WEB 2.0 APPLICATIONS IN PRIVATE BANKING - CLASSIFICATION, POTENTIALS, AND APPLICATION FIELDS

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Abstract

Banks gain their main competitive advantage by designing the client-bank relationship. This becomes even more important as customer behavior changes and the internet enables new business models. This paper aims to analyze the potentials and application fields of Web 2.0 applications in private banking by developing a suitable classification system. Typical classification systems of Web 2.0 applications differentiate functional types of applications such as blogs, wikis, social networks or mash-ups. This paper suggests a user-related scheme that differentiates internal and external Web 2.0 applications and thus is aligned along bank's and customer's processes. Additionally it enhances published classifications by adding third party Web 2.0 applications as a further main category. Hence it supplements the existing functional classification system by clearly distinguishing the application owner, the interaction sphere and the communication parties involved. It aims to support researchers and practitioners to gain a holistic overview of potential Web 2.0 application fields in the external communication with clients, the internal communication among employees, and of third party Web 2.0 applications relevant to their business. An example of the world's second largest wealth manager, UBS, unveils the relevance and potentials of Web 2.0 applications along the classified areas. While the usage of internal Web 2.0 applications at UBS seems to be advanced, the use of external and third party Web 2.0 applications is still in the fledgling stages. The third party applications seem not to pose a competitive threat to private banking at present, but future changes in the competitive environment might arise, not least through younger, more internet literate clients and shifting customer behavior.

Keywords: Web 2.0, classification system, client-bank-relationship, private banking
1 Introduction

The emergence and growing dominance of so-called “User Generated Content” (UGC) websites is leading to a paradigm change in the generation, organization and transfer of information and media, and in the social interaction between internet users. Out of the top 10 traffic generating websites globally, six are based on UGC (Alexa 2010). The technologies, the types of web applications, and the resulting user experiences through UGC-websites are commonly aggregated under the term “Web 2.0” (O’Reilly 2005). Web 2.0 is believed to re-shape the consumer-supplier relationships of all organizations and businesses, internet-based or not because of changing customer behaviour (McAfee 2006). (Seo & Rietsema 2010) even state that there is an enormous social pressure on organizations to adopt Web 2.0 technologies as quick as possible.

Private banks’ competitive advantage primarily lies in the design of client-bank relationships as products become increasingly substitutable. In the future private banks could strongly be affected by Web 2.0 applications, because of changing customer behaviour in the banking industry. Increasingly noticeable from a customer point of view are the loss in trust for banks, decreasing loyalty, higher transparency requirements, and higher client involvement in the investment allocation process. An interesting illustration of these developments is provided by Memberlink, the online social network of the Institute for Private Investors (IPI) in the US, which is used by more than 90% of its members to request references of client advisors/banks, to compare fees, and to reveal opaque charges. As the IPI states, “Greater transparency in the wealth management industry is arguably the most applauded of the unintended consequences [of Memberlink].” (Fischer 2010). These developments were even reinforced through the financial crisis. (Celent 2008) for example identifies a growing gap between banking services offered and expectations of Web 2.0 consumers in the US.

Currently, private banks face a double challenge: On the one hand they have invested large resources in IT infrastructure, websites, and online banking platforms. However, these systems often merely facilitate the transfer of information from content providers to content consumers and the execution of standardized transactions such as online payments; this without any interaction mechanisms between the bank and its clients or among clients (PWC - PricewaterhouseCoopers 2009). On the other hand new actors that are especially important in the private banks’ investment domain such as e.g. Covestor or Prosper in the US enter the financial market with new business models using Web 2.0. According to the “Bank & Future 2009” study by Fraunhofer Institute in Germany, 89% of the participating banks state that Web 2.0 will gain importance in the client-bank interaction (Fraunhofer 2009).

Although the concept of Web 2.0 has received some attention from practitioners and researchers, it has hardly been addressed the specific characteristics of the private banking industry and their challenges mentioned before. Even more, the application of current classification schemes to the private banking industry shows that current approaches do not properly classify all Web 2.0 applications that are relevant in the context of private banking (e.g. Covestor). Therefore this paper focuses on the development of a new classification scheme as well as the potentials and application fields of Web 2.0 applications in private banking with three distinct research questions:

- How can Web 2.0 applications be classified from a bank’s point of view?
- What are the potentials of Web 2.0 applications in private banking?
- What are the application fields for Web 2.0 applications in private banking?

