

STRATEGIC LEVERS IN INSURANCE CLAIMS MANAGEMENT

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Evolution of Strategic Levers in Insurance Claims Management: An Industry Survey

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Abstract

This paper discusses competing strategic goals and success factors in non-life insurers' claims management using new and ad hoc empirical data. We structure the study of the companies' aims along the three main conflicting goals (A) the minimization of claims volumes, (B) the optimization of the internal claims processes and (C) the maximization of the customer satisfaction. We analyze the insurance industry perspective through a qualitative survey carried out in Germany and Switzerland. Findings on the current and expected importance of selected topics are derived. The results shall lead to managerial implications improving industry practice and serve as a starting point for further research. Our findings are relevant for academics and practitioners beyond the two markets surveyed in the study.

1 Introduction

Claims management operations and their “best practice” are currently among the most important strategic topics for the non-life retail business of insurance companies in Europe (see, e.g., EY, 2014; PricewaterhouseCoopers, 2014). In fact, macroeconomic factors such as the recent financial crisis as well as changing buying patterns of insurance customers put significant pressure on insurers to maintain overall profitability and establish excellent claims management. Considering that on average more than 60% of all expenses of property and liability insurers arise from claims costs, the importance of solid claims management is apparent.¹ Historically, claims management at insurance companies has often been treated as a necessary part of operations. The potential competitive advantages, both in terms of customers and operational focus, that can be gained through improved claims management have long been underestimated (see, e.g., Dab et al., 2007). In fact, insurance companies often set as their primary goal the reduction of claims volumes, not realizing that customer satisfaction and processes are complementary topics. To gain a better understanding of the dynamics of claims management and its key topics with a focus on current and future challenges, we define our research target as follows. First, we introduce a framework to structure the three most relevant strategic topics in insurance claims management. Within this framework and 13 selected underlying key topics, we discuss target conflicts. The identified topics are of relevance in non-life retail claims operations in many markets (cf. EY, 2014). Next, we present

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¹See, for example, the German and Swiss insurance associations at <http://www.gdv.de> and <http://www.svv.ch>.

survey results from insurance companies in Germany and Switzerland to assess the key topics regarding their current and expected future importance. While our results are directly applicable to the insurance industry in the two surveyed countries, insights can be transferred to markets presenting similar levels of development and when discussing issues from trends in dimensions like, e.g., cost reduction, sourcing, new technologies, data analytics.

We introduce the main competing goals in strategic claims management along the core dimensions of claims volume, claims administration costs and customer satisfaction. Each of these three elements is associated with specific targets which often stand in conflict to each other (see, for example, Naujoks and Venohr, 1998 and Schmidt, 2012). Theoretically there is an optimal level of goal fulfillment in the three dimensions, which then leads to an optimal aggregate level in the consolidated strategy of claims management. While the concept is well accepted by practitioners, to the best of our knowledge, there have been no academic discussions of the competing goals of insurance company claims management (also see our literature review in Section 2). On the basis of a threefold framework we select and discuss 13 topics which are of current relevance for the industry. The selection is based on desk research and telephone interviews with C-level representatives. A survey tool is set up to assess the current and future relevance of the chosen topics. The survey results are based on responses from C-level executives from 22 non-life insurance companies in Germany and Switzerland representing 42 and 68 percent, respectively, of market share in terms of premium volume. The setup also allows us to derive results focussing on differences in the viewpoints of companies of different sizes (small and large companies) and in different geographical regions (Germany and Switzerland).

With regard to overall key results, we detect a strong trend of insurance companies trying to gain more influence over the overall claims handling process. This goes along with centralization efforts of insurers. Further, insurers seem to perceive customer demand for increased service levels with regard to claims handling. This will be achieved through technological improvements (e.g., the digitization of customer touch points) hand in hand with the faster adjustment processes. A third core finding reveals that insurance companies are not aiming to further outsource claims handling processes to third party providers. This finding is somewhat surprising because insurers have very high claims administration costs and claims process outsourcing is still on a low level when comparing to other industries. When considering small and large insurance companies separately, differences in their assessments regarding the importance of the topics appear. It becomes apparent that large insurers are working on higher professionalization levels than small insurers. A driver behind this is, among others, that large insurers can make use of economies of scale. As a result, large insurers for example consider alternative compensation methods to be more important than small insurance companies do (alternative compensation methods often require greater vertical integration of repairing process activities outside insurance companies' core value chain). Examining differences between insurers from Germany and Switzerland, the analysis shows, that German insurers currently consider topics with respect to a reduction of claims administration costs and absolute claims volumes to be more important than Swiss insurance companies do. This includes, for example, the outsourcing of claims processes, the usage of alternative compensation methods and the requirement that customers use contractors.

The remainder of the paper is structured as follows: In Section 2, we discuss the competing strategic goals. In Section 3, we describe the selected topics and the survey to assess their current and future relevance. We present the obtained data and discuss the results in Section 4. We conclude in Section 5.

2 Three main competing goals in strategic claims management

In this section we introduce a threefold structure to discuss the core goals of insurance company claims management and discuss the competing aspects of these goals from both the insurer and the policyholder perspective. This structure lays the basis for our industry survey (see in Section 3). The core competing goals of claims management are (A) *the minimization of the claims volume*, (B) *the minimization of claims administration costs* and (C) *the maximization of customer satisfaction*. Different versions of a triangular representation of the goals have been used by several authors because of its simplistic, yet holistic approach for discussing goals in claims management. Such publications include, for example, the work by Naujoks and Venohr (1998) introducing the three dimensions of costs, claims volume and customer service and citing the claims strategy of the insurance company Progressive with the key principles of accurate claims settlement, operating efficiency and customer satisfaction. Further Schmidt (2012) focuses on customer satisfaction, cost efficiency and the service quality of contractor collaboration. Finally, Maas and El Hage (2006) discuss the challenges along the adapted dimensions including efficiency, customer orientation and innovation. Similar threefold structures have been adopted by practitioners in many insurance companies. In this paper we will structure our ideas along the three goals (A–C).

Depending on the non-life (retail) business line the *claims volume*, i.e., the payouts for incurred losses, ranges from 55 to 90 percent of premium income (see, for example, recent reports from the supervisory authorities or the industry associations in Germany and Switzerland, or, e.g., Dab et al., 2007) Thus, it is clear that the strategic focus in the insurance industry is first to optimize the amount of claims payouts. Excellent claims handling, e.g., through the use of contractors or alternative compensations and active steering may help minimize the claims volume. In recent years, the levers of fraud detection and goodwill management have received increased management attention. In fact, excess payments due to fraudulent claims are estimated to be as high as 18 percent in the U.S. (Insurance Research Council, 2008), and according to the European Insurance and Reinsurance Federation (2013) the amount of detected and undetected fraud represents up to 10 percent of all claim expenditures in Europe. The amount of goodwill claims is not as readily available from insurance companies. Based in expert testimony in a study by Mahlow and Wagner (2014), the amount of claims cases regulated on the basis of goodwill is estimated to be up to 15 percent.

The *administration costs* of an insurance company include all administrative expenses incurred during the claims handling process. These include the labor costs for back-office staff and internal claim auditors, costs for external claim experts, IT investment and operating costs as well as overhead costs of the insurance company and other infrastructure expenses. The claims cost ratio, i.e., the claims administration expenses compared to the insurers' premium income, typically ranges from 5 to 15 percent (see, e.g., Dab et al., 2007) and depends in large part on the efficiency of the insurer. Typical drivers include the company size, the segmentation of claims and processes (industrialization and specialization) as well as the sourcing (e.g. usage of contractors). On the one hand, when considering the basic principle of economies of scale, large insurers should be able to lower their administration costs (see, e.g., Cummins and Weiss, 1993). On the other hand, higher levels of complexity and other inefficiencies may limit this advantage (see, e.g., Fenn et al., 2008). An adequate segmentation of claims allows insurance companies, for example to industrialize the handling processes for smaller claims while enabling the company at the same time to assign specialists to more complex cases. Furthermore, the concept of

outsourcing selected process stages and the idea of using contractor networks (see, e.g., HUK Coburg, 2009) may help to lower administration costs.

