Abstract
Ranging from customer service to board presentations, tablets increasingly penetrate the customer advisory process. Past research on mobile banking solutions focused on their potentials in an educational setting, on the advisory process, or on the design of a tablet solution in the retail banking sector. However, little research exists on the impact of tablets on the advisory process in private banking. We qualitatively examined the changes in the advisory process caused by the introduction of tablets in private banking. To that end, we describe the case of a Swiss Private Bank, which introduced tablets into its advisory process and underwent the transformation from a paper-based to a tablet-supported customer counselling.

Keywords: Mobile Banking, advisory process, tablets, hybrid customer interaction, case study
1 Introduction

Customer interaction is dynamic and diverse due to the application of innovative technologies (Brenner et al. 2014). In particular, merging of the digital and the physical world caused by the convergence of different technologies and electronic services such as smartphones, tablet computers (“tablets”) and the social web leads to new ways of customer interaction (Leimeister, Österle & Alter 2014). According to Birch (2012), the tablet is an important device to shift the interaction to a new level: “the tablet is really where we will begin to see this convergence. It has PC-like real estate with mobile-like ubiquitous connectivity” (Birch 2012, 1). The large screen and the low price supported fast adoption of this technology for operating purposes at banks. Ranging from customer service to board presentations, tablets are used indifferent situations. For example, Union Bank has started deploying tablets for operating purposes in 2011. The tablet, which is larger than a smartphone, but lighter than a laptop, provides an easy and fast way to access documents and gives customers quick loan information. It replaces folders and paper worksheets at meetings and enables taking notes and entering information in real time (Adams 2011). The question arises of how the tablet influences the advisory process.

Until now, research on tablets has focused on areas such as the business workspace (e.g. Harris, Ives & Junglas 2012), the educational situation of CIOs (e.g. Bonig 2011), the dialogue setting between doctor and patient, the advisory process with regard to the potentials tablets offer (e.g. Biernat 2014; Nueesch, Puschmann & Alt 2014; Adams 2011), or the design of a tablet solution (e.g. Ruf et al. 2015a; Ruf, Back & Weidenfeld 2015b). However, little research exists on the implication for the advisory process, on best practice of embedding tablets into an organization, or on the impact on the customer advisor’s work in the private banking industry (Nueesch, Puschmann & Alt 2014). In this paper, we describe the changes of the advisory process of a Swiss Private Bank caused by the introduction of tablets. From 2011 to 2014, we studied how the Swiss Private Bank embraced the complexities of implementation and obtained knowledge on how the bank embedded the technology in its organization and how that influenced the advisory process. This paper qualitatively analyzes a tablet-supported advisory situation from the perspective of the customer advisor in private banking and compares it to the previous paper-based advisory situation. We address the following research questions: How does the tablet influence the advisory process from a relationship manager’s perspective and how does the tablet-supported advisory situation differ from the paper-based process.

First, we consider related research regarding tablet-supported customer advisory situations. Second, we analyze the specific case of a Swiss Private Bank to investigate
the impact of tablets on the customer advisory process in practice. Following analysis, we discuss the limitations of this study and provide an outlook on future research.

2 Related Research

In this section, we discuss the relevant theoretical background pertaining to the advisory process and to the value realized through a tablet-supported advisory situation, and provide an outlook on initial changes in the advisory process in a retail banking context.

Tablets are defined as information systems (IS) (see Silver, Markus & Beath 1995). The key elements of IS are people (persons that use the tablets), business processes (activities which are integrated and processed through tablets) and information technology (including software). Atkinson (2008, 2) defines tablets as “a form of mobile personal computer with large, touch-sensitive screens operated using a pen, stylus, or finger”. According to Pitt, Berthon and Robson (2011), tablets exhibit some differences to traditional PCs. First, mobility: a tablet is easy to carry, fits into a bag and is quickly turned on. Second, presentation: in comparison to a laptop screen, a tablet screen is smaller, but, however, larger than a smartphone without being too heavy. Third, interaction and navigation: the touchscreen enables the users to navigate with their fingers.