This research paper explicitly considers bank-operated Web 2.0 applications for the external interaction with or among existing or potential clients, bank-operated Web 2.0 applications for the internal interaction among its employees, and non-bank-run third party Web 2.0 applications that either support the bank in its internal processes, support the client in his client processes or disintermediate the bank’s offering. Thus it does not consider bank-operated Web 2.0 applications for the communication with competitors, suppliers or institutional clients. It focuses on private banking rather than retail, institutional or investment banking, this due to its strong client focus which may offer many potentials of Web 2.0 applications for customer-bank interaction. Additionally there is no research available for the application of Web 2.0 in the private banking industry.
The value-added of this paper for practitioners and scholars is
(1) a new classification system for Web 2.0 applications in private banking that allows an easier
development of Web 2.0 strategies and the assessment of potentials and risks of Web 2.0 applications
(2) an overview of examples of existing Web 2.0 applications applicable to the private banking industry and
(3) the current adoption rate of Web 2.0 applications at the example of the leading Swiss private bank UBS.

After introducing the research methodology in chapter 2, chapter 3 defines Web 2.0 applications, gives an
overview of their potential benefits and introduces the classification system. Chapter 4 applies this
classification system to the private banking industry and illustrates typical application fields with the case
of UBS. Chapter 5 summarizes the results.

2 Research Methodology

The classification scheme developed in this paper is an artefact developed in the context of design-oriented
information systems (IS) research following the definition of (Österle et al., 2011, 8) who suggest a four
step research process covering the phases of “analysis”, “design”, “evaluation” and “diffusion” (see also
(Peppers et al., 2008, 54-55) and (Hevner, 2004, 82-90) for design science research guidelines).

The four process steps are embedded in an eight year consortial research program (Back et al., 2007, 94-
101) which started in 2004 and runs until 2012. It involves 18 partner companies from all tiers of the
financial value chain (e.g. regional retail bank, international private bank, outsourcing provider, software
provider etc.). The aim of the research program is to develop artefacts (architectures, methods, reference
models, tools) for customer-bank interaction and service-oriented design of banking architectures.
Generally, the artefacts are developed in close cooperation with experts from the participating 18
companies. Those are not only involved in the selection and definition of the research questions, but also in
the conception of target solutions as well as the development of artefacts, their evaluation and finally their
diffusion. The web 2.0 classification scheme presented in the following sections is one artefact which was
developed within the consortial research program.

3 A framework for Web 2.0

3.1 Definition and benefits of Web 2.0

The expression “Web 2.0” has been coined by Tim O’Reilly in 2004 through his “O'Reilly Media Web 2.0
conference” and his subsequent publication “What is Web 2.0” (O’Reilly 2005). It has been employed for
describing a wide variety of differing concepts, applications, and technologies, hence the diffused and
unclear understanding of its exact meaning. The large number of varying social web applications are
themselves in a state of constant evolution which naturally exacerbates the manoeuvre to develop a crystal
clear definition of Web 2.0. Drawing from various research publications (Anderson 2007; Geoff 2007;
O'Reilly 2005; Parameswaran & Whinston 2007; Tenenbaum 2006) a common set of constitutive
characteristics of Web 2.0 applications can be identified:

- Web 2.0 applications do not require the user to install additional software. Essentially, the software is
  outsourced to the web and can be accessed through online/mobile channels.
- Web 2.0 applications allow for interactivity, hence, a multi-directional information flow from
  providers to users and among users.
- Web 2.0 applications allow for mass collaboration, collective creation, social networking, media
  sharing, and experience/data comparison.

These characteristics are enabled by Web 2.0 technologies, such as e.g. AJAX (Fry 2006), mobile services
or open source technologies that allow for a rich user experience, a semantic use of information, and
areas of benefits for Web 2.0 applications in businesses are distinguished in the literature (Kim et al. 2009),
(Murugesan 2007), (Economist Intelligence Unit 2007), and (McKinsey 2009b):
**External Web 2.0 applications**

Web 2.0 in the external sphere implies the interaction of the company with its customers through the use of self-developed or third-party Web 2.0 applications. According to the recent global Web 2.0 survey by (McKinsey 2009a), the five main benefits enabled through Web 2.0 applications in the customer interaction are: acquiring new customers, improving customer service, developing products, allowing customers to interact with each other, and improving marketing. The most relevant Web 2.0 applications used in the external sphere were blogs, social networks, wikis, video sharing, and podcasts. The main risks of Web 2.0 applications in the external communication are due to the decreased control of companies over the communication process and therewith mostly reputational. Web 2.0 applications can work as catalyst in both ways: reinforcing positive or negative publicity (Heng et al. 2007; van Zyl 2009).