The situation of an insured loss for the customer corresponds to the “moment of truth” for the insurance company in which the insurance promises are tested. In this case *customer satisfaction* is of paramount importance since a loss event in combination with a bad customer experience with the claims settlement is one of the most important drivers of insurance policy cancellations (see Psychonomics, 2008). Empirical studies by YouGov (2012) underline customers’ expectations in the case of a loss: good accessibility when reporting the claim, personal communication during the claims handling process, short response times and fast settlement of the claim, which translates into short cycle times. Transparency regarding the process and the settlement amount is important for policyholders. Finally, customers put their own interest (claims payouts) ahead of the interests of the insured collective. Thus, settlements involving goodwill (i.e., for borderline loss cases not covered by the in-force insurance policy) have a positive impact on how the service is perceived by the customer. This has been analyzed in the consumer goods industry in connection with voluntary compensation for warranties. Andaleeb and Basu (1998) find evidence for a positive correlation between the level of perceived customer service and the amount of warranties granted, while Huysentruyt and Read (2010) identify the emotional well being of the customer as the main reason why companies with higher product warranties were preferred over firms with a lower average level of warranties.

Conflicts within the claims management framework arise because the two stakeholders – the insurance company and the customer – have different expectations and goals that need to be reconciled. In addition, the insurers own goals regarding the claims volume and administration costs are competing (see also, e.g., Naujoks and Venohr, 1998). In the following, we outline three examples for illustration purposes. First, management may initiate more detailed audits that typically help to lower the claims volume (goal A), e.g., by getting better estimates of the actual loss or by detecting more fraudulent filings. However, these audits entail higher administration costs (e.g. human resources) and process expenses (e.g. IT-supported audits), and are therefore in conflict with goal (B). This procedure may also have a negative impact on the cycle times, making the settlement process longer, which is contrary to goal (C). Second, customers typically favor higher service standards, i.e., fast claims adjustment, personal communication and no waiting times (goal C). However, such initiatives are in opposition to the other two goals. In fact, a quick settlement of claims is almost impossible through audits and therefore hinders fraud detection and claims volume optimization (goal A). And if the company implements such measures, they are only feasible with higher resources and thus at a higher cost (in opposition to goal B). The same holds for personal interaction and short waiting times. Third, goals (A) and (C) are also in opposition to one another in terms of contractor usage (less personal service for customers), alternative compensation (may be perceived negatively by customers) or limitation of goodwill payouts (against policyholder “expectations” in the case of borderline cases and leading to more negative perception of the service).

3 Description of current strategic topics and survey setup

Using the aforementioned threefold structure, we have identified strategic topics in each of the three dimensions using a two-step process. First, we have established a long list of relevant levers underlying

the three key dimensions (A–C) by conducting desk research and analyzing current trends in the business environment (for example, the need for cost reduction programs, the change of customers’ behavior, the availability of new technologies). Second, on the basis of about 20 telephone interviews with C-level representatives of different insurance companies in Germany and Switzerland (who are mostly in charge of the claims management department at their company) we have aggregated our ideas into 13 topics that we describe in detail below. The resulting topics represent the most important issues from a practitioner’s perspective. Four topics involve claims volume (1–4), five concern administration costs (5–9) and the final four deal with customer satisfaction (10–13). Our assumption is that the identified topics are of particular relevance to insurance companies in the current market environment. In the description below, we put the topics in the context of the existing (academic) research and/or of the current industry practice. Based on these topics, we develop a survey in which we ask relevant industry representatives about the current impact and the expected importance of each lever.

(A) Claims volume

- (1) *Usage of alternative compensation methods.* Standardized adjustment patterns can be introduced with the help of alternative compensation methods. They target a reduction of the influence of the individual customer on the claims adjustment process. The so-called “payout” or “standard” claims are most suitable since they show comparably low levels of complexity. Most often, such methods are applied when the customer receives payments on a different basis than actual invoices. From the insurance companies’ point of view, such compensation aims at lowering the total claims volume by regulating claims more appropriately and without cash payouts to customers (e.g., replacements in kind). Ceeney (2011) identifies active communication with customers as a key success factor for the introduction of these methods. In an analysis of their acceptance for car insurance, Brandstetter (2006) finds that customers support the introduction of alternative compensation methods on the condition that service is increased or product premiums are lowered. Finally, from a sustainability point of view, Meyricke (2010) considers the fact that damaged assets are most often replaced instead of repaired as a central issue in insurer’s claims management.
- (2) *Activities to prevent insurance fraud.* The detection of fraud is one of the major tasks in claims management and measures cover strategic, personnel and systemic fields. The Association of British Insurers (2012) reports detected fraudulent claims in the U.K. amounting to £1 billion in 2011; the German insurance association estimates the volume of annual insurance fraud to be around €4 billion in the German non-life insurance segment.² An effective fraud detection system therefore targets a reduction in overall claims volumes by keeping an eye on auditing costs (see, e.g., Picard, 1996; Viaene et al., 2002; Müller et al., 2014). The pivotal question is how much effort insurance companies have to invest in order to reduce their fraud exposure to a sustainable level. In the past, companies have generally been too tolerant (see, e.g., Viaene and Dedene, 2004) and, according to Bearing Point (2008), processes need to be more automated in order to improve prevention. This also implies that insurers have to devise new detection methods that are highly adaptive to customer behavior (see Viaene et al., 2005). Fenn and Rickmann (2001) and Gracey (2009) see the low level of information on individual claims cases that companies collect as an important reason why fraud

²See <http://www.gdv.de/versicherungsbetrug>.

often cannot be detected. Different fraud patterns and categories of fraudulent customers increase the complexity. Most insurers also segment potentially fraudulent customers into professional and amateur fraudsters (see, e.g., Tennyson and Salsas-Forn, 2002, for a review of empirical auditing practices). According to Fähnrich (2013), the reduction of amateur fraud (also opportunistic fraud) holds the most potential. Tennyson (2011) and Pratt (2009) find that the identification of amateur fraud is most difficult and also holds the most risk of damaging the customer relationship. In all activities, insurers face the potential risk that the market may detect the auditing strategy of the insurer and the latter may thus be cheated (see Lang and Wambach, 2013).

- (3) *Customer requirement to use contractors.* This requirement is closely linked to alternative compensation methods (topic 1) and involves that customers use only pre-defined contractors in loss events. This can help insurers reduce claims volumes significantly, because it allows companies to make use of economies of scale. Furthermore, it allows insurers to increase the vertical integration of the adjustment process, which results in an information advantage over customers. For example, HUK Coburg (2009), a German insurance company, defines its nationwide contractor network as a key success factor in having average claims costs that are below-market. Nevertheless, the applicability largely depends on the business segment. Because the car insurance line has the least complexity it is the most appropriate segment for contractor requirements. However, in order for such a system to receive high acceptance, customers need to see direct advantages from that requirement (for example, increased service levels or reduced product premiums, see Brandstetter, 2006).
- (4) *Active claim case steering.* Continuous and active routing of the claim case along the handling processes is called active claim steering. This applies to the internal and external processes (e.g., the transfer of cases to contractors or outsourcing of processes to third party providers). Such a system can keep the insurer informed at all stages of the process and thus enables the company to intervene in a timely manner whenever necessary. Active claim case steering can lower the total claims volume of insurers, e.g., through a reduction of insurance fraud and the selection of service providers with the lowest prices.