2.1 Customer Advisory Process

Customer interaction relates to the processes between a company and its customers (Vandermerwe 2000), in which they share information in order to jointly solve specific customer needs (Dezinger 2010). Thus, customer advisory is “one interactive, collaborative information channel, available to an individual seeking assistance in reaching investment decisions” (Nussbaumer et al. 2009, 5). Based on several existing models of the advisory process in general (see Stryker 2011, Sadler 2001, Lippitt & Lippitt 1986, Keizer & Kempen 2006), the advisory process can be divided into six major phases: initiation (preparing the meeting), profiling (determining the target situation based on the customer’s needs), concept (developing a solution based on the customer’s situation and requirements), offer (presenting and discussing the specific offer), implementation (implementing strategies into product portfolios) and maintenance (monitoring and updating the customer’s requirements and optimizing strategies) (see also Nueesch, Puschnmann & Alt 2014).

Financial advisory is a longstanding strategic priority of the private banking industry and an important competitive differentiator (Schwabe & Nussbaumer 2009, Collette et al. 2015). Competitive differentiation can be achieved through an individualized advisory, which however is a complex process. Technology can facilitate this process by
standardizing it and, thus make it more efficient and effective (Schwabe & Nussbaumer 2009; Buhl & Kaiser 2008). Our focus in this paper lies on the tablet as a salesperson-customer-shared technology, i.e. technology actively used by both customer and salesperson during the advisory (see Ahearne and Rapp 2010), and its effect on the advisory process from initiation to maintenance. The reason we focus on a salesperson-customer-shared technology lies in the present and future importance of a personal relationship in private banking (see e.g. KPMG 2015, Capco 2015, Capgemini 2015). The tablet solution, which is described in this paper, could not be used as pure self-service or “customer-centric” technologies due to its complexity (e.g. the simulations are not self-explanatory).

### 2.2 Initial Changes in the Advisory Process in the Retail Banking Context

A previous paper from Nueesch, Puschmann and Alt (2014) provides general insights about the major implications of the use of tablets on the advisory process in a retail banking context. However, it does not describe the changes along each advisory process step.

*Implications on sequence.* The customer takes a more interactive role in the advisory meeting. The process is no longer an inquiry-response process.

*Implications on the number of process steps and on the automation of the process.* All data are presented on the device. During the meeting, all information is immediately documented and archived. The documentation of the advisory meeting does no longer require a separate step.

The question arises of how the tablet influences the customer advisory process at each step. In section 4, we analyze that impact in more detail and describe the changes along each process step, before we compare the results to the paper-based advisory situation.

### 3 Research Methodology

This paper is part of a design science research project (see Hevner et al. 2004). Design science research aims to create and subsequently validate solution-oriented artefacts (methods, reference models, etc.).

In order to determine the qualitative impact of a tablet on the advisory situation and the working processes of customer advisors, we chose a case study approach. This method is particularly appropriate for exploratory research because the circularity of the research process allows for necessary redefinitions of concepts or adjustments of data collection methods in line with relevant findings (Yin 2003). The unit under study,
the Swiss Private Bank, was selected because the investigators had intimate knowledge of the bank’s initial situation. The investigators served as an innovation partner during a three-year project (2011-2014) which aimed for developing and implementing the tablet-solution at the Swiss Private Bank. The project documents including workshop protocols on the tablet’s design requirements and scope as well as presentations and project-related progress reports were the data sources used to describe the changes of the advisory process and the transformation of the bank. This source was complemented by open-ended in-depth interviews (duration of each interview: 45 minutes) with five customer advisors as well as with a vice president from the Swiss Private Bank. The five customer advisors interviewed were change agents entrusted by the bank to support the implementation of the tablets in the advisory process. These change agents had a well-founded understanding of the solution with all its positive and negative aspects. The interviews took place at an early stage of the transformation process to allow for necessary adjustments. The interviewees received the interview guidelines beforehand via e-mail, together with information concerning the goal of the case study and the use of data as suggested by Myers and Newman (2007). The interviews were led by two interviewers to ensure comprehensiveness and to increase the validity of the field notes. The interview documents and interviewer notes were iteratively analyzed and interpreted during the data collection process (Eisenhardt 1989). The questionnaire used a three-point Likert scale (1) “low”, (2) “intermediate”, and (3) “high” (thesis-like questions; e.g. the integrated customer information provides a more holistic view and therefore the customer becomes more tangible (needs, goals, etc.)) as well as open questions. Two conditions were compared: the paper-based customer advisory process (without tablet) and the tablet-supported advisory process. The open questions focused on the effects of tablets on the advisory process itself and on the handling of the device by the customer advisor. The questionnaire was structured along the project goals like uniform branding, customer interaction, fulfilment of legal and compliance requirements, and standardization of the advisory process.

