Data Governance Survey Results:
A European Comparison of Data Management Capabilities in Banks

Identifying the main challenges for banks in terms of Data Governance and Data Management.

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Dear Readers

As stated by the ECB Banking Supervision in their paper around the supervisory priorities for 2016 of the Single Supervisory Mechanism (SSM), data quality will be one major priority in their future work. Data quality and firm-wide risk data aggregation capabilities are an essential precondition for sound, risk-based decision-making and therefore for proper risk governance. Furthermore, ensuring data quality and security necessitates that state-of-the-art IT infrastructure will be part of further reviews. Current regulations like AnaCredit, BCBS239 and MiFID and the upcoming Basel IV Framework will also drive the requirements around data. As a consequence, more and very detailed data has to be available in a shorter time period in high quality for different purposes. Different information needs of the various stakeholders require structured preparation and processing of data with differing granularity. The main success factors are a proper corporate data governance, an effective and efficient as well as sustainable data quality management system, a fast and effective delivery of data tapes and an effective internal controls system around the handling of data. The banking sector faces challenges regarding the interpretation of data, reconciliation of reports and ambitious deadlines which require large investments. On the business side market trends like Digital Transformation and Big Data increase competition and make an efficient and effective data governance structure a necessity. In other words ‘Data is key!’

After having had insightful and deep discussions on Data Management topics with 45 banks across Europe, this report shows that all of them are facing similar data challenges. Our survey takes an in-depth look at the results garnered from many interviews with the personnel responsible for data in banks and shows the need to get data higher up the agenda. We wish you an insightful read and look forward to further discussions.

Best wishes

Burkhard Eckes
Banking & Capital Markets Leader

Marc Billeb
Partner Technology & Processes
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Data Governance Survey
After having had insightful and deep discussions on Data Management topics with 45 banks across Europe we come to the conclusion that all of them are facing similar challenges. Furthermore, we realised that more regulation introduced by the regulators does not directly lead to better data and by that an in-depth view on the current state of the banks. It may be argued that the increased regulation, which is mainly the reaction to the economic crisis, will not avoid similar crises in the future. On the other hand we understand the rationale behind the regulatory initiatives. The key messages as a result of our survey can be summarised as follows:

Management Summary

Banks are investing large budgets to comply with diverse regulations, but they risk implementing redundant and inefficient processes and shrinking margins.

Regulation
More regulation on its own does not help solving the main challenges which banks are facing in terms of data. Although there are different national areas of focus from the regulators, differences regarding Data Management are not measurable.

Governance and Responsibilities
Most banks do not have a common Data Governance Framework and are lacking clear responsibilities for data. Furthermore, it is unclear which department should be responsible and banks are afflicted with silos.

Data Quality
Data Quality has been identified as a major topic, but sustainable processes to address and improve Data Quality as well as corresponding controls are still missing. Software for measuring Data Quality is used relatively widely but is not standardised.

Architecture
Most of the banks neither have a central Data Warehouse nor well-documented data flows. New technologies regarding data have not been adopted during the last few years and the architecture is not flexible enough to be adjusted quickly for new requirements. During the next three years many banks plan to implement a central data warehouse.

Given the diverse national regulations in the past and the large investments as well as current developments in the market (e.g. Digitization, FinTechs) banks should think of how to organise Data Management in the future. If well-organised and addressed with the correct actions, banks will be able to comply with regulations and grow the business simultaneously as well as save costs and ensure that they are focused on the main risks.
What should banks do next? What do the survey results mean for banks in their current situation?

Banks are facing different challenges regarding Data Management and and risk having to make multiple investments on similar topics: As a consequence banks should focus on the following four priorities:

1. Review all current projects that touch on data topics (e.g. IFRS 9, BCBS 239, AnaCredit)
2. Define a Data Strategy and link it to the business and risk strategy
3. Define clear responsibilities and a Governance Framework
4. Implement sustainable Data Quality Management

Added value for banks

- Cross-functional, effective and efficient front-to-back solutions for Data Management which address regulatory as well as business aspects; synergies and cost savings achieved.
- Commitment from Senior Management and other stakeholders for implementing a central Data Management strategy; a consistent basis for solutions which support business goals.
- Better clarity in operations; improved reporting capabilities; and the confidence that relevant capacity is sustainable.
- Improved Data Quality and more efficient processes, as less time and effort is spent on corrective action.
Methodology and General Information
PwC Data Governance Framework provides the essence from recent regulations

The structure of this survey follows the PwC Data Governance Framework, which has been developed based on recent regulations in Europe, including (among others) BCBS 239, AnaCredit and FinRep. These regulations include requirements for Data Governance or Data Management as well as rules forcing banks to collect detailed data in a structured and traceable manner.