(B) Claims administration costs

- (5) *Outsourcing of claim processes.* This involves all initiatives through which insurance companies transfer claims-related processes to third party providers. The primary motivation is to reduce administration costs. Given the importance of claims management, particularly with regard to the customer relationship, insurers are generally very selective when outsourcing operational processes. This is in sharp contrast to players in the manufacturing and retail industries. However, there are success stories involving process outsourcing (see the example of HUK Coburg, 2009, described above) and some authors even define it as a trend (see, e.g., Khiruddin, 2011). Other industry experts (see Johnson, 2013) consider the outsourcing of claims processes as a cyclical trend without a clear right or wrong either way. Contrary to these findings, Hood and Stein (2003) see increasing efforts by U.K.-based insurance companies to return to in-house claims handling. In an analogy involving insurance distribution and claims management, Regan (1997) shows that outsourced sales agents are more expensive for insurers than in-house sales agents. Higher income

margins as well as higher customer service levels are the main reasons for this. Larsen et al. (2011) and Kalaighnam and Varadarajan (2011) find evidence for increased monitoring and controlling costs for companies with off-shored business activities. Increased monitoring efforts are rooted in the principal-agent theory, where the external contractor is seen as the agent. Higher controlling costs result from a larger complexity in the steering processes of contractors.

- (6) *Detailed claims segmentation.* Retail claims are segmented according to claim complexity in the insurer's back office to enable appropriate handling. Segmentation methods differ to a significant extent among insurance companies. The rationale behind claims segmentation is, to provide the right handling pattern for a maximum number of incoming claims (see Crawford & Company, 2007). Claims are either segmented into categories, e.g., according to the amount of claimed losses, or are partitioned on the basis of multiple factors (see also Mahlow and Wagner, 2014). New developments show that companies are trying to introduce more complex segmentation systems because traditional models often lead to higher levels of wrongly segmented claims. One aspect is that claims are not only segmented according to historical data, but also customer behavior plays an important role in claim case steering (see Smith et al., 2000). The overall ability of companies to use cutting edge technologies like predictive analytics can lead to competitive advantages, going beyond the sole operational area of claims settlement (see Salvino and Duganier, 2010, and Amoroso, 2011). State-of-the-art classification also improves fraud detection (see topic 2 and Viaene et al., 2002). Although an increasing number of insurers are aware of the importance of an elaborate claims segmentation system, some still fail to devise one. According to Bart (2012), most of the companies see claims management as too individualistic to apply standardized segmentation systems.
- (7) *Industrialization of payout claims.* "One-step-closing" of claims means that all necessary handling activities from the initial reporting to the settlement of the claim are executed in a single step. Internal or external claim auditors are therefore not needed in the adjustment process. Due to the abbreviated handling process, the one-step-closing of claims cases can largely only be applied to simple payout claims that are not very complex. This is often a trade-off between a reduction in administration costs (lower use of back office resources) and higher claims volumes (e.g., due to potentially inadequate auditing procedures). One-step-closing procedures allow the insurer to communicate reliable claims handling service levels because internal cycle times can be defined in advance (see InterRisk, 2013). In order to be able to provide such procedures, insurance companies have to drastically increase their technological capabilities. A study by Accenture (2010) reveals that, according to insurance executives, the main claims handling processes, such as notification and settlement, are still mostly manually handled. Baecker and Bereuter (2010) recommend a process architecture that integrates customers' mobile devices in the process chain to a high degree.
- (8) *Back office specialization.* We define back office specialization in the claims handling units as the employment of highly specialized personnel. As in other industries, a specialized workforce results in a task-oriented working pattern with narrow qualifications. By contrast, in a generalist approach employees fulfill broader tasks. V. Fürstenwerth and Weiß (2001) state that a specialized workforce is most suitable for complex business segments (e.g., non-retail business) and insurance companies that have several business lines (e.g., health, life, non-life). Salipante (2013) considers the historical

development of claims operations and analyzes claims cases as state transition systems (of opening and closing claims). In their study on the German insurance market, Postai et al. (2005) find that claims handling units are already highly specialized.

- (9) *Flexibility of adjustment limits.* A flexible system of settlement limits allows insurers to switch adjustment competencies quickly within the organization. With such a system, the insurer can adapt limits (e.g. general increase in competencies for internal or external personnel) and responsibilities (e.g. shift from internal to external adjustment) according to predefined mechanisms. Usually, flexible adjustment limits are used in the context of extraordinary loss events (e.g. hail damages, hurricanes and flooding). Such events can lead to tremendous claims handling arrears if the insurer does not use flexible limits. However, due to the enormous complexities of the claims handling processes, implementing more flexibility is often difficult (see Postai et al., 2005).

(C) Customer satisfaction

- (10) *Active customer communication.* This means that the insurer keeps the customer updated about the claim status on a regular basis using all available communication channels (e.g., telephone, e-mail, text messages). Industry practice with regard to customer communication along the claims adjustment processes differ greatly from one company to another. Current research and discussions in the industry show that communication and information are critical to customer satisfaction. Often, regularly informing the customer is considered more important than fast settlement of the claim (see the discussion of topic 12 for references). When trying to introduce new communication systems, insurers likely struggle with technological investments (see the study by IBM, 2006).
- (11) *Digitization of touch points.* With the help of digitization, insurers allow their customers to use online and electronic access channels (e.g., mobile device applications, social media platforms) for claim events. Customers increasingly link the ease of communication to their perceived satisfaction with services. Digitization developments go along with the shrinking importance of previously important communication channels such as letters, faxes and phone calls. Naujoks et al. (2013) note that only a very small number of insurers are currently able to offer digitized handling processes to their customers. Aside from technological aspects, that is often driven by heterogeneous processes used. Companies in German-speaking countries are well behind U.S. companies with regard to digitization initiatives, even though customers actively prefer electronic access channels (see Capgemini and EFMA, 2013). Qualitative and quantitative results from Baecker (2011) underline the increasing importance of this topic. The author concludes that insurers with mobile claims handling processes achieve greater customer trust and satisfaction. Higher satisfaction rates are often achieved by offering new services in addition to the core processes, such as intelligent routing tools and automated emergency situation procedures (see, e.g., Baecker et al., 2010).
- (12) *Reduction of claims cycle times.* Reducing cycle times shortens the time between the customer's report of the damage to the insurer and the settlement of the claim. Besides the provision of adequate settlement payments, claims cycle times are seen as a potential lever for greater customer satisfaction. To the best of our knowledge, there is no empirical evidence that the mere length of claims cycle times has a significant impact on customer satisfaction. On the contrary, Dab et al.

(2007) find that the meeting of communicated deadlines within the process can be more important than the mere reduction of times. Results from Macgard (1990) point into the same direction. The author finds that the prompt taking of customer orders is more important than the total waiting time. Another work on customer satisfaction concludes that perceived customer waiting time strongly depends on the physical and emotional surrounding in which the customer has to wait (see Pruyn and Smidts, 1998). This may be strained in the case of important losses. Direct competitors have to be monitored carefully: Kumar (2005) finds that the reduction of waiting times is perceived differently by customers if competitors improve their services simultaneously. Considering the technological requirements, insurers' operations have to undergo tremendous developments (see IBM, 2006).

- (13) *Transfer of claims processes to sales agents.* This increases the proximity between customers and insurers' sales agents. Centralizing processes in companies' main offices is the counter measure to this strategy. Some insurers consider settlement through sales agents to be an effective measure to increase customer satisfaction, since it is regarded as softening the insurer's anonymity among customers. The side effects may include increases in goodwill payouts or decreases in fraudulent claims. However, an increasing number of insurers do not consider the effects of such a process transfer to be significantly beneficial. These insurers focus on initiatives to re-centralize claims processes (see, for example, Zurich Insurance Austria, 2009).

The survey of our study contains the above 13 topics framed by the three management dimensions. A summary of topics (1) to (13) is given in Table 1. While we discussed goals in claims management at a strategically high level in Section 2, our survey aims to provide deeper insights into current and future aspects. All survey participants were asked to evaluate the current and the future impact of each topic on a five-point Likert scale 1 = "very low" impact, 2 = "low" impact, 3 = "neutral" or no impact to 4 = "high" and 5 = "very high" impact. Results were obtained via an electronic survey from September to December 2013. In addition to the qualitative survey results, we had (unstructured) discussions with some of the participants. The insights gained from these interviews deepened our knowledge, and we will partly reference these in the remainder of the paper.

