exists. This could be a reference, an invoice number, a purchase order number, a lease agreement number or anything else that is used with this specific reconciliation. However, in certain reconciliations such a unique reference does not exist and in this case you need to combine the elements that make up a unique reference or use a reference that is 'unique enough'. Such a reference could be a customer number combined with the amount, an amount combined with a lease agreement and a date, and so on. When you have found the unique key that links the transactions you can start matching transactions.

By far the easiest are the one to one matches. This is typically one transaction from each side in the reconciliation and can be done fairly easy. Doing this manually, with pen and paper, you would typically manage to match four to five transactions a minute. There are systems on the market today that can match more than 100 000 transactions in the same minute, so automating this can make a huge difference and create great benefit.

The next part is to look at one-to-many, many-to-one and many-to-many matches. These transactions typically take much longer and involve a piece of paper and a calculator on the side. Even if you have a fairly good matching reference, you might not know how many transactions from each side need to be added up before you get an exact match. This is where the paper and the calculator comes in. You need to find combinations of partial sums that eventually end up with a match. Sometimes this can be done without spending to much time in calculations, but at times it can potentially take hours, just for a single match. Again, there are matching software packages available in the market that can do this in a matter of minutes.

However, in some cases the matching reference is only part of an element in a transaction. Example: on one side it could be something like "banktx-12345" and on the other side it could be something like "gl12345" where the matching reference is "12345", and with a multiple transaction match you could even have more variants. This could sometimes be handled in the data collection step of the matching procedure, where you would cut the interesting part of the data based on positions and put a copy in a matching field. However, there are situations where this is not desirable and even possible, for instance if the overhead text around your matching reference varies in content or length. In these cases, and this is more normal than you might think, you need the matching and index engine to search for patterns and present matching options. The technology for doing this, called "regular expressions search", are available but not all vendors of reconciliation systems provide this. It is however a very powerful search algorithm, that can really boost your automatic reconciliation rate.

An automated matching system should also be able to handle partial matching and variances. For instance if you have a many to many match where you only have 99 of the 100 transactions needed for a complete match the system should be able to match off the 99 transactions and leave a remainder. This is really important in the investigation phase as you will only have one transaction to investigate, instead of 99. You get optimum overview and are able to focus on the one that is not correct instead of the 99 that are correct.

### **Investigation and exception management**

The next step in the reconciliation process is to investigate and manage exceptions. If you have optimized the automatic matching rate as discussed in the previous section, you should now have the actual exceptions to investigate. However, even if you have the best matching engine available, there are some transactions that have to be ticked off “manually”. Your reconciliation system should have a workspace that makes the complementary manual matching very easy. You should simply be able to list the transactions on the screen and match them off with a single click – on screen. The workspace should also have an automatic calculator that sums up the transactions as you mark them for matching, leaving you with a final sum to look for. When all the possible matches have been ticked off, you are left with the actual exceptions and can start the investigation process. When working your way through the exceptions it is important that you are able to leave a comment of your findings directly on the screen which will be visible as part of the transaction’s meta data and subsequently on your reconciliation reports. This enables you to swiftly document the result of your investigation and make sure they can easily be followed up. Another very important part of an investigation workspace is the ability to send transactions to others for review or investigation. Sometimes you need input from other colleagues or departments and to work effectively you need to be able to send a copy of the transaction(s). The easiest and most manageable way of doing this is to send an email with the transaction details

directly from the workspace.

### **Reporting and exporting data to external systems.**

The fourth and last step in the reconciliation process is to set up the reports and verify that everything is correct. If you are doing this manually it normally means opening up a spread sheet, copying in all the transactions and balances, and then summing up the value of all the unmatched transactions and comparing it to the difference between the balances. If you have no difference you have succeeded, but if there remains a difference you need to review all the matched transactions and see if you can spot the mistake. These mistakes happen very easily when matching transactions manually. The most common error is that you for some reason you forget to tick off one of the transactions in a match, or that there is a small deviance in the amount which gets overlooked. These human errors occur because you get distracted by a phone call, a question from a colleague or a multitude of other reasons. Hopefully you can find the error and correct the difference, but far too often the worst case scenario happens - you have to start over. With an automated system such an error will never occur. A computerized system removes the possibility of human error. You simply cannot forget not to tick off one of the transactions or make a mistake on the amount. The reconciliation system has built-in functionality to prevent this.

Another great part of having a reconciliation tool is that reporting is done literally with a click of a button. All the transactions are available in the system together with the balances. Therefore the reconciliation report, all open transactions and the balances with an automatic control of the reconciliation, can be printed directly or saved to a file without any additional effort. But the reporting is not limited to the reconciliation report, as it would be when you do this manually or in a spread sheet, as you can also print all the reconciled items, list of transactions with variances, account balances and everything else that is available in the system.

