Deutsche Bank Research

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Be a driver, not a passenger

Implications of Web 2.0 for financial institutions

Financial services providers need to adapt to a new era of communication and may turn it into their advantage. Retail banks are feeling the heat in the form of diminishing margins on standard products and increased scrutiny by the online community. Those who stay abreast of events, however, may turn the Web 2.0 challenge to their advantage by offering new services and reaching out to new customers. Any Web 2.0 presence of a bank must be authentic and consistent with the bank's brand and corporate culture.

Users of Web 2.0 applications propagate information and opinion – this multiplies reputational risk. Any news can spread uncontrollably through virtual worlds. Financial institutions must adjust their internal and external communication policies accordingly. This includes, for instance, deciding on a company policy for accessing the new applications as they will inevitably become widely used by employees.

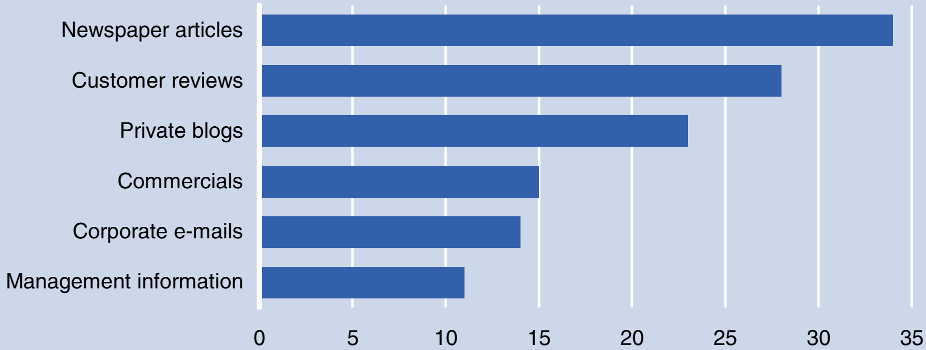
Innovative payment systems are capturing niche markets. A limited market is developing for innovative online payment systems that address specific needs. Since those niches represent only a small slice of B2C e-commerce, conventional payment systems continue to dominate the B2C business.

Online P2P lending platforms nibble at banks' loan business. New internet ventures match people who need a small loan with others who have extra cash to lend online. They aim to save costs by cutting out the middleman – i.e., the retail banks. The market for standard loans is highly competitive, though, which limits the potential for P2P platforms.

Web 2.0 inspired inroads into traditional banking seize on the human factor. Many users are attracted by the community aspect. They often trust customer reviews and private postings more than official information. Some online P2P lending platforms draw on user networks to assess credit risk, determine interest rates and pressure for repayment.

Users trust users

Product information which German internet users trust, % (2006)



Source: Ipsos, 2006

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Interactive Web 2.0 applications such as online diaries (blogs, see box), online libraries (wikis) or virtual worlds have changed the way that consumers gather information. Instead of settling for the role of passive customer, the active Web 2.0 user wants to contribute and discuss the latest news. Interactive platforms challenge existing business models and demand an appropriate reaction as information spreads through new channels (see box).

Financial services providers are realising that they need to deploy Web 2.0 applications to differentiate themselves for customers and to maximise their reach in the offline and online segments. According to Gartner Research, three-quarters of financial institutions will be using Web 2.0 applications by 2012.

Web 2.0 offers a combination of competitive prices and a congenial community network which attracts many customers. Nowadays, financial services providers are already increasingly exposed to intense scrutiny via the internet. This boosts price transparency, squeezes margins and multiplies reputational risks. Furthermore, innovative payment systems and online person-to-person (P2P) lending platforms are among the most visible Web 2.0-inspired inroads into traditional banking.

Financial institutions face new opportunities in the process of communication with customers and their employees. Interactive applications supplement conventional sales channels and offer better access to defined target groups. Web 2.0 also facilitates and demands the creation of new products. Innovative online payment systems are trying to replace traditional payment methods, e.g. credit cards or even cash. A key component of each market transaction, namely the payment process, needs to be adapted to new challenges in the world of digital trading platforms. The increased participation of individuals even questions original services in the financial sector. New platforms bypass financial institutions and, e.g., offer loans from person-to-person.

