FIN 404 Applied Global Finance

Digitalization in the Financial Sector: How to Reach Millennials in Today's Digitalized Financial World?

Group Written Assignment

submitted to

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List of Abbreviations

AI	Artificial Intelligence
App	Application
ATM	Automated Teller Machine
BMW	Bayerische Motoren Werke
CEO	Chief Executive Officer
E-Banking	Electronic Banking
e.g.	For Example
EUR	Euro
FinTech	Financial Technology
FSI	Financial Service Institutions
IT	Information Technology
Tech	Technology
U.S.	United States of America
VW	Volkswagen

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1 Introduction

1.1 Problem Statement

"Technology is revolutionising banking, improving the experience for clients."[1] The financial sector continuously experiences evolution. Because of this, not only consumers must adapt to new forms of personal finance, but also financial institutions must also compete and adapt in order to provide the best user experience for its customers. Therefore, the significant rise in financial technology companies (Fintechs) shows the importance that the financial industry places on “automated and improved financial services”.[2]

Changing the scope of current financial practices is not a simple task. Various types of customers as well as completely different target groups control their finances uniquely. As a result, relatively older generations may not be as committed to testing new technologies with regards to their assets as trust and security are real and serious issues.[3] One generation that is particularly interesting to monitor in terms of financial technology is the millennial group and it is also likely the most studied generation.[4] “The world’s first digitally-native generation, millennials’ tech-saturated upbringing has made the group distinct from the older generations that preceded them.”[5] Out of all generations, millennials are noted as “the largest segment of today’s working population”[6] and as a result are more likely to use financial services with technology than those of other generations. Therefore, it is no surprise that the financial sector has a significant issue to consider.

How will banks and other financial services correspond to millennials in this digital age?

1 World Finance 2018.
2 FinTech Weekly 2020.
3 Cf. Christ 2017.
4 Cf. Emmons 2016.
5 Mery 2019.
6 Fry 2016.

As millennials have understandably high expectations when it comes to technology, the financial sector will have to adjust to run the business smoothly and provide the best user experience.

1.2 Purpose and Approach of the Study

Continuous technological advancement is not specific to the financial sector. According to Forbes, "the industries of the future are all powered by tech."[7] Since the invention of the personal computer and then eventually the smartphone, consumers are now using high-paced technology daily. One report from Kepios states that "more than 4.57 billion people around the world now use the internet – close to 60 percent of the world's total population."[8] The number of internet users is only expected to grow and this fact can be explored deeper for financial institutions to adapt and better satisfy customer needs.

The purpose of the research conducted in this paper is to understand how financial institutions are adjusting their strategies to better satisfy customer demands and expectations. To understand this, a brief overview of the history of the financial industry is necessary before analyzing and applying current and upcoming trends accordingly. Because internet use and technological advancement are rapidly increasing, it is paramount that financial institutions adapt as previous methods may be obsolete in the years to come.

1.3 Limitation of Information

Before the following analysis is conducted, several limitations must be mentioned. Although the millennial generation has ample subject matter to examine, it omits data regarding the remaining generations accordingly. Therefore, as the focus is on millennials, the full scope of financial technology and the participation of all users will not be examined.

Millennials (Generation Y) have been proven to be an important target group due to technological proficiency and the likelihood to use financial technology relative to other generation counterparts (e.g. Generation X, Generation Z).[9] Therefore, although

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7 Hecht 2018.

8 Kepios 2020.

9 See Appendix 6.2, p. 16.

this is a limitation, in theory, it does not take away from the significance of the research presented.

2 Digitalization of the Financial Industry

2.1 Financial Industry Development

Today's banking system dates back as far as the Middle Ages. Modern capitalism, which is based on private ownership, began in Florence, Italy.[10] The Medici family was the first to create a "formal structure of the bank" as it is known today.[11]

From the crusades to the great discoveries, Italy can be seen as the leading economic power in Europe and the Western world.[12] The country officiates as the mediator between the Levant, including countries such as Israel, Egypt, or Turkey, with the shores of the North Sea.[13] The spice market can be seen as the main trading commodity of Italian trade between both continents. However, the Italians were not only the leading merchants but also the key players in banking at that time as foreign banking was mainly being carried out by Italian merchant-bankers.[14]

