

Social Media Marketing – Analysis of Online presence of Slovak banks

Tomáš Feige

Department of Information Technologies

University of Economics, Prague, Czech Republic

tomas.feige@vse.cz

Abstract: Paper focuses on areas of Social Media Marketing and Social Network Analysis. It describes case-study of joint university-business project of analysis of online presence of Slovak banks which took place in cooperation with IBM CZ in early 2012. This project was aimed at general analysis of online presence of Slovak banks, uncovering the structure of various channels and forms of bank-customer interaction and identifying key actors in banks social networks along with general sentiment and climate. Paper gives a general overview of the project and its challenges and presents high-level results.

Keywords: Social media, analysis, online presence, social networks, competitive intelligence, Slovakia, banks, Facebook, CI, SNA, SMM

1. Introduction

Since the recent global boom of various virtual social networks started by MySpace and currently headed by Facebook, internet underwent a change in paradigm of how it is used by general population. Now everything revolves around sharing, linking, socializing and communicating.

This shift in general communication was logically followed by many companies, who adapted to these changes, changed their promotion strategies and public relation channels and started to interact with their customers via social networks. That brought along some new challenges that needed to be overcome and problems to deal with. Gathered know-how and best practices formed into the discipline called Social Media Marketing (SMM).

“SMM is the way of promoting a website, brand or business by interacting with or attracting the interest of current or prospective customers through the channels of social media.” (Saravanakumar, et al., 2012)

As was said at Social Media Conference 2012 held at Charles University in Prague: *Modern social networks have a potential to become an exact scientific platform liberal arts and social science have been waiting for.* And not just that, the true value of modern virtual social networks lies in analytical scientific areas such as Social Network Analysis (SNA) and Competitive Intelligence (CI) who’s main goal is *“to build efficient bridge between those who know (Knowledge Owners) and those who decide (Decision Makers).”* (Molnár, 2012)

With numbers of active users growing every day, each *social* site is becoming a treasure box of knowledge. And this new valuable data source was noticed not only by academics with their books and papers such as (Berger, 2011), (Pavlíček, 2011), (Go, a další, 2009) or (Juchelka, 2012), but was also reflected by all major global IT companies and their products. The most notable being:

- IBM with Content Analytics and its Watson language processing core,
- SAP with Text Analysis (part of SAP Business Objects) and Social Media Analytics (former NetBase),
- HP with newly acquired Autonomy platform,
- Microsoft with Fast (SharePoint module) and NodeXL (MS Excel extension) and also
- Tovek and its Tools¹.

They are all shifting their focus on the new media and specifically to virtual social networks racing towards *hidden knowledge* and *added value* that is allegedly somewhere to be found in there.

¹ When considering local Central-and-Eastern Europe market.

1.1 Scope of work

This paper focuses on describing the whole process, outcomes and findings of the project “Analysis of online presence of Slovak banks” which took place in early 2012 in cooperation with IBM CZ. Project was done as a part of Smarter Analytics and Social Business campaign for Slovak market and its aim and scope was divided into three main areas of interest each characterized by one of the following hypothesis:

Hypothesis H1: *A majority of Slovak banks is actively using social media and is communicating with their customers via social networks.*

Regarding to Kaplan and Haenlein classification scheme of social media (Kaplan, et al., 2010) the scope of the analysis covered following three main categories of social media – blogs and microblogs; content communities and social networking sites, with emphasis on the latter.

Actively used social media was considered any site included in any of these categories with its content changed at least once in five days.

Hypothesis H2: *It is possible with current tools and technologies to do a reliable SNA in conditions of Slovak banking market.*

This was to test usability of currently available tools and technologies in specific Slovak conditions (small market, not enough traffics and information, lack of reliable data sources). Analysis had three consequent goals:

1. General competitive analysis and online presence comparison.
2. Social networks usage and social presence.
3. Sentiment analysis and identification of key influencers.

Hypothesis H3: *Analytical know-how gathered during Czech projects is transferable to and applies to Slovak market.*

Important part of the project was to determine, whether already gathered experience and formed knowhow from Czech projects is applicable to Slovak conditions and what difficulties and challenges are specific for each country and its market.

2. Project overview

As was already said, the analysis was done in an early 2012 as a joint university-business project in cooperation with IBM CZ. The team consisted of Czech and Slovak professionals and students (masters candidates). The main tool used throughout the process was IBM Content Analytics with custom social media add-ons and crawler plug-ins.