4 Data basis and results

4.1 Data collection: methodology and data basis

For our survey we use a questionnaire based on the 13 topics identified in Section 3. Participating insurers come from Germany and Switzerland. Initially, we contacted 57 C-level representatives.³ A total of $N = 22$ representatives of different insurance companies returned the questionnaire.⁴ This corresponds to a response rate of 39 percent. Of the 22 insurers, 17 are from Germany and 5 from Switzerland. In

³Since our study focuses on the non-life retail customer segment, we only consider insurance companies with significant market shares in this business segment. In 2012, these companies had a combined market share in terms of gross written premiums of 87% in Germany and 68% in Switzerland. The questionnaire has been communicated as a complementary part to the survey instrument used in Mahlow and Wagner (2014).

⁴All respondents have fully completed the survey so that the same N holds for all questions. Note that the sample of the 22 final respondents does not fully comprise the sample of participants in the interviews that helped identifying the 13 survey topics, see Section 3.

(A) Claims volume	
(1) Alternative compensation methods	Settlement methods, where the occurred damage is regulated on other basis than customers' own invoices
(2) Insurance fraud prevention	Measures include strategic, personnel and systemic fields in insurance companies' claims management
(3) Obligation to contractor usage	With such obligation, insurers require customers to use only pre-defined contractors in loss events
(4) Active claims case steering	Continuous and proactive routing of the claims case according to the claims settlement process by the insurer
(B) Claims administration costs	
(5) Outsourcing of claim processes	Initiatives in which insurance companies transfer claim processes to third party providers
(6) Detailed claims segmentation	Segmentation according to different criteria to provide individual settlement procedures
(7) Industrialization of payout claims	All handling activities in the adjustment, from reporting to settlement, are executed in a single process step.
(8) Back office specialization	Specialization of the employees in the claims handling units of insurance companies
(9) Flexibility of adjustment limits	Adjustment limits and claim adjustment competencies within the organization can easily be adapted
(C) Customer satisfaction	
(10) Active customer communication	Regular updates about the claim status to the customer during all claims process steps
(11) Digitization of touch points	Insurers allow their customers to use online and electronic access channels for claims processes
(12) Reduction of claims cycle times	Shortening of the time period between a customer's damage report and the claims settlement by the insurer
(13) Transfer of claims processes	Increased proximity to the customer by transferring part of the claims settlement to sales agents

Table 1: Summary of the selected 13 topics labeled (1) to (13) according to the claims management goals (A) claims volume, (B) claims administration costs and (C) customer satisfaction.

each country, we split our sample into two groups according to the size of the company.⁵ The median company size of all participating insurers is € 868 million gross written retail premiums. This will serve to define the two groups of smaller and larger insurers in our analysis. Our study covers 42.4% of the relevant retail market in Germany and 67.9% in Switzerland, respectively. In both countries, the group of 11 large insurers contributes the largest share to the total volume with 33.0% for the German market (8 companies) and 52.8% for the Swiss market (3 companies). Table 2 summarizes the market shares and numbers of participating companies in each group.

Due to the composition of the participants in our study, we face a potential low degree selection bias.

⁵In terms of gross written premiums from 2012 in the three relevant retail business lines: car, property and liability; see also Mahlow and Wagner, 2014. In currency conversions the exchange rate €1 = CHF 1.2007 as of 31st December 2012 is utilized.

	Small insurers	Large insurers	Total
Germany	9.4% (9)	33.0% (8)	42.4% (17)
Switzerland	15.2% (2)	52.8% (3)	67.9% (5)
Number of firms	11	11	22

Table 2: Categorization of participating insurers in the survey according to their total market share per country and company size.

Note: Market shares are calculated on the basis of gross written retail premiums. Small/large insurers have premiums below/above the median premium level of all participants, that is €868 million. Values in brackets reflect the absolute number of answers received.

Since the aim is to consider only firms giving direct access to C-level representatives or top management, insurers with opinions from representatives from lower management levels have been omitted. Aside from this, our focus was on larger insurance companies in order to reach a higher level of market coverage. The 22 responding companies have an average volume of written retail premiums of €832 million (figures for 2012), whereas all German and Swiss companies together have an average size of €636 million. Also note that we achieve a significantly higher market coverage in Switzerland than in Germany (67.9% versus 42.4%). In fact, in Germany we count 17 participants, while in Switzerland we only received 5 responses. However, the German and Swiss insurance markets differ significantly with regard to the number of market participants. From an industry point of view, the total retail market is composed of roughly 10 important insurance companies in Switzerland, compared to around 100 companies in Germany.

Finally, it must be noted that splitting the 22 respondents into small/large and German/Swiss groups implies very small samples. In our study we will report separate values for the groups of small and large insurers (see Table 5) and the groups of German and Swiss insurers (Table 6). Interpretations and conclusions on the results obtained from these samples (especially with regard to the group of only 5 Swiss insurers) must be considered with care. In fact, statistical significance tests will barely lead to positive results. However, the results may give some indications on potential differences within the sample. We discuss the results and address the limitations in each of the following sections.

4.2 The current and future importance of the topics

We first consider the whole set of respondents, i.e., small and large firms from Germany and Switzerland. The focus is on the discussion of differences in assessment of the current and future importance of each of the topics (1) to (13). For this purpose, we provide a graphical illustration of the ratings and expected developments in each topic in Figures 1–3. Subsequently the descriptive statistics are reported in Table 3.

In order to provide a first overview on the assessment of the current and future importance of the 13 topics, we report the distribution of the survey answers in Figure 1. The distribution of the answers in percent is given for each topic and for the rating of current (labeled “C”) and future impact (labeled “F”). This representation allows to see how the different answers are distributed before we focus on average values of the ratings in the sequel.

For further differentiating the responses between current and future impact, we define a two-dimensional plot as follows. We consider the dimensions “current impact” (horizontal axis) and “future impact” (vertical axis). Each topic is characterized by its coordinates in these dimensions. The coordinates are

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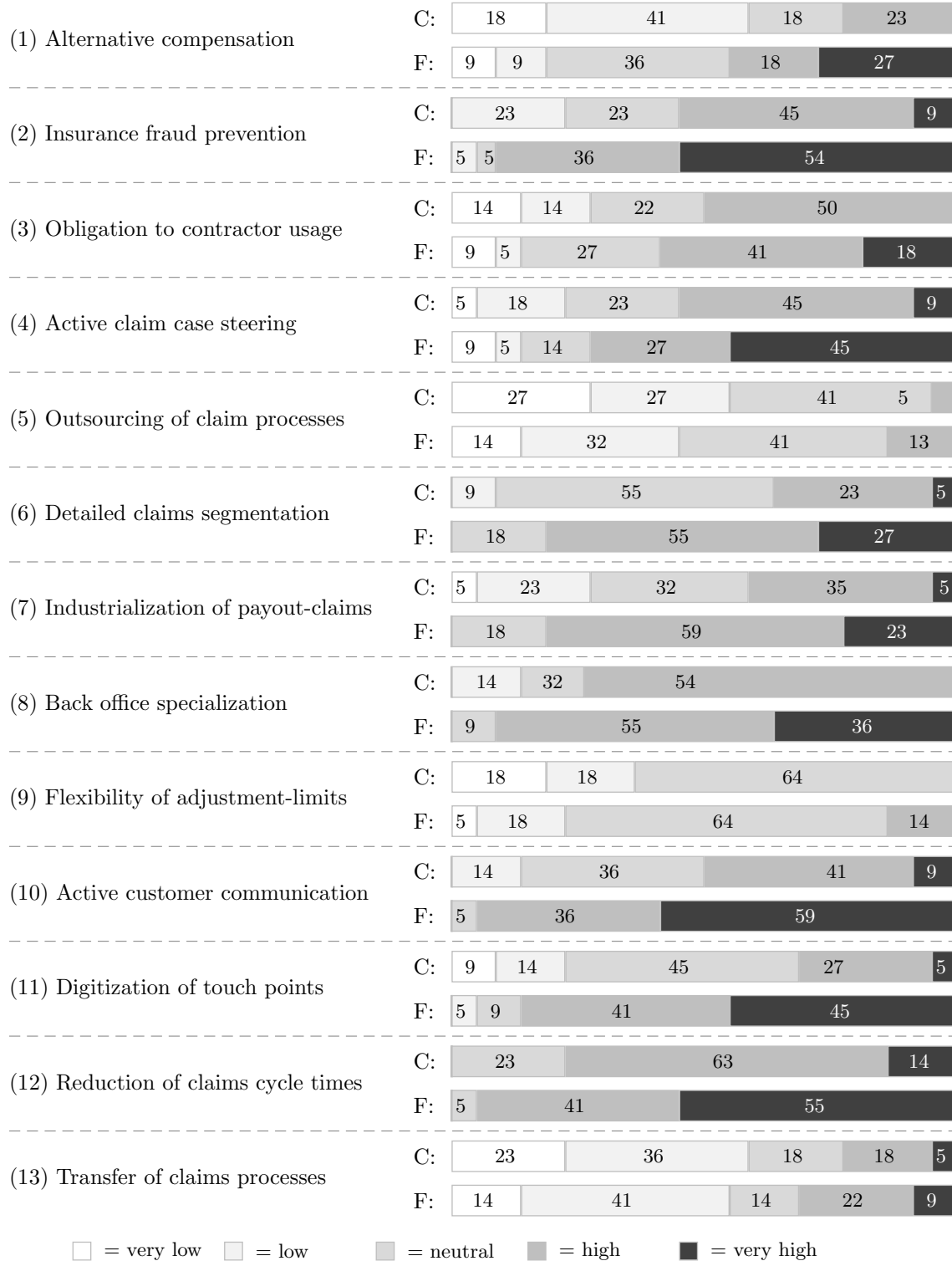