A benefit that is often underestimated when you use software to automate the reconciliation process is that the reports are by default standardized across companies, departments, groups and reconciliation types. Of course most systems afford you the opportunity to change the different standard reports to your needs, but as soon as that is done you have an overall organization standard. The time spent by managers on checking and signing off reconciliation reports increases greatly with the number of different shapes, control algorithms and formats that reconcilers have made “their” standard.

In most cases keeping the reconciliation in the reconciliation system is more than good enough. However, in some cases you would possibly like to export the reconciliation report, or a list of all the matched transactions to an external system. There are many ways of sending data to an external system, as discussed in the Data Collection Challenge section for gathering data, but again the conclusion is the same. The easiest way of getting data into a system is to use files. Most financial systems or transaction holding systems have a load procedure to accept files. Again the structure and format differs, but most systems accept a text file, a CSV file or an Excel file, so make sure that the system you are considering can export files in one or more of these formats.

### **Security and audit trail**

A very important element in the system security is to make sure that data is consistent during all phases of the reconciliation, and it starts with the data load. If anything is wrong in the data load, for instance if the data file is corrupted, partly missing or the wrong file is loaded, the result will be wrong. Therefore to ensure a correct reconciliation report the data load must be controlled. When the load starts, the system should start with the opening balance for each data file to be loaded, count the transaction and also compute the new balance. After the load, but before the acceptance of the data, the new balance in your system should be verified with the closing balance in the loaded file. If this is not available in the file, the closing balance has to be verified visually. This process verification step must be completed for each data

file loaded before proceeding to the transaction matching phase.

A good system should be data consistent throughout the process and, again, this needs to be controlled at the report phase. If the balances are the same as after the data load, and the system does not show any differences, the data is consistent. In short, this means that no transaction has been added or deleted during the process. Anything else is a potential breach of the data consistency, which must be intact to avoid errors.

Another important aspect is that an audit trail is kept on a transaction level. Transparency and traceability is vital. This is something that is not easily done in a manual or semi manual spreadsheet reconciliation, but a good reconciliation system should record everything that happens with a transaction and store it as meta data on that transaction. Typically you need to be able to show who did what and when. In addition all transactions should be given a system unique id when loaded, and as they are matched a match id should be issued to verify which transactions form the match.

### **Conclusion**

Manual or semi manual reconciliation is not efficient. It is vulnerable to human error. It takes the focus away from what you actually should do, i.e. exception management. It does not give you traceability or an audit trail. Reporting and the attached control are difficult. And it is definitely not fun! So, why do so many organizations still continue to match manually? It is not a very complex process, so it is not difficult to automate. It can be done in a day or two. You get an instant win, when a machine does the automatic matching 30 000 times faster than a man. When you are done checking the exceptions, the reports are also done, with a click of a button.

Our experience with helping more than 3000 clients globally with their reconciliations has given us a unique opportunity to continuously develop our reconciliation software Adra Match Accounts. The current version is the 12th bringing new features and benefits to our customers in every release. We have experience with all types of

reconciliations from standard bank reconciliation to complex multi way, multi source reconciliations. The system is generic and flexible and we can match anything from a few thousand transactions to over a 100 million transactions annually. We are

familiar with all kinds of data sources and data structures and to data we have made data mappings to more than 2000 financial systems, payroll systems etc. Automating your reconciliation process, could be done tomorrow!

*Adra Match is the European market leader in account reconciliation automation, with over 3,000 clients. We offer over 20 years' experience in delivering solutions that are 100% focused on the transaction reconciliation process. We provide an outstanding combination of technology solutions, consultancy, development and post-sales support. Our software is developed by our own team – which has vast specialist knowledge of and competence in financial accounting and finance process improvement – in close co-operation with banks, system suppliers and customers, resulting in a comprehensive process automation solution*

*Bjørn Loe is the managing director for Adra Match UK and was one of the first employees in the company after its start up, and has had a vital part of the company's growth and success. His role was mainly CTO of Tech support, research and the leading product development before taking on the role as managing director for UK. Bjørn Loe has more than 15 years experience in the reconciliation market space, he is one of the most knowledgeable people in this sector and advises many large companies on how to get the most from their reconciliation processes.*

*Outside of business, Bjørn Loe is an accomplished adventurer listing crossings of Greenland and the first canoe expedition on the Merevari River amongst his achievements.*

*If you request any further information, want to be added to our technical reconciliation mailing list or comment on this whitepaper, please email [infouk@adramatch.com](mailto:infouk@adramatch.com) or visit our website <http://www.adramatch.com>*