As sources of the data for the analysis were used only publicly available Slovak (.sk) web pages and social network profiles.

The project took place at IBM CZ, Prague and lasted 3 months². Because of complexity and variety of different actions requiring usage of several different tools, the whole project was divided into multiple phases for better coordination and workflow control (see **Figure 1**):

- *Initial phase* – to define the purpose of the project,
- *Global market analysis* – to gather base source data,
- *Goal definition phase* – to define primary and secondary goals of the analysis,
- *Preparation phase* – to fill and configure ICA dictionaries and crawlers,
- *Data-mining phase* – to gather detailed source data,
- *Knowledge working* – to extract actual knowledge from source data,
- *Presentation phase* – to create scenarios to be presented,
- *Closing phase* – to summarize and close the whole project.

² Including the time needed for development of custom plug-ins.

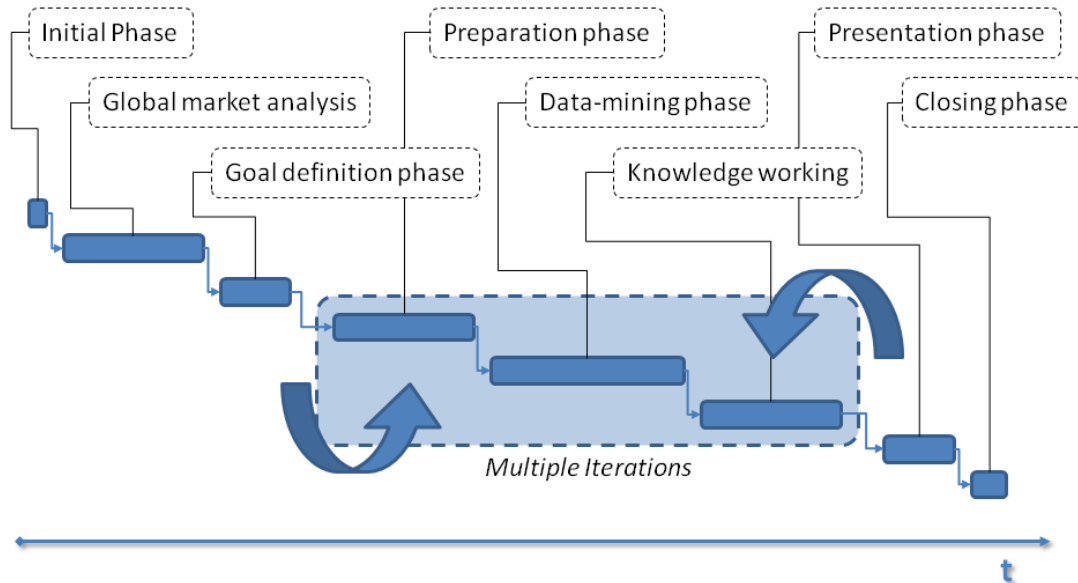


Figure 1 - Phases of the analytical project

The scope of the project required participation of several people with following roles and responsibilities:

- Senior Analyst – *formal project leader responsible for success of the whole project and quality of its final outcome.*
- Junior Analyst – *responsible for quality assurance of individual outcomes in each of the project phases.*
- Dictionary Specialist – *responsible for creating, filling and optimizing of language dictionaries and term facets.*
- Programming Developer – *developing and setting into production custom Facebook data mining plugin.*
- Language Consultant – *language dictionaries quality assurance in terms of Slovak language and sentiment.*
- Resource Analyst – *responsible for Global market analysis and gathering relevant data sources.*

2.1 Results

Following are the main use-cases, scenarios and outcomes from the analytical project. These were chosen to both give a general overview of the scope of the analysis and to address questions and hypothesis formulated in the beginning.

2.1.1 Global market analysis

First step was to explore the field, identify the main data sources and areas of interest on Slovak internet and gain general knowledge about local bank market, its main players and leaders.

Actual outcomes of the initial analysis can be divided into three parts – list of Slovak banks, list of main product groups and list of sources suitable for further use and analysis.

- **Slovak banks**

Bank subjects acting on a Slovak market can be divided into two groups – banks with subsidiary office in Slovakia (*SK Banks*) and foreign banks (see **Figure 2**).