Figure 1: Illustration of the distribution of the survey responses (numbers reflect % of all responses, $N = 22$) of the selected 13 topics labeled (1) to (13) for current (upper bars, label “C”) and future impact (lower bars, label “F”).

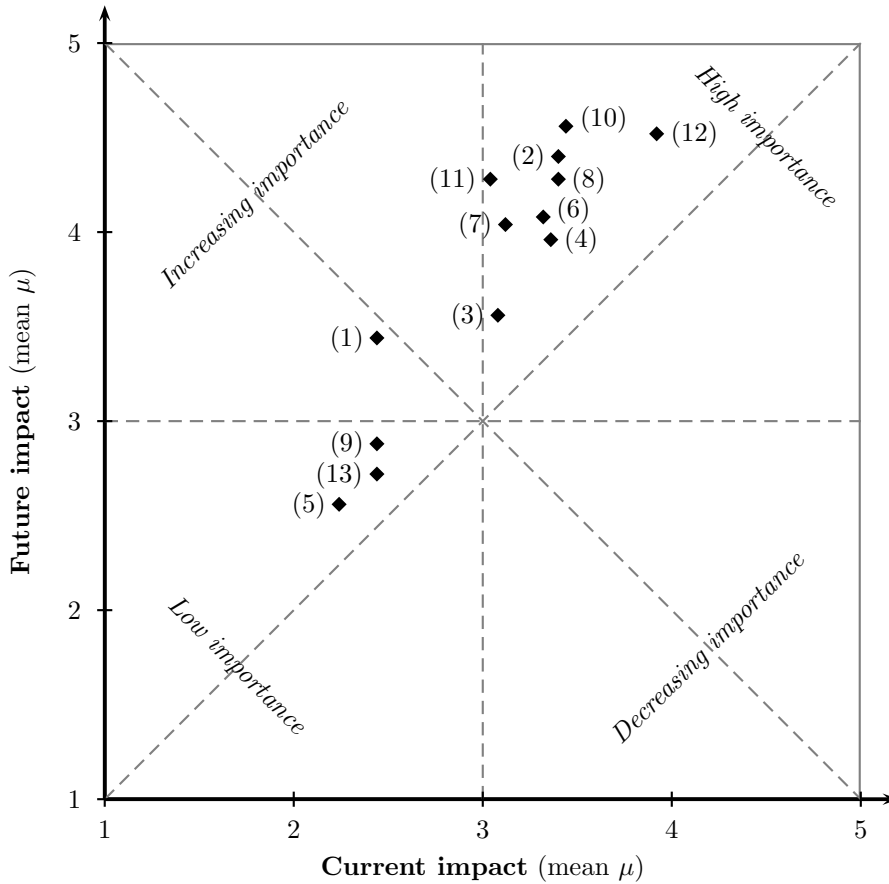


Figure 2: Illustration of the participants’ average rating ($N = 22$) of the current and future impact of the selected 13 topics labeled (1) to (13) as introduced in Section 3, see Table 1.

Note: Each point reflects the average current/future rating (mean μ) of the topic for the whole set of respondents as reported in Table 3 (columns labeled “ μ ”). Combinations of current and future impact levels lead to a position in one of four quadrants and above/below the diagonals with different strategic implications. The value either indicates lower (left-hand bottom quadrant) or higher (right-hand upper quadrant) impact as well as increasing (left-hand upper half space) or decreasing (right-hand lower half space) importance.

calculated as the average current and future rating of the topic for the whole set of respondents. The possible values for the rating follow the setup of the questionnaire, that is, each of the impact categories range from very low to very high (1 = very low, 2 = low, 3 = neutral, 4 = high to 5 = very high). The plot of the results is given in Figure 2. In order to graphically support our further discussions, we introduce quadrants. This enables us to distinguish more easily the topics with lower/higher current impact and those with lower/higher future impact. For example in the right-hand upper quadrant the current and future impact are high, while in the left-hand bottom quadrant the current and future importance have a low rating. Furthermore, we draw two diagonals. The position of a topic in one of the domains has an impact on its strategic implications. In fact, a topic positioned in the left-hand upper half space indicates increasing importance. Topics positioned in the right-hand lower half space are assessed to have decreasing importance in the future.

From Figure 2 we see that topics (2), (10) and (12) are rated with the highest future impact. That is

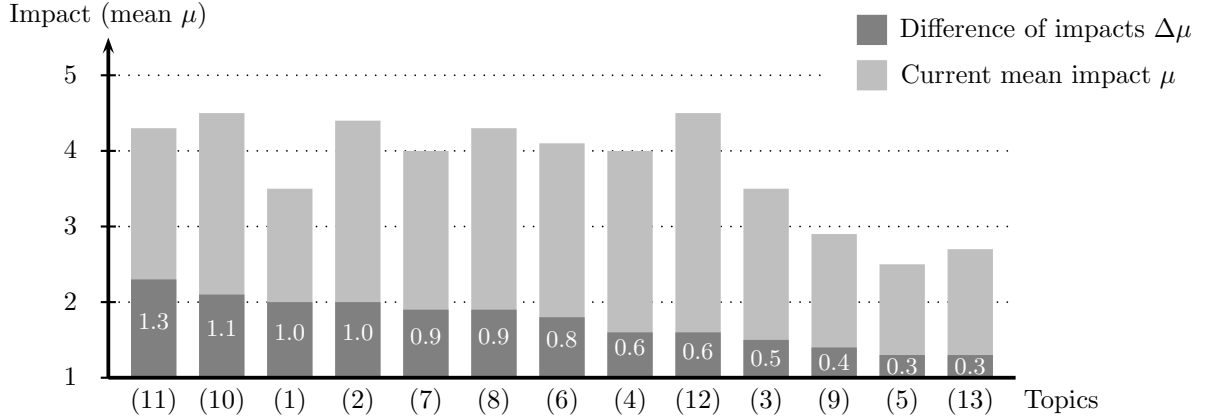


Figure 3: Illustration of the participants’ average rating ($N = 22$) of the current and future impact of the selected thirteen topics labeled (1) to (13), see Table 1.

