

Managing Risks Using SAP MDM



Applies to:

SAP Master Data Management (MDM), Risk Management. For more information, visit the [Master Data Management homepage](#).

Summary

Effective management of risks and credits is of utmost importance for any business organization. Check out how SAP MDM can help you take better decision by giving you a single consolidated enriched view of your business partner master data.

Author: Ketan Phanse

Company: Wipro Technologies

Created on: 31 July 2008

Author Bio



Ketan is a Business Analyst in Wipro Technologies and working on SAP NetWeaver MDM for more than a year.

Table of Contents

Introduction to Risk Management.....	3
Credit Management.....	3
Bringing them under One Umbrella: SAP MDM	5
Consolidate	6
Cleanse	6
De-duplicate	7
Enriching your Business Partners	8
Decide your Risk Factors	8
Modeling MDM for enrichment.....	8
Enrichment Architecture.....	9
Business Process Management (BPM for Risk Management)	10
Summary.....	11
Related Content.....	12
Disclaimer and Liability Notice.....	13

Introduction to Risk Management

Before starting business with your partners; whether customer or vendor; you would definitely want to know more about them.

- Will my customer pay me on time or will he pay at all?
- What is the financial condition of my business partner? Are his financial statements running into red?
- Will my supplier deliver on time?
- Is my business partner reliable enough to business with?
- Is my business partner involved in lawsuits or has any background that would hamper my business?

Getting answers to all these questions is what you call "Risk Management". Simply speaking, what is the risk involved in doing business a particular customer or vendor and am I willing to take this risk. There are already lot of details on Risk Management and this article will not focus on the definitions of risk management but more on how Risk Management and specifically credit management be modeled using SAP Master Data Management solution.

Credit Management

It's the way to decide how much credit that should be extended to a customer while maintaining a balance between risk and profitability. To assess the credit of a company, D&B speaks of "Four C's": character, capacity, capital and conditions of the times.

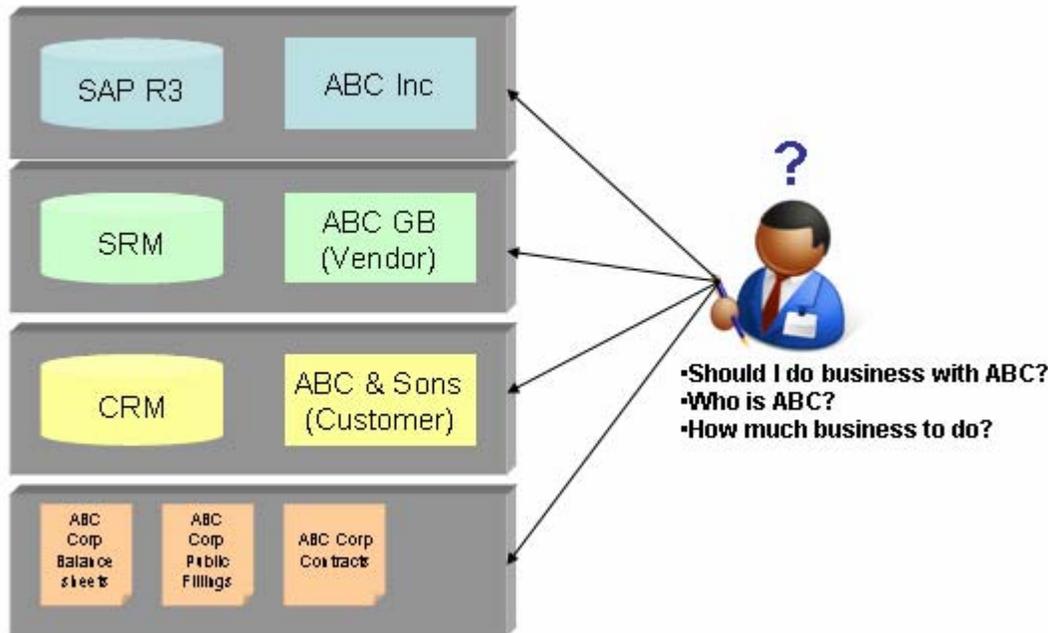
- Character indicates the condition and background of company
- Capacity indicates resources of the company
- Capital indicates the financial capacity to meet obligations. This is one of the most important measurement criteria's to assess how much credit to give.
- Conditions indicate the nature of industry/geography etc in which the company is operating

Reference: https://www.dnb.com/ebir/help/credit_decisions.htm

To manage risks and credits effectively it is imperative to have all this data consolidated for a particular business partner. But with a diverse system landscape and duplicate customers and vendors existing in various parts of organizations; assessing risk becomes a very big challenge. Inaccurate risk and credit management would lead not only to bad financial decisions but also may hamper your relations with your business partner.

