

# The EU Insurance Mediation Directive – Bureaucracy or Opportunity?

Kathrin Braunwarth<sup>1</sup>, Hans Ulrich Buhl<sup>1</sup>, Marcus Kaiser<sup>1</sup>, Alexander Krammer<sup>1</sup>, Maximilian Röglinger<sup>1</sup>, and Alexander Wehrmann<sup>2</sup>

<sup>1</sup> University of Augsburg, Department of Information Systems Engineering & Financial Management, Universitätsstraße 16, 86159 Augsburg  
{kathrin.braunwarth,hans-ulrich.buhl,  
marcus.kaiser,alexander.krammer,  
maximilian.roeglinger}@wiwi.uni-augsburg.de

<sup>2</sup> Senacor Technologies AG, Vordere Cramergasse 11, 90478 Nuremberg  
alexander.wehrmann@senacor.com

**Abstract.** The insurance mediation directive of the EU contributes to the recent regulation of financial services markets in order to improve customer protection. Many financial services providers as well as insurance intermediaries fear expensive documentation overhead. In this paper, we argue that the documentation requirements offer a variety of chances. As neither the directive nor national law explicitly specify which customer data has to be collected, we analyse the propositions of respective associations. Moreover, we reason that overall data quality, i.e. completeness, correctness, currency, and consistency of customer data, will probably be influenced in a positive way. With this knowledge in mind, we finally present a set of scenarios from the field of customer relationship management such as advisory process and campaign management that undeniably benefit from a better documentation of customer data.

**Keywords:** Regulation, insurance mediation, data quality, customer relationship management.

## 1 Introduction

In recent years, the EU commission began regulating the financial services markets, in order to improve consumer protection. Both the “insurance mediation directive” (IMD, [1]) and the “markets in financial instruments directive” (MiFID, [2]) are designed to support this objective.

While the EU member nations had until November 2007 to convert the MiFID directive into national law, the deadline for the IMD implementation expired in January 2005. The German transposition took effect in May 2007 and affects approx. 500,000 consultants [3]. In the meantime, most of the German financial services providers (FSPs) have introduced procedures that prepare them to fulfill the documentation requirements, but they did not adjust their business processes and IT Systems to capitalize on the opportunities presented by the IMD.

This article explains why it is short-sighted to solely focus on fulfilling the minimum IMD documentation requirements because of the inherent benefits for the FSP

(e. g. better quality of financial advisory [4]). Our premise is that – besides others – the IMD comes along with a higher customer data quality (DQ) and therefore provides the FSP with increased value. Both MiFID and IMD present clear business opportunities for financial FSPs, but due to the still outstanding implementation of MiFID and the limited space we further on focus on IMD.

The paper is organized as follows: section two presents the proposed German IMD legislation. Next, we analyze several interpretations of the IMD documentation requirements in order to identify exactly which data FSP are required to collect from the customer. Section three deals with DQ, presents metrics to quantify four dimensions of DQ and discusses the general impact that the IMD has on customer DQ. Subsequently, we illustrate the economic effects of the higher DQ by means of two case studies. Section four summarizes the results and provides further aspects of the topic.

## 2 Documentation Requirements

In order to build a fundamental understanding, this section presents the salient topics covered in the IMD. We focus on Germany because it constitutes the largest market for insurance services, and the transformation process, converting the directive into national law, will most likely be very similar for other European countries. Subsequently, we analyze which customer data has to be collected in order to comply with legal requirements.

### 2.1 The Insurance Mediation Directive and Its Transposition into German Law

The Directive 2002/92/EC of the European Parliament and the European Council of 9 December 2002 on insurance mediation was adopted in January 2003. In particular it aims at ensuring a higher level of consumer protection by prescribing professional reliability to be verified by a registration authority. Furthermore, it specifies information and documentation requirements for insurance intermediaries. That is, “insurance [...] intermediaries should be registered with [a] competent authority” [1] ensuring that intermediaries “meet strict professional requirements in relation to their competence, good repute, professional indemnity cover and financial capacity” [1]. The IMD also specifies “the obligations which insurance intermediaries should have in providing information to customers” [1]. Additionally, “prior to the conclusion of any specific contract, the insurance intermediary shall at least specify, in particular on the basis of information provided by the customer, the demands and the needs of that customer as well as the underlying reasons for any advice given to the customer on a given insurance product”.