The idea of the PwC Data Governance Framework is to establish structured guidelines on how to deal with all of these regulations simultaneously and effectively.

1. **Data Governance** requires an organisational structure (e.g. department or function) to include clear guidelines and responsibilities for data. Data Governance should be supported by policies and guidelines as well as job descriptions and encompassing roles and responsibilities for data (e.g. data ownership).

2. **Data Strategy** is the overarching component, with impact on Data Quality, Data Modelling, Data Architecture, Data Protection and Privacy as well as business aspects. It should be connected with the business strategy and covers at least Data Governance aspects, target architecture for Data Management/Data Quality measurement and definition of good Data Quality including concrete key performance indicators (KPIs).

3. **Data Management** incorporates the processes and reporting capabilities of an organisation. It should ensure that an organisation has defined and implemented standardised processes for normal and ad-hoc reporting requirements as well as Data Quality reporting. The required data can be produced accurately within a reasonable timeframe and reporting requirements encompass the latest data requirements.

4. **Data Quality** deals with the appropriate Data Quality requirements which are defined and documented across the organisation (front-to-back). Data Quality can be measured on the basis of criteria and methods. Moreover, a continuous Data Quality improvement process should be defined and actively managed.

5. In a **Data Model**, data which is processed and the relationship amongst data is defined. In this respect, data is defined and documented consistently across the entire organisation in a Data Model. Furthermore, the organisation uses a data dictionary to define data and describe data processing rules. The data storage locations are known and documented (data lineage) and data aggregation is able to be reproduced.

6. The **Data Architecture** describes the state in which the organisation has an integrated finance and risk IT architecture which allows for flexible data processing and data delivery. This is especially important with regards to new data requirements requested by a regulatory authority. The operations within the Data Architecture are highly automated with a negligible share of manual intervention.

7. The **Data Protection and Privacy** requires that the organisation performs a protection requirement analysis across all IT systems in accordance with the Data Governance responsibilities. Moreover, the organisation has set up a data security concept. For all data deliveries, the appropriate level of confidentiality and data protection is defined.
We used a well-structured methodology based on our Data Governance Framework derived from recent regulations in Europe to explore the main challenges regarding Data Governance and Data Management aspects in banks across Europe.

Using a standardised questionnaire derived from the PwC Data Governance Framework, we interviewed key data specialists in 45 banks across Europe. These were predominantly Chief Risk Officers (CROs) or Chief Information Officers (CIOs), but we also interviewed Chief Data Officers (CDOs) if this role existed in an organisation. From these interviews, we were able to gather interesting insights into Data Governance and Data Management, while at the same time gaining an understanding of current thinking within the industry on other non-regulatory data related topics, including the future of the business model of banks (e.g. digitization).

The results have been aggregated and consolidated by a central team and the key results and insights are provided in this report.
Participating banks are spread across 12 European territories.

Type of banks which participated in the survey

- Wholesale Bank
- Retail Bank
- Special Institutions

The 45 banks which took part in the survey are spread across **12 European territories**:

- **3** banks from Northern Europe
- **33** banks from Western/Central Europe
- **9** banks from Southern Europe

Mostly the participating banks can be categorised as either Wholesale (14 of 45) or Retail (19 of 45) banks. Special institutions include especially public-owned and mortgage banks as well as specialised banks for e.g. wealth management.

... of participating banks are supervised by the Single Supervisory Mechanism (SSM).

Participating banks according to balance sheet amount in € billion (bn):

- **42.2%** 500 - above 1000bn
- **22.2%** 150 - 500bn
- **8.9%** 100 - 150bn
- **13.3%** 30 - 100bn
- **4.4%** 10bn and under 30bn
- **9.0%** Other
Detailed Survey Results
The vast majority of banks surveyed do not have a Chief Data Officer (CDO) in place to address Data Governance issues.

Banks are facing more and more requirements to deliver large amounts of data to regulators at a very low level of granularity; furthermore, regulations such as BCBS 239 require a well-structured Data Governance function, without defining clearly what this means. Against this background it is surprising that …

76%

... of European Banks do NOT have a CDO function.