Who is my Business Partner?

The challenge organizations are facing today is not to get the credit and risk data. There are already many providers like DNB, Acxiom etc which offer products & services for these specific requirements. The challenge is to get this data for the right business partners so as to make right decisions. Global organizations with a diverse portfolio and customer base that cuts across geographies and a system landscape that has grown over years accumulating segmented business partner data have a major hurdle identifying and maintaining the single version of their business partner.



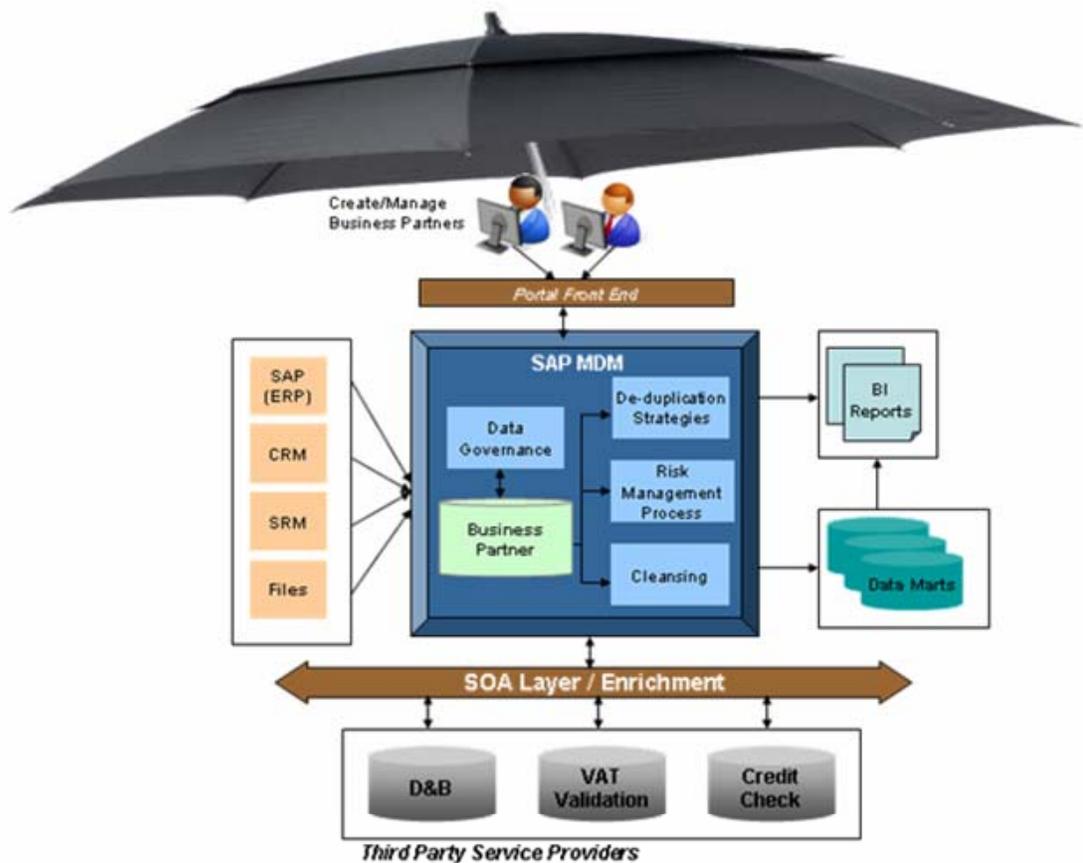
As seen in the image above, with each system storing its own version of business partner, there is a lot of discrepancy and credibility issue on the data. Hence, it is first of all important to have a single consolidated version of truth of your business partners and then enrich them with external data. This is where SAP MDM can play a key role.

Bringing them under One Umbrella: SAP MDM

A pre-requisite for effective risk and credit management is to have a consolidated master data system. This system will maintain a unique reference number for your business partner irrespective of the referenced system, geography or any other technical or functional boundary.

SAP NetWeaver MDM provides three IT scenarios namely Data Consolidation, Data Harmonization and Central Master Data Management. Using these scenarios one can model a strong foundation of risk management. A step by step solution will be:

1. Consolidate business partner master data from various consuming systems into SAP MDM
2. Clean the consolidated master data
3. Remove duplicates among business partners to have a true business partner record
4. Enrich business partner data with global Id, business data, communication data, financial data using web services
5. Use the enriched consolidated data as single reference point for future business partner activities like creating new business partners, editing and managing existing business partners etc.