As its name implies, the IMD applies to insurance intermediaries. It defines insurance mediation as “activities of introducing, proposing or carrying out other work preparatory to the conclusion of contracts of insurance, or of concluding such contracts, or of assisting in the administration and performance of such contracts, in particular in the event of a claim” [1]. Hence, an insurance intermediary is “any natural or legal person who, for remuneration, takes up or pursues insurance mediation” [1]. Moreover, a tied insurance intermediary is “any person who carries on the activity of insurance intermediation for and on behalf of one or more insurance undertakings”

[1]. As this distinction is only relevant for registration issues and does not concern documentation requirements, we refer to the notion of insurance intermediaries throughout the remainder of this paper. As the concentration process within the financial services industry leads to more and more banks offering insurance products and vice versa, the IMD applies not only to genuine insurance companies, but also to a wide range of other FSP.

Originally, the Member States should have had transposed the IMD into national law by January 2005. Among others, France, Great Britain, Italy, Spain, and Germany failed to meet the deadline [5]. In Germany, the advanced re-election in 2006 caused further delay. In June 2006, the Federal Ministry of Economics and Technology proposed a draft law named “Gesetz zur Neuregelung des Versicherungsvermittlerrechts” [6] that was adopted by the Bundestag in October 2006. The justification of this document shows the guideline of the IMD: “The Directive aims at consumer protection [...]. Customer interests shall be protected by an obligation of registration and a standardization of information and documentation requirements of the intermediary.” ([6], translated by the authors). As we intend to elaborate the chances resulting from the IMD in the field of customer relationship management, we particularly focus on the documentation requirements described above. This is rooted in that insurance intermediaries will benefit most from obtaining additional customer data of high quality.

In German law, the documentation requirements are specified in §42c of the “Gesetz über den Versicherungsvertrag” (VVG): „The insurance intermediary must interview the insuree according to the complexity of judging the insurance offered or the insuree and the insuree’s individual situation. Taking into account the appropriate proportion between effort of advice and the premium to be discharged by the insuree, the insurance intermediary must give advice to the insuree and justify each council concerning certain insurance. The intermediary must document this with respect to the complexity of the insurance contract according to §42d.” ([6], translated by the authors).

According to §42d VVG the documented information has to be provided to the customer “in a clear and comprehensible textual form” ([6], translated by the authors) before a contract is signed.

There have been many reactions on the legislative procedure of this law as well as on the results published so far. On the one hand, parts of the law have been commented by various associations. On the other hand, as neither the IMD nor national law explicitly specify which customer data has to be documented. Various institutions have interpreted the results so far. As a consequence, first drafts of advisory protocols and documentation recommendations have been proposed. Some of them are presented and compared below.

## 2.2 Proposed Documentation Templates

“The advisory documentation has to contain all information that is surveyed from and all recommendations including the reasons given to the customer.” ([7], translated by the authors) To enable and ensure this requirement, different organizations are currently working on interpretations of the IMD in order to suggest documentation templates. The results are advisory protocols and documentation recommendations. Some of them are already integrated in software applications.

Among others, two comparably mature documentation templates are the one of the Arbeitskreis EU-Vermittlerrichtlinie and one called Beratungsprotokoll. We analyzed these with focus on the required data fields. As a more technical counterpart we also describe the de facto standard for personal information management vCard [8] and the XML-based Extensible Customer Information Language (xCIL, [9]). Details of the analysis can be seen in the table in the appendix.

It is reasonable to tell apart three groups of data claimed in the templates, because the documentation templates are structured similarly:

- *Basic customer data fields* store personal customer information such as name, date of birth or number of children. Data fields from the technical standards vCard and xCIL as well as the corresponding fields of the other documentation templates are clustered into this group.
- *Product-specific customer data* fields contain information that is especially required for a certain product category. These fields differ for each product category. Additionally, not every field is required for each product category, e.g. living space is required for a householders insurance but not for a life assurance. Both the documentation template of the Arbeitskreis EU-Vermittlerrichtlinie and the Beratungsprotokoll provide different sheets for each product category. Therefore, we clustered these data fields into the group product-specific customer data.
- *Process-specific data* describes the advisory process, such as date of advisory, topic of advisory or advisor's name. In the documentation templates developed with respect to the IMD, these fields can usually be found at the end.

The analysis illustrates several problems regarding the comparability of the surveyed data. First of all, fields that are semantically identical differ with regard to name, e.g. birthday vs. date of birth, and type of data, e.g. marital status as a multiple choice vs. text field. Secondly, each template specifies a set of unique data fields which cannot be found in one or more of the other templates. For instance, the customer's nationality is only asked for by the Beratungsprotokoll and xCIL.