**Internal Web 2.0 applications**

The use of Web 2.0 in the internal corporate sphere implies the interaction of employees throughout Web 2.0 applications in the intranet focused towards improving business process efficiency, teamwork, innovation, decision-making processes, and employee relationships (Murugesan 2007). According to the aforementioned study by (McKinsey 2009a), the five main benefit areas through internal Web 2.0 applications are: developing products or services, managing knowledge, enhancing company culture, fostering collaboration, and training. Similarly as in the external sphere, the most relevant Web 2.0 applications used in the internal sphere were blogs, wikis, social networks, video sharing, RSS, and podcasts. As (van Zyl 2009) and (Peters & Stock 2007) explain, challenges exacerbate the implementation of Web 2.0 applications in the internal sphere: the spread and/or loss of sensitive data through misuse by employees, the decrease in productivity through increased social communication, circumvention of hierarchical/organizational communications, the misrepresentation of employees inexperienced with Web 2.0 or the failure to involve a critical mass (ClearSwift 2007).

### 3.2 Classification of Web 2.0 applications

Typical classification systems of Web 2.0 applications distinguish functional types of applications such as blogs, wikis, social networks or mash-ups. Except for small differences, this classification system is adopted by the majority of scholars and practitioners (see (McKinsey 2009a; McKinsey 2009b; Anderson 2007; Charron et al. 2006; Economist Intelligence Unit 2007; Frank 2010; Godwin-Jones 2006; Matuszak 2007; Murugesan 2007; Nath et al. 2009; Peek 2005; Torrance 2006; van Zyl 2009)).

Despite its wide usage and acceptance, the classification into functional types of Web 2.0 applications remains unclear in respect to who owns the application and who the interaction parties are. Such a classification scheme would support executives in deriving and implementing a Web 2.0 strategy as well as in assessing risks and opportunities arising through the use of Web 2.0 applications. Hence, this paper develops a more comprehensive classification system of Web 2.0 applications in business, distinguishing the owner, the interaction spheres as well as the parties involved. The differentiation of external vs. internal Web 2.0 applications is adopted from (Kim et al. 2009). (Boyd & Ellison 2007) categorize internal Web 2.0 applications in companies by differentiating between the types and numbers of communication parties involved. This concept is adopted for the internal application sphere and transposed to the external application sphere. Thus company-run external and internal Web 2.0 applications are broken down by defining categories that clearly segregate between the number and types of interaction parties involved (i.e. external: business-to-individual customer, business-to-many customers, or customer-to-customer, internal: one-to-one, one-to-many, or many-to-many). Additionally this paper adds a further main category, namely third party Web 2.0 applications that are explicitly not run or managed by the company, hence splitting up the “external” impact sphere into company-run (external) vs. non-company-run (third party) applications. Third party Web 2.0 applications are also further broken down into sub-categories distinguishing the interaction parties of the applications (i.e. company and third party vs. client and third party). Taken together, three hierarchical dimensions that allow for a clear distinction of Web 2.0 applications in businesses can be defined (see Figure 1):

1. Owner of the application: Company-run (internal or external) vs. Non-company-run (third party).
2. Interaction sphere: External (customers), internal (employees) or third party.
3. Communication parties involved:


Web 2.0 interaction channels have firstly developed as interaction between individual customers, business-to-many customers, customer-to-customer. Secondly as mass interaction channels between the bank and many clients through applications such as blogs, podcasts, or RSS feeds and thirdly as interaction channels among clients of the bank through applications such as blogs, podcasts, or third party products distributed alongside own products. The external communication between the bank and its clients has dramatically changed with the emergence and development of the internet, whereby three evolution steps can be defined. In a first evolution step the internet is used as a sole information channel from the bank to the client. In a second evolution step the internet is used as a transaction channel between the bank and its clients. And in a third evolution step the internet is used as a Web 2.0 interaction channel between the bank and its clients and among clients. Web 2.0 interaction channels have firstly developed as interaction between individual clients and the bank with the use of instant messaging or instant feedback tools; secondly as mass interaction channels between the bank and many clients through applications such as blogs, podcasts, or RSS feeds and thirdly as interaction channels among clients of the bank through applications such as comparison, commenting or rating tools, forums or social networks.

## 4 Web 2.0 in Private Banking

### 4.1 Characteristics of Private Banking

In accordance to (Gardner et al. 1994) this paper conceives private banking as the comprehensive wealth management offered to sophisticated private clients by banks. The sophistication level of clients thereby refers to their high service requirements due to their complex wealth situation. Hence private banking can be characterized as a service providing the following features (Schierenbeck 1998):

- Custom-tailored and integrated wealth management products and services that meet the client’s individual needs.
- Personal relationships between private banking clients and the bank’s client advisors.
- Trust and discretion in the client-bank relationship.