SK Banks	Foreign Banks
Československá obchodná banka, a.s.	AXA Bank Europe
ČSOB stavebná sporiteľňa, a. s.	Banco Banif Mais, S. A.
EXIMBANKA SR - Exportno-importná banka	BKS Bank AG
OTP Banka Slovensko, a. s.	BRE Bank SA
Poštová banka, a.s.	Citibank Europe plc
Prima banka Slovensko, a. s.	COMMERZBANK Aktiengesellschaft
Privatbanka, a. s.	Crédit Agricole Corporate and Investment Bank S. A.
Prvá stavebná sporiteľňa, a. s.	Fio banka, a.s.
Slovenská sporiteľňa, a. s.	HSBC Bank plc
Slovenská záručná a rozvojová banka, a. s.	ING Bank N. V.
Tatra banka, a. s.	J&T BANKA, a. s.
UniCredit Bank Slovakia, a. s.	Komerční banka, a.s.
VOLKSBANK Slovensko, a. s.	Oberbank AG
Všeobecná úverová banka, a. s.	The Royal Bank of Scotland N. V.
Wüstenrot stavebná sporiteľňa, a. s.	ZUNO BANK AG

Figure 2 - List of Slovak Banks (source: Banky.sk)

- **Products and Product types**

Second part of the market analysis focused on listing all currently available banking products. After consulting with official sources and financial servers all products were divided into several categories based on their type. These categories were:

- Current accounts (*bežné účty*),
- Mortgages (*hypotéky*),
- Internet banking (*internetové bankovníctví*),
- Credit cards (*kreditní karty*),
- Savings accounts (*sporenie*) and
- Consumer credits (*spotřební úvěry*).

- **Sources for Analysis**

Creating a comprehensive knowledge base of reliable data sources for further detailed analysis proved to be somewhat problematic in conditions of Slovak market, because there weren't simply enough relevant and fresh *e-sources* updated on a regular basis. Whether it is because of relative small size of the Slovak market or simple lack of public's interest in financial sector, the fact is that the number of quality Slovak financial news servers is rather scarce. And even darker is the situation on the field of social networks – if banks even try to communicate with their clients through social networks, they choose almost exclusively Facebook.

The final list of used sources divided into categories was as follows:

- General news servers
 - *Ekonomika @ SME.sk*
 - *Ekonomika @ Aktuality.sk*
 - *peniazoch @ Zoznam.sk*
- Specialized financial sites
 - *Banky.sk*
 - *Slovenská banková asociácia*
 - *FINinfo.sk*

- Facebook pages and profiles
 - Official profiles
 - Public fan-based pages and group
 - Other relevant Facebook pages

2.1.2 Frequency analysis of SK Banks

Important outcome from the initial global market analysis was a general frequency analysis of Slovak banks (see **Figure 3**). Its purpose was to give a simple high level overview of the *online presence* of all banking subjects on Slovak financial market and point to the biggest leaders in terms of online activity. As a relevant sign of online presence in this case counts any form of electronic data mentioning the company name or its products – be it official press release, blog post, news article or just a Facebook comment. This kind of analysis could have been broken further down based on form and source of parsed data to give more detailed overview of its structure, but for the scope of the project this wouldn't have served any meaningful purpose and was therefore left only in its general global form.