Note: In each topic the mean difference between the future and current impact is reported and graphically depicted in gray. The rating of the current mean impact is illustrated through a stacked bar in lighter gray. The total height of the bar yields the future mean impact of the topic.

fraud prevention, active customer communication and the reduction of claims cycle times are assessed to be most important in the future. There are no topics in the domain labeled “decreasing importance”. In fact, all surveyed topics are rated with a future impact higher than the perceived current impact. The topics (1), (2), (10) and (11) are positioned most prominently (furthest away from the diagonal) in the “increasing importance-domain”. That is, alternative compensation methods, fraud prevention, active customer communication and the digitization of customer touch points gain most in importance. In Figure 3 we illustrate this graphically. The figure allows us to identify the topics the greatest increase in importance (difference between future and current rating, darker color) and the expected future impact (full height of the stacked bar). The part colored in lighter gray corresponds to current impact. The different topics are sorted from the greatest increase in importance to the lowest increase.

The full set of descriptive statistics is reported in Table 3. For each topic we give the mean value (column “ μ ”), the standard deviation (column “ (σ) ”), the median value (column “ m ”) and the mode (column “ M ”, that is the most frequent answer) of the insurers’ ratings for the current (column “current”) and future impact (column “future”). Furthermore, we calculate the mean difference of future versus current impact (column “ $\Delta\mu$ ”). Most of the topics show a significantly higher rating for future impact than current impact. In order to discuss the significance of the differences in the assessment of the current and the future impact, a statistical test is needed. Given the small size $N = 22$ of our sample and the classical difficulty with the normal distribution hypothesis of the responses in such sets of data, parametric statistical procedures are not applicable for testing the results. A non-parametric or distribution-free statistical hypothesis test forgoes the normality hypothesis. For our analysis we chose the distribution-free rank sum test by Wilcoxon as discussed, e.g., in Hollander et al. (1999, Sect. 4.1). Furthermore, since the same group of respondents assesses the current and future impact, a test for dependent groups is appropriate in our case. Thus, the results from a paired two-sample Wilcoxon signed rank tests are reported in column “sig.”.

Topics	Current				Future				Difference	
	μ	(σ)	m	M	μ	(σ)	m	M	$\Delta\mu$	sig.
(A) Claims volume										
(1) Alternative compensation	2.5	(1.0)	2.0	2	3.5	(1.2)	3.0	3	1.0	***
(2) Insurance fraud prevention	3.4	(0.9)	4.0	4	4.4	(0.8)	5.0	5	1.0	***
(3) Obligation to contractor usage	3.1	(1.1)	3.5	4	3.5	(1.1)	4.0	4	0.4	***
(4) Active claim case steering	3.4	(1.0)	4.0	4	4.0	(1.3)	4.0	5	0.6	***
(B) Claims administration costs										
(5) Outsourcing of claim processes	2.2	(0.9)	2.0	3	2.5	(0.9)	3.0	3	0.3	
(6) Detailed claims segmentation	3.3	(0.7)	3.0	3	4.1	(0.7)	4.0	4	0.8	***
(7) Industrialization of payout-claims	3.1	(1.0)	3.0	4	4.0	(0.6)	4.0	4	0.9	***
(8) Back office specialization	3.4	(0.7)	4.0	4	4.3	(0.6)	4.0	4	0.9	***
(9) Flexibility of adjustment-limits	2.5	(0.8)	3.0	3	2.9	(0.7)	3.0	3	0.4	***
(C) Customer satisfaction										
(10) Active customer communication	3.5	(0.8)	3.5	4	4.5	(0.6)	5.0	5	1.0	***
(11) Digitization of touch points	3.0	(1.0)	3.0	3	4.3	(0.8)	4.0	5	1.3	***
(12) Reduction of claims cycle times	3.9	(0.6)	4.0	4	4.5	(0.6)	5.0	5	0.6	***
(13) Transfer of claims processes	2.5	(1.2)	2.0	2	2.7	(1.2)	2.0	2	0.2	

Table 3: Results of the participants’ rating ($N = 22$) of current and future impact of the selected 13 topics labeled (1) to (13) as introduced in Section 3, see Table 1.

Note: For each topic we report the rating of the current and future impact (columns “current” and “future”) as well as the difference between both ratings (column “difference”). The ratings are given on a five-point Likert scale 1 = very low, 2 = low, 3 = neutral, 4 = high to 5 = very high. For both current and future importance we give the mean value μ , the standard deviation σ , the median m and the mode M of the participants’ ratings. The column “ $\Delta\mu$ ” indicates the difference between the future and current mean values. Statistical results from the Wilcoxon signed rank tests on the significance of the difference between both ratings are reported as follows: *** = significance at the 1% level, ** = 5% level, * = 10% level.

In order to discuss the results, we first consider the three dimensions (A–C) and the overarching results. In Table 4 we report the aggregated descriptive statistics. The average values of the impact are given along with the increase Δ . With the help of Wilcoxon rank sum tests we learn that the difference in the rating of the current impact with respect to dimensions (B) and (C) is significant at the 5% level. This means that currently strategic topics in the dimension customer satisfaction are considered more important than the efforts in administration costs. However, when considering the assessments of future impact and the differences among the three dimensions, we find an even stronger difference between dimensions (B) and (C) (significance below the 1% level) and a significant difference between (A) and (B) (at the 10% level). From this we conclude that the topics regarding customer satisfaction are considered to gain even a stronger importance in the future. Furthermore, the goal of reducing the claims volumes is expected to have a higher impact than measures on claims administration costs.

Subsequently, considering the individual topics (1–4) with regard to the *claims volume*, we note that fraud prevention (2) and active claims steering (4) are the topics with the highest impact ratings. In particular, the finding about topic (4) underlines the insurance companies’ efforts to get better control of the claims handling process. The two topics with the highest increase are alternative compensation methods (1) and fraud prevention (2). Topic (2) is the one where the future impact rating is highest and differs most from the current rating. This result is not surprising to us, since this topic dominates

Strategic dimensions	Current		Future		Difference
	μ	(σ)	μ	(σ)	$\Delta\mu$
(A) Claims volume	3.1	(1.1)	3.8	(1.2)	0.7
(B) Claims administration costs	2.9	(1.0)	3.6	(1.0)	0.7
(C) Customer satisfaction	3.2	(1.1)	4.0	(1.1)	0.8

Table 4: Aggregated results of the participants’ rating ($N = 22$) of the current and future impact at the level of the three strategic dimensions.

Note: See the note in Table 3 for information on the labeling of the columns.

insurance claims management research and literature (see Section 3). This also reflects well the discussions that we had with industry experts in the context of the study. Experts stated that alternative compensation methods can have significantly positive impacts, including in terms of reducing insurance fraud. To realize such potential, insurers will often have to deepen their vertical integration into the claims handling value chain (for example with regard to car garages). We interpret the moderate increase in importance of topic (3) in that insurers prefer to convince customers of the own contractor usage, for example, through offering an increased service level instead of pure obligations.

In the topics (5) to (9) regarding *claims administration costs*, we notice that the outsourcing of processes (5) shows only little impact for operations. The difference between the current and future average perceived impact is not significant. On the one hand, this result supports the general attitude of the industry as being averse to outsourcing initiatives. On the other hand, this is a striking finding with significance for the future, since many experts, including those from outside, see significant optimization potential in process outsourcing (compare, e.g., with EY, 2014). Among the remaining topics, back office specialization and claims segmentation (topics 8 and 6) are rated most important, both for the present and the future. It is also in these two levers and in the industrialization of payout claims where industry representatives see the most significant increases in importance. These topics (6, 7 and 8) argue for segmentation, a higher level of one-step closing of cases and more back office specialization. What is noticeable in all aspects is that the current impact is on average only at a slightly relevant level, despite the fact that insurance companies have been dealing with these topics regularly in recent years. Through interviews with industry experts, we found evidence that the currently low level of importance for segmentation and one-step closing is driven by a non-ready IT environment in many companies. In addition to the IT-related aspect, both topics require companies to handle tremendous amounts of historical customer and claims data holistically. The flexibilization of adjustment limits (topic 9) is expected to experience a significant increase in importance. However, the level of its future importance is still at a neutral level. This is most likely driven by the fact that this topic only becomes relevant in extraordinary loss cases (e.g. significant hail damage), which seldomly occurs. Furthermore, the flexibilization of adjustment limits requires highly standardized operations to transfer single process steps properly. Many companies are currently not able to provide this level of standardization.

