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# Social Network Banking: A Case Study of 100 Leading Global Banks

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## ABSTRACT

Social media is widely recognized as a challenging new communication technology in both economic and social contexts. The present article explores how banks have exploited this technology in the range of consumer retail banking services offered by 100 leading global banks on the three major social networking sites (SNS): Facebook, Twitter, and YouTube. Viewing social network (SN) banking as a separate delivery channel and offering a working definition of SN banking, the article shows that banks have been more cautious than other businesses in using SNS. The available services are classified on nine main dimensions: marketing, financial education and advice, information support, customer support, sales representativeness, customer engagement, online recruitment, survey and polling, and other services. The scope of these SN banking services is for the most part non-cash-based. Conclusions, implications, and recommendations are discussed and future research priorities are identified.

## KEYWORDS

Retail Financial Services, Social Media, Social Network Banking, Social Network Sites

## 1. INTRODUCTION

Social Networking Sites (SNS)—defined as a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of User Generated Content (Kaplan and Haenlein, 2010, p. 61)—provide huge business potential and have emerged as a new medium of expression and interaction that allows both individuals and companies (including banks) to initiate and maintain new and real sets of relationships (Chen and Beaudoin, 2016; Chen et al., 2012). SNS allow users to connect with networks of individuals through online platforms such as Facebook (Chung et al., 2016). Consequent to these developments, the accessibility of information on social media about the products and services is greater than it ever has been before, and customers are now frequently asked to “like” companies on Facebook, to “follow” companies on Twitter, or to “connect” via LinkedIn (Agnihotri et al., 2016). Referring to digital and social media as significant developments for the banking and finance industry, Bill Gates of Microsoft Corporation once predicted that “in the 21<sup>st</sup> century, there will be a lot of banking but no banks” (Shaikh, 2016, p. 15).

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These empirical studies as well as predictions such as this from one of the most successful entrepreneurs of the digital era clearly endorse the view that the growing virtualization of banking services will disrupt the banking business models and reduce the need for branch-oriented banking, radically transforming banking delivery methods, and creating a new type of banking that can be easily accessed through various delivery channels and portable devices (Shaikh, 2016). The services offered through mobile and social media are considered disruptive, because they have the potential to replace other banking channels and making branch-oriented banking redundant.

Over the last two decades, SNS such as Facebook, Google+, Myspace, Pinterest, Snap (formerly known as Snapchat), YouTube, LinkedIn, Twitter, Yammer, and the recently introduced Musical.ly have attracted considerable interest from disparate disciplines, generating a plethora of research investigating the adoption and usage of SNS as well as their disruptive effects on the industry. However, there has to date been little empirical investigation of the use of SNS for banking purposes. Much of the existing academic research in this area has focused on identity presentation and privacy concerns (e.g., Debatin et al., 2009; Jeong and Kim, 2017), or on social and ethical banking (Ghazinoory et al., 2016). While previous studies have investigated the use of SNS in education (Greenhow and Lewin, 2016), in government departments (Alam and Walker, 2011), in tourism and hospitality (Leung et al., 2013) and in other sectors, the use of SNS in retail banking remains largely unexplored.

In addition, the European Commission's regulatory guidelines (the Revised Payment Services Directive, also known as PSD2) (EC, 2016) further augment the significance of SNS for banking purposes. Due to be published in early 2018, the PSD2 will require banks to provide access to consumer data for third-party app developers and service providers such as Facebook. This initiative will end the banking companies' monopoly regarding their account holders' information and payment services and will allow previously restricted non-banking actors like Facebook, YouTube, LinkedIn, and Twitter to incorporate payment functionality into their own social media apps, so providing a wide range of banking and other financial services for their registered users—for example, by using their Facebook credentials to access banking information. These regulatory developments and the explosive growth and usage of SNS are changing the game, and they will have a major impact on retail business (Davis et al., 2014).