4 Introduction of Tablets into the Customer Advisory Process at the Swiss Private Bank

4.1 Initial Situation – Decision to Implement a Tablet-Supported Customer Advisory

The Swiss Private Bank specializes in asset management and related services for private and institutional clients. As a traditional private bank, it has focused so far on a personal, paper-based customer contact without any technological support during the
advisory situation. Internal as well as external key drivers made a transformation in the direction of digitalization necessary. Therefore, the Swiss Private Bank decided to modernize its advisory situation by introducing tablets. The decision to introduce this technology as opposed to personal computers or laptops was motivated by the distinctive characteristics of tablets (see chapter 2).

The Swiss Private Bank started the transformation project at the end of 2011. It was decided to implement the iPad and to use iOS. The Swiss Private Bank’s tablet solution focused mainly on Swiss customers. The transformation project was organized as an innovation project that involved more than fifty co-workers and comprised an innovation budget (external costs) of four hundred days of development. The Swiss Private Bank’s transformation process is still ongoing. Considering the target return on investment of three years, the investment is profitable. In 2014, about 120 customer advisors used the device in a customer advisory situation. The aim of the project was to implement a standardized and holistic advisory process and to support different phases of the process with a tablet solution, as illustrated in Figure 1.

![Figure 1: Customer advisory process of the Swiss Private Bank](image)

The device supported only the most consulting-intensive process steps of the customer-bank-interaction. This was a decision made by the project management team with regard to the limited budget and in accordance with a cost-benefit-calculation.
4.2 Functionality of and Requirement for the Mobile Banking Solution for Private Banking

To achieve the goal of a holistic advisory, the integration of the device into the existing IT architecture of the Swiss Private Bank was required. The Swiss Private Bank decoupled their back-end from their front-end applications by using service-oriented front-end architecture. The back-end system was modularized and an integration layer (interaction engine handling data and workflows) linked the front- and back-end systems. Each step on the tablet was buffered in the front-end system. The tablet solution was designed as an app, which allowed fast implementation of new services on the device. The app included four main functionalities for serving the customer:

Dashboard. The entry page of an advisory session was the dashboard. The dashboard included different entry points (wealth balance sheet, risk profile etc.) that provided insights into the customer’s financial situation and served as starting points for the advisory situation.

Wealth Balance Sheet (WBS). The WBS provided a holistic view of the customer’s financial situation. It gave an overview of the assets and liabilities for internal as well as for external bankable assets and liabilities.

Risk profile. The advisor had the possibility to analyze the customer’s portfolio based on the risk profile. It gave an overview of the specific risk tolerance and calculated if the customer goals matched with the current financial situation. The risk profile also included the investment horizon as well as the investment structure.

Investment proposition. The Swiss Private Bank’s tablet solution was able to automatically generate fully customized investment propositions (based on model portfolios). The investment proposition, i.e., the customer received a solution to sign, was the main element of customer advisory. Furthermore, items included in the investment propositions automatically complied with legal requirements (e.g. Fidleg and Mifid II).

Each functionality of the tablet solution had to provide an added value (cost-benefit ratio) over the paper-based advisory. An automatically generated investment proposition, a risk profile and WBS providing a holistic view on the customer’s financial situation was considered a benefit. In contrast, an automated goal analysis or event-based simulations could be useful, but they offered no additional benefit in relation to the costs of their implementation. In addition, the complexity of the functionalities of a tablet solution appeared to be critical. On the one hand, the customer can only handle a certain complexity. Therefore, simple functions seemed to be more useful than, e.g.,
complex simulations. On the other hand, simplification of some functionalities remains limited by compliance requirements.

4.3 Impact on the Advisory Process at Each Step of the Process

For the introduction of tablets, the standardization of the advisory process was a prerequisite. However, since both processes occurred at the same time, they could not to be considered and analyzed as being sealed off from one another. What could be done, though, was to compare the paper-based and the tablet-supported processes and to identify alterations which were due entirely either to the tablet implementation (tablet-specific changes (TS)) or to process standardization (process-specific (PS)), or to a combination of both. In the following, we examined those changes first by looking at the process as a whole, and then by examining the different process steps separately.