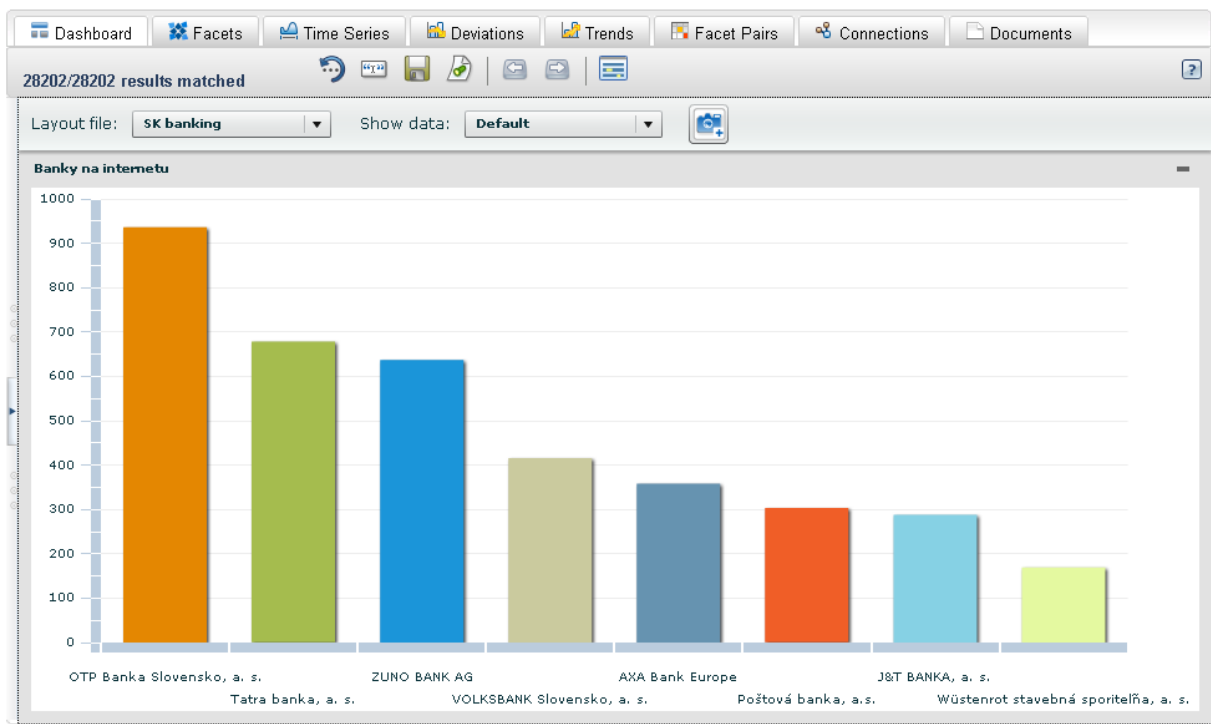


Figure 3 - Frequency analysis of SK Banks

2.1.3 Frequency analysis of Product types

Usual part of a general competitive analysis is also a frequency analysis of products and product types. Following scenario was done to test current tools and internal mechanics in Slovak conditions based on data gathered during *Global market analysis phase*.

For proper business strategy planning it is necessary to keep oneself informed about the product structure of the market and a frequency of interest in each individual product category. From the **Figure 4** it is apparent, that dominant banking product types are *current* and *savings accounts* and *internet banking*, while *consumer credits* and *credit cards* are minority. This knowledge in praxis helps to make better decisions on what form should company product portfolio be and on what product types should marketing section focus the most.