For those banks that have a CDO function, the role focuses mainly on the following topics (more than one answer was allowed):

- Assess data relevance
- Manage data availability
- Ensure data quality
- Other

Reporting lines for CDOs. When banks that do have a CDO function were asked where in the organisation the function sat, the answer varied widely. There is no clear consensus on where the CDO function should be best placed. If the CDO function is to be independent and accepted across the organisation, it may be best to either create an entirely new department with direct reporting lines into the CEO, or to link the CDO to the COO function.
Banks are failing to address Data Governance in a structured way, with a lack of an overall Data Governance Framework across surveyed banks. This leads to redundant costs and inefficiencies.

Two thirds of banks do NOT have an overall Data Governance Framework. And despite the significant increase in data-related regulation, banks are seemingly indifferent about the topics which should be addressed in a Data Governance Framework.

The No.1 reason for addressing Data Governance aspects is To comply with regulatory and/or compliance requirements (71 %)

Followed by

2. To reach strategic goals (38%)
3. To fulfill the requirements of the organisation’s corporate governance policy (33%)

In a more and more competitive banking landscape, it is crucial to not only consider a bank’s Data Governance Framework from a regulatory perspective, but also to ensure that it also addresses business aspects. Well-defined and structured Data Governance and Data Quality Management processes should help to make sure that a bank is operating in line with minimum regulatory requirements, but should also increase business opportunities by, for example, making available valid and accurate customer and product data. In an industry where margins generally are shrinking, the ability to draw relevant conclusions from data will be essential in ensuring that a bank remains competitive.

The survey found that Data Governance aspects are mainly addressed through the creation of policies and guidelines, or through the establishment of a robust organisational structure. But other actions, such as regular awareness initiatives and culture change are important to preserve Data Governance and quality.

Banks are planning one or more of the following actions:
Data Ownership is not clearly defined – defining clear responsibilities for data will be crucial going forward.

... have defined some kind of Data Ownership. In most cases, Data Ownership is organised decentrally so the right skills are available to validate the data. Nevertheless, Data Ownership is often not clearly defined and responsibilities are not clearly documented, as banks continue to face difficulties in complying with all regulatory requirements and in delivering large, granular data sets within a short time period.

Definition Box: Data Ownership

Data Ownership means clearly defined responsibilities for the definition and quality of data items. It is crucial that there is a clear structure within technical departments. There should only be one function responsible for defining data, although many other functions may use the data produced. If Data Ownership is effectively implemented, redundant data will be avoided and data reconciliation and reporting processes will become easier and less resource intensive.

Summary Data Governance

- There is a high risk of banks investing in the wrong areas or wasting money on the same topics, because they are handling more than one project that addresses Data Management.
- No central responsibility for Data Management.
- Banks should implement a Data Governance Framework which covers all recent regulations and functions within a bank as well as defining clear responsibilities for data.
- Data Quality is either not addressed or solutions are not sustainable.
Banks’ most valuable asset, although not shown in the financial statements, is data.

... of the interviewed banks do not have a Data Strategy.

Data Strategy: What does this mean?

A Data Strategy should address at least the following topics:

- High level minimum requirements on Data Governance
- Target architecture for Data Management (e.g. central data warehouse implementation)
- Target level of Data Quality Management as well as concrete KPIs
- Future topics such as Big Data, Digital Transformation, Mobile Banking or Payments

Furthermore the Data Strategy should be aligned to the IT strategy, Risk Strategy, Digital Strategy (if applicable) as well as the overall Business Strategy.

Summary: Data Strategy

Data Strategy is a cross-functional topic. It should occupy a central place to ensure feasibility as well as effective and goal-oriented investments. Data and Data Governance are the basis for risk management as well as for business development – alignment is essential. Digital Strategy and Data Strategy should also be aligned.
Ad-hoc reporting is a challenge for all banks. Few are satisfied with the speed and accuracy of ad-hoc reporting.

While banks are generally satisfied with their reporting processes, there is a discrepancy when we look at the type of reporting. It’s clear that the surveyed banks are less satisfied with the speed and accuracy of their ad-hoc reporting than they are with their recurring reporting processes.

This is because ad-hoc reporting procedures are less standardised procedures. Although ad-hoc reporting demands are less predictable, banks should implement procedures and responsibilities to handle these demands, which come mainly from regulators.