The integral importance of the client relationship in private banking is confirmed by (PricewaterhouseCoopers 2009). This in combination with the immateriality and heterogeneity of private banking products and the vital nature of financial issues for wealthy clients emphasizes the importance of credence qualities such as trust, reputation, loyalty, discretion, and tradition in private banking (Balmer & Stotvig 1997). Five major trends in private banking have a strong impact on the future structure of private banks and their client’s behaviours: increased demand for transparency by clients (see (Edelman 2010)); out-sourcing of non-core processes (see (IBM 2008)); use of best advice-led models that rely on an “open architecture” where third party products are distributed alongside own products (see (Accenture 2010)); the increased use of electronic channels (see (ISB 2008; ISB 2009)); and the changing consumer behaviour toward active investing (see (Booz and Company 2010; Heng et al. 2007)).

**External Web 2.0 applications**

The external communication between the bank and its clients has dramatically changed with the emergence and development of the internet, whereby three evolution steps can be defined (Seitz & Stickel 1998). In a first evolution step the internet is used as a sole information channel from the bank to the client. In a second evolution step the internet is used as a transaction channel between the bank and its clients. And in a third evolution step the internet is used as a Web 2.0 interaction channel between the bank and its clients and among clients. Web 2.0 interaction channels have firstly developed as interaction between individual clients and the bank with the use of instant messaging or instant feedback tools; secondly as mass interaction channels between the bank and many clients through applications such as blogs, podcasts, or RSS feeds and thirdly as interaction channels among clients of the bank through applications such as comparison, commenting or rating tools, forums or social networks.

**Internal Web 2.0 applications**

The internal communication among the bank’s employees has been strongly influenced by the emergence and development of internal networks based on the internet’s features and commonly defined as the “intranet”. The intranet has developed in similar evolution steps as the external communication with clients through the internet (Curry & Stancich 2000; Martini et al. 2009; Tredinnick 2006): in a first evolution step...
Table 1: Web 2.0 applications in private banking – illustration of results.