With regard to the data groups, the templates differ quite significantly. As far as basic customer data are concerned, the documentation requirement template of the Arbeitskreis EU Vermittlerrichtlinie and the Beratungsprotokoll show many missing fields compared to the technical standards vCard and xCIL. In the field of product-specific data the difference between the templates is mainly a question of granularity. In return, the process-specific data fields are quite homogeneous.

It is remarkable that none of the proposed templates is based on established standards. The vCard standard for example is integrated in the majority of today's E-mail applications, cell phones or PDAs and covers major parts of the data fields for basic customer data. Therefore, the authors suggest considering established technical standards – e.g. the vCard – when setting up new documentation solutions.

After the comparison of data fields in different templates we will have a look at more general aspects of DQ in the next section.

### 3 Data Quality

This section investigates to what extent the documentation requirements specified in the IMD may improve the overall quality of customer data. This is necessary because

the quality of customer data is often quite poor [10]. Main reason for this is that customer data are often collected incompletely, at irregular intervals and that it is stored in several independent databases, which is a source of inconsistencies. Moreover it becomes “naturally” obsolete over time. For our investigation, we select an appropriate set of DQ dimensions. After a general definition, we analyze how each dimension must be interpreted in our context and how it may be influenced by the documentation requirements.

In the last years, a lot of research has been done in the field of DQ and many approaches concerning the identification and classification of DQ dimensions have been proposed [11]. Some of them generally apply to data, information, and knowledge management systems. Others focus especially on data warehouses, internet-based or cooperative information systems [12].

As a consequence, the selection of an appropriate set of DQ dimensions is not straightforward. In literature there are two different perspectives on the measurement of quality [13]: Quality of Design (QoD) and Quality of Conformance (QoC). QoD denotes the degree of correspondence between the users’ expectations and the specification of the information system (IS) (e.g. specified by means of data schemes). In contrast, QoC represents the degree of correspondence between the specification and the existing realisation in the IS (e.g. data schemes vs. set of stored customer data). In the following we focus on QoC as the existing realisation in the IS (stored data values) are of high relevance regarding the documentation requirements imposed by the IMD.

Considering the definition above, QoC is mainly related to data values. According to [14], the DQ dimensions correctness, completeness, consistency and timeliness are most important in this context.

### Completeness

Generally defined, completeness means that data attributes must have a value that semantically differs from NULL. In this context, NULL is not a defined value, but a mere wildcard for unknown or non-present values:

Let  $w_I$  be an attribute value stored in the IS. Then the metric for completeness on the level of attribute values  $Q_{Compl.}(w)$  is defined as follows [15]:

$$Q_{Compl.}(w_I) := \begin{cases} 0 & \text{if } w_I = NULL \text{ or } w_I \text{ is semantically equal to } NULL \\ 1 & \text{else} \end{cases} \quad (1)$$

Considering an advisory process, this definition does not consider whether an attribute actually should have been documented according to a customer’s specific advisory situation. For instance, a customer that solely had an advisory interview on indemnity insurances will probably not indicate data that is relevant for the conclusion of a householders’ insurance. Nevertheless, the customer’s data are complete with respect to the individual advisory situation. As the definition above treats each data attribute value in equal measure, on this level, we can not emphasize particular attributes, e.g. according to their importance within an individual advisory situation. However, this problem is solved on higher levels of data storage, namely the levels of tuples, relations/views and the whole database. We will describe this in the following:

Based on the level of attribute values, [15] define the metric on the level of tuples:  $T$  is a tuple with the values  $T.A_1, \dots, T.A_{|A|}$  for the attributes  $A_1, \dots, A_{|A|}$  and  $g_i \in [0;1]$  is the relative importance of  $A_i$  regarding completeness. Thus we define the metric for completeness on the level of tuples based on the metric on the level of attribute values as a weighted arithmetic mean:

$$Q_{\text{Compl.}}(T) = \frac{\sum_{i=1}^{|A|} Q_{\text{Compl.}}(T.A_i) g_i}{\sum_{i=1}^{|A|} g_i} \quad (2)$$

This formula provides the possibility to emphasize particular attributes when quantifying DQ. For instance in our example, if we want to quantify the completeness of attributes which are relevant for indemnity insurances, we can (but need not!) put a higher weight on these attributes. Thus, the metric can be adapted to the data requirements imposed by specific product groups. The results of the metric on the level of tuples can then be aggregated to the next higher level, the one of relations/views.