**Implemented internal and external standardised reporting procedures**

75% Recurring reporting
44% Ad-hoc reporting

Banks should define clear responsibilities and introduce a structured process to address ad-hoc reporting demands from external as well as internal stakeholders. By doing so they will improve their ad-hoc reporting capabilities, be more efficient and drive resource savings which could be invested into other important activities.
Even so, only a few banks consider themselves unprepared for ad-hoc reporting demands.

Most of the participating banks are more or less satisfied with their readiness to react to regulators’ ad-hoc reporting requirements. But the lack of clear responsibilities and standardised procedures in banks means they face the risk of failing to meet these requirements or regulatory deadlines, or of delivering wrong data.

Bank reporting processes are generally inefficient - most of the surveyed banks produce more reports than needed, wasting resources which could be deployed across different activities.

Banks should think about their Data Strategy and work on defining responsibilities and processes to address ad-hoc reporting demands. Otherwise, they risk losing their competitiveness while investing a huge effort in fulfilling ad-hoc reporting requirements from the regulators.

**Top 3 Challenges for report preparation**

1. **High effort for reconciliation of data**
2. **Manual data collection is needed (excel etc.)**
3. **Data granularity is not appropriate**

69% of banks do not have procedures in place to ensure that only relevant reports are produced.
Banks understand the importance of Data Quality, but still have a long way to go.

The survey results show that banks have identified Data Quality as an important topic. Nearly two-thirds of banks have implemented criteria and methods to measure Data Quality, as well as quality gates. KPIs are used to address completeness and accuracy, but measurements around validity, availability, timeliness, consistency and integrity are mostly missing. These criteria are just as important and should be taken into account.

Most of the banks have not implemented a process to continuously improve Data Quality. The result is that significant investment has been made to implement quality gates and controls without any improvement in Data Quality and business processes. Ultimately, problems with Data Quality in banks will not be resolved and internal control systems will remain ineffective and inefficient – while at the same time, banks will continue to face more and more regulations on data.

Identifying the root cause of Data Quality problems is essential if banks are to find the best way to address any errors. 32% of the banks said they are only partially able to identify the root cause of Data Quality problems. Banks will not be able to improve their Data Quality effectively and efficiently unless they document data flows front to back and define a clear responsibility for data.
Nearly half of the banks in Europe are not using automated procedures to measure their Data Quality and less than a third have implemented a structured process for reporting on Data Quality.

Although most of the banks surveyed have identified Data Quality as an important topic and implemented criteria to measure it, they don’t consequently carry out what they have planned. Many do not use software to measure Data Quality or have a process for reporting on it.

Nearly 50% of the banks surveyed haven’t yet implemented any software to measure their Data Quality; standardised software is not commonly used. A reason for this may be that most banks are still using many different IT systems to support their processes (heterogeneous IT architecture) and standardised software is very difficult to integrate into the landscape of IT systems.

Less than one third of banks have implemented a specific process for reporting on Data Quality – most of these have also implemented a standard software to measure Data Quality.

Banks will only be able to improve their Data Quality in a sustainable manner if they build transparency on their Data Quality front-to-back with structured and regular reporting. Banks should take action to improve Data Quality or risk being unable to fulfil growing regulatory requirements in a cost-efficient manner.
Reasons for poor Data Quality are numerous and widely spread across IT systems.

Banks have identified different reasons for poor Data Quality – mainly, they are missing the ‘Golden Source’ and clear definition of data fields. The reasons for this may be that banks are often organised in different silos, e.g. risk management, finance, regulatory affairs etc. Within these silos, definitions on data fields as well as the understanding of the same figures could be significantly different. Having a unique definition of data fields and figures which is understood and applied across all banking functions is crucial to be able to implement structured and sustainable Data Quality management. The precondition for this is that different divisions decide on a common understanding for the data fields and the main figures. Implementing clear data ownership may also help to solve this issue.

Reasons for poor Data Quality in banks mainly are … (multiple answers were possible)

Different understanding of data fields; no uniform definition of data fields, no ‘Golden Source’ - 30
No appropriate definition of data responsibilities - 18
Inconsistent data across systems - 16
Weak internal control system - 10
Other - 16

While errors occur across all IT systems, the majority occur in front-office or back-office systems as the employees in these business areas often do not understand the downstream consequences of wrong information and clear agreements between divisions are not in place.

Summary: Data Quality

- Data Quality has been identified as an important topic.
- No consistent use of software to measure and processes to report on Data Quality.
- Reasons for lack of Data Quality are numerous and widely spread across all IT systems and business units.
- Lack of know-how in business units to ensure Data Quality.
Focus: Sustainable Data Management

Data Quality (Management) has to be improved continuously and must be combined effectively within the existing Internal Control System.