This report investigates the impact of Web 2.0 especially on the financial sector. It starts by discussing the diversity of Web 2.0 activities, such as wikis, blogs, virtual worlds (e.g. Second Life) and automated information feeds (Really Simple Syndication, RSS), that have reached a mass market. Some firms have embraced Web 2.0 applications, for example in the form of corporate blogs, internal wikis or representations in virtual worlds. The report shows that Web 2.0 applications face special challenges in the financial sector. Some of the requirements of regulatory authorities and customers (e.g. the degree of privacy) do not square with the casual communication culture of Web 2.0.

Blog: between useful information and senseless twitter

A weblog, or blog, a combination of “web” and “logbook”, is a website in the form of a diary with pithy, frequently updated entries that are posted regularly. Additionally, they often contain links to other websites and blogs so the reader can quickly find blocks of news, information and opinions on a specific topic. The content varies widely and often has no particular relevance for the public at large. At the same time, there has been rapid growth in the segment of specialised and expert blogs where technological and political topics predominate.

Web 2.0: What does it really mean?

Tim O'Reilly created the term Web 2.0 in 2004 as a title for a developer conference. Actually, there is not a clear-cut definition for Web 2.0 but it typically describes a form of user-to-user communication over the internet. For unlike Web 1.0, Web 2.0 is not a technical innovation. With offers for social interaction such as Blogger.com, Del.icio.us, facebook, Flickr, GarageBand, Habbo-Hotel, MySpace, Linkedin, Spoke, Studylounge, YouTube, Wikipedia and Xing, the Web 2.0 merely documents the realisation that the internet was always a social forum for exchanging opinions and banal experiences and never just a digital market place.

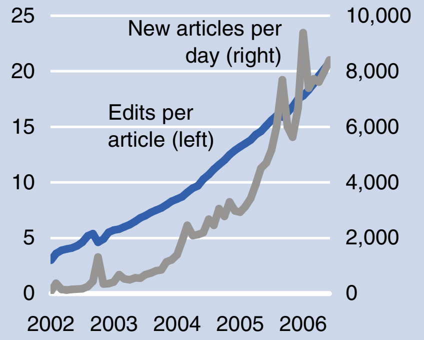
Humanising is the crucial idea behind many Web 2.0 applications. Hence, even though there are masses of recipients, the Web 2.0 is not a mass medium in the traditional sense. The Web 2.0 lacks the uniform underlying structure needed for this. As a result of this diffuse structure all attempts to define the Web 2.0 become entangled in IT abbreviations (e.g. Atom, AJAX, API, RSS, SVG, XML, XUL) and visionary consultant-speak (e.g. prosumer, mini-preneur, generation tekki 2.0, collective intelligence, user generated content, citizen journalism, wisdom of the masses and ecocast).

Web 2.0 inaugurates a new era of communication

With innovative information and communication technologies, interactive and personalised programming is making inroads into the media world. Researchers see a new era of media history unfolding. They say that following the transition from oral to written communication, which represented the first era, and the spread of mass media, which constituted the second, Web 2.0 now heralds the third era of communication history. The developing Web 2.0 represents a first in that there are no longer only professional editors who impart mass information to passive readers, listeners and viewers.

User-written encyclopedia

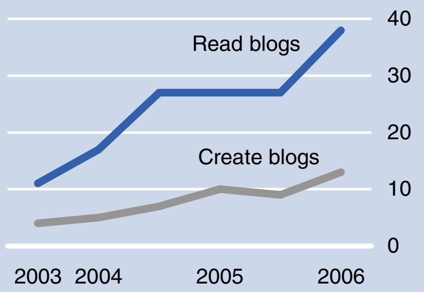
Articles in Wikipedia (all languages)



Source: Wikipedia, 2006 **1**

Blogs propagate information and opinion

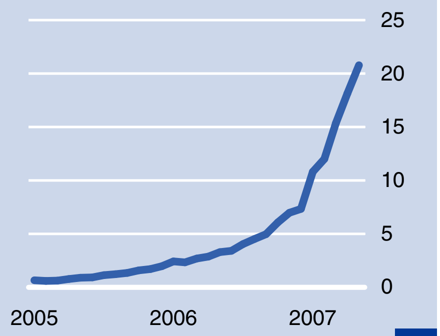
% of US internet users that create or read blogs



Source: PEW/Internet, 2006 **2**

Crush in the virtual world

Hours per month spent in-world by Second Life residents, m



Source: Second Life, 2007 **3**

Volunteers contribute en masse

In manifold applications Web 2.0 provides opportunities for interaction, e.g. taking part in discussions, imparting information and shaping events.[1] Many users exchange knowledge and opinions in different web applications, such as wikis or blogs. For the encyclopaedia Wikipedia, for instance, volunteers create more than 8,000 articles each day (see chart 1).