Given this changing new environment, we consider the present research both timely and imperative. The study has two principal aims. First, it seeks to address the current research gap in this area by organizing, summarizing, and segregating the current range of banking services offered by top global banks on popular SNS such as Facebook, YouTube, and Twitter. As well as highlighting the similarities and differences among banking services offered on these sites, the study evaluates them in terms of the service areas mentioned in the existing literature. This comparative evaluation reveals the distance between potential and actual banking services, and the challenges and opportunities for banks in augmenting their activities on SNS. Second, we enhance understanding of the term *social network banking* by offering a working definition and envisaging it as a separate digital banking delivery channel.

To achieve these aims, we conducted a broadly-based content analysis of SN banking services offered during the period January–June 2015 by 100 leading global banking institutions, which were selected using the popular Financial Brands (2015).

In the next section, we provide the working definition of SN banking (Section 2). This is followed by a description of the research design and methodology (Section 3), findings and discussion (Section 4) and conclusion (Section 5).

## **2. SOCIAL NETWORK BANKING: CONCEPT AND DEFINITION**

One of the intriguing advantages associated with SNS is its increasing use as a new tool for “social bank marketing,” “social direct marketing,” “social financial marketing,” or “social interactive marketing.” This approach offers several benefits for the financial industry, such as increased convenience and

ease of use, reduced costs, recruitment of new customers, retention of old customers, and anytime-anywhere-anyplace banking services.

Although recognized as a channel with great potential for banking and financial services, social network banking (SN Banking) lacks a comprehensive definition that captures recent advances in the field. To address this issue, we offer the following working definition of SN banking.

Social network banking is the provision of banking and financial services offered to consumers on interactive social network sites using any electronic and/or mobile device such as a PC, mobile phone, smartphone, or tablet.

While there is a relatively small conceptual overlap between this definition of SN banking and Internet and mobile banking, they share a similar strategic core—that is, to reduce overheads by substantially reducing the physical branch channel (DeYoung, 2005) and instead delivering banking services where the customers spend most of their time and can conveniently access banking information and services. Table 1 presents a clear comparison between Internet banking, mobile banking, branchless banking, and social network banking.

**Table 1. Comparison between internet banking, mobile banking and social media banking [sources: Martins et al. (2014); Shaikh and Karjaluo (2016); Shaikh and Karjaluo (2015); Hanafizadeh et al. (2014)]**

Description	Channel segmentation		
	Internet Banking	Mobile Banking	Social Network Banking
Definition	Internet banking is defined as the use of banking services through the computer network (the Internet), offering a wider range of potential benefits to financial institutions because of the technology's greater accessibility and user-friendliness.	M-banking is an application of m-commerce that enables customers to access bank accounts through mobile devices to conduct various transactions.	SN Banking comprises a set of banking services offered to consumers through interactive social network sites using any electronic and/or mobile devices such as a PC, mobile phone, smartphone, or tablet.
Access device dynamics	Consumers can access their banking information using a personal computer and/or a laptop.	Consumers can access the banking information and conduct transactions using cell phones or tablets.	SN banking offers consumers broader access to banking information using any available device, including a personal computer, laptop, cell phone, smartphone, or tablet.
Services dynamics	Internet banking offers several transactional and non-transactional services, including balance inquiries and viewing financial information.	Like Internet banking, mobile banking offers both transactional, and non-transactional services, including balance inquiries and viewing financial information. These services can be accessed either by SMS notification or using secure downloadable mobile banking applications.	SN banking currently offers largely non-transactional services. However, after implementation of PSD2, SN banking will include both transactional and non-transactional services.
Relationship dynamics	Banking companies and credit unions allow regular bank account holders to access Internet banking services.	Like Internet banking, banking companies and credit unions allow regular bank account holders to access mobile banking services. However, a close variant of mobile banking called "branchless banking" allows both account and non-account holders to access banking information.	SN banking allows users to access non-monetary banking information on SNS.
Consumer dynamics	As provision of Internet banking services is strongly linked to the availability of Internet services, banked and under-banked consumers can access Internet banking services subject to Internet availability.	Mobile banking can be accessed by banked, under-banked, and un-banked consumers using GSM/Internet-enabled mobile phones or tablets.	SN banking can be accessed by anyone using SNS.
Institutional dynamics	The regulatory framework ensures the provision of safe and secure services to bank consumers. In many countries, because of information security concerns, only banking companies and credit unions are allowed to provide Internet banking services to consumers.	Mobile banking allows banking institutions, credit unions, and non-banking entities such as FinTech to develop, deploy, and offer mobile banking and payment services.	Like mobile banking, SN banking allows banking institutions, credit unions, and non-banking entities such as FinTech to develop, deploy, and offer banking and payment services.