Stock companies did not appear until the beginning of the 17th century; however, the Medici Bank already predicted the "holding company"[15] by then. In addition, the Italian brokers developed double-entry bookkeeping in 1340, invented the bill of exchange, and used marine insurance.[16] Around 750 years ago, the oldest bank in the world, the Monte Dei Paschi de Siena, opened its doors to the public in Siena, Italy.[17]

The evolution of the banking system can be divided into 5 different steps beginning with the informal banking phase.[18] During this phase, the focus was mainly on trading

10 Cf. King 2018, p. 27.
11 King 2018, p. 27.
12 Cf. De Roover 1999, p. 1.
13 Cf. Aydin 2018, p. 6.
14 Cf. De Roover 1999, p. 1.
15 De Roover 1999, p. 1.
16 De Roover 1999, p. 1.
17 Cf. King 2018, p. 28.
18 See Appendix 6.1, p. 16.

and “under the mattress savings.”[19] From 1400 to 1950 the second phase, community-led banking appeared. A single bank relationship appeared at the local bank branch. From 1950 to 2000 the third evolution step occurred and universal banking was born. From the local bank agency, access to the global international platform was granted. This business model was necessary as part of the world population started to travel around the globe on a more regular basis. From the year 2000 until approximately 2025, omnichannel banking led the next step of evolution.[20] In omnichannel banking, the customer can experience consistent service through different channels. Access is granted via different tools such as the branch, credit card, ATM, E-Banking, or mobile phone. The fifth evolution step is the ubiquitous banking phase. Ubiquitous banking, also known as the ideal banking system, allows customers to settle “transactions at any time, any number of times and results should be declared immediately.”[21] Those that will best develop in this phase will be those with the broadest data capabilities, not the biggest distribution networks.[22]

FinTech creation started during the fifth phase of the model. FinTechs are not traditional banks, but these digital companies compete with IT solutions on banking and payment services. These entities will progressively replace traditional banks regarding various activities.

2.2 Financial Industry Evolution From Digitalization

As within other sectors, the banking sector has evolved dramatically especially during the last decade. Digital markets have become common as a shift from analog businesses to digitalized businesses arose.[23] Innovation has risen as the customers have been provided with the possibility to access their financial information anywhere at any time via online and mobile access.[24]

The introduction of digitalization in the financial industry has allowed businesses and accountants to control an extensive amount of data to handle arduous calculations and oversee financial transactions from one computer.[25] For banks, classic in-person

[19] King 2018, p. 257.

[20] Cf. King 2018, p. 257.

[21] Aithal 2016, p. 123.

[22] Cf. King 2018, p. 267.

[23] Cf. Kumar 2018, p. 1.

[24] Cf. Salesky 2017, p. 38.

[25] Cf. Kumar 2018, p. 1.

banking needs to be combined with online accessibility.[26] Well-known banks such as JP Morgan Chase or Bank of America have already closed 9% respectively 15% of their branches since 2012.[27] There is, however, still a need for keeping physical banks as Paul Donofrio, CEO of Bank of America, declares that today not only are one million customers still coming to different branches to transact but also a lot of customers are passing by to obtain advice.[28] Over time, digital banking seems to become "the new normal."[29] Digital banks are operating exclusively online with only a few or even no physical venues. Two big players in this sector in the U.S. are the Ally Bank and the Simple Bank, both existing for approximately a decade.

Without a doubt, Artificial Intelligence (AI) and machine learning will leave a permanent trace in the financial industry. AI and machine learning create complicated algorithms producing an extraordinary amount of data. The obtained information can be used for "insights into consumer behavior, providing real-time investment insights, regulatory compliance, and more."[30] The algorithms resulting from these practices can also be used to detect counterfeit activity and support banks in protecting customers from cybercrime attacks while using mobile banking.[31]

As previously mentioned, digitalization plays a major role in the transformation of the banking system. FinTechs are one of the main drivers because these entities combine financial aspects with technological aspects.[32] The term FinTech is mainly used for "digital banking technologies such as digital banks, wallets, blockchain tech, and more."[33] FinTech companies have enrolled in the banking market by selling payments. Most of these companies focus on the mobile payment market, personal lending, or financial advisory.[34]

The banking industry can be viewed as a slowly developing and inflexible business especially regarding the aspect of e-commerce or digitalization in general.[35] FinTechs,

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26 Cf. Salesky 2017, p. 38.