Worldwide the number of blogs is growing quickly. We estimate that there are currently over 70 million blogs in total. Blogs propagate information and opinion. About two-fifths of US internet users read blogs (see chart 2). This illustrates how easy it is for customers to follow the experiences of many other users (accurately presented or not) and to use online information and opinion before taking decisions. Surveys show that customers trust the advice of friends – this may also include online acquaintances – and family members more than advice from any other source.

Wikis and blogs offer new means of communication for internal processes within financial institutions. These support databases are easily accessible for all employees and boost information flow. Internal communication improves as more people within an organization provide input to wikis and blogs at the company level. Web 2.0 applications facilitate a better identification with the product and the corporate culture for employees and customers too. Customers gain an inside view and firms can give their customers the impression of participating in the product itself. This way of identification with a product offers new marketing opportunities especially in the financial sector where it is difficult to touch or feel the products.

Virtual words enrich the real world

Millions of users flock to web-based virtual worlds such as Second Life (see chart 3). Second Life is sometimes called a game, but it does not have scores or winners. Today, Second Life boasts more than 7 m accounts – with differing levels of activity. Each user of Second Life, called resident, is represented by an avatar. These animated avatars interact with each other in this user-defined world. Avatars meet and socialise for the purpose of personal enjoyment and they even do business by trading virtual items and services. The avatars pay with Linden Dollars (L$). This virtual currency is exchangeable for real currency.

Some financial institutions have created a presence in Second Life to boost brand awareness and also to cater to the needs of the online community. Moreover, by offering financial services – e.g. currency exchange from real-world currency to L$ – financial institutions can authentically integrate themselves into the online community.

Joe Six-pack live on stage

The different Web 2.0 applications enable individuals to reach a broad public – a possibility that until recently has been reserved mainly for journalists and public figures. From the viewpoint of corporates, too, the different Web 2.0 applications offer a technically inexpensive way of obtaining direct access to a specific target group and responding quickly to news reports. Usually Web 2.0 applications offer an interactive discussion platform with personal character (unfiltered communication). Anyhow, Web 2.0 applications can also be used by a firm as an instrument for business agenda-setting or

[1] See Heng, Stefan (2006). "Media industry facing biggest upheaval since Gutenberg: Media consumers morphing into media makers". Deutsche Bank Research, E-conomics No. 59. Frankfurt am Main.

image-building. Referring to this, Web 2.0 applications fall into three different communication levels:[2]

— The Web 2.0 sphere offers a new communications arena and can influence public opinion on the corporate.

— Customers, experts (such as software developers) and aficionados of certain products are among those who seek publicity in the Web 2.0 sphere.

— Firms can use Web 2.0 applications as a communication tool, for example with a corporate blog.

These aspects are changing the world of business and offer firms new ways to interact with their customers. Blogs and wikis also challenge year-old business policies and firms need to adapt their means of communication to these new possibilities.

Strategic monitoring and policies required

Ready for pointedly written contributions?

There is, however, a risk that those Web 2.0 applications dominated by firms will not be accepted by private users. Naked self-promotion or a marketing campaign disguised as community interaction can tarnish a firm's reputation. Besides a lack of credibility, corporate dominated Web 2.0 applications may often be boring and suffer from their monotonous language. Conversely, firms may also be challenged by the pointedly written, polarising style of Web 2.0 contributions.

What issues are set to confront firms, particularly financial institutions with the increasing spread of Web 2.0?

Firms must monitor the different levels of communication in the web

1. Monitoring the Web 2.0 sphere as the new communications arena: In principle, firms should track their image in the Web 2.0 sphere just as closely as they do in the conventional media landscape. Substantial reputational risks can emerge if firms pay no heed to or misjudge the rapidly forming opinions in the Web 2.0 sphere. Monitoring offers them a way to catch wind of the opinion-making process at an early stage and, if necessary, to respond to it.

Policies for employees required

2. An explicit Web 2.0 policy for employees is necessary: Employees will inevitably start to contribute to different Web 2.0 applications as private individuals. For this reason, firms require a clear Web 2.0 policy. Besides setting guidelines for employees contributing privately, it should also set out rules saying how employees are allowed to write articles on behalf of the corporate.