SN banking allows banks and other financial institutions to reach many account holders and non-bank account holders simultaneously, as well as receiving a new type of information, described here as *feelings*. SN banking services can be accessed using Facebook, Twitter, or YouTube credentials, and a formal relationship with the bank (in other words, a bank account) is not required, as it would normally be for Internet and m-banking.

### 3. RESEARCH METHODOLOGY

This study is descriptive and comparative in nature. The usage of social media by banks has recently emerged more or less in practice on one hand, and researchers have predicted or conceptually designed/suggested some possible services on social media on the other. Therefore, to describe this phenomenon, there is a need to compare what researchers suggested in the literature with what has actually and successfully occurred in reality. Comparative evaluation of the literature and the existing reality enables us to establish how innovatively pioneer banks use social media, thus revealing their best practices. Based on an inductive research method, such possibilities of the existence of successful innovative banking services in practice have been investigated. Content analysis is used to show that there is a substantial convergence of these innovative banking services on social media. However, interpretation is also provided with the support of different types of evidence such as facts, statistics, examples, and statements by authorities.

To begin, all the SNS-based banking and financial services mentioned in the literature were synthesized into four major domains (see Table 2). Given the rudimentary current understanding of these banking services, we then collated and analyzed a sample of 100 top global commercial banks using social media technology to provide banking and financial services, selected from the Financial Brands list published in 2015. The sample is not a statistical one, which is the type of sample

Table 2. Classification of potential banking services offered by banks and financial institutions through SNS

SNS		
Social Network Service Domains (SNSDs)	Social Network Services	Citations
1) Customer Education and Support Services	Customer voice analysis Content aggregation Early detection/emerging issues Reputation management Interests analysis and rumor monitoring Problem-solving through resource/idea aggregation Knowledge and idea sharing for banking operations	Capgemini (2014); Cognizant (2014); IDRBT (2013); Pry (2010); Chikandiwa et al. (2013); Sih et al. (2010)
2) Marketing and Sales Services	Attracting young customers Improving brand name Marketing (5 areas for building and managing relations) Advertising tool/customer information Word of mouth or viral marketing Effect on shopping decisions Increasing customer loyalty and support/offering different incentive models Customer segmentation Priority and sales Product and service development	Cognizant (2014); Capgemini (2014); IDRBT (2013); McKinsey Global Institute (2012); Chikandiwa et al. (2013); Bonsón and Florcs (2011); Tapscott and Williams (2008); Mitic and Kapoulas (2012)
3) Customer Service Improvement and Relationship	Customers as service representatives Monitoring and involvement Social customer relation management	Capgemini (2014); Cognizant (2014); McKinsey Global Institute (2012); Chikandiwa et al. (2013); Mitic and Kapoulas (2012); IDRBT(2013); Stone (2009)
4) Other Services	Efficient risk management Recruitment	Cognizant (2014)

normally used in relational research studies to generalize the finding to the population. This sample is considered “best of breeds” in terms of banking practice on social network sites. To determine the degree to which such services can be operationalized, those currently offered by the selected 100 leading global banks on popular SNS were compared with those mentioned in the literature. This method of comparative evaluation was first elaborated by Vartiainen (2002).

Working carefully with the definitions of banking services and their actual occurrence on three social networks, the authors identified and analyzed nine major services provided by the 100 leading global banking companies on the three major SNS, and these were further divided into 31 sub-services (see Table 3).

The actual SN banking services variously offered by the selected 100 leading banks were identified from the literature. The purpose of this evaluation was to identify, examine, and compare different services and products offered by the selected banks on Facebook, Twitter, and YouTube. As detailed in Table 4, the evaluation of these case banks yielded a number of intriguing findings.