Participants see significant changes in operations with regard to the optimization of *customer satisfaction*. While the reduction of claims cycle times (topic 12) and active customer communication (topic 10) are currently seen as the most important levers, they are rated as significantly more important in the future. The future relevance of these strategies has the highest rating of all 13 topics (4.5 points). Furthermore, the digitization of customer touch points, from a current “neutral” rating, will see the

greatest increase in importance according to the participants (+1.3 points). This illustrates that insurance companies are well aware of increasing customer demand for electronic access and communication channels in claims events. There are already some companies that offer selected online access channels to customers, but these initiatives are mostly too separated from the overall claims handling process. Even though customer communication and claims cycle times are the future top levers, the increase in importance of the former is higher than the latter. In fact, focusing on active customer communication supports the concept of added customer value through a high level of information in contrast to focusing solely on operational excellence, i.e., the continuous reduction of cycle times. We also assume that the attempts to reduce cycle times are not relevant for the whole industry, because insurers differ significantly from each other with regard to cycle time performance. This assumption is confirmed by a recent study by Mahlow and Wagner (2014) in which the claims management process efficiency and claims cycle times of 11 insurers from Germany and Switzerland are analyzed. The assessment that a transfer of claims processes to customers (topic 13) only has a lower impact on customer satisfaction is in line with current discussions among practitioners. In fact, there is a tendency among insurance companies to try to centralize their claim adjustment allowances in order to have a more direct influence on the associated risk controlling and management. No significant difference on this measure is expected in the future.

4.3 Differences between small and large insurers

This paragraph discusses the potential impact of an insurance company's size on the perception of the topics. The central question is whether large insurers have significantly different views than small insurance companies. In this context, company size is seen as a potential source of differences due to economies of scale, the ability to invest in information technologies and other related factors. In fact, considering, for example, the dimension claims administration costs and the basic economic principle of economies of scale, the question should be answered positively. However, large insurance companies have to deal with higher levels of complexity and other factors that can reduce the positive effects. As Cummins and Weiss (1993) found out, large insurance companies are more efficient than small and medium insurers. The authors explicitly stress the fact that small and medium insurers lack efficient administrations because they are not able to make use of economies of scale at the same level as large insurance companies. Another empirical study by Fenn et al. (2008) comes to opposite conclusion. The authors find evidence that large insurance companies and companies with high market shares have higher levels of cost inefficiencies than smaller companies. Below, we report the evaluation results of the current and future importance of the 13 topics defined in Section 3 separately for smaller and larger insurance firms. We aim to identify differences on the one hand and evaluate similarities between both company segments on the other hand. Our results are reported in Table 5 and we discuss the figures below.

The comparison of the assessment of the topics by small and large firms shows no important differences. We statistically analyze the observed differences $\Delta\mu$ between the responses from small/large companies using Wilcoxon signed rank tests for independent samples. The future impact assessment in topic (12) is the only one yielding significantly different results at the 10%-level. In fact, with regard to future importance, we note that smaller companies see a very high impact (4.8 points) from the reduction of cycle times. This is significantly higher than the average rating given by the group of large firms. In the following, we discuss indications of trends that can be deduced from the results obtained in the various

Topics	Current			Future		
	Small μ	Large μ	Diff. $\Delta\mu$	Small μ	Large μ	Diff. $\Delta\mu$
(A) Claims volume						
(1) Alternative compensation	2.2 (0.9)	2.6 (1.1)	0.4	3.2 (1.2)	3.6 (1.2)	0.4
(2) Insurance fraud prevention	3.4 (1.2)	3.4 (0.7)	-0.0	4.1 (1.0)	4.6 (0.5)	0.5
(3) Obligation to contractor usage	3.1 (1.1)	3.1 (1.1)	0.0	3.6 (1.3)	3.5 (1.0)	-0.1
(4) Active claim case steering	3.7 (1.2)	3.2 (0.9)	-0.5	4.0 (1.2)	3.9 (1.3)	-0.1
(B) Claims administration costs						
(5) Outsourcing of claim processes	2.1 (0.9)	2.3 (0.9)	0.2	2.6 (1.0)	2.5 (0.8)	-0.1
(6) Detailed claims segmentation	3.2 (0.6)	3.4 (0.7)	0.2	4.1 (0.7)	4.1 (0.6)	0.0
(7) Industrialization of payout-claims	3.3 (1.2)	3.0 (0.8)	-0.3	4.1 (0.7)	4.0 (0.6)	-0.1
(8) Back office specialization	3.4 (0.7)	3.4 (0.7)	-0.0	4.4 (0.7)	4.2 (0.5)	-0.2
(9) Flexibility of adjustment-limits	2.4 (0.8)	2.5 (0.7)	0.1	3.0 (0.7)	2.8 (0.7)	-0.2
(C) Customer satisfaction						
(10) Active customer communication	3.4 (0.8)	3.5 (0.8)	0.1	4.7 (0.5)	4.5 (0.6)	-0.2
(11) Digitization of touch points	2.9 (0.9)	3.2 (1.0)	0.3	4.2 (0.6)	4.3 (0.9)	0.1
(12) Reduction of claims cycle times	4.1 (0.3)	3.8 (0.7)	-0.3	4.8 (0.4)	4.3 (0.6)	-0.5
(13) Transfer of claims processes	2.1 (1.0)	2.7 (1.2)	0.6	2.8 (1.1)	2.7 (1.3)	-0.1

Table 5: Results of the small ($N = 11$) and large ($N = 11$) insurance companies' rating of the current and future impact of the selected 13 topics labeled (1) to (13) from Table 1.

Note: For each topic, the rating by small and large companies ("small" and "large") as well as the difference between the ratings from both company categories are reported ("Diff." column). The column " $\Delta\mu$ " provides information about the difference between the large and the small companies' mean values. For further details, see the note in Table 3.

topics.

When taking a closer look at the topics in the strategic dimension *claims volume*, several trends can be identified. Currently, small insurers tend to see a higher lever in active claims steering (topic 4), whereas larger insurers tend to consider insurance fraud prevention and alternative compensation methods (topics 2 and 1) as more important. This may be because the claims management units of smaller insurers are not yet prepared for this strategic switch. For example, as mentioned in Section 3, alternative compensation methods seek to substitute the invoice-based adjustment process, which requires the insurer to vertically integrate into repairment processes to a higher level. Such investments are naturally easier for large companies to make. Active claims case steering (topic 4) is assessed to be of great importance by both company segments with respect to future developments.

Considering the topics in *claims administration costs*, the difference in the assessment of both groups of insurers is even less prominent (no statistically significant differences). While large insurers currently assign the most importance to detailed claims segmentation (topic 6), smaller insurers focus more on back office specialization (topic 8). Large insurers seem to rate the industrialization of payout claims (topic 7) as less important than small insurers. The fact that large companies are often more industrialized than small companies might be a reason for the lower impact as assessed by large insurance companies. When looking at the assessments of the future impact the differences between both groups are close to zero. Small and large insurers have an almost identical assessment of administration cost-related topics.

Within the topics related to *customer satisfaction*, the reduction of claims cycle times (topic 12)

reveals a significant difference in both groups' rating on future impact. Small insurance companies see a very high impact, whereas large insurers evaluate the impact 0.5 points below this level. Although the absolute impact levels for both company segments are a high level, the difference leaves room for interpretation. Mahlow and Wagner (2014) analyzes whether small insurers currently have higher cycle times than large companies. Depending on the business line, those companies put more emphasis on the topic in the future. Besides the reduction of claims cycle times, there are no topics with significant differences between small and large insurers. When considering current impact levels, the reduction of cycle times (topic 12) is of high importance for both groups of companies, followed by active customer communication (topic 10). These two topics are also seen as the top levers in future strategies.