Let  $R$  be a non empty relation or a view. Then the completeness of  $R$  bases on the arithmetic mean of the completeness of the tuples  $T_j$  in  $R$  ( $j = 1, 2, \dots, |T|$ ) and is defined as (cf. [15]):

$$Q_{\text{Compl.}}(R) = \frac{\sum_{j=1}^{|T|} Q_{\text{Compl.}}(T_j)}{|T|} \quad (3)$$

Considering a relation consisting of several tuples, this formula seems intuitive. More interesting is the fact that the definition explicitly includes views: This means that we can define particular views e.g. for every product group. These views include only or put a higher weight on those attributes relevant for the corresponding product group and these attributes can also be distributed over several relations. Hence, by defining particular views, we can quantify the completeness according to the specific characteristics of the advisory data.

Finally, let  $D$  be a data set (e.g. a database) which can be represented as a disjoint decomposition of the relations or views  $R_k$  ( $k = 1, 2, \dots, |R|$ ). I.e. the whole data set can be decomposed into pairwise non-overlapping relations  $R_k$ , so that each attribute in the data set is assigned to exactly one of the relations, or formally noted:  $D = R_1 \cup R_2 \cup \dots \cup R_{|R|}$  and  $R_i \cap R_j = \emptyset \forall i \neq j$ . (Note: in cases when a key attribute is part of several relations or views, it has to be weighted with a positive value only once. This avoids a multiple consideration within the metric for completeness and does not prohibit the applicability of the metric). Hence, we define the completeness of a data set  $D$  (based on the completeness of the relations  $R_k$  ( $k=1, 2, \dots, |R|$ )) as follows:

$$Q_{\text{Compl.}}(D, R) := \frac{\sum_{k=1}^{|R|} Q_{\text{Compl.}}(R_k) g_k}{\sum_{k=1}^{|R|} g_k} \quad (4)$$

The adoption of the IMD will improve the completeness of customer data with high probability because it is of high importance for both insurance intermediaries and customers. From the perspective of an intermediary, completeness of customer

data proves that the intermediary sedulously carried out his duties, a fact that protects him against claims for indemnities. Moreover, intermediaries are now able to document why fractions of customer data are missing, i.e. whether a customer was not able or did not want to provide the information required. In addition, more complete customer data provides also economic benefit, which we will illustrate later. From the perspective of a customer, complete data enables to identify suitable insurance cover and to achieve acceptance of claims for indemnity against intermediaries or insurance companies. Of course some customers are afraid of their personal data being recorded and abused. It is up to the intermediary to establish trust so that these concerns do not prevent the chances mentioned below for the FSP.

**Correctness**

In concordance with [16] – and their definition of accuracy – [17] define correctness as the closeness between a value  $w_I$  and a value  $w_R$ , considered as the correct representation of the real world phenomenon that  $w_I$  aims to represent. To quantify closeness, we first need an adequate distance measure  $d$ . Examples for distances measures normalized to the interval [0;1] are:

- $d_1(w_I, w_R) := \begin{cases} 0 & \text{if } w_I = w_R, \text{ which is independent of the field of application,} \\ 1 & \text{else} \end{cases}$
- $d_2(w_I, w_R) := \left( \frac{|w_I - w_R|}{\max\{|w_I|, |w_R|\}} \right)^\alpha$  with  $\alpha \in R^+$  for numeric, metrically scaled attributes and
- n-grams, edit (or Levenshtein) distance or Hamming distance for strings (all normalized to the interval [0; 1]).

Based on such distance functions, [17] define the metric on the level of attribute values as follows:

$$Q_{Corr.}(w_I, w_R) := 1 - d(w_I, w_R)$$

In analogy to the metric for completeness, the results can be aggregated to the levels of tuples, relations/views and the database.

This definition of correctness directly applies to our context because it concerns basic customer data, product-specific customer data as well as process-specific data in equal measure.

Analogously to completeness, the adoption of the IMD will probably increase the quality of customer data in terms of correctness. Intermediaries must document their recommendations and corresponding reasons according to the needs of the customer. If it turns out that recommendations and reasons cannot be justified properly, intermediaries lose the cover of their professional indemnity. For customers, it is crucial to provide information to the best of their conscience because otherwise insurance contracts loose validity in many cases.

**Currency**

Currency (which is also often named timeliness) refers to whether “the recorded value is not out of date [...]. A stored value, or any data item, that has become outdated is in error in that it differs from the current (correct) value.” [18] Though being closely related to correctness, both dimensions do not mean the same. Currency explicitly

addresses the decay of data with respect to the point in time when it has been acquired or revised.