After careful comparison of banking services identified in the literature and those offered by the selected 100 leading banks on social networks, the authors divided these into two main streams. The first stream includes those actually provided by the banking companies to their consumers, and the second stream includes all those theoretical services identified in the literature and in various market and survey reports. Because of certain restrictions, such as ownership of social information, the banks act as suppliers to social networks but do not own the social information produced by

**Table 3. Comparison of services provided by 100 leading banks and banking services in SNS (from the literature)**

Service ID	Description of Social Network Services	Types of Banking Services Offered on SNS (from the Literature)	Social Media Technology (%)			
			Average	YouTube	Twitter	Facebook
1	Marketing (including advertisements, offers, and promotions)	1) Attracting young customers 2) Improving brand name 3) Advertising tool and customer information 4) Word of mouth or viral marketing 5) Effect on shopping decision-making 6) Increasing customer loyalty and support 7) Offering different incentive models 8) Customer segmentation 9) Priority and sales	82	84 <sup>a</sup>	80	82
2	Financial Education and Advice	10) Customer education and knowledge management	82	77	84	84
3	Information Support	11) Customer voice analysis 12) Content aggregation 13) Early detection/emerging crises 14) Reputation management 15) Increased sales based on social data and life events	61	71	55	56
4	Customer Support	16) Social customer relationship management	51	4 <sup>Y</sup>	88 <sup>a</sup>	60
5	Sales Representativeness	17) Customers as service representatives 18) Monitoring customers	55	47	57	60
6	Customer Engagement	19) Customer engagement 20) Interest analysis and rumor monitoring	57	4 <sup>Y</sup>	81	87 <sup>a</sup>
7	Online Recruitment	21) Recruitment 22) Product and service development 23) Banking operations 24) Retail payment 25) New lending models 26) Efficient risk management	29	30	21 <sup>Y</sup>	36
8	Survey and Polling	27) Problem-solving through resource 28) Idea aggregation 29) Knowledge and idea sharing for banking operations 30) Large-scale business collaboration	6	2 <sup>Y</sup>	9 <sup>Y</sup>	8 <sup>Y</sup>
9	Other Services (news updates, sharing, complaints, greetings)	31) Advertising tool/customer updates	30	27	32	30 <sup>Y</sup>

Table 4. Services offered by 100 banks on Facebook, Twitter and Youtube

S. No.	MKT	FE&A	InfoSup	SR	RCTM	Other	CE	CustSup	S&P
YouTube	82	75	70	46	29	26	4	4	2
Twitter	79	83	54	56	21	32	80	87	9
Facebook	80	82	55	59	35	29	85	59	8

*Notes: MKT = Marketing, FE&A = Financial education and advice, InfoSup = Information support, SR = Sales representativeness, RCTM = Online recruitment, Other = Other services, CE = Customer engagement, CustSup = Customer support, S&P = Survey & Polling.*

members via SNS. Services for authorizing the identity of social network members do not yet exist on social media because of reputation risk and tight regulations.

#### 4. FINDINGS AND DISCUSSION

The findings of this study suggest that unlike other digital banking channels, such as ATM, POS, and mobile that offer financial and non-financial services, the banking services offered on the three major SNS are non-financial, which means that “social users” can use their “social accounts” to access non-cash-based services.

Given the nature and scope of these non-financial services, we have broadly segregated the SN Banking services into the following nine service dimensions. Table 3 provides a detailed description of the services in each category:

1. Marketing (including advertisements, offers, and promotions);
2. Financial education and advice;
3. Information support;
4. Customer support;
5. Sales representativeness;
6. Customer engagement;
7. Online recruitment;
8. Survey and polling;
9. Other services (such as news updates, sharing, complaints, and greetings).

According to our preliminary analysis, marketing, financial education and advice, information support, and customer engagement are of greatest importance. Statistically, more than 82 per cent of banks offer marketing and financial education and advice on the three major SNS; 61 per cent provide information support; 57 per cent focus on customer engagement; 55 per cent monitor customers through sales representativeness; 51 per cent provide customer support; 30 per cent offer other services; 29 per cent offer online recruitment; and a very small number of banks (6 per cent) conduct survey and polling on SNS.