Due to the implementation of tablets, the Swiss Private Bank was able to implement a standardized advisory model and a new pricing model. Approximately a sixth of the customers are now willing to pay for advice because of the improvements in the advisory situation. Twenty-three percent of the advisory mandates were repriced due to the elimination of margins of retrocession.

As part of the expert interviews, we discussed the differences of a paper-based compared to a tablet-supported advisory situation from a qualitative point of view. Generally, the advisors agreed that the device provided a better user experience due to more transparency concerning the products and a higher degree of involvement of the customer. Additionally, the advisors were more motivated in the tablet-supported advisory situation because of less tedious paperwork. On the other hand, the tablet guided the advisor only partially through the process, because not each step of the advisory process was tablet-supported (see Figure 1). This led to a certain confusion regarding when it was appropriate to use the device or paper and what to do in case the tablet broke down. These uncertainties had to be addressed through special training.

By analyzing the advisory process together with customer advisors, we could evaluate the impact of tablets on each process step. The results are visualized in Figure 2 (paper-based advisory situation) and 3 (tablet-supported advisory situation) and subsequently interpreted in Table 1.
Figure 2: Paper-based advisory process
**Figure 3:** Impact of a tablet-supported customer advisory on the advisory process at each process step compared to a paper-based situation.
### Changes through the introduction of a tablet-supported customer advisory

<table>
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<tr>
<th>Paper-based customer advisory</th>
<th>Changes through the introduction of a tablet-supported customer advisory (TS = tablet-specific, PS = process-specific*)</th>
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| **Initiation**                | - Identification of most important subjects and preparation of necessary documents  
- Preparation of different proposals  
- Identification of customer needs is partly automated and contains subjective interpretation of customer advisor  
- All customer information is available electronically: the dashboard allows for the context-dependent development of the advisory situation (TS)  
- Suggestions for implementing customer needs with an asset proposal are automated (TS)  
- Simulations of proposals are generated during the meeting (TS) |
| **Profiling**                 | - Analysis of customer needs by means of inquiry-response-process  
- Increased flexibility to customize solution according to customer needs (TS, PS)  
- Improved cross- and upselling potentials through better overview on customer’s data based on the WBS (TS)  
- Enhanced visualization of comparison between target and actual situation (TS)  
- Solution generation on the spot and without temporal delay on basis of model portfolios (TS)  
- Customer signs paper-based contract during the same meeting (TS, PS) |
| **Concept**                  | - Solution is generated on basis of proposals prepared during initiation, new meeting is arranged to discuss reworked solution  
- Advisor visualizes solution on paper  
- Documentation of the meeting is done by the advisor after the meeting  
- Continuous examination of compliance with regulations (TS)  
- Continuous documentation of advisory meeting (TS) |
| **Offer**                    | - Customer advisor is responsible for ensuring compliance with regulations  
- Offer is prepared after meeting  
- Documentation of meeting  
- Advisor physically presents offer at next meeting  
- Customer signs paper-based contract  
- Offer and implementation all take place during one meeting (TS) |
| **Implementation**           | - Implementation of solution depends on customer advisor  
- Uniform guidelines concerning implementation of solution (TS, PS) |
| **Maintenance**             | - Monitoring und customer care depends on customer advisor: context-dependent analysis of individual customer profiles  
- Monitoring and customer care as a continuous process through automated recommendations (comparison with market development) (TS, PS) |

* All process-specific (PS) improvements stem from the standardization of the advisory process

**Table 1:** Paper-based compared to tablet-supported customer advisory situation
As Table 1 shows, we could identify the following mutations of the advisory process brought by the device (see also Figure 2 and 3):

Before the meeting. With the dashboard, the advisor had an overall view of all data (customer data as well as further advisory potential). In case some data were missing, the customer had the possibility to provide them digitally. The advisor could actively engage with the dashboard, which provided all the necessary financial information. Each step could be traced back. An automatic completeness monitoring ensured that all necessary data were entered.

Meeting 1. With tablet support, the process steps initiation, profiling, concept, offer, and implementation took place during one meeting. Without tablet support, a minimum of two meetings were required (see Figure 2). In the interim between the two meetings, the advisor prepared the investment proposal in order to discuss it with the customer in a meeting 2. At this point, we saw the greatest efficiency gain: the reduction of the number of meetings and the time between the meetings. Another advantage was the device’s allowing for more customer interaction. Paper-based, the advisory was more of an inquiry-response process. In contrast, with the tablet the advisor adapted the process to the customer’s specific needs and ensured a stronger interactive collaboration towards the solution, e.g. via the touchpad.