At the first stage, a Data Strategy should be defined and include an overall Data Quality Level to be achieved.

Data Quality measures should be planned front-to-back throughout all processes and IT systems including a clear description of all measures to achieve the defined Data Quality Level. Automatic checks should be implemented upfront by using the existing Change Management procedures.

Throughout the day-to-day business all Data Quality measures should be performed.

Weaknesses in Data Quality and controls should be identified by collecting the results of the Data Quality measures. By using that information the Data Quality Level can be determined and be compared against the Data Quality Level specified in the Data Strategy.

Depending on the type of error corrective actions should be taken which may be 1. Correct the wrong gathered data; 2. Change IT applications or 3. Implement new detective controls. It is important not only to correct the wrong data but also to think of long-term actions to continuously improve Data Quality.

Regular reports on Data Quality and the main reasons for weaknesses as well as actions being taken should be prepared and provided to the board. Furthermore, the process of Continuous Data Quality Management should be reviewed (second line of defence).
Nearly half of the banks surveyed do not have a clear and documented Data Model and diverse responsibilities.

Who is considered to be responsible for the Data Model?

IT department | CDO department | Finance or Risk department | Different department | No responsibility

Although half of the banks have defined and documented a Data Model, there are high levels of uncertainty about the responsibility for defining and maintaining this. Currently, responsibility for the Data Model is widely spread across surveyed banks. As a well-structured and clearly defined Data Model builds the basis for fulfilling ad-hoc regulatory data requirements and efficient Data Quality Management processes, banks should:

Define clear responsibilities for defining and maintaining the Data Model
Define and document the Data Model including descriptions of the content of data fields
More than 90% of banks either have not or have only partially documented their front-to-back data flows across the organisation.

Banks are facing high risks of not being able to sustainably fulfil regulatory requirements. Without having a distinct source for data and documented data flows, it will take a lot of time and investment to identify the correct data, to reconcile the data and last but not least to implement necessary changes in IT systems.

If banks do not manage these risks responsibly, they will not have sufficient time to care for and grow their business.

Not only for regulatory reasons, banks should define a clear, well-structured Data Model and document the data flows as the basis of coordinated Data Management. By doing so they will be able to:

1. React to ad-hoc data requirements from regulators.
2. Implement changes in the system landscape due to legal regulation or product changes/new products.
3. Effectively analyse their business model to improve services for their customers.
Banks will implement a bank-wide Data Dictionary within the next three years.

By now …

… of survey participants have a Data Dictionary

- Yes: 64%
- No, but we plan to implement: 36.4%
- No, an Excel-based worksheet is used: 15.9%
- No, the organisation does not use Data Dictionary software: 11.3%

BUT

… currently the scope of the Data Dictionary is mainly an internal view for each single division. Banks do not have a clear view whether to use the Data Dictionary product or IT system related.

The majority of the survey participants plan to have a group-wide roll-out of their data dictionaries within the next three years.

Top three reasons not to use a data dictionary software

- Consider the selection of a data dictionary software not a high priority
- Implementation costs and change management efforts are too high
- Processes in the organisation are not adequately structured to support standardised software
Most surveyed banks have implemented a central Data Warehouse (DWH) and even 50% of those banks that do not have a central DWH have defined a ‘Golden Source’.

On the other hand, the majority of banks are facing Data Quality issues due to missing ‘Golden Source’ (see page 22). What is driving this?

It seems that while individual business units often have their own ‘central’ Data Warehouse, this is not always rolled out on a true, consistent, bank-wide basis.

If not implemented with well-structured processes to ensure Data Quality and robust reporting, a central Data Warehouse or technology like Business Intelligence will not address the challenges banks are currently facing with regards to data.

In the end, there is a high risk that despite investing heavily in the implementation of a central Data Warehouse, banks will not be able to realise the advantages, which include more efficient processes, less costs and faster data delivery.

In the past, many projects for implementing a central Data Warehouse have not proved advantageous as these projects have mostly been IT or technology driven, with business aspects, as well as process control topics, not being adequately addressed.
All banks have installed a Chief Information Security Officer and introduced more or less mature policies and guidelines regarding data protection and privacy, but they are not proving effective.

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**98%**

... have installed a Chief Information Security Officer

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Does the organisation have policies, processes and controls for Data Protection and Privacy?