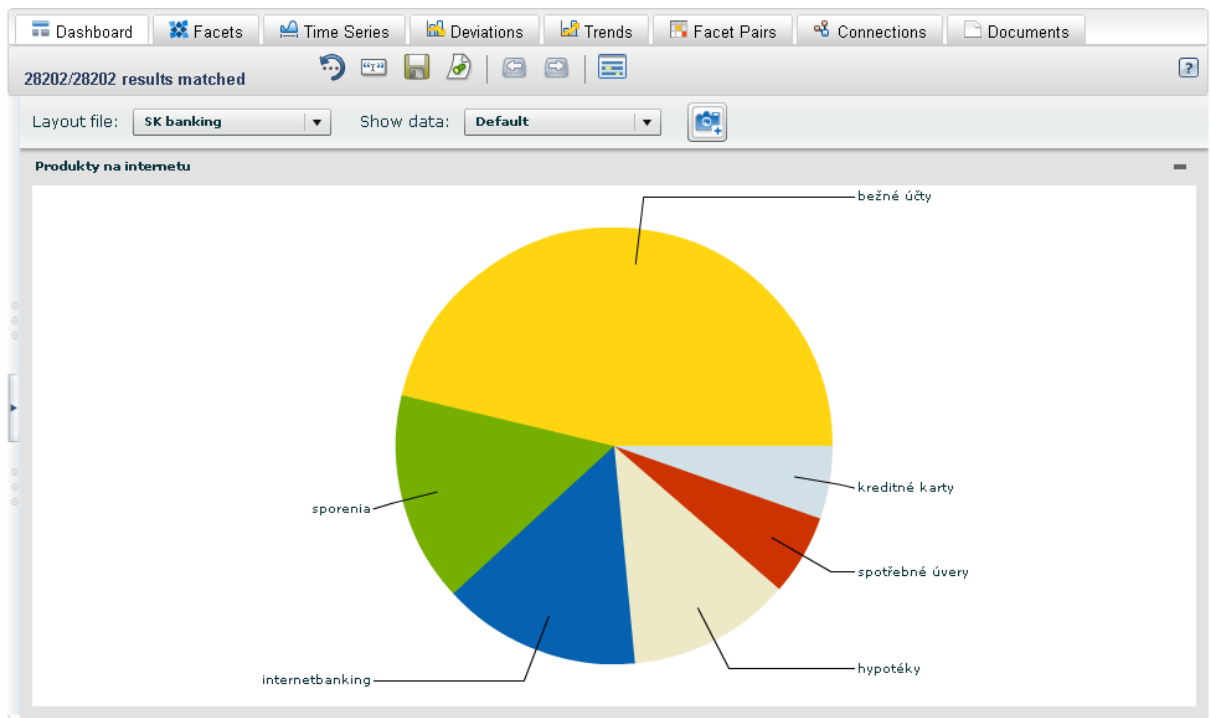


Figure 4 - Frequency analysis of product types

2.1.4 Communication channels of SK Banks

Analysis of banks communication channels was originally planned to cover all major social networks **and other channels such as community forums**. However due to lack of overall bank-customer interaction and scarce usage of social media in general, this scenario was eventually narrowed solely on Facebook with aim to compare different communication channels each bank uses to keep in touch with its customers (and fans) on this social network.

Important note: It must be noted however, that resources for this kind of specialized analysis were somewhat limited due to the fact that only six Slovak banks had active Facebook profile (or page). But the results were still considered interesting enough to be included into the report.

Facebook offers five major communication channels for brand pages – via commenting, regular status updating, posting links and sharing photos or videos; and as can be seen in matrix on **Figure 5** different banks have different strategies and approaches in terms of communication and services promotion. Except for *Slovenská spořitelna* all banks have active and well commented profile pages with clear dominance of *ZUNO* bank, where comments represent more than 62% of overall activity of the page. What is interesting are the different ways banks interact with their customers. While *ZUNO* posts mainly text statuses, *Tatra banka* and *mBank SK* bet on link posting, *UniCredit Bank SK* communicates via images and photos and *Poštová banka* even experiments with videos.