[17] were the first to propose an approach for quantifying currency which is based on probability theory. That means, their metric on the level of attribute values returns a value which indicates the probability that the considered attribute value still corresponds to its real world counterpart. This probability depends on the distribution of the shelf life of an attribute value. For an exponentially distributed shelf life of a particular attribute value, they define the metric for currency as follows:

The parameter *decline*(*A*) is the decline rate indicating how many values of the attribute considered become out of date in average within one period of time. E. g., a value of *decline*(*A*)=0.2 has to be interpreted as follows: on average 20% of the attribute *A*'s values lose their validity within one period of time. The variable *age*(*w*, *A*) denotes the age of the attribute value *w*, which is computed by means of two factors: the instant when DQ is quantified and the instant of data acquisition. The metric on the level of an attribute value is – under the assumption of an exponentially distributed shelf life of the attribute – then defined as:

$$Q_{Time.}(w, A) := \exp(-decline(A) \cdot age(w, A)) \quad (5)$$

Again, the results can be aggregated to higher levels.

As mentioned above, attributes differ in the shelf life and therefore in the decline rate of their values. In cases, where the shelf lives are not exponentially distributed, other metrics have to be developed. [19] design a procedure consisting of six steps, which allows developing a metric for currency according to the specific characteristics of the considered attribute with respect to its values' shelf life.

Currency does not directly depend on the documentation requirements of the IMD. It rather depends on how frequently the intermediary contacts a customer. If this is quite rarely the case, specific fractions of customer data, e.g. marital status or net income, are not updated sufficiently and will become obsolete sooner or later. However, if the customer frequently contacts the intermediary, customer data are updated more often. Therefore, basic customer data are updated each time, product-specific data and process-specific data on occasion only. For instance, if a couple moves together, new insurances must be contracted and already existing insurances like a householders' insurance must be updated. Assuming that customers call on their intermediaries in regular intervals (et vice versa), currency will be improved by the documentation requirements of the IMD.

### Consistency

Consistency requires that two or more values of data attributes are free of internal contradictions. Distinguishing only between either *consistent* or *not consistent*, [20] provide a logical definition of consistency: Let *w* be an attribute value within the information system and  $\mathcal{R}$  a set of consistency rules with  $|\mathcal{R}|$  as the number of set elements that shall be applied to *w*. Each consistency rule  $r_s \in \mathcal{R}$  ( $s = 1, 2, \dots, |\mathcal{R}|$ ) returns the value 0, if *w* fulfils the consistency rule, and 1 otherwise:

$$r_s(w) := \begin{cases} 0 & \text{if } w \text{ fulfils the consistency rule } r_s \\ 1 & \text{else} \end{cases} \quad (6)$$



Using (6), the metric for consistency is defined as follows:

$$Q_{Cons.}(w, \mathcal{R}) := \prod_{s=1}^{|\mathcal{R}|} (1 - r_s(w)) \quad (7)$$

The value of the metric is 1, if the attribute value fulfils all consistency rules defined in  $\mathcal{R}$  (i. e.  $r_s(w) = 0 \forall r_s(w) \in \mathcal{R}$ ). Otherwise the result is 0, if at least one of the rules specified in  $\mathcal{R}$  is violated. (i. e.  $\exists r_s \in \mathcal{R} : r_s(w) = 1$ ). Such consistency rules can be deduced from business rules or domain-specific functions, e. g. rules that check the value range of an attribute (e. g.  $00600 \leq US\ zip\ code, US\ zip\ code \leq 99950, US\ zip\ code \in \{0, 1, \dots, 9\}^5$  or  $marital\ status \in \{\text{“single”}, \text{“married”}, \text{“divorced”}, \text{“widowed”}\}$ ).

Based on particular assumption concerning the consistency rule set  $\mathcal{R}$ , the results can be aggregated to higher levels, too. In contrast to the other dimensions, [20] propose not to weigh particular attributes on the level of tuples.

In contrast to the dimensions presented so far, it is impossible to make any a priori assumptions of whether consistency will be influenced positively or negatively by the IMD. If – in order to provide a correct documentation – the insurance intermediary uses an application system which verifies whether the consistency rules are fulfilled or not, the quality of customer data will be higher in this regard. However, this is not directly influenced by the IMD. The status quo can be characterized as follows: Despite considerable standardization efforts, many FSPs still dispose of a historically grown, heterogeneous landscape of product-centric application systems, i.e. often each application system is especially geared to exactly one financial or insurance product. Besides FSPs, individual intermediaries often employ a mixture of paper-based and application system-based documentation techniques. Beyond, product-specific data are maintained in non-integrated application systems, a fact that complicates the realization of an integrated advisory process. As in many cases no integrated advisory process is implemented, process-specific data are scattered to several application systems. The fact that customers contact the FSP over different channels which are not always integrated as well still worsens these problems. Hence, it is a complex task to implement such consistency rules.