Powerful instrument for internal communication

3. Web 2.0 is a powerful instrument for internal communication: One area suited to the use of Web 2.0 applications is internal communication, e.g. for sharing expertise or dialogue between board members and corporate employees. Via internal Web 2.0 applications, such as corporate blogs or internal wikis, the responsible parties can respond rapidly, pointedly and appropriately to relevant topics. Internal Web 2.0 applications can also be used as a test for external Web 2.0 applications to gather experience with this medium.

4. Web 2.0 as a channel for external communication for a firm: Before establishing corporate Web 2.0 applications the

[2] See Jüch, Claudia, Stobbe, Antje, and Walter, Norbert (2005). Blogs: Not the new magic formula for corporate communications. Deutsche Bank Research. E-conomics No. 54. Frankfurt am Main.

New ways of interaction with stakeholders

responsible parties must address various strategic issues in order to decide on the practicality of the tools:

— Is the Web 2.0 application a good fit for the firm, its objectives and its culture? As Web 2.0 applications can sometimes be very provocative, they may not be compatible with the firm's image. Risks that are hard to control lie mainly in the content and tone of comments in blogs or wikis. Ultimately these contributions can only be influenced to a very limited degree.

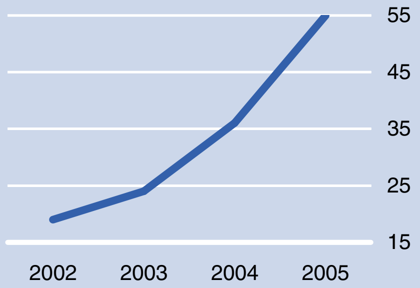
— As regards content, limitations arise – especially for listed firms. The content of a Web 2.0 application has to comply with legal and regulatory standards. This substantially diminishes the appeal of Web 2.0 applications to firms.

— Web 2.0 applications demand substantial editorial input. Especially for blogs this includes regular updates, once or several times per day, and timely responses to comments and e-mails.

— Referring to websites of third parties harbours the risk that the views expressed there either do not reflect the firm's own opinions or are even opposed to them.

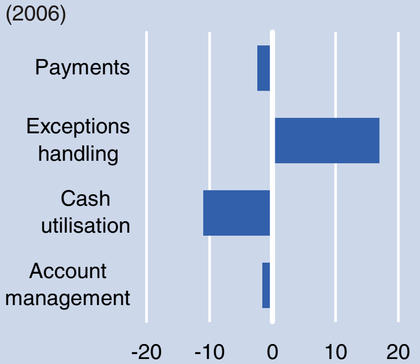
Basically, it is only possible to deploy Web 2.0 applications in corporate communications management within narrowly defined limits. This may be the case if, for example, there is close congruence between corporate objectives and those of the Web 2.0 community. Web 2.0 applications for a firm may also be successful if they are placed and run by businesses with the right kind of corporate culture. Authenticity, credibility of content and style, and a straightforward approach to handling negative reactions, e.g. comments in blogs, are the prerequisites.

Customer empowerment
"Do you shop around for financial products?", European consumers, %



Source: Forrester Reseach Inc., 2005 **4**

Standard services are getting cheaper
Change in prices, Eurozone, % yoy (2006)



Source: Cap Gemini, 2006 **5**

Internet boosts price transparency

For most customers it is standard practice to compare prices before buying products. This is sensible and necessary to make markets efficient. The internet has leveraged the power of customers to new heights because a vast amount of information is only a click away. Price comparison sites reveal immediately where products are cheapest. Online reviews and comments, posted by other customers, inform potential buyers about the quality and possible pitfalls.