However, close analysis of these services reveals that Facebook has about 1.4 billion active users (Lönnqvist and große Deters, 2016), and that the selected banks use Facebook largely for customer engagement (87 banks), financial education and advice (84 banks), and marketing (82 banks). Twitter, the most popular microblogging outlet (with over 650 million registered users), has enjoyed unprecedented adoption diffusion around the world (Aladhadh et al., 2014; Pentina et al., 2016). As a social media tool, Twitter entices firms (including banks) with the possibility of connecting brands to consumers at a deeper, more personal level and on a wider scale (Pentina et al., 2016). Twitter is

actively used by the majority of the banks to offer customer support (88 banks) and financial education and advice (84 banks). YouTube has over a billion users (YouTube, 2015) and is actively used by banks to share videos related to marketing (84 banks) and financial education and advice (84 banks).

These variations in use of the three major SNS for banking purpose are quite understandable, especially in light of their business models and marketing strategies. For instance, although the banks largely use Twitter for customer support (88 banks), this cannot be done effectively on YouTube; as a result, only four of the top 100 banks use YouTube for customer support. In addition, all the banks included in our sample use these three SNS intensively for sharing financial education and advice, related information, and updates with users. Conversely, almost all the banks use these SNS sparingly to conduct online recruitment and survey and polling.

These findings point to the potential of SNS as a powerful and purposeful bank marketing and advertising tool (Hanafizadeh and Behboudi, 2012). In most cases, customer engagement and financial education and advice services are offered primarily on Facebook and Twitter, and a thorough understanding of the methods and tools is required to realize the advantages of SN banking for these purposes. In an increasingly networked society where customers can interact easily with other customers and firms through SNS, we propose that customer engagement is an important new dimension in the customer management process (Verhoef et al., 2010). Here, we observed that banks collect data about users for customer engagement but analyze them in very limited ways, such as provision of information support to users. On the other hand, legal requirements and changes in banking operations sometimes require new ways of doing business. Here, SNS can act as an efficient channel for communicating with and training customers in relation to such changes (Cognizant, 2014). Through SN Banking, customers can also receive training on new financial services and share their views and questions about these with the bank.

In summary, if the banks hope to integrate SNS into their business strategies, they must pay special attention to the four important services above as critical success factors or standards. While the others are of less importance to these selected 100 leading global banks, they may offer significant benefits for small and medium-size banks and should not be ignored. One possible reason for the neglect of these services on SNS by large banks is that they can be provided by other means, such as bank websites, and replication on SNS is less important.

With regard to the use of services on the three networks, Twitter achieves the highest rank and YouTube the lowest, but among the banks in the study, there is little difference between Facebook and Twitter. Half of the banks on both networks provide six of the nine selected services. In short, banks offer about one and a half times more services on Facebook and Twitter than on YouTube.

Provision of financial education and advice and marketing is similarly distributed across the three social networks, and these services are extensively offered. In contrast, survey and polling has been ignored on all three networks. With respect to customer support and financial education and advice, Twitter leads among the three networks, with an especially strong role in customer support. Facebook, on the other hand, has been more successful in terms of customer engagement. Most of the services offered by YouTube fall within financial education and advice, information support, and, in particular, marketing and customer engagement. The large number of multimedia content views on YouTube (about five times more than on Facebook and 80 times more than on Twitter) shows that this content has been highly influential in attracting a large audience, and it has become a popular means for banks to provide financial education and advice, marketing, and information support services.

By demonstrating the relative frequency of usage of different services across various media, it is possible to infer the popularity of each service in diverse media. Services exhibiting a high frequency of usage by different banks are clearly perceived as less risky and are considered as the standard or what the customers' expect. Since users have encountered different services/products from other realms of business, this creates new expectations of and new demands on banking institutions. Account holders expect banks to keep pace with other businesses in their use of social media, offering new services through this new but already popular channel.



## 5. CONCLUSION

The underlying purpose of this empirical study was to examine banks' use of the three most visited SNS (Facebook, Twitter, and YouTube) by comparing the present level of SNS-based banking services with service areas mentioned in the literature. A sample of 100 leading global banks was selected from the most recent Financial Brands list (2015). Of the 100 selected banks, most were located in the US, followed by the UK and Australia.