27 Cf. Digital Marketing Institute 2020.

28 Cf. Digital Marketing Institute 2020.

29 Digital Marketing Institute 2020.

30 Digital Marketing Institute 2020.

31 Cf. Digital Marketing Institute 2020.

32 Cf. Eickhoff/Muntermann/Weinrich 2017, p. 1.

33 Digital Marketing Institute 2020.

34 Cf. Omarini 2018, p. 3.

35 Cf. King 2018, p. 14.

on the other hand, can be described as “young, aspirational, visionary, and capable.”[36] Today’s customers are looking for innovation, fast service, and good customer experience which can all be provided by FinTechs. Due to a smaller and flexible structure, these companies can act faster, target more precisely, and reduce costs.[37] N26, a company offering a mobile banking app, is an example of an entity not owning a single physical branch.[38] One of the key benefits of the company is that no charges must be paid on any transaction, making the company even more attractive for the consumer.

In the meantime, thousands of these FinTech companies have been formed and new ones are created every day. The type of activities performed is extremely diversified and an increasing number of business areas previously handled by traditional banks now compete with a multitude of FinTechs.[39] The largest growth in the financial services sector can be seen in the payments area. Companies such as PayPal or Adyen are relevant examples of payment processing companies successfully entering the market since the turn of the millennium.[40]

A similar situation can be observed in the automobile industry where the traditional producers compete with Tesla, a company that has a significant advance on the technology side. This is demonstrated by the market capitalization of Tesla in comparison to other relatively large car manufacturers. As of July 2020, Tesla’s market value of EUR 254.9 billion can be compared to EUR 176.9 billion for Toyota, EUR 75.7 billion for VW, EUR 51.4 billion for Daimler, and EUR 45 billion for BMW.[41] A major difference exists between these two markets as there is only one relatively large technology competitor in the automobile sector; however, in the finance industry, thousands of FinTech companies exist. If the banking industry does not urgently and aggressively invest in digitalization the banks will likely be overtaken by these FinTechs.

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[36] Cf. Omarini 2018, p. 3.

[37] Cf. PwC 2016, p. 21.

[38] H2 Ventures & KPMG 2019.

[39] Cf. PwC 2016, p. 6.

[40] Cf. FINTECHTRIS 2020.

[41] Cf. Dörner/Demling 2020.

3 Millennials as a Customer Base for the Financial Industry

3.1 Definition of Millennials

Although almost everyone associates the term "millennials" with synonyms such as Generation Y, young people, and digital natives, it is a multidimensional construct with many different meanings.[42] Looking at existing definitions, it can be seen that millennials refer to those born between 1980 and 2000.[43] However, there is a wide variation in the exact delimitation of these birth cohorts: the accounting firm KPMG defines the period from 1980 to 1995[44], while Kienbaum only considers the birth years 1980 to 1990.[45] Generally speaking, the term millennials refers to young people and Generation Y. On the one hand, the term Generation Y is used to refer to the previous generation (Generation X). On the other hand, the "Y", which is pronounced like the word "why" in English, is intended to show that this generation has, among other things, the ability to question many things, as well as the system in general, and has grown up in a time of uncertainty.[46] The term millennials was created because the generation at the turn of the millennium was the youngest.[47]

Generation Y has grown up in a society characterized by prosperity.[48] Through digitalization and globalization, the world has become more transparent, communication facilities are constantly available, and choice has increased in every respect.[49] This generation especially associates the concept of globalization with the possibility of traveling to other countries, studying or working internationally, and a high degree of cultural diversity.[50] In addition, this generation is characterized by being highly "tech-savvy". Millennials are considered the very first digital natives in the world and the first to “always be connected".[51] Their great competence lies in “obtaining information via