This development has not spared retail banking products. Many price comparison sites cover standard banking services, such as money-market accounts and personal loans. Little wonder that customers increasingly shop around for financial products (see chart 4) and flock to the most competitive offer. This has 3 consequences:

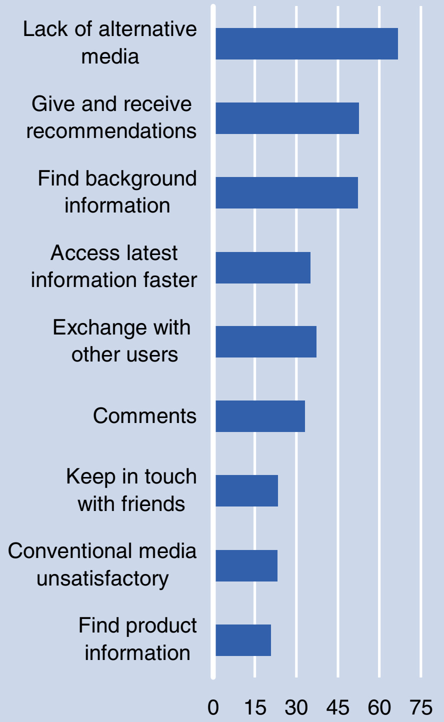
— Margins on standard products will be squeezed to a minimum (see chart 5). True, many customers will continue to rely on those products recommended by bank advisors, but the proportion of "cherry-pickers" will certainly grow.

— To protect margins, financial institutions will increasingly create non-standard and emotional products that defy direct comparison.

— Retail customers will increasingly desire easy-to-understand and easy-to-compare products, such as those offered by discount banks. The surge in assets held in online money-market accounts in Germany is one example.

First of all a source for information

"Why do you use blogs?", % (2006)



Online survey in December 2006, 605 heavy users. Source: Blogstudy University of Leipzig, 2007 **6**

Obviously, there is a conflict between the second and third consequences stated above. And this conflict can spiral because the more obscure banking products become, the easier they alienate customers.

A stage for word-of-mouth

The Web 2.0 contains masses of information on financial products beyond simple price comparisons. Customers share their experiences and give their opinions on a wide array of services (see chart 6). Often, this information is as valuable as the headline price – in particular, if the products are complex (or obscure) and the contractual relation is long term. Customers write whether staff are friendly and competent and whether the recommended products live up to expectations.

The downside is that outspoken customers are not always the most qualified. The recommendations and views given by members of the Web 2.0 community can be arbitrary, biased or plain wrong. Opinions can turn into scathing comments about certain financial institutions and cause substantial damage to these firms' reputations. Nevertheless, customers trust word-of-mouth. Many rely on first-hand experiences of acquaintances rather than on professional advice: in a survey, online users said that they trust customer reviews and private blogs more than corporate information in the form of commercials or e-mails.

Innovative payment systems appear

For financial institutions the Web 2.0 not only impacts internal and external communication but also the core business, such as payment systems.[3] There are currently numerous innovative payment systems operating in different countries – in Germany alone there are more than 40. However, only recently a few of these systems such as PayPal, Click&Buy and Giropay have actually found their way into the payment portfolio of e-shops. The conventional payment systems long established in traditional retail trade in the physical world (payment in advance, invoice, cash on delivery, direct debit and credit card) will continue to dominate B2C e-commerce.

Besides the pronounced network effect (see box) for payment systems the major reason for this market situation is that most of the innovative payment systems fail to address the typical business circumstances in B2C e-commerce. Numerous systems are only geared to settling micro-payments, but most e-shops do not ever charge such small amounts. In addition, innovative mobile payment systems advertise the advantages of their portability. However, this trump cannot be played in a typical online situation.

In addition, payment systems operate in an intensively regulated, complex market environment. Policy and regulatory frameworks – including those outside the financial sector – have a major influence on the market potential of payment systems. The substantial administrative expense involved in complying with government regulation limits the potential of the small innovative systems in particular.

Except in rare cases, conventional payment systems ultimately leave little room for the innovative systems. The few innovative payment systems with mass-market promise are those that take into

Evidence of network effect in payment systems

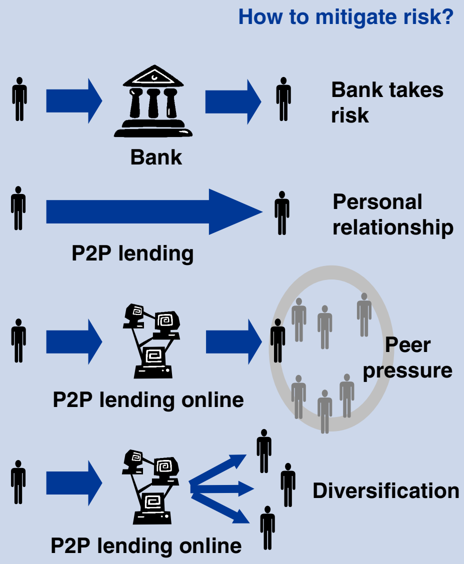
All payment systems are subject to the network effect: the more firms and individuals opt for a given payment system, the more attractive it becomes for other firms and individuals to join in. This broad acceptance unleashes a spiral of new possibilities and ever greater value added. Conversely, the network effect also ensures that new payment systems have extreme difficulties in holding their own against already established systems. Therefore, the new payment systems often face a dilemma. On the one hand, shops will be hesitant to invest in a still little-known system. On the other, the shoppers will be reluctant to switch to a payment system that so far has only been deployed by a few shops.