The current applications of social networks by these 100 banks are customer relation management, feedback to the bank, discussions of public perceptions of bank policies and its social environment, obtaining the latest news, rumors and updates about the bank or its representatives, and entertainment. Some areas identified as potentially practical applications of SN Banking services are currently neglected by the banks, including financial services, knowledge sharing among personnel, new lending models, and risk management. Based on our observations, the reasons for the few or limited SNS-based banking services provided by banks are as follows:

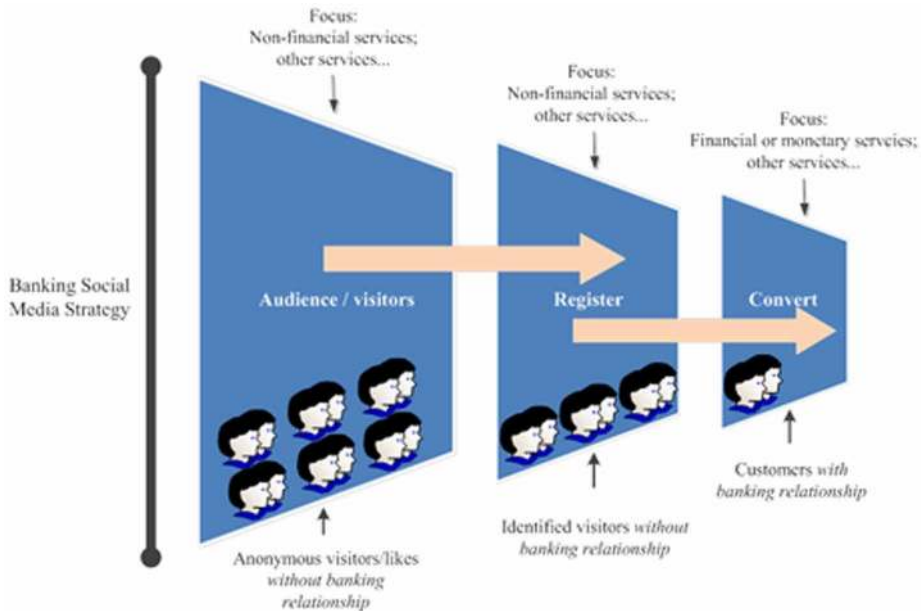
- Lack of control of users' shared content, as banking companies do not control the content and the information shared over social media;
- Low-security levels, as most SNS are owned, controlled, and managed by non-banking entities;
- The possibility of losing private information (banks must maintain certain security standards, and a dedicated social media policy is needed to prevent customers from sharing their personal information on public folders);
- Decreasing competitive advantage;
- Increasing regulative complexity (banks are generally considered a heavily regulated services sector, and most of the regulations are designed to protect the account holder's interests and their banking information).

The PSD2 will soon revolutionize the banking sector, allowing many more firms to develop and offer banking and payment services to consumers. PSD2 will also enable banks to share account holder information with non-banking entities, so expanding the banking and payment horizon. These developments will require banking and other financial firms to develop a specific social media strategy and a business model that enables them to exploit this untapped opportunity. The use of different SNSs for banking purpose offers several benefits for banks such as:

- Banks can introduce "SN banking" as a new financial delivery channel similar to other digital channels, such as ATMs, POS, and Mobile;
- Banks can provide real-time financial and non-financial services and responses to consumers that will expand their banking portfolio, developing SNS as a separate alternative delivery channel for retail customer interaction;
- Banks will be able to create and promote digital relationships with huge numbers of anonymous users, maximizing their chances of recruiting these anonymous users as registered members before converting them into customers (see Figure 1). We suggest that banks should emphasize interpersonal word of mouth and focus more on emerging SNS (such as Facebook, Twitter, YouTube) than on traditional mass media (i.e., television, radio, and newspapers) to increase the penetration of their digital banking services (Yu, 2012);
- Banks also need to address security and privacy issues to remove barriers to acceptance of SNS-based banking services.