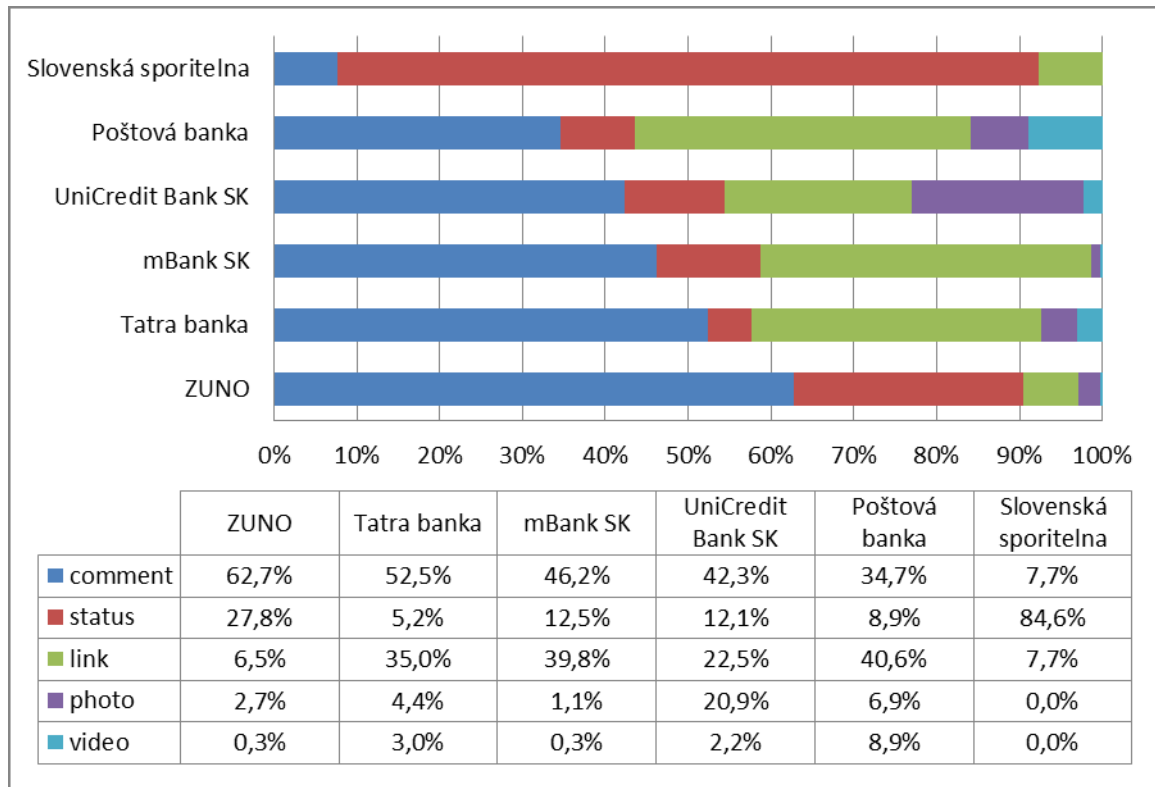


Figure 5 - Communication channels of SK Banks on Facebook

2.1.5 SNA – Key Influencers in Banks' network

One of the core activities of social network analysis is uncovering the internal structure of the network and identifying key actors and influencers with the biggest impact on the community. This is an important part of Key Account Management process (see (Cheverton, 2002)).

Compared to Twitter social network and various web services such as *Topsy.com*, there is currently no easy way to reliably evaluate influence level and potential value of individual Facebook profiles. However one is at least able to identify the most active customers in one's network and aim one's attention to them and their needs.

Figure 6 shows the matrix of the most active contributors in banks networks³. These are people who have no apparent direct connection to banks themselves but are actively contributing to their communities and networks around the official Facebook pages. This applies to two banks – *ZUNO* and *mBank SK*. Specifically on *mBank SK* profile these are *Marek K.*⁴ and *Peter Z.*, on *ZUNO* these are *Branislav B.*, *Miroslav L.*, *Martin M.* and others. In terms of public relations, marketing and promotion these are very important people, since they are interested in specific brand and are willing to actively participate and as such they form something like a core of the customer community. Specifically in this case these people form more than 17% of overall activity on *ZUNO* page and more than 7% on *mBank SK* page.

Peter Z. in particular is interesting due to his activity in both *ZUNO* and *mBank SK* communities. Such person can be an important community influencer and opinion builder and may help promote (or dishonor) company's name or product just because he believes in (or mistrusts) the brand.

³ The banks themselves and related accounts were taken out of the matrix.

⁴ For the purpose of this paper all names were anonymized. However the analysis itself contains direct links to each individual's Facebook profile.