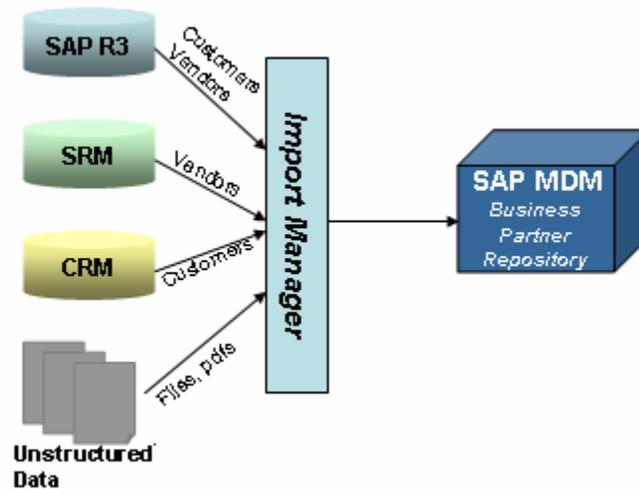


MDM can then be used as a central hub for your analysis and reporting using business intelligence systems. Also time series data can be stored in data marts for future reference while MDM will have the latest updated records of business partner.

The following sections give details on how to model each of the above scenarios in SAP MDM

Consolidate

The first step towards having a single version of your business partner is consolidating the data silos across systems. This is not only for effective risk management but for any of your MDM initiatives. SAP MDM has capabilities to integrate data from various sources and maintain them using Remote System Mapping. SAP MDM also stores unstructured data which can have your business partner contracts, pdf's images etc.



Cleanse

Once all the business partner data has been consolidated into SAP MDM, you can perform master data cleaning using SAP MDM Validation and Assignment functionalities. These feature let you write effective business logic to check the credibility of the data and assign values to fields. Data stewards can take necessary actions on these records to change and update their information.

For example, the below the Validation written in SAP MDM on VAT Number checks for a particular format of VAT Number when country of origin is Austria

```

Validation Expression
None None ✓ X Fields Attributes Relationship/psr Lookups Text Values Operators Functions
IF(Country of Origin.[Record]=Country of Origin [Austria, AT].(LEFT(VAT registration number,3)=ATU
AND LEN(VAT registration number)=12
AND HAS_ANY(MID(VAT registration number,4,1),0,1,2,3,4,5,6,7,8,9)
AND HAS_ANY(MID(VAT registration number,5,1),0,1,2,3,4,5,6,7,8,9)
AND HAS_ANY(MID(VAT registration number,6,1),0,1,2,3,4,5,6,7,8,9)
AND HAS_ANY(MID(VAT registration number,7,1),0,1,2,3,4,5,6,7,8,9)
AND HAS_ANY(MID(VAT registration number,8,1),0,1,2,3,4,5,6,7,8,9)
AND HAS_ANY(MID(VAT registration number,9,1),0,1,2,3,4,5,6,7,8,9)
AND HAS_ANY(MID(VAT registration number,10,1),0,1,2,3,4,5,6,7,8,9)
AND HAS_ANY(MID(VAT registration number,11,1),0,1,2,3,4,5,6,7,8,9)
AND HAS_ANY(MID(VAT registration number,12,1),0,1,2,3,4,5,6,7,8,9)
) )
  
```

De-duplicate

The next step is to remove duplicate entries so as to attain the 'single version of truth'. SAP MDM provides specific functionalities to perform matching and merging of duplicate entries into one. It provides options to define rules and scores to identify duplicates, select individual fields for the merged record and also stores the cross reference (key mapping) of the merged records.

The duplicate business partners can be identified by defining strategies on combination of various fields like Name, VAT number, Address etc.

A sample De-duplication report generated by SAP MDM is shown below. The report gives details on Score, Count, Probability of duplicate business partner records based on the business rules and strategies defined.

[Count]	[Level]	[Score]	MDM Partner	MDM Customer	Name 1
0	None	0	1	1	Maria
0	None	0	2	2	Reassurantie Maatschappij Nederland N.V.
0	None	0	3	3	Jotem Waterbehandeling B.V.
7	High	80	4	4	EFS: MATADERO IND.DE AVES Y PROM.AGRI...
2	High	80	5	5	EFS: AUTOMOVILES LA ALCOYANA, S.A.
1	High	80	6	6	EFS: ANGEL MARIANO MOLLA, S.A.
0	None	0	7	7	COSTA BLANCA S.A.
1	Low	40	8	8	EFS: MASATUSA2
1	High	80	9	9	EFS: ANGEL MARIANO MOLLA, S.A.
0	None	0	10	10	SANDOVAL, S.A.
1	Low	40	11	11	EFS: AUTOMOVILES LA ALCOYANA, S.A.
0	None	0	12	12	EFS: AGOSTENSE-HLIOS DE C. SERNA S.A.