42 Cf. Moreno et al. 2017, p. 135.
43 Cf. Moreno et al. 2017, p. 135.
44 Cf. KPMG 2017, p. 4.
45 Cf. Kienbaum Management Consultants 2010, p. 1.
46 Cf. Augustine 2018, p. 70.
47 Cf. KPMG 2017, p. 5.
48 Cf. Pospolit/Weiher 2016, p. 158.
49 Cf. Parment 2013, p. 7.
50 Cf. Weuthen 2019, p. 126.
51 Cf. KPMG 2017, p. 5.

the Internet [and] the informal use of new technologies".[52] Growing up with digital media, laptops, and mobile phones are a constant companion resulting in changed buying behavior.[53]

Furthermore, individualism is a very important aspect of millennials. With this thinking, a combination of almost incompatible things like convenience and time stress, publicity, and protection of privacy is evident.[54]

Today, millennials represent a very large consumer group, which for many financial companies should not be underestimated. This generation numbers around 80 million and is "set to represent an astounding 50% of the global workforce by 2020".[55] Concerning the population distribution in Germany, it is also interesting that more than 15 million belong to the millennial generation.[56]

3.2 Expectations Towards the Financial Industry

"Millennials are digital natives. Born into an era when smartphones are abundant and texting is a fixture in communication, Millennials fluently speak the digital language."[57]

Financial services institutions (FSIs) are still feeling the effects of the 2008 financial crisis and are working to regain the trust of customers. Millennials are seen as the next generation of financial service customers. Nevertheless, the only way for financial services companies to attract this generation is to focus primarily on the latest technologies and digitalization.[58] It is no longer enough to address this generation like its parents' generation (Generation X). Only 46% of those millennials surveyed in a Forbes study see themselves staying with their current financial services institution for the next few years and a full 76% will find out about personal investments in a social network.[59] "FSIs must embrace a digital transformation, with a laser-focus on

52 Parment 2013, p. 4.
53 Cf. Augustine 2018, p. 72.
54 Cf. Weuthen 2019, p. 126.
55 KPMG 2017, p. 1.
56 Cf. Statista GmbH 2019.
57 Fromm/Garton 2013, p. 27; See Appendix 6.2.3, p. 17.
58 Cf. Akamai 2015, p. 2.
59 Cf. Forbes 2015.

changing customer relationships and experiences, redefining value propositions and optimizing business models and processes."[60]

For a generation, already accustomed to digital platforms, intelligent technology, and data-driven personalization and forecasting, the minimum requirements for modern financial products and services have changed.[61] For example, online access or the loading speed of a website is now a "standard" and a prerequisite for all financial providers and no longer just a unique advantage for new market participants. And with the rise of new technological entry points (e.g. digital language assistants, chatbots, video chat), millennials feel increasingly comfortable using them to search for and use financial services products.[62]

Looking at statistics that deal with online activities, the use of social media stands out clearly, but online banking takes on great significance immediately afterwards.[63] Concerning online banking, in particular, financial services customers first and foremost expect security, closely followed by ease of usability, speed, and availability.[64] Another major expectation of millennials towards online banking is responsive web design: "Mobile users experience website dissatisfaction the most often, with nearly 40% stating they have had a dissatisfying experience".[65] And the responses towards a dissatisfying experience are clear: most users would choose a competitor.[66]

Many millennials are not only technology-dependent but also a generation with more debt. Due to increased costs of living and delayed wage increases, Generation Y has grown into a more frugal and price-conscious generation: "Across banking, insurance, and wealth management, almost half of U.S. millennial consumers say competitive pricing is one of the most important factors that makes them stay with their current provider".[67] This means that financial companies have to take into account this price sensitivity and the high priority it has for millennials in their communications.

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[60] Akamai 2015, p. 2.

[61] Cf. Covi 2019, p. 2.

[62] Cf. Accenture 2018, p. 14.

[63] See Appendix 6.2.4, p. 18.

[64] See Appendix 6.3, p. 18.

[65] Akamai 2015, p. 11.

[66] Cf. Akamai 2015, p. 12.

[67] Accenture 2018, p. 11.