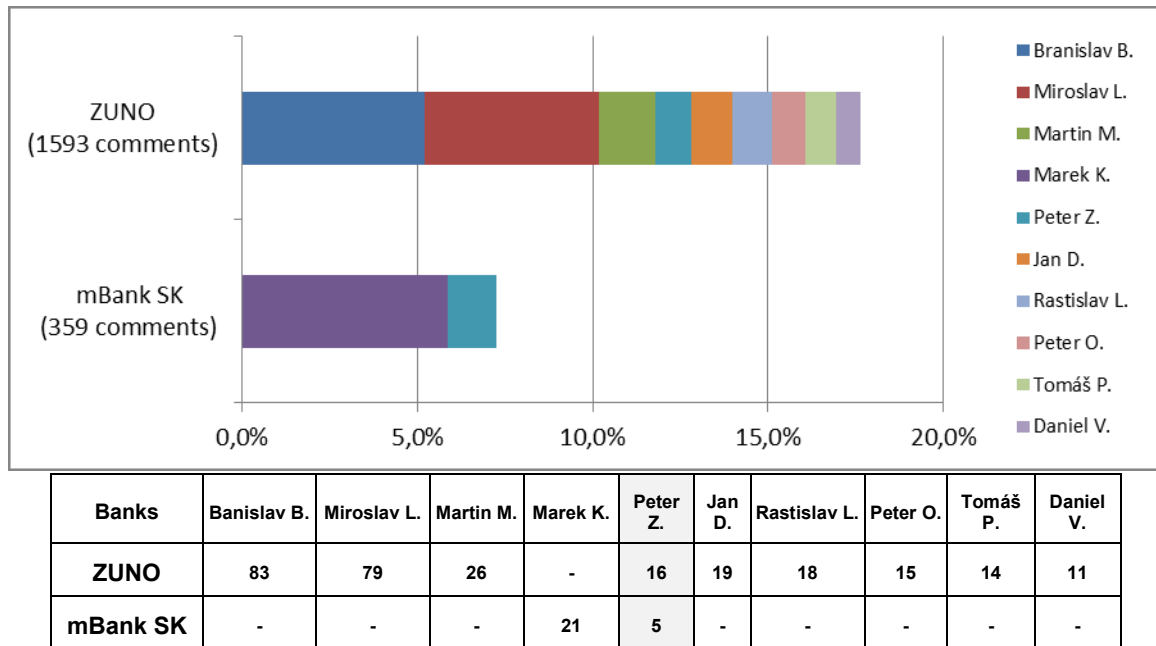


Figure 6 – Identification of Key Influencers in SK banks networks

2.1.6 Sentiment Analysis on Facebook

Because of its unpredictability and variability, sentiment analysis was the most delicate and difficult scenario of the whole project. While other scenarios worked mainly with structured and clearly defined data and metadata, during sentiment analysis one must dive into a sea of unstructured text and natural language processing. Not only is this area of language analysis and understanding still young, unmapped and untamed, but also presents its own problems, boundaries and challenges such as slang, homonyms, sarcasm or irony.

As can be seen on **Figure 7**, banks keep an average share of negative comments at mere 2.742% with slight lead of *UniCredit Bank SK* (with 3.9%). This implies a surprisingly very peaceful and friendly atmosphere one wouldn't expect based on experience from various general internet discussions and forums. With the hypothesis of a friendly environment goes also a much higher share of positive comments with the average of 12.072% and the highest value at *mBank SK's* 18.07%.

However, when evaluating such analysis one must be extra cautious not to get deluded by the results and not to come to wrong conclusions. Apart from obvious difficulties and limits of the sentiment analysis itself mentioned above, these results tell little about current state of the banking market and the actual customer satisfaction. The only reliable conclusion of this part of the analysis is that *if customers have problems with products and services of Slovak banks, they don't complain about them on banks' official Facebook pages.*

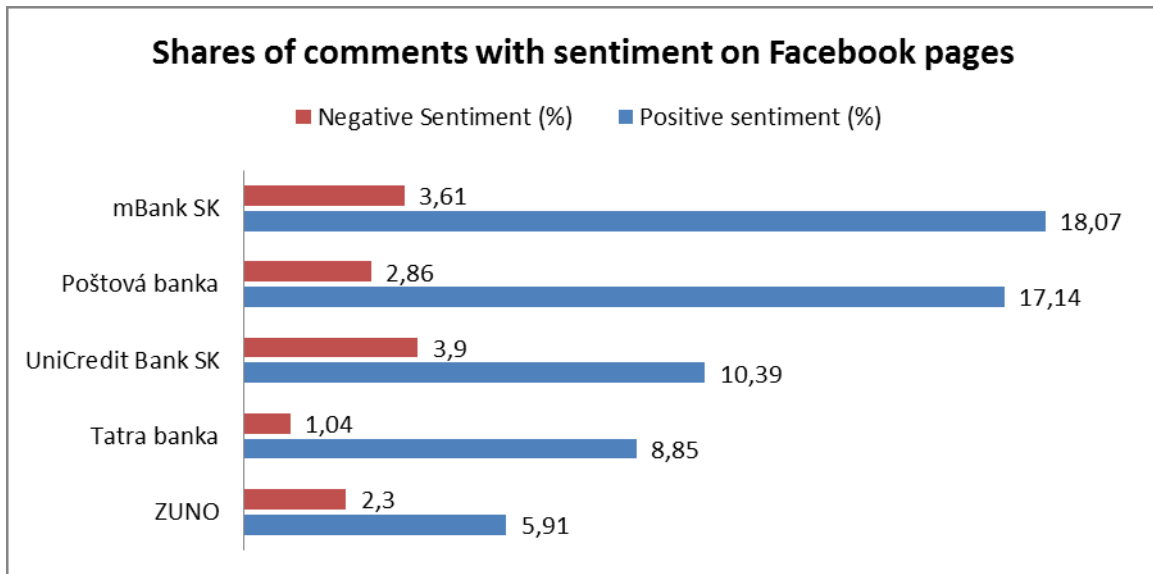


Figure 7 - Sentiment analysis of SK Banks at Facebook

3. Conclusion

This paper focused on the area of social networks in Slovak banking sector. The overall state of the market and use of social networks were analyzed during a single project, whose aim was to capture the online presence of Slovak banks with emphasis on social networks and Facebook in particular. Chapters 2.1.2 to 2.1.6 describe individual parts of the conducted analysis and discuss the outcomes presented in Fig. 3 to 7.