Enriching your Business Partners

The business partner master data is now ready to be enriched with necessary details for the risk management. For this, an organization can sign up a deal with service providers such as DnB, Acxiom etc where you can send the business partner basic details (which now are clean and unique) and the service providers will in turn return the details of that organization. Some providers like DnB also maintain scores and ratios on various risk aspects which are calculated by them. Off course all of these wont come for free!

Decide your Risk Factors

First, decide what data you want to assess risk of doing business with an entity. Some of the information that can help you assess the risk and manage the credit is:

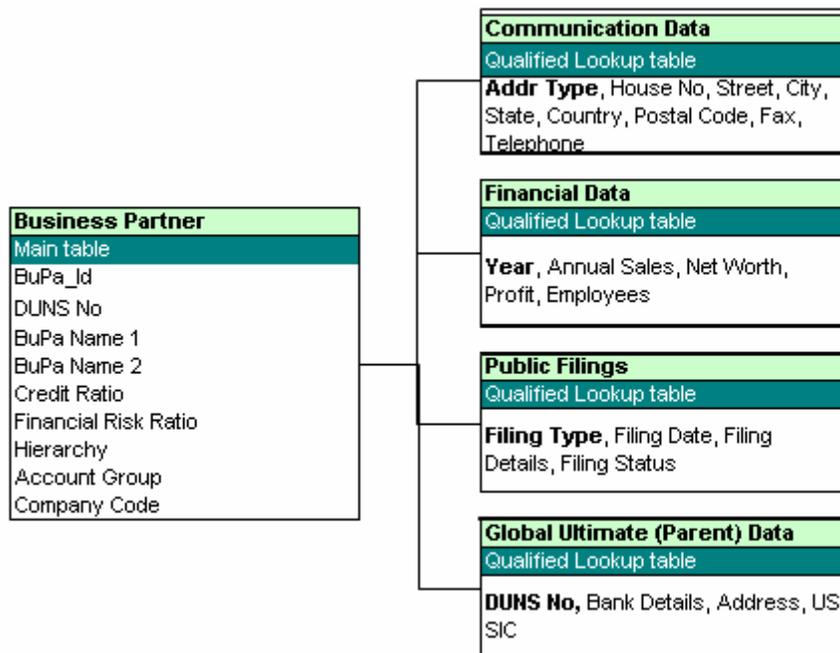
- Business overview: DUNS Number, Line of business, Parent organization, Employees etc
- Financial details: Annual Sales, Net Worth, Profit, SIC etc
- Communication details: Address, Fax, Telephone, CEO etc
- Public filings: Bankruptcy fillings, Liens, Suits etc
- Risk ratios: Credit ratio, Financial stress score etc

Check out the [Sample report by DnB](#)

Modeling MDM for enrichment

You would by now have a picture of what data of business partner you want to store in MDM. Based on this you need to perform data modeling in SAP MDM i.e. create fields and tables to store the enriched entries.

A snapshot of a sample data model is shown below.

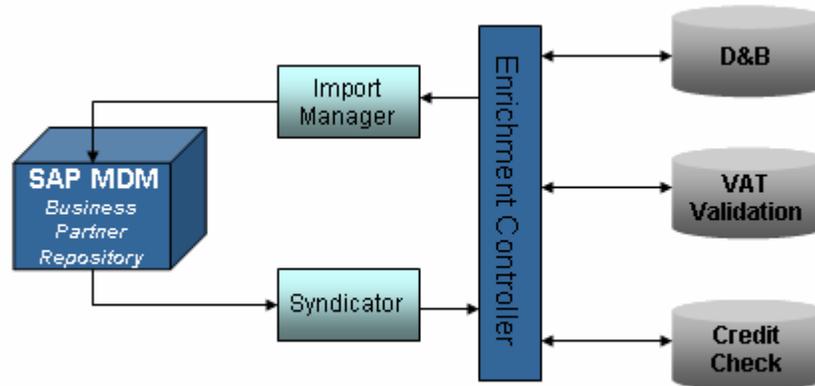


Note: This is only a sample model with limited fields shown specifically from Risk Management perspective. The Business Partner repository will also contain all other fields and tables pertaining to your various remote systems.