And when it comes to wealth management, millennials prefer to manage their finances and investments. As a result, their investment confidence, combined with a lack of trust in advisors, means that financial firms need to provide more tools to facilitate self-investment.[68]

Nevertheless, FSIs should use the opportunities offered by social networks to reach Generation Y. Faced with increasing regulatory constraints, few financial institutions were able to fully exploit the strategic importance of social channels. But with over 65% of Internet users using social sites once a week or more, FSIs that do not maintain an active presence in social media miss a massive opportunity to connect with the next generation of customers and retain them.[69] The study also found that 52% of affluent millennials would look for information from financial firms on a social network, and 59% would seek information for personal financial and investment decisions on social media sites such as LinkedIn.[70] This represents a great opportunity for financial companies. Therefore, social media channel presence can be seen as a further requirement of millennials from financial companies.

4 Financial Industry Approach to Millennials

4.1 Possible Targeting Approaches

It has been proven that the interaction of three factors has a significant influence on the change in the financial sector: technology, competition, and changing customer behavior.[71] The appropriate responding question is, how can financial services companies such as FIST and upcoming FinTech's best keep up with millennials? The rapid development of technology in recent years has had a decisive influence on customer behavior and has made new business models possible.[72] It is precisely the demands and expectations of the population that trigger millennials to profoundly change the business models of the past decades in terms of means of communication, service models, and consumption patterns.[73]

[68] Cf. Accenture 2018, p. 12.

[69] Cf. Akamai 2015, p. 3.

[70] Cf. Forbes 2015.

[71] Cf. Kesting 2017, p. 3-4.

[72] Cf. Fernandez 2018.

[73] Cf. Fernandez 2018.

This denotes that banks, for example, are faced with a number of serious risks caused by external factors, such as regulation or political and economic changes, as well as by an internal weakness of their traditional business models.[74] In the context of millennials, the following factors, among others, pose risks to the financial or banking sector: bad reputation, increasing internal/ external competition, and little investment in digital commerce thus far. However, the following points strengthen the current sector: millennials are open for new service models and millennials are mostly already bank customers. As a result, millennials, only need to be maintained, not acquired, and the cooperation between banks and FinTech's will increase enormously in the future.[75] It is necessary to define an innovative roadmap (internal and organic development, cooperation with FinTech's, banking start-ups, etc.) and to act efficiently and goal-oriented.

On this future-oriented path, it is important to face the problems openly and to create awareness at the management level in order to initiate change. Furthermore, the focus must be on relevant innovative topics and the company policy must be aligned to the values and needs of millennials. Finally, the will to "disrupt" is decisive.[76] Consumers are expecting these pervasive, seamless ecosystems to support their financial service experiences. Therefore, to thrive, financial institutions need to actively forge their place in their ecosystem or risk losing market share to digitally-driven financial service leaders, fintech companies, and big tech competitors.[77] The changes beginning to occur today will drastically affect how financial service companies serve their customers in the future. The investments financial services companies make in technology and FinTech will become primary drivers for attracting and retaining consumers. To understand how that might look, the following sub-chapter will provide a detailed look onto the FinTech's N26 and Trade Republic.

4.2 Implementation of Targeting Approaches

4.2.1 N26 - Modern Banking for Millennials

N26 GmbH (N26) is a Berlin-based FinTech company that attempts to adjust retail banking to the modern, mobile lifestyle of today's customers. N26 (with its subsidiary

[74] Cf. PwC 2020.

[75] Cf. Fleiß et al. 2019, p. 115-117.

[76] Cf. Anderie 2018, p. 1-2.

[77] Cf. Anderie 2018, p. 3.

N26 Bank GmbH) is a direct bank specializing in offering its banking services completely via a smartphone app.[78] Besides a free bank account that comes with a free credit card and customer-friendly conditions, N26 partners with other financial services providers. As a result of these cooperations, the company is able to offer its customers a broad spectrum of services like insurance, foreign exchange services, or investments, all of which are accessible via a mobile app. Thanks to its mobile strategy, N26 operates on a cost-effective basis with a lean organization and without the need for stationary bank branches.[79] Customers can deposit or withdraw money free of charge in selected retail outlets, such as supermarkets, and advice and support are provided online exclusively. Although the company is based in Berlin (Germany) it is currently establishing new offices in New York (USA) and Barcelona (Spain). But what makes the success of N26 so unique? The bank focuses on two core areas in which it wants to stand out from its traditional competitors. The first, as previously mentioned, is the price. The second core area is user-friendliness. Many traditional banks still work with letter post and opening hours. N26 offers the exact opposite. The bank's app offers all basic functions (setting up an account, making transfers, calling up payment statistics, blocking cards, or taking out loans). In addition, an immediate notification is received for every transaction (banking in real-time).[80]