<table>
<thead>
<tr>
<th>Type</th>
<th>Characteristics</th>
<th>Applications</th>
<th>Potentials</th>
<th>Risks</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2C</td>
<td>Allows for instant interaction between client advisors and bank-wide experts and individual clients through bank-run online and/or mobile channel applications</td>
<td>- Instant messaging (chat)</td>
<td>- Faster communication</td>
<td>- Data security</td>
<td>Virtual advisor payments through Windows Live Messenger: ABN Amro, KfW Bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Voice over IP (VoIP)</td>
<td>- Direct transfer of documents and/or links</td>
<td>- Stronger monitoring requirements</td>
<td>Instant Messaging: Wells Fargo, National City Video conferencing: BBVA, TD Canada Trust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Access anytime, anywhere and mobile</td>
<td>- Higher licensure costs and expenses</td>
<td>Bankrun.org: Deutsche Bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Monitoring client needs while improving relationships</td>
<td>- Mirr with client corporate culture</td>
<td>Live Messenger: ABN Amro, Rabobank</td>
</tr>
<tr>
<td>B2Cs</td>
<td>Allows for interaction between the bank and many clients through bank-run multi-communication applications in online and/or mobile channels</td>
<td>- Blogs/Microblogs</td>
<td>- Reputation gain through transparency</td>
<td>- Higher monitoring and editorial efforts</td>
<td>Adobe: UBS, Credit Suisse, HSCB Private Bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Podcasts</td>
<td>- Recognize real-time client sentiments</td>
<td>- Reputational damage through negative client comments</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RSS</td>
<td>- Harnessed collective intelligence</td>
<td>- Mirr with client corporate culture</td>
<td>Deutsche Bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Media sharing</td>
<td>- Fast, cheap and direct marketing</td>
<td>- Higher monitoring and editorial efforts</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td>C2C</td>
<td>Allows for one-to-one, one-to-many and many-to-many interaction among the bank’s clients through bank-run online and/or mobile channel applications</td>
<td>Social networks</td>
<td>- Value-added service to clients</td>
<td>- Data security</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wikis</td>
<td>- Improving client acquisition</td>
<td>- Conflict with banking regulations</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commenting, rating, comparing, tagging &amp; linking tools</td>
<td>- Monitoring client trends</td>
<td>- Sufficiently involving critical mass of users</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td>1-1</td>
<td>Allows for instant interaction between two individual employees through bank-run applications in the intranet and/or the mobile channel</td>
<td>- Instant messaging (chat)</td>
<td>- Faster and less formal communication</td>
<td>- Data security</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social network phonebooks</td>
<td>- Direct transfer of documents and/or links</td>
<td>- Circumvention of hierarchical decision tools</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Video conferencing</td>
<td>- Access anytime, anywhere and mobile</td>
<td>- Productivity loss through inefficiency and social communication</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Voice over IP (VoIP)</td>
<td>- Improving employer relationships</td>
<td>- Mirr with client corporate culture</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td>1-Many</td>
<td>Allows for top-down and bottom-up interaction between individual employees and many employees through bank-run mass interaction applications in the intranet and/or the mobile channel</td>
<td>Social networks</td>
<td>- Recognize real-time employer’s opinions</td>
<td>- Higher monitoring and editorial efforts</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wikis</td>
<td>- Harnessed collective intelligence</td>
<td>- Sufficiently involving critical mass of users</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Media sharing</td>
<td>- Fast, cheap and direct corporate communication</td>
<td>- Mirr with client corporate culture</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td>Many-Many</td>
<td>Allows for interaction and collaboration among groups of employees through bank-run applications in the intranet and/or the mobile channel</td>
<td>Social network groups</td>
<td>- More efficient workflow</td>
<td>- Data loss, IT system complexity</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wikis/collaboration software</td>
<td>- Recognizing individual employee contributions</td>
<td>- Employee acceptance</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commenting, rating, comparing, tagging &amp; linking tools</td>
<td>- Improving employer relationships</td>
<td>- Training effort</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Efficient training</td>
<td>- MS-related corporate culture</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td>Supporting</td>
<td>Supports the bank in specific business processes through the use of third party online and/or mobile applications</td>
<td>Client acquisition</td>
<td>- Client acquisition through social networks</td>
<td>- Data loss</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>social networks</td>
<td>- Talent recruitment through social networks</td>
<td>- Reputational damage through unverified employee statements</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Talent recruitment insocial networks</td>
<td>- Harnessed collective intelligence</td>
<td>- Loss of single employee statement</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Media sharing</td>
<td>- Mirr with corporate culture</td>
<td>- Client acquisition: LinkedIn, Xing, XingWorld, Gobe</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td>Complementing</td>
<td>Complement the bank's offering by supporting the client in her client processes, buying, investing, financing planning and in his bank account services through the use of selected online and/or mobile applications</td>
<td>Online Personal Financial Management tools</td>
<td>- Recognizing innovation</td>
<td>- Client acquisition: LinkedIn, Xing, XingWorld, Gobe</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social insider</td>
<td>- Identifying trends</td>
<td>- Talent recruitment through unverified employee statements</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bank client advisor/product comparison websites</td>
<td>- Retractional gain through positive client feedback</td>
<td>- Training effort</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td>Distinct</td>
<td>Party or complementary platform for the product and service offering of the bank by taking over one or more of the client processes, buying, investing, financing, planning and in his bank account services through the use of third party online and/or mobile applications</td>
<td>Online private banking</td>
<td>- Detecting potential challenges and risks of new web technologies</td>
<td>- Data loss</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td>Non-intermediation</td>
<td>Collaborative investing platforms</td>
<td>- Recognizing client trends</td>
<td>- Reputational damage through negative client comments</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Collaborative research</td>
<td>- Identifying innovation areas</td>
<td>- Mirr with corporate culture</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Circumventing of bank's core competence</td>
<td>- Client acquisition: LinkedIn, Xing, XingWorld, Gobe</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Price competition through transparency</td>
<td>- Loss of single employee statement</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Less demand for investment delegation</td>
<td>- Loss of single employee statement</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Loss of single employee statement</td>
<td>- Loss of single employee statement</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Loss of single employee statement</td>
<td>- Loss of single employee statement</td>
<td>Deutsche Bank: KfW Bank &amp; Commerzbank</td>
</tr>
</tbody>
</table>

Table 1: Web 2.0 applications in private banking – illustration of results.
In a second evolution step the intranet can be used by employees to perform internal transactions such as service requests, holiday submission, project evaluations or performance assessments. In a third evolution step the intranet is used as an interaction channel with three phases: firstly as a one-to-one interaction channel between two individual employees through instant messaging applications; secondly as a one-to-many interaction channel between the content provider and many employees through applications such as blogs, podcasts, or RSS feeds; and thirdly as a many-to-many interaction channel through online collaboration tools such as wikis, online collaboration or group network applications (van Zyl 2009).

Third Party Web 2.0 Applications

The development of the internet from a static information platform to an interaction platform incorporating Web 2.0 elements has led to the emergence of third party non- or near-bank specialists providing specific online services to private banking. Two user categories of third party Web 2.0 applications can be defined:

- **User - private bank**: Third party Web 2.0 applications used by private banks include all categories of applications such as social networks, blogs, or media sharing from third party providers. They are used by banks to support them in specific business processes such as client acquisition, talent recruitment, or idea generation. Hence we call this category “supporting” third party Web 2.0 applications.