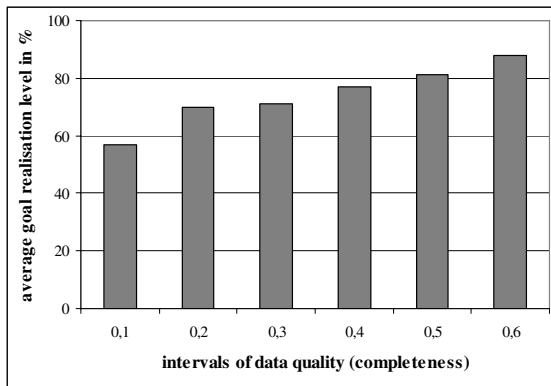
Concluding, it can be stated that the documentation requirements of the IMD will presumably have a positive impact on the DQ dimensions investigated above. That is, the additional work caused by recurrent documentation will lead to a higher level of overall DQ. This, in turn, offers several chances, some of which are illustrated in the next section.

## 4 Case studies

Up to now, we identified which customer data should be documented according to the interpretations of the IMD. Additionally, we analyzed how the IMD influences the quality of customer data. In this section, we exemplarily sketch two chances that arise from the IMD.

#### 4.1 Advisory Process: Economic Effects of a Higher Completeness of Customer Data

In this subsection we present the results of a project which was conducted at a major German FSP (for details see [15]). The project started with the premise that the IMD comes along with a higher completeness of customer data. The goal was now to analyze whether more complete customer data provides higher economic benefits. Therefore, 75 comparable branches of the FSP were selected: To quantify completeness, the metric outlined above was applied to data which are acquired during an individualized advisory process. The measure for economic success was the goal realization level (GRL), which was computed as the ratio between the realized sales of a branch and the target sales (the latter being equal for all branches). Figure 1 depicts the results of this analysis for a subset of the data.



**Fig. 1.** Average goal realization level depending on the metric for completeness [15]

For instance, all branches with completeness of customer data between 0 and 0.1 achieved in average a GRL of about 58%. We see, that the completeness of customer data seems to be positively correlated with the economic success. Assuming the IMD causing a higher completeness of customer data, it is not only bureaucracy, but will also provide economic advantages. [15] also discuss which subsets of customer data are likely to provide economic benefit and which ones are bureaucracy.

#### 4.2 Campaign Management: Economic Effects of a Higher Currency of Customer Data

Campaign management is defined as “the planning, realization, control, and monitoring of marketing activities aimed at known recipients, who are either current or prospective customers” [21]. As a sub-activity to customer relationship management, its success rate is heavily influenced by DQ [10]. As [19] illustrate, DQ problems arise in the activities of customer selection and customer contacting. The goal of customer selection is to identify target group(s) and to select the corresponding customers by using available data. However, the data stored in the IS are often not up-to-date anymore.

Taking a campaign from a German mobile services provider (MSP), [19] illustrate the economic results of developing a metric for currency according to their procedure. As the campaign addresses students, their metric shall indicate the probability, whether the professional status “student” stored in the customer data base is still up-to-date. Hence, they compute this probability for each of the customers with the professional status “student” based on the age of the attribute value. It turns out that many of these customers are very likely not to study anymore and therefore cannot accept the offer.

Finally, they compare the economic effects of two customer selection methods:

1. Select the top 30% according to sales volume out of all customers with the professional status “student”
2. Select the top 30% according to their individual expected additional profit out of all customers with the professional status “student”

It turned out, that the additional profit was 1.7 times higher when using the second selection method compared to the first one (309,200 € to 178,200 €). This is due to the fact that many of the customers with the professional status “student” were indeed not studying anymore. The second selection procedure - based on a metric for currency, indicating the probability whether a customer is in fact still studying - takes into account this possibility.

## 5 Conclusion

In this paper, we illustrated that the documentation requirements specified by the IMD do not only cause additional work, but that they also offer a variety of chances. In order to clearly define the notion of customer data, we analyzed advisory protocols and documentation recommendations with respect to data attributes recommended for the documentation of customer-specific, product-specific, and process-specific advisory issues. Furthermore, we identified that the documentation requirements have the potential of improving overall DQ, i.e. completeness, correctness, currency, and consistency of customer data. Finally, we exemplarily illustrated some chances offered by such solutions with scenarios from the field of customer relationship management. We illustrated the IMD being not – as understood by most of FSP at present – just a costly obligation but rather a chance to justify investments to advance DQ. As an adoption of the regulation is mandatory anyway, the investment should be very well considered in order to be able to support strategic decision as well as to improve the day-to-day business. In this way the expenses for the mandatory documentation requirements have not to be seen as sunk but can also generate return in form of revenue resulting from better DQ.