According to its own statements, this app is to be launched in the American market in the third quarter of 2020 and the number of customers is expected to rise to 5 million by the end of the year.[81] This is one of the reasons why its presence in social media channels is an integral part of the company's business strategy whereby especially the corporate app has to be highlighted.[82] Large-scale advertising campaigns (e.g. the #nobullshit campaign[83]) have already proven that it is possible to cleverly position oneself as a smartphone bank vis-à-vis traditional bank. At first glance, it may sound paradoxical that a bank with such advertising slogans enjoys a higher level of trust in its target group than established financial institutions.[84] However, N26 is right on trend with its product regarding their desired target group.[85] Large technology groups are increasingly attacking banks in their core business. The online retailer Amazon, for

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[78] Cf. Heyden/Poppelreuter 2018.

[79] Cf. Heyden/Poppelreuter 2018.

[80] Cf. N26 GmbH 2020.

[81] See Appendix 6.4.1, p. 19.

[82] See Appendix 6.5.1, p. 20.

[83] See Appendix 6.5.2, p. 20.

[84] Cf. Heyden/Poppelreuter 2018.

[85] See Appendix 6.4.2, p. 19.

example, is planning to develop a product similar to a current account with the major bank JP Morgan Chase.[86] Apple has been investing in the expansion of the Apple Pay payment service for years. Google launched AndroidPay on the market as early as 2015.[87] Facebook is converting the Messenger chat service into a payment platform and WhatsApp is also working on a payment function. In contrast to N26, however, the technology giants prefer to rely on partnerships rather than direct entry into the financial sector. As a leader in mobile banking, N26 has recognized that modern generations - millennials - no longer want to manage their finances locally or even branch-based. The increasing number of users is a clear indication of this.

4.2.2 Online Broker – Trade Republic

Another possibility for FinTech's or competition with conventional banks is the increasing number of online brokerage providers. Technological innovation and favorable prices considerably simplify entering the market for new investors. The idea behind this is that trading and investing today should be as simple and intuitive as possible. The management of securities accounts and the purchase of securities are often cheaper with these providers than with the established competition. Providers such as Trade Republic or Smartbroker benefit from the fact that millennials are clearly tech-affine and that using their services via an app is much easier than for older investors.[88] Trade Republic is a purely app-based broker[89] that allows you to buy, hold and sell stocks and ETFs, collect dividends, watch companies in a watchlist, or get an overview of your own performance.[90] Since the majority already own smartphones, an app is the only necessity for securities transactions. The mixture of numerous innovations in the way of trading as well as the particularly low prices - also caused by the current situation surrounding the coronavirus pandemic - have led to an enormous increase of online brokers.[91] Through these offers, millennials are given the chance to dispel the supposed cliché of carelessly handling money and to be sufficiently informed about possibilities for wealth creation in order to make investments in the capital market.[92]

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86 Cf. Forbes 2020.

87 Cf. The Guardian 2015.

88 Cf. Heyden/Poppelreuter 2018.

89 See Appendix 6.6.1, p. 21.

90 Cf. Trade Republic 2020.

91 Cf. Handelsblatt 2020.

92 Cf. Heyden/Poppelreuter 2018.

Therefore, it is clear that the financial sector, and with it the banks, must adapt to change and transform traditional business models in order to be appropriately positioned.

5 Conclusion

5.1 Outlook and Recommendation

On the basis of the preceding application scenario, it can be concluded that due to the rapid technological progress within the last two decades, the requirements that customers expect from companies have likewise increased exponentially.