- **User - private banking client**: The third party Web 2.0 applications used by private banking clients include all applications that either support (“complementing”) or partly/totally fulfill (“disintermediating”) a client need/process. These applications are provided by third party providers that either focus on additional services which are not part of today's private banking service portfolio or substitutional services which are alternative services from a client's perspective.

The **User - private banking client** third party application category seems to be of important future relevance for private banks, since they challenge banks in their core competencies. This category includes third party providers that either de-value private banks’ core competencies or take over parts or the total value chain of private banks (Porter 1999; Prahalad & Hamel 1990; Wernerfelt 1984). Those Web 2.0 application providers that de-value private banks’ core competence are defined as “complementing” third party Web 2.0 application providers and include applications such as personal online financial management tools, private banking client communities, or price/product comparison websites. The Web 2.0 application providers that take over parts of or the total value chain of private banks are defined as “disintermediating” third party Web 2.0 applications and include applications such as online private banks, peer-to-peer lending platforms, or co-investing platforms. For instance, smava mediates small- and mid-sized peer-to-peer loans granted between private individuals, thus dis-intermediating the bank. Complementing Web 2.0 applications act as further intermediary between the bank and the client while disintermediating Web 2.0 applications disintermediate parts of or the entire private bank’s offering.

Table 1 illustrates the categories, describes characteristics, application types, potentials, risks and real-world examples of each application type. It should be noted that the types of interaction parties covered in this research paper have been limited to the bank and their potential or existing clients. Hence, further stakeholders are explicitly not taken into account. This limitation greatly simplifies the analysis, while nevertheless laying the focus on private banks’ most important interaction party, namely their clients.

### 4.2 Web 2.0 applications at UBS

With almost 1,600 billion USD of assets under management in its private banking business, UBS AG, headquartered in Zurich, Switzerland, is the second largest global wealth manager after Bank of America (as of end 2009; (Scorpio Partnership 2010)). We chose UBS because it has made highly positive experiences with supporting third party Web 2.0 applications to gather ideas and hence, harness the crowdsourcing potential of Web 2.0. Additionally, UBS does not unconditionally implement all different types of Web 2.0 applications, but rather critically accesses chances and risks of each type of application and subsequently implements only those applications that it finds to be the most suitable. By that, the example also provides a critical and reflective view. The following illustration was developed from an interview on September 28, 2010 which does not necessarily represent the complete view of UBS. UBS is employing selected Web 2.0 applications internally, while external, client-facing Web 2.0 technologies are intentionally approached very restrictively, since the implementation of external, client-facing Web 2.0
applications is highly problematic in Switzerland, given the strict banking secrecy laws. Therefore banks merely allow for bank-to-client communication, hence not incorporating the essence of Web 2.0. Even the enabling of client or user comments is legally problematic as it is unclear if the bank might be liable to information provided by users of its websites through bank-run Web 2.0 applications. However, the restrictions are not insurmountable and the potentials of external Web 2.0 applications in Swiss private banking are huge. The softening of the banking secrecy regulations and/or the increased client demand towards interactive banking applications will lead to increased Web 2.0 innovations in Swiss private banking as well as at UBS.

**External Web 2.0 applications**

As stated, UBS approaches external, bank-run Web 2.0 applications for the interaction with and among clients very restrictively. The main reasons include security and privacy issues as well as legal regulations. Bank-to-individual client Web 2.0 applications such as instant messaging or video chat/conferencing systems are regarded as very interesting. Video chat/conferencing systems that allow clients to interact with bank-wide experts while in a meeting with their client advisor are being considered as high value-added for clients. Bank-to-many clients Web 2.0 applications such as blogs, podcasts, and RSS are partly in operation. Selected research reports and news are available through podcasts and RSS feeds, while external blogs are not in operation. Importantly, the external Web 2.0 applications in place do not allow for multi-directional interaction through any Web 2.0 functionalities, due to unclear legal issues and security risks. The perceived potentials through blogs are rather small. Client-to-client Web 2.0 applications such as social networks, wikis or portfolio comparison, product rating, and investment commenting tools are not implemented due to similar legal/security issues as above. However, considerations are being made how clients could profit from comparisons with other clients’ data such as spending patterns, portfolio breakdowns, investment performances, or risk affinities. The potential value-addition to the client is regarded as very high, while legal/security issues could be surmounted.