Regarding the three hypotheses formulated in the beginning of the paper:

Hypothesis H1: *A majority of Slovak banks is actively using social media and is communicating with their customers via social networks.*

This hypothesis was rejected. Online presence of Slovak banks in general is very low and only a small minority of them is using modern platforms, social media and social networks as a communication channel with their customers and communities. As of now, big banks and market leaders seem to be ignoring the upcoming trend of social networking, while their smaller competitors are at least trying to experiment with the media and options it offers. Compared to Czech market or even a global trends the usage of social media by Slovak banks can be described as next to nonexistent.

Hypothesis H2: *It is possible with current tools and technologies to do a reliable SNA in conditions of Slovak banking market.*

This hypothesis wasn't rejected but also couldn't be fully confirmed. Although it was proven that it is possible with current tools and technologies (with added effort, custom changes and specific add-ons) to do a general high-level analysis of Slovak banking market, due to general lack of high quality information sources and general online traffic the overall reliability of the outcomes and findings is somewhat debatable and in current state definitely shouldn't be taken as a main source of decision making and business strategy forming.

Hypothesis H3: *Analytical know-how gathered during Czech projects is transferable to and applies to Slovak market.*

This hypothesis was confirmed. Conditions on Slovak internet and Slovak market in general are very similar to those on Czech. The only notable difference between these two areas is that Slovakia is much smaller than Czech Republic and therefore offers less reliable data sources and shows much less online activity in general. This of course brings several challenges and issues in terms of analysis depth and conclusions relevance and reliability.

Based on the experience from the Czech field and outcomes of this project, Slovakian customers seem to be much less interested in banks, banking products and financial sector in general.

3.1 Follow up

An interesting follow up would be to do a similar project in Polish conditions since Czech, Slovak and Polish markets are often approached in the same *market penetration wave* as a “Central European region” and all countries share cultural background and their languages are very similar. Outcomes of such project could be then compared to these from Slovak market and others from Czech to identify both key success factors globally applicable for the whole region and challenges specific for individual countries. This paper can then serve as a simple framework or roadmap in terms of what areas should one focus on in individual phases of the analysis and what type of results to expect throughout the project and how to interpret them.

Such global analysis could be then repeated on a regular (e.g. yearly) basis to capture an overall development in social media usage by banks in the whole Central European region. And possibly even broaden the scope of the analysis to other financial institutions or transfer the know-how to completely different industries and business areas that also rely heavily on customer interaction and satisfaction such as telecommunication, retail or various service providers.

Sources

Berger, A. Asa, 2011: *Media Analysis Techniques*. s.l. : SAGE, 2011

Feige, T., 2012: *Using social networks for Competitive Intelligence*. [Diploma thesis] Prague : University of Economics, 2012

Go, A., 2009: *Twitter Earth*. [Online] 2009. [Cited: 4 15, 2012.] <http://www.twitter-earth.com/#havel>

Go, A., Bhayani, R. and Huang, L., 2009: Sentiment140. *Twitter Sentiment Classification using Distant Supervision*. [Online] 2009. [Cited: 4 15, 2012.] <http://cs.stanford.edu/people/alecmgo/papers/TwitterDistantSupervision09.pdf>.

Cheverton, P., 2002: *How Come You Can't Identify Your Key Customers?* s.l. : Kogan Page, Ltd., 2002

Juchelka, V., 2012: *Gathering data on the relationship of users to trademarks from social networks*. Brno, Masaryk University, 2012

Kaplan, A.M. and Haenlein, M., 2010: Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, Vol. 53, No.1

Molnár, Z., 2012: *Competitive Intelligence*. Praha: Oeconomia, 2012

Pavliček, A., 2011: *New media and Social networks*. Prague : Oeconomia, 2011. 978-80-245-1742-1

SAP. 2011. NETBASE AND SAP JOIN FORCES TO DELIVER SOCIAL MEDIA ANALYTICS TO GLOBAL ENTERPRISES. *SAP*. [Online] 12 12, 2011. [Cited: 12 29, 2011.] <http://www.sap.com/corporate-en/press/newsroom/press-releases/press.epx?pressid=17994>

Saravanakumar, M. and Dr.T.SuganthaLakshmi, T., 2012. Social Media Marketing. *Life Science Journal*. 2012, Vol. 9

Social Media Research Foundation, 2012: NodeXL: Network Overview, Discovery and Exploration for Excel. *CodePlex: Open Source Community*. [Online] 2012. [Cited: 4 15, 2012.] <http://nodexl.codeplex.com/>

JEL Classification: G20, M10