[3] See Heng, Stefan (2007). E-commerce settles for established payment systems: Limited market potential for innovative payment systems. Deutsche Bank Research. E-conomics 62. Frankfurt am Main.

account the particular features of B2C e-commerce, enjoy the support of established e-shops or service providers in payment transactions and can convey the unique selling point that they offer.

Innovative payment systems are one example of Web 2.0 inspired inroads into traditional banking. Other ventures take the idea even further and transfer elementary banking services, such as the intermediation between savers and borrowers, to the internet. Thus, they bypass the traditional financial institutions.

Cut out the middleman?
Lending via bank or P2P



Source: DB Research, 2006 **7**

Person-to-person lending platforms: cost savings mix with humanising

The internet is often regarded as a gigantic marketplace where supply and demand meet without the need for further intermediation. Many booksellers and travel-agents that are now out of work are evidence of the power of this marketplace. New internet ventures nibble at retail banks' loan business by matching people who need a small loan with others who have extra cash to lend online. Such person-to-person (P2P) lending aims to save costs by cutting out the middleman – i.e. the retail banks (see chart 7).[4] Examples include Zopa in the UK, Prosper in the US, Boober in the Netherlands and most recently, Smava in Germany. Another outlet, Kiva, specialises on loans to entrepreneurs in developing countries.

Regulatory hurdles are steep but not insurmountable. Lenders are typically not allowed to lend commercially (otherwise they need a credit licence) and loans and/or investments are mostly limited to values between EUR 10,000 and EUR 35,000.[5] In Germany, P2P loans are technically granted by a traditional bank which then passes these loans to the investors. As a consequence, transaction costs are higher and Smava only handles bigger allocations starting at EUR 500 (Prosper USD 50).

Lenders bear credit risk

It's all about reputation

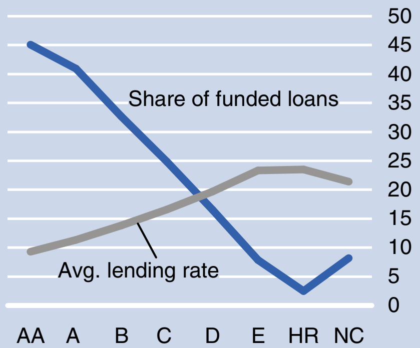
To diversify, most loans are granted on a "one to many basis" – i.e. allocations are being spread across many loans so that the individual exposure to each loan is small. However, all models differ in detail. Zopa does not showcase individual borrowers, whereas most others let borrowers explain who they are and why they need the money. Prosper determines interest rates with an auction mechanism, others have fixed rates. Loans are typically unsecured and repayment is not guaranteed but German Smava offers a rudimentary insurance based on the default rates of a group of borrowers rather than any individual debtor. Borrowers at Prosper can improve their standing by joining (and being accepted by) a reputable group of borrowers, e.g. a group of MBA alumni. The group's reputation depends on punctual payments being made by all members and hence there is peer pressure to conduct oneself reputably. Shame on those who do not pay on time! Kiva has a strong charity component while others are commercial.

[4] See Meyer, Thomas (2006). Financial Services 2.0: How social computing and P2P activity are changing financial research and lending. E-Banking Snapshot 18. Frankfurt am Main.

[5] German financial supervisor BaFin gives its views on P2P lending platforms in Mitschke, Ulf (2007). Kreditauktionen im Internet und die bankaufsichtsrechtliche Erlaubnispflicht der Beteiligten. BaFinJournal 05/07. pp 3-5.