**Internal Web 2.0 applications**

In general, internal bank-run Web 2.0 applications for the interaction among employees are regarded as potentially highly beneficial, while the perceived risks are low. The main hurdles are cultural adaptations within UBS towards open communication, transparency, peer-to-peer learning among employees, and the embracing of Web 2.0 technology and channels. One-to-one internal Web 2.0 applications such as instant messaging applications, social networks/phonebooks are partly in place. While the chat system Mindalign is in place and in extensive use, social networks and or phonebooks including employee profiles are not used today. However, projects are in progress aiming to introduce such Web 2.0 functionalities. One-to-many internal Web 2.0 applications such as podcasts, blogs, and RSS are partly employed. Employees can access UBS Research through podcasts, selected top-down blogs are in place, for example by members of the Group Executive Board, while RSS or personalized Intranets are not in operation. Many-to-many internal Web 2.0 applications such as wikis, collaboration software, or group interaction applications are partly in place and planned. Wikis are in operation although the usage is rather low. Document sharing or boards are not in place while a group collaboration application is planned. As discussed above, UBS is planning to introduce an internal social networking application that allows for each employee to design and manage a profile, contact other employees, build groups, tag, blog, and comment. The main application field and value-added is the localization of expertise and peer-to-peer learning. Requests have also been made in the front business where the application could be used to compare client bases, portfolios and performances, net new money, and profitability KPIs of client advisors. However, while the technological implementation is rather straightforward, the cultural implications are highly complex. A client advisor that is highly successful might not be incentivized to reveal his client advisory and investment management strategies to his peers. Fostering a culture of peer-to-peer learning and transparent, open discussion among employees will be crucial to the application’s success.

**Third party Web 2.0 applications**

Supporting Web 2.0 applications for the client acquisition are not used out of obvious legal reasons while third party Web 2.0 applications are selectively used to recruit talent and generate ideas. Through an initiative from the IT department, a UBS Web 2.0 competition was initiated in November 2009 to gather ideas on how Web 2.0 applications could support the client-facing online channels of UBS. The competition was publicized both, through external third party Web 2.0 providers such as Amazee.com and
Starmind.com and through internal channels. Within four weeks, approximately 45 papers were submitted through external channels, while only 2 papers were submitted through internal channels. The externally generated ideas were very useful as three external participants were granted a reward of 5,000 CHF each and recruited to follow-up with a project proposal that is being implemented presently at UBS. This “Web 2.0 experiment” has been perceived as highly beneficial by UBS and will possibly be followed-up by similar initiatives. Complementing and disintermediating Web 2.0 applications such as online personal financial management tools, social investing sites, collaborative investing provider, peer-to-peer lending platforms, or online private banks are not regarded as competitive threat to UBS Wealth Management at present as its clients attach greater importance to trust, personal, face-to-face interaction with their client advisor, security, discretion, long-standing experience than to client-to-client interaction, low price, and/or online technology.

UBS has perceived the potentials of external Web 2.0 applications to add value to the client, of internal Web 2.0 applications to add value to its employees and of third party Web 2.0 applications to add value to its innovation process (see Table 2).

However, often the perceived risks, predominantly due to the strict banking secrecy laws in Switzerland, outweigh the potentials that Web 2.0 technologies could have in the external interaction with and among clients. Also, Web 2.0 faces hurdles internally as the cultural compatibility of traditional private banking with the open, transparent features of Web 2.0 is, at best, questionable. However, the efforts to build an innovative external Web 2.0 application where clients can profit from comparisons with collective client data and the efforts to build an internal social network to improve employee-to-employee collaboration and foster a transparent, open culture based on peer data and the efforts to build an internal social network to improve employee collaboration and employee-to-client interaction, low price, and/or online technology.

5 Discussion and Conclusions

By embracing change and new opportunities through the internet, banks can gain competitive advantages with Web 2.0 applications. As (Porter 2001) explains, the internet does not render established rules about strategy obsolete. Rather it makes them more vital than ever. With the internet’s evolution to Web 2.0, these principles become ever more important. Being prepared is key for private banks to lead change and harness future potentials. To critically assess the current situation this paper develops a classification system for Web 2.0 applications in private banking and describes their relevance, potentials, risks, and application fields. The classification system provides a holistic overview and structure of Web 2.0 applications relevant to private banks. This allows researchers and practitioners to more efficiently organize their analysis and risk assessment of Web 2.0 applications which may also be adapted for other industries. As stated before, the only stakeholder the classification scheme considers apart from the