## References

1. European Parliament and the Council,  
[http://eur-lex.europa.eu/LexUriServ/  
LexUriServ.do?uri=CELEX:32002L0092:EN:NOT](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002L0092:EN:NOT)
2. European Parliament and the Council,  
[http://eur-lex.europa.eu/LexUriServ/  
LexUriServ.do?uri=OJ:L:2004:145:0001:0044:EN:PDF](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:145:0001:0044:EN:PDF)

3. Maschmeyer, C.: Vermittlerrichtlinie: Unabhängige als Gewinner. *bank und markt* 36, 16–18 (2007)
4. Kaiser, M.: Financial Services Advisory. Individualisation and the Role of Customer Data. Dissertation at the University of Augsburg (2008)
5. Freshfields Bruckhaus Deringer, <http://www.freshfields.com/practice/disputeresolution/publications/pdfs/13289.pdf>
6. Deutscher Bundestag, <http://217.160.60.235/BGBL/bgb11f/bgb1106s3232.pdf>
7. Warth, W.P., Beenken, M.: Bankassurance nach EU-Recht: Abschied vom Produktvertrieb. *bank und markt* 55, 36–38 (2005)
8. InternetMailConsortium, <http://www.imc.org/pdi/>
9. Organization for the Advancement of Structured Information Standards, [http://www.oasis-open.org/committees/ciq/Downloads/xCIL/Versions/xCILv1\\_0/](http://www.oasis-open.org/committees/ciq/Downloads/xCIL/Versions/xCILv1_0/)
10. Ryals, L., Payne, A.: Customer relationship management in financial services: towards information-enabled relationship marketing. *Journal of Strategic Marketing* 9, 3–27 (2001)
11. Wang, R.Y., Storey, V.C., Firth, C.P.: A Framework for analysis of data quality research. *IEEE Transactions on Knowledge and Data Engineering* 7, 623–640 (1995)
12. Helfert, M., Heinrich, B.: Analyzing Data Quality Investments in CRM - A model-based approach. In: *Proceedings of the 8th International Conference on Information Quality*, pp. 80–95. MIT Press, Cambridge (2003)
13. Juran, J.M.: *How to think about Quality* (1998)
14. Redman, T.C.: *Data Quality for the Information Age*. Artech House, Boston (1996)
15. Heinrich, B., Kaiser, M., Klier, M.: Does the EU Insurance Mediation Directive help to improve Data Quality? - A metric-based analysis. In: *Proceedings of the 16th European Conference on Information Systems (ECIS)* (2008)
16. Batini, C., Scannapieco, M.: *Data Quality. Concepts, Methodologies and Techniques (Data-Centric Systems and Applications)*. Springer, Berlin (2006)
17. Heinrich, B., Kaiser, M., Klier, M.: How to measure data quality? – a metric based approach. In: *Proceedings of the 28th International Conference on Information Systems (ICIS)* (2007)
18. Ballou, D.P., Pazer, H.L.: Modeling Data and Process Quality in Multi-Input, Multi-Output Information Systems. *Management Science* 31, 150–162 (1985)
19. Heinrich, B., Kaiser, M., Klier, M.: A procedure to develop metrics for currency and its application in CRM. In *appraisal for: Journal of Data and Information Quality* (2008)
20. Heinrich, B., Kaiser, M., Klier, M.: Metrics for measuring data quality – Foundations for an economic data quality management. In: *2nd International Conference on Software and Data Technologies (ICSOFD)* (2007)
21. Geib, M., Reichold, A., Kolbe, L., Brenner, W.: *Architecture for Customer Relationship Management Approaches in Financial Services*. IEEE Computer Society Press, Washington (2005)

**Appendix**

	Documentation Template “Arbeitskreis EU- Vermittlerrichtlinie“	Beratungsprotokoll	vCard <sup>1</sup>	xCIL
<b>Basic customer data</b>				
Customer identifier	---	---	Unique Identifier (UID)	Customer identifier
Salutation	Salutation	Salutation	Full Name (FN)	[can be deduced]
Title	Title	---	Name (N) with type values	Name and address details
Name	Name	Name	Family Name, Given Name, Additional Names, Honorific Prefixes, Honorific Suffixes	
First Name	First Name	First Name	Nickname (NICKNAME)	
Address details	Address	Address	Address (ADR) and Label (LABEL)	
Birth details	Date of birth	Date of birth	Birthday (BDAY)	Birth details
Age details	[can be deduced]	[can be deduced]	[can be deduced]	Age details
Gender	[can be deduced]	[can be deduced]	[can be deduced]	Gender
Marital Status	Marital Status (multiple choice)	Marital Status (multiple choice)	---	Marital Status
Nationality	---	Nationality (German or other)	---	Nationality
Photo	---	---	Photo (PHOTO)	---
Organisation details	---	---	Organisation (ORG)	Organisation details

<sup>1</sup> Labeling of the particular data field is written in brackets and capitals.