4.4 Differences between German and Swiss insurers

Finally, we focus on differences between German and Swiss insurers. Different market conditions may have an impact on insurers' claims management. The following aspects are likely to be drivers for potential differences: The German insurance retail market is significantly larger than the Swiss market with regard to total market volume (in terms of premium volume and number of insurance companies). This leads to more intense competition in the German than the Swiss market, which is reflected, for example, in significantly lower average retail premium levels in Germany. We thus assume lower operational margins in Germany and as a result more pressure for insurance companies to excel in operations in general and also with regard to claims operations in particular. Swiss insurers have comparably lower claims ratios than German insurance companies, especially in car and home insurance lines (see Footnote 1). Another factor that might differentiate claims operations of German and Swiss insurers is the higher income level and associated higher human resources expenses in Switzerland. We would expect this to lead to increased claims automation efforts by Swiss insurance companies.

The results from the German-Switzerland side-by-side analysis are reported in Table 6. No significant differences can be detected using statistical tests. This is not surprising, given the small sizes of the subsamples ($N = 5$ for the group of Swiss companies). Thus, in what follows we limit ourselves to carefully commenting on the descriptive results. For the dimension *claims volume*, a relatively high difference $\Delta\mu$ in the assessment between German and Swiss insurers can be detected in topic (2) insurance fraud prevention. Insurance companies from Switzerland rate this topic higher where this topic has a very high impact rating, especially with regard to its future impact (4.8 points). Further, we note that German insurers rate the other three topics (1), (3) and (4) higher than Swiss insurers, as well with regard to their current and future impact. This trend may indicate that German insurers are looking more intently for optimization measures in claims management. In terms of efficiency improvements in *claims administration costs* and topics related to *customer satisfaction*, German and Swiss insurers reveal no important differences (all $\Delta\mu$ smaller than 0.5 points). With regard to their current impact, the same topics (6) and (8) have the highest rating in both countries. With regard to their future impact, Swiss insurers tend to focus more on the digitization of customer touch points (topic 11), whereas the transfer of claims processes (topic 13) is only considered to be of low importance in Switzerland. On average, Swiss companies view the transfer of claims processes to sales agents as having a low impact, while German insurers consider the impact to be neutral. Based on further discussions with industry experts, we discovered that insurers view the transfer of processes to sales agents negatively. This may

Topics	Current			Future		
	DE μ	CH μ	Diff. $\Delta\mu$	DE μ	CH μ	Diff. $\Delta\mu$
(A) Claims volume						
(1) Alternative compensation	2.5 (1.1)	2.2 (0.4)	-0.3	3.6 (1.3)	3.0 (0.6)	-0.6
(2) Insurance fraud prevention	3.2 (1.0)	4.0 (0.0)	0.8	4.3 (0.8)	4.8 (0.4)	0.5
(3) Obligation to contractor usage	3.2 (1.1)	2.6 (1.0)	-0.6	3.6 (1.2)	3.4 (0.5)	-0.2
(4) Active claim case steering	3.4 (1.1)	3.2 (0.7)	-0.2	4.0 (1.3)	3.8 (1.2)	-0.2
(B) Claims administration costs						
(5) Outsourcing of claim processes	2.3 (0.9)	2.0 (0.9)	-0.3	2.6 (0.9)	2.2 (0.7)	-0.4
(6) Detailed claims segmentation	3.2 (0.7)	3.6 (0.5)	0.4	4.1 (0.8)	4.0 (0.0)	-0.1
(7) Industrialization of payout-claims	3.2 (1.0)	3.0 (0.9)	-0.2	4.0 (0.6)	4.2 (0.7)	0.2
(8) Back office specialization	3.4 (0.8)	3.6 (0.5)	0.2	4.2 (0.6)	4.4 (0.5)	0.2
(9) Flexibility of adjustment-limits	2.4 (0.8)	2.8 (0.4)	0.4	2.8 (0.7)	3.2 (0.4)	0.4
(C) Customer satisfaction						
(10) Active customer communication	3.5 (0.8)	3.4 (1.0)	-0.1	4.5 (0.6)	4.8 (0.4)	0.3
(11) Digitization of touch points	3.0 (0.9)	3.2 (1.2)	0.2	4.2 (0.9)	4.6 (0.5)	0.4
(12) Reduction of claims cycle times	3.9 (0.5)	4.0 (0.9)	0.1	4.5 (0.6)	4.6 (0.5)	0.1
(13) Transfer of claims processes	2.5 (1.0)	2.2 (1.6)	-0.3	2.8 (1.1)	2.4 (1.5)	-0.4

Table 6: Results of German (DE, $N = 17$) and Swiss (CH, $N = 5$) insurance companies' rating of the current and future impact of the selected 13 topics labeled (1) to (13) from Table 1.

Note: For each topic, the rating by German and Swiss companies ("DE" and "CH") as well as the difference between the ratings from companies from both countries are reported ("Diff." column). The column " $\Delta\mu$ " provides information about the difference between Swiss and German companies' mean values. For further details, see the note in Table 3.

be due to reduced control of claims cases and the potential increase of insurance fraud. Sales agents (tied agents or brokers) may try to extend their claims adjustment competencies to gain more impact on their customers. Summing up these points, our results contradict the expected findings to a certain extent. One reason for this might be that the participants consider the impact of sales agents to be very high, which does not allow for a reduction of the level of external claims adjustment, although it is economically necessary. Finally, it is worth mentioning that active customer communication is seen as the top lever in the future by both company groups.

5 Conclusion

The target of this paper is to give an overview of current and future strategic topics in insurance claims management from a practitioner's point of view. For this purpose, we introduce a claims management triangular framework with the main competing goals, which are (A) the minimization of claims volume, (B) the minimization of claims administration costs and (C) the maximization of customer satisfaction. First, we discuss the three targets and potential conflicts. Next, we define a set of 13 relevant topics in insurance claims management according to three key dimensions. Using a survey, assessments from C-level industry representatives regarding the relevance of the different levers were gathered. The responses from 22 insurance companies in Germany and Switzerland form the data basis for our study.

Many facets of claims management have been little studied by academic work in the field of insurance

management. Completing these references with current industry studies and introducing analogies from other industries, we lay out the importance of the selected topics. According to our analysis, the largest goal conflicts in insurance claims management potentially arise between customer interests on the one hand and insurance companies' interests (efficient claims administration and low claims volumes) on the other hand. Secondly, we see conflicts within insurance companies, especially between actions to reduce claims volumes and keeping claims administration costs at a low level. From the survey of top management at insurance companies, a ranking of the most relevant topics in insurance claims management with respect to current and future impact is derived. The results show that several topics are of particular importance for the insurance industry.

At the level of the three strategic goals we find that initiatives concerning customer satisfaction currently have greater importance than efforts regarding administration costs. In the future, these differences are likely to increase. Furthermore, the reduction of claims volume will receive greater efforts in the future than administration costs. Looking at the different levers, the topics of alternative compensation methods and insurance fraud prevention will see the greatest increases in terms of reducing claims volume. With regard to claims administration cost, the industrialization of payout claims, detailed claims segmentation and back office specialization are likely to see the greatest increase in future impact. For improving the customer satisfaction, industry experts favor active customer communication, the digitization of customer touch points as well as the reduction of claims cycle times. Finally, only one significant difference in the assessment of the topics could be identified between the groups of small and large insurers and the groups of companies in Germany and Switzerland. This is partially driven by the small size of our sample.

We see a better understanding of goals and their potential conflicts in insurance claims management as a relevant research field. In particular, the quantification of interdependencies among the different topics and the firms' position and profitability in the market can add further value to discussions among researchers and practitioners. Our formal introduction of the goals, the assessment of the goal conflicts and the identification of relevant topics can serve as the structural basis in this regard. More detailed research hypotheses can be formed on the basis of our results. However, our interviews with experts from insurance companies demonstrated that data collection for such a research project will be extremely complex since each company uses its own claims handling procedures. To the best of our knowledge, there has not been such an effort in insurance management research to date.

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