<table>
<thead>
<tr>
<th>Type</th>
<th>Application Fields at UBS</th>
<th>Exemplary/Potentials at UBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2C</td>
<td>Non yet implement due to legal/security issues</td>
<td>Push-Delivery actively keeps employees up to date</td>
</tr>
<tr>
<td>B2Cs</td>
<td>Availability of selected research reports and news through podcasts and RSS feeds</td>
<td>Fast communication / coordination between employees</td>
</tr>
<tr>
<td>C2C</td>
<td>Non yet implement due to legal/security issues</td>
<td>Knowledge dissemination among the employees</td>
</tr>
<tr>
<td>Team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-1</td>
<td>Chat System Mind Align</td>
<td>Fosters communication / coordination between employees</td>
</tr>
<tr>
<td>1-Many</td>
<td>Access to UBS Research podcast</td>
<td>Fast communication / execution of employees’ instructions</td>
</tr>
<tr>
<td>Many-Many</td>
<td>Different Wikis are in operation (but no extensive use)</td>
<td>Knowledge dissemination among the employees</td>
</tr>
<tr>
<td>Supporting</td>
<td>Selective use for talent recruitment and ide generation (UBS Web 2.0 competition)</td>
<td>Crowd-Sourcing of ideas and possibly innovations</td>
</tr>
<tr>
<td>Complementing</td>
<td>Not regarded as competitive threat</td>
<td></td>
</tr>
<tr>
<td>Disintermediating</td>
<td>Not regarded as competitive threat</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Application fields and potentials of Web 2.0 applications at UBS
employees themselves are the customers. This limitation proved helpful in limiting complexity of the analyses. However, an extension of the analyses to other stakeholders could be subject to future research.

For the different types of Web 2.0 applications the following conclusions can be drawn:

External Web 2.0 applications

(Messerschmidt et al. 2010) have classified Web 2.0 applications relevant to banks according to their implied intensity of dialogue, whereby podcasts, RSS, instant messaging, and widgets imply low interaction levels, wikis, blogs, and rating applications imply medium interaction levels, and online communities/social networks imply high levels of interaction between the bank and its clients and/or among its clients. It can be concluded that most external Web 2.0 applications applied by banks belong to the low-intensity group. For example, the only two banks in the German-speaking region that implemented high-intensity applications (online communities), namely Cortal Consors in cooperation with Sharewise and Fidor Bank, are both non-traditional online banks. Thus, all external Web 2.0 applications in private banking belong to the low-intensity levels. This is also true for the example of UBS shown in this paper. While the low-intensity level applications entail fewer risks, they do also allow for fewer business potentials, as (Messerschmidt et al. 2010) explain. Consequently, it can be concluded that private banks have either not fully recognized the business potentials, namely improving the client acquisition process and the bank-client relationship, increasing loyalty, and increasing cross-selling potentials; or their evaluation of these potentials is outweighed by the perceived risks and challenges. Additional factors that have to be considered are national regulations.

Internal Web 2.0 applications

The example of UBS shows that the usage levels of internal Web 2.0 applications are much larger than external Web 2.0 applications. The potentials are perceived as high while the risks and challenges are perceived as much lower than for external Web 2.0 applications, which might be the main reason for the higher implementation rates. However, employee acceptance is significantly higher than the usage rates, which may point to lack of top-management support through insufficient potential awareness and or practical experiences. Further research could be done specifically about banks and their employees, researching planned and existing usage/implementation rates, potential/risk assessments, and application fields of internal Web 2.0 applications. Applying new applications to the front office, allowing client advisors to collaboratively manage client portfolios, develop investment ideas, and share successful client acquisition, advisory, and retention strategies, and compare assets under management, net new money, and profitability KPIs would allow for great potentials to improve private banks’ core competence, namely their client advisory process.

Third Party Web 2.0 applications

Very few banks have perceived the business potentials through supporting third party Web 2.0 applications. The example of UBS and its “Web 2.0 Competition” illustrates the potentials through Web 2.0 in a very distinct manner. Other supporting Web 2.0 application fields such as client acquisition or support of client processes are currently treated with caution as private banks are highly restricted in dealing with client data. Non-sensitive processes such as talent recruitment or marketing can, however, profit from third party Web 2.0 applications in targeting their audiences more accurately. As the example of UBS shows, complementing and disintermediating Web 2.0 applications do currently not pose a competitive threat to private banks. Also, the development of these types of applications seems to be much slower in Europe than in the US. For example, the leading online personal financial management tool in the U.S., Mint, manages the finances of more than 3 million US banking customers, 3 years after its foundation. No such alternative can be seen in Europe up to now. However, this does not imply that complementing and/or disintermediating Web 2.0 applications cannot potentially have an effect on the private banks’ competitive landscape, now and in the future. It can be expected according to the changing customer behaviour that complementing Web 2.0 applications will gain in popularity for private banking clients to share experiences, compare fees/performances, and support the client processes paying, investing, financing, and planning. While the consequence for private banks might not be a total disintermediation, it might nevertheless increase competitive pressure through increased price/performance transparency, client involvement, and demand for more sophisticated online banking platforms.
Nevertheless, the personal contact and personal advisory are very relevant for this industry and pure electronic interaction stands diametric to the private bank’s business model based on personal relationship, trust, and integrated advisory.

References