Enrichment Architecture

Enriching your business partner master data with necessary information is the key to your Risk Management initiative. You can use a single third party data provider or opt for multiple providers to give you specific information on business partners. Requesting and gathering information is one part but most important is to use it effectively to make better decisions. Using the Enrichment Architecture, SAP MDM provides a Service Oriented Approach to easily connect and communicate with third party providers. Also now as all the data is consolidated with SAP MDM acting as a central hub, it facilitates better risk management.

All the previous steps of consolidating, cleansing and de-duplicating would come handy while enriching as you would now be able to ask for the exact business partner data and your request details would be more accurate. This would make it simpler for the 3rd party providers to send you the required details.



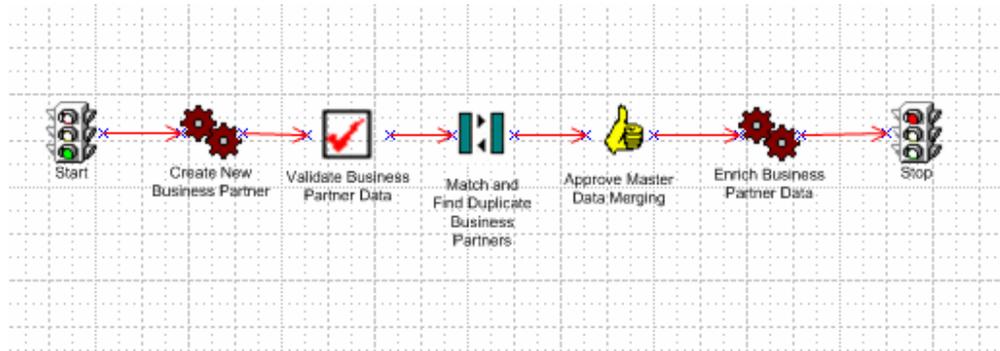
As shown above, SAP MDM comes with an Enrichment Controller which helps maintain communication with 3rd party service providers. The steps to be followed are:

1. SAP MDM syndicates XML file to Enrichment Controller
2. Enrichment Controller will forward the file to 3rd party service provider
3. 3rd party service provider will analyze the data and send the information requested
4. SAP MDM will import the XML file using Import Manager and update data of the specific business partner

Business Process Management (BPM for Risk Management)

After establishing a framework for risk management and enriching your business partner data from multiple sources, you now have a rich accurate master data repository with you. This needs to be regularly updated and mined so as to make better decisions with lower risks. SAP MDM comes with a very user friendly tool to model complex business process. A risk and credit management process can be established for creating new business partners.

A simple example is shown below where you can streamline your risk management process by converting it into a step-by-step workflow. At each step, you can use SAP MDM functionalities to achieve synchronization and communication between all concerned stakeholders.



Similar process can be designed for changing, updating, consolidating and harmonizing business partner master data which will also help in data governance initiatives.

Summary

Having seen the Risk Management process using SAP MDM, it is also important to keep the master data updated. At the same time one must realize that MDM is not a data warehouse and hence historical or time series data should not be stored in MDM. To overcome this, we can keep the latest business information of the partners in MDM and regularly archiving the previous data like financial statements in data warehouse.

Business Intelligence systems can communicate with SAP MDM to retrieve the single version of the business partner and its master data and get the historical data from the Data Warehouse to generate detailed reports.

Some of the key business benefits of managing your risks using SAP MDM are:

1. Single face of business partner; irrespective of whether it's a customer or vendor
2. Efficient risk management due to consolidated master data and hence better decision making
3. Effective Credit Management due to enriched data from various third party service providers
4. Compliance Adherence as a result of avoidance of "unwanted business partner relations"
5. Business process management for risks on an ongoing way by establishing a strong framework and workflows
6. Accurate reporting by BI systems due to consolidated business partner single source of data
7. Increase in business revenue and better relationships with your customers/vendors by analyzing them as business partners across geographies and systems thereby able to offer them better financial rates and terms.

Related Content

[Data Governance using SAP MDM](#)

[Compliance Adherence using SAP MDM](#)

[Credit Portfolio Management](#)

For more information, visit the [Master Data Management homepage](#).

Disclaimer and Liability Notice

This document may discuss sample coding or other information that does not include SAP official interfaces and therefore is not supported by SAP. Changes made based on this information are not supported and can be overwritten during an upgrade.

SAP will not be held liable for any damages caused by using or misusing the information, code or methods suggested in this document, and anyone using these methods does so at his/her own risk.

SAP offers no guarantees and assumes no responsibility or liability of any type with respect to the content of this technical article or code sample, including any liability resulting from incompatibility between the content within this document and the materials and services offered by SAP. You agree that you will not hold, or seek to hold, SAP responsible or liable with respect to the content of this document.