<table>
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<th>Yes, maturity high</th>
<th>Yes, maturity low</th>
<th>No</th>
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<tbody>
<tr>
<td>20.0</td>
<td>37.8</td>
<td>6.7</td>
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**48%**

... have implemented an Information Security Management System

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<table>
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<th>Yes</th>
<th>Yes, but only partially implemented</th>
<th>No</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>48%</td>
<td>18%</td>
<td>32%</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

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Banks who have mature policies and guidelines in place continue to experience data protection laws and regulations as an obstacle for Data Management and as a hindrance for their business.

One of the biggest challenges over the next few years will be to fulfil all legal requirements and achieve a business model which will enable banks to stay competitive.
One third of the banks surveyed do not have any or have only an incomplete overview of relevant regulations.

Summary: Data Protection and Privacy

1. Although all banks have implemented a Chief Information Security Officer (CISO) function and defined guidelines, most of the banks do not have a structured and effective Information Security Management System (ISMS).

2. More regulation does not consequently lead to better data protection or at least more effective Data Management.

3. Monetary losses due to insufficient data protection are relatively minor.

... of banks have an overview about all relevant legal requirements in all relevant countries of operation related to Data Protection and Privacy.

Nevertheless, banks face neither a large number nor value of losses with regards to data due to insufficient data protection.
Going Forward
Summary: Framework Aspects – Data Governance and Data Strategy

Key learnings

• No responsibilities for Data Management.
• Missing Data Governance Framework.
• Missing linkage between Digital Strategy and Data Strategy as well as between Data Management, Risk Management and Business Development.
• Data Quality is not being addressed sustainably.
• Data Strategy is cross-functional
• High risk for misinvestments; need for effective approach and goal-oriented investments.
• Topics on Data Management are being addressed in multiple ways due to several regulatory topics.

What banks should do now

1. Consolidate Data Management topics and address them in ONE central Data Management Project

2. Build a Data Governance Framework including a clear definition of responsibilities

3. Define a Data Strategy addressing business topics and Risk Management as well as building a linkage between the Data Strategy and Digital Strategy and other topics

Advantages:

More efficiency, less costs for implementing Data Management topics, effective solutions, optimised structure for Data Management.
Summary: Processual Aspects – Data Management and Data Quality

Key learnings

• Ad-hoc reporting is a challenge for all banks; satisfaction level with speed and accuracy is very low.
• Reporting demands are becoming less predictable.
• Banks invest a lot of effort in the reconciliation of data, perform a lot of manual data collection and data granularity is often not appropriate.
• Banks have identified Data Quality as an important topic, but structured processes to measure Data Quality are mostly not implemented and software to measure Data Quality is not used at all.
• A continuous Data Quality improvement process is not being implemented. As a result banks risk having poor Data Quality after having invested in large projects over the next few years.
• The main reasons for poor Data Quality are unclear definitions of data fields and missing ‘Golden Sources’.

What banks should do now

1. Agree on a clear definition of data and all key figures; select ONE clear definition applicable for every Business unit

2. Define processes to measure and report Data Quality; implement software to measure Data Quality

3. Train all employees on Data Quality topics and the necessity of correct information

Advantages:
Improved ad-hoc reporting capabilities, more efficiency, resource savings, clear processual structures as well as transparency in Data Quality.
Summary Data Modeling Aspects – Data Model, Architecture and Security

Key learnings

- A lot of uncertainty about the responsibilities for Data Modelling and the corresponding Data Architecture.
- Lack of documentation in the banks’ front-to-back data flows across organisations.
- Banks are facing big risks of not being able to sustainably fulfill regulatory requirements and distinct data sources (‘Golden Sources’ are missing).
- Data Dictionaries are mainly an internal issue for each division and not bank-wide solutions; but banks mainly plan to create a bank-wide Data Dictionary.
- Although most of the banks surveyed have implemented a central Data Warehouse they are suffering from poor data quality.
- Banks which have implemented older security policies and guidelines experience this as an obstacle for Data Management and a hindrance for their business.

What banks should do now

1. Define a clear, well-structured Data Model and document data flows as a basis of coordinated Data Management
2. Consider implementing Data Dictionary software
3. Force implementation of an Information Security Management System (ISMS) as well as find pragmatic ways to fulfill regulations

Advantages:

Clear structures in data flows and fields, basis for faster reporting due to clear data structures, efficient change management procedures due to data dictionary software
If you would like to discuss the issues raised in this paper in more detail, please speak with any of the contacts listed on the next page or your usual PwC contact.