The investment proposition was automatically generated based on a model portfolio, which allowed for a customization of the solution. The portfolio was aligned with legal and regulatory requirements. Before implementing tablets, the advisor was responsible for assuring the portfolio’s alignment with legal requirements, a task he had to accomplish between the customer meetings. The automation of this step was another efficiency gain. Furthermore, the transparency of the customer’s investment situation by means of a target-performance comparison served to individualize the advisory and to adapt it to the customer’s specific needs. The device supported the automatic fulfilment of the customer’s requirements (targets were electronically stored, prioritized and quantified, which allowed for the matching of the investment proposition with the customer’s requirements) and allowed at the same time to adapt the solution to the customer’s performance. Better cross- and upselling possibilities arose due to different investment propositions and the overall view on the customer’s data (based on the WBS). With a tablet the advisor was able to successively generate investment proposals until the customer’s needs were satisfied. Without a tablet, the customer advisor had to arrange another meeting (meeting n), so that he had the time to generate a new investment proposition.

The device provided transparency and a holistic view of products and customer data. The interviewed customer advisors agreed that the customer participated in the
solution process and could rely on being advised the right way because he saw each step of the advisory process. Therefore, the customer’s acceptance of the investment proposition was higher because he saw the shift in the variance analysis (e.g. on position level). Furthermore, customer and advisor had access to the same data, which strengthened trust in the advisory solution. The customer advisor was more efficient because both the digital documentation of the meeting and its operationalization took place during the meeting. This led to the reduction of the number of meetings and the time between the meetings.

After the meeting. Operationalization was followed by maintenance. During the maintenance phase, the customer advisor monitored if the implemented solution developed according to plan and analyzed whether there was a requirement for another advisory meeting. This phase did not involve customer interaction.

5 Summary

We investigated the changes of the advisory situation caused by the implementation of tablets into the advisory process of a Swiss Private Bank. Our analysis was based on interviews with the responsible change agents who described how the advisory process was changed by the application of tablets compared to the previously used paper-based approach. In this study, we found the greatest efficiency gain for the customer advisor, i.e., the reduction of the number of meetings and the time between the meetings. The introduction of tablets was associated with comprehensive reorganization of the advisory approach, which enabled the Swiss Private Bank to implement a new pricing model and a standardized advisory model.

In general, the most important aspect of a tablet-supported advisory is the understanding how to involve the customer in the solution building. Guidance on tablet use is therefore important. By means of tutorials, the customer advisors have to be educated in the use of the new devices, especially regarding the question of how and when the tablet should replace paper-based advisory, which was a cause of uncertainty in the beginning. Apart from that, further research in this field is required placing the changes for the customers at the focus.

6 Limitations and Further Research

Within the constraints of the present paper, we prioritized the outcome of the transformation over the transformation process itself. The introduction of tablets into advisory situation altered the advisory process but could have modified also the enterprise architecture. This would be equally interesting to practitioners and should be a topic of further research.
The limited number of the interviewed change agents in this study in addition to their specific roles in the implementation process might have led to a bias in favor of the technology they were supposed to promote. Apart from validating the views of the interviewed change agents through more extensive interviews and surveys among advisors, further research will have to determine the level of customer acceptance of the new technology. Another important step would also be to quantify the effect of tablets in the advisory process, for example, by measuring the number of contracts signed and the overall revenue development (e.g. sales increase, kind of products sold, etc.). Furthermore, the implementation of a tablet-supported advisory needs to be analyzed in other industries in order to verify and possibly generalize our first results.

In this study, we compared the tablet solution with the established paper-based approach. However, another aspect that needs to be addressed by further research is the difference in customer experience between an advisory setting using a tablet or a PC or laptop. Most of the advantages brought by the use of tablets should also apply to a situation in which a laptop is used. According to Bonig (2011), there seems to be some agreement that tablets offset some of the disadvantages of laptops in an interactive setting; however, we need studies quantifying and directly comparing the effects of the use of laptops and tablets in an advisory setting to be able to precisely delineate the distinctions between their effects and formulate practical guidelines.

References