Need to convince more lenders

Share of funded loans to requested loans and avg. lending rate at Prosper, %



Credit quality decreases from grade AA to E; HR=high risk; NC=no credit score

Source: Wiseclerk.com as of 12 June 2007

8

Lenders ignore high-risk borrowers

For P2P borrowers it is easy to judge whether they are agreeing a good deal (compare the best rate offered by a bank with that of the P2P platform). For P2P lenders it is difficult because they bear the default risk and few of them are experts in risk management. Hence, the key challenge to further growth is to find more people willing to lend. Prosper, the Californian outlet which went online February 2006, has brokered loans worth around USD 70 m so far but had unfunded loan requests of more than USD 460 m. Loan requests from low-risk borrowers have the highest probability of being funded (around 45%) whereas high-risk borrowers are being ignored (less than 5% of loan bids are funded) (see chart 8). However, low-risk borrowers also qualify for cheap, standardised retail loans from traditional banks – this pitches P2P platforms into cut-throat competition. Margins on discount loans are already razor-thin, leaving little to be saved in the first place. Thus it seems unlikely that P2P lending can ever be more than a niche product in this segment.

Albeit widely neglected so far, competition from traditional banks might push P2P sites increasingly towards riskier loans. Here they can leverage their unique community powers. Evidence from Prosper illustrates the difference peer-review and peer-pressure can make: default rates are typically much lower if borrowers have joined (and were accepted by) a group of borrowers – this holds in particular for high-risk and non-rated borrowers.[6]

Social quality makes the difference

Many lenders are not primarily attracted by higher interest rates but rather by the community aspect: potential borrowers explain who they are and why they need the money and lenders can actually decide which loan requests to fund and which not. A compelling story or stirring plea can make a difference. Online P2P lending also has a strong non-establishment twist ("no banks, better deals") and many users prefer doing business with other people rather than with an impersonal bank. Social intentions can be a strong motivation as more than USD 2 trillion assets in socially responsible investments in the US show.

Conclusion: Better to be a driver than a passenger

Firms interact with their target groups

Firms may use the Web 2.0 to collect information, to pick up trends and fashions, and to interact with customers and the public. They may reach out in particular to the young, affluent and tech-savvy users – a demographic segment that is often immune to a traditional marketing campaign. Firms can also apply Web 2.0 applications to improve internal communications: they are great tools for aggregating and distributing knowledge. These innovative information and communication technologies demand that corporations respond rapidly, pointedly and appropriately to relevant topics.

More power for the customer

But Web 2.0 is not a one-way street. Online communities put financial institutions and other firms under the microscope and multiply reputational risk. In the old days, angry customers had few means to spread their disaffection. Nowadays, interactive Web 2.0 applications result in customer empowerment. Instead of settling for the role of passive customer, the active Web 2.0 user wants to contribute and discuss the latest news. They document their experiences in blogs and write scathing reviews on customer-opinion platforms with global reach. These additional information

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[6] See Meyer, Thomas (2007). The power of people: Online P2P lending nibbles at banks' loan business. E-Banking Snapshot 22. Frankfurt am Main.

sources challenge sales and marketing policies but may also help to create an emotional bond between customer and product.

Grass-roots developments

Many Web 2.0 activities are grass-roots developments with a non-establishment and improvised style. Regulatory hurdles, compliance needs, and the high degree of privacy and professionalism that most customers want from their banks, do not square well with the open communication culture in the Web 2.0. Yet, some financial brands will employ Web 2.0 applications to portray themselves as young, cool and innovative alternatives to the establishment. A multi-brand strategy may be used to exploit the one without sacrificing the other.

Payment systems fight for their market share in B2C e-commerce

Some financial institutions are following Web 2.0 to the next level. Innovative payment systems and online P2P lending platforms are among the most visible Web 2.0-inspired inroads into traditional banking. They use the new possibilities being offered by the internet (e.g. online matching instead of intermediation), exploit the playful character of Web 2.0 (e.g. the community aspect), and deliver services that complement other internet activities (e.g. immediate payments for internet auctions). Most inroads appear to fill niches in the market rather than revolutionise the banking business. Yet, it would be unwise to underestimate the challenging forces being at work.

Be authentic!

Web 2.0 heralds a new era of communication with a massive increase in information supply and where news, opinion and services flow directly from user to user. Financial institutions can take advantage if they stay abreast of this development. However, any Web 2.0 presence of a financial institution must be authentic and consistent with the institution's brand and corporate culture. To leverage the potential, the need for an immaculate reputation and the right type of brand is becoming ever more important.

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