The growing role of non-financial firms such as telecoms companies, financial technology (FinTech) companies and other start-ups in developing and deploying various financial and payment services is undeniable. These firms use technology to make financial and payment systems more

Figure 1. Potential social medial strategy of banks and other financial institutions (Pre- and Post-PSD2 scenario)



efficient, so revolutionizing traditional banking business models. Under these circumstances, the scope of SN banking is not limited to banks but also includes all these non-banking institutions, developing and deploying innovative banking products and services on social media, either as standalone or in collaboration with a bank, depending on the local regulatory environment. This study also reveals that banks tend to offer more non-financial services through social media, while financial institutions are tending to provide financial services, particularly banking utilities, via social networks. This fact may lead to banks losing their future market segment to the new players in the financial institutions, such as FinTech, telecoms, and even social media owners like Facebook, Twitter, and so on.

In summary, the rapid digitalization of service delivery is changing the dynamics of the banking industry, and imminent regulatory developments will soon create a flock of technology disruptors offering discrete banking services to different consumer segments (including banked, under-banked, and even unbanked) through innovative delivery channels such as SNS and mobile. This will create increased competition for well-regulated banks, underlining the importance of SNS in targeting different demographics, exploring new markets, and cutting costs.

### 5.1. Implications for Research and Practice, Limitations, and Future Research Directions

This study makes some significant theoretical and managerial contributions in the areas of retail banking and banking service delivery. First, this paper contributes to the theory of SNS, digital banking applications and services by providing valuable insights into the yet-emerging concept of SN banking. Second, this study recognized the potential of SN banking and identified SN banking as a new banking delivery channel. The empirical evidence of its usefulness to the banking industry, granted the inherent risks, remains largely an open question. Third, our results showed that marketing, customer engagement, financial education and advice, and customer support are more often offered by leading banks than other services on three social networks, namely Facebook, YouTube, and Twitter.

One of the major practical implications of this study is its recognition of SNS as separate delivery channel. For much of the past three decades, most of the research has focused on other digital banking

channels, such as Internet banking (e.g., Hanafizadeh et al., 2014) or mobile banking (e.g., Lee et al., 2015; Shaikh et al., 2015;). Unlike the previous research, our findings have postulated the potential of SN banking offering non-financial services to SNS users at their convenience. These insights can help bank managers and experts in the strategic development of social networks for banking purposes with an underlying purpose, for example, to preserve competitive advantage.

As banking institutions and non-banking entities such as FinTech and Telecom are keen to capture and retain customers, the ability to offer cutting-edge banking applications and value-added (including financial) services through innovative channels such as SNS in different markets (developed, emerging, and developing) means that banks can secure customer loyalty and increase customer satisfaction and retention (Shaikh, 2016).

This study is not without limitations. First, our argumentation in this study has addressed social media technology and the banking industry but widely ignores the social implications of customers and their expectations as well as demands. Especially after the promulgation of revised payment directives (PSD2) in 2018 by the European Commission, which will soon expand the scope as well as the necessity of SN banking services, future research may investigate the user perspectives on SN banking services.

The second limitation of our study is the scope of social media. According to Duane and O'Reilly (2012), there are four key types or domains of social media that are significantly important for any business: collaborative projects, micro blogs, content communities, and SNS. The scope of our study is limited to only one type of social media, SNS. Future research may consider and address other social media types when investigating SN banking services, including the consumer attitude across different social media types when choosing to adopt the SN banking services.

Third, the majority of the top 100 banks included in this sample were located in developed markets, such as the USA (32 banks), the UK (12 banks), and Australia (8 banks). Future research may consider including a more balanced sample size with banks located in emerging and developing countries and analyze the usage of SN banking services. Demographic differences and a comparative analysis may give valuable findings and useful information on how consumers from different regions/economies (such as developed, emerging, and developing) perceive and interact with SN banking services.

A fourth valuable future research avenue is the use of Altman and Taylor's (1973) Social Penetration Theory (SPT). According to Beatty et al. (1996), in the SPT, the relationships between the service provider and the user become deeper and more personal as interactions proceed and time passes. Since SNS are perceived as highly interactive communication channels by both companies and users, future research may use SPT while examining the usage of SN banking services.

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