Occupation	Occupation (multiple choice)	Occupation	Job Title (TITLE) Occupation/Role/Business category (ROLE)	Occupation
Qualification details	---	Qualification (multiple choice)	---	Qualification details
Passport details	---	---	---	Passport details
Religion	---	---	---	Religion
Ethnicity	---	---	---	Ethnicity
Telephone details	Telephone (private, official, mobile)	---	Telephone (TEL) with type values home, work, msg (for voice messaging support), pref (means preferred use), voice, fax, cell, video, pager, bbs (for bulletin board system), modem, car, isdn, pcs (indicates personal communication services)	Telephone details
Cellular Phone details		---		Cellular Phone details
Facsimile details	Facsimile (private, official)	---		Facsimile details
Pager		---		Pager
E-mail details	E-mail (private, official)	---	E-mail (EMAIL); types (TYPE): internet, pref, x400 E-Mail Programme (MAILER)	E-mail details
URL	Internet address	---	URL	---
Availability	Availability	---	[can be deduced]	---
Legal representative	Legal representative	---	---	---
Time Zone	---	---	Time Zone (TZ)	---
Global Position	---	---	Global Position (GEO);	---
Living situation	Living situation (multiple choice)	---	---	---
Account details	---	---	---	Account details

Identification card details	---	---	---	---	Identification card details
Person Identification Number details	---	---	---	---	Person Identification Number details
Vehicle Information details	---	---	---	---	Vehicle Information details
Tax number details	---	---	---	---	Tax number details
Spouse details	Own fields for spouse	Own fields for spouse	---	---	Spouse details
Children details	Name, First Name, living (not) with me, article (for 4 children), further field family planning	Name, First Name, Birthday, Note (for 2 children)	---	---	Children details
Note	---	Additions	Note (NOTE)	---	---
Category	---	---	Category (CATEGORIES)	---	---
Generated with Product	---	---	Product generated this vCard (PRODIG)	---	---
Sort String	---	---	Sort String (SORT-STRING)	---	---
Sound	---	---	Sound (SOUND)	---	---
Version	---	---	Version of vCard specification (VERSION)	---	---
Access classification	---	---	Access classification (CLASS)	---	---
Public Key	---	---	Public Key (KEY, ENCODING)	---	---
Product-specific customer data: [old age provision]					
Income details	Income in the last 3 years Average monthly income after tax Monthly disposable income	Finances (Net income, liquid assets, funds, liabilities)	---	---	Income details

Existing contract	Existing contracts	Existing contract (cancelled or not)	---
Insurer	Insurer	Insurer	---
Identifier	Insurance number	Insurance number	---
Pension needed	Monthly Pension needed	Pension needed	---
Expected pension	Expected benefits from... Until age... About... One-time sum... Monthly sum... Comment...	Expected provision	---
Pension shortfall	Monthly Pension shortfall in	Pension shortfall	---
Required Sum	---	Required Sum	---
Demand analysis	---	Demand analysis	---
Type of insurance	---	Type of insurance	---
Additions	---	Additions	---
Monthly pension	---	Monthly pension	---
Sum in case of survival	---	Sum in case of survival	---
Expiration of the contract	---	Expiration of the contract	---
Increasing benefits	---	Increasing benefits	---
Contribution per year	---	Contribution per year	---
Additions	---	additions	---
Advisor's recommendation	---	Recommendation (take out/ leave/ change/cancel)	---
		Market Basis	---



Customer's decision	---	Reason Changes Decision (take out/ leave/ change/cancel) Motives Changes	---	---
Process-specific data				
Copy of advisory protocol given to the customer?	---	Copy of advisory protocol given to the customer?	---	---
Topic of Advisory	[can be deduced]	As multiple choice	---	---
Customer, Advisor and other Attendees	Customer, Advisor and other Attendees	Customer, Partner, Mediator, other Attendees	---	---
Date, time and Place of advisory	Date and Place	Date, Time, Length and Place of advisory	---	---
Customer's signature	Customer's signature	Customer's signature	---	---
Advisor's signature	Advisor's signature	Mediator's signature	---	---