In this context, this development likewise affected the banking industry, which was impacted during this period by, for example, the economic crisis in 2007. This industry was nevertheless not limited by the rapidness of technological development, but instead gained from it. This adaptability has been evident since the emergence of the banking industry where, since the foundations were established in Italy, a continuous process of change has been seen over decades and even centuries displayed in the five steps of the banking industry. However, over the past few years, not only the market situation has changed, but also customer demands on banks depending on the respective generation. In this respect, millennials represent a suitable generation with regard to analysis as this generation has been shaped by this technological development from early childhood and thus forms the transition to subsequent generations such as Generation Z.[93] As a reflection of this development, more than 70% of all children today in the USA have already used a smartphone before the age of ten and thus came into contact with technology much earlier than previous generations.[94] In addition, this is supported by the fact that Generation Y has the highest percentage of smartphone ownership of all other generations.[95] Based on these findings, it, therefore, follows that banks wanting to address Generation Y as a target group should do so primarily by applying technological innovations as this increases the chances of success. In this context, banks should continue to develop and take advantage of new technological innovations since millennials as a target group are accustomed to all

[93] Cf. van den Bergh/Behrer 2016, p. 6; See Appendix 6.2.2, p. 16.

[94] See Appendix 6.7.1, p. 21.

[95] Cf. The Nielsen Company (US), LLC. 2016.

kinds of technology through frequent contact and thus show higher expectations than previous generations.

In conclusion, it can be stated that due to the current situation regarding the corona-virus pandemic, a relatively large number of banks are already developing possible technological alternatives in order to continue to offer customers the best possible service. This is underlined by the fact that various measures in the banking sector, such as online brokers, are enjoying increased satisfaction since the offline application is currently unavailable. Thus, the banking industry currently has the opportunity to implement millennium-oriented measures that focus on online platforms as the prevailing situation worldwide complicates or completely prevents offline application.

5.2 Summary

The primary purpose of this assignment consisted of answering the research question formulated in chapter 1.1: **How will banks and other financial services correspond to millennials in this digital age?**

Thereby it became apparent that the banking sector, like numerous other industries, should use the technological progress to its own advantage in order to address both millennials and future generations in the best possible way. In this context, the banking industry has several technological opportunities, such as the use of banking apps, in order to be both competitive in the market and to optimally address the desired target group. Therefore, while banks should retain traditional offline business models for the older generations, a shift towards the implementation of new online business models is equally necessary to avoid losing market share due to the loss of younger generations as potential customers.

Ultimately, the ongoing technological progress is clearly an indispensable part of the banking industry's approach to addressing millennials and subsequent target groups. Thus, companies within this industry are required to follow current technological trends in order to address the younger generations in the future, who have different expectations than previous generations, in order to remain competitive in the market.

6 Appendix

6.1 Financial Industry Development

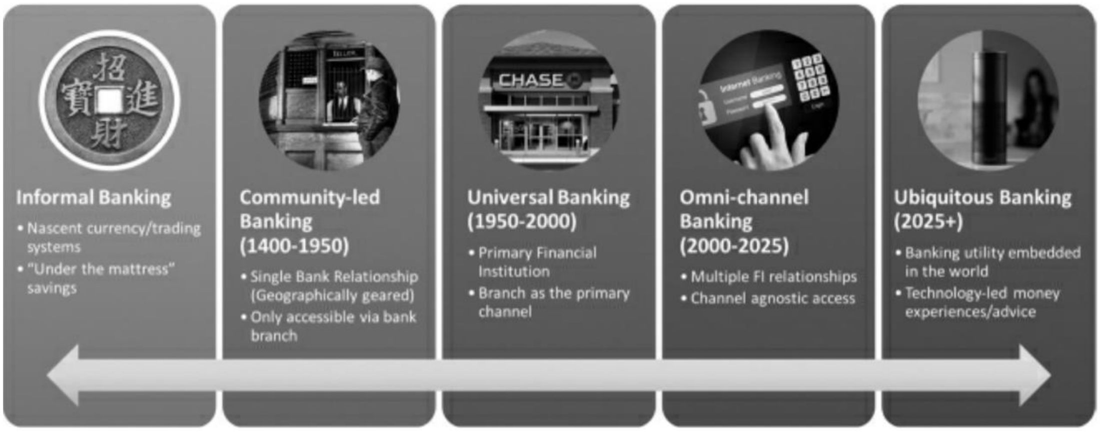

Figure 1: The Evolution of Banking Systems[96]

6.2 General Information Millennials

6.2.1 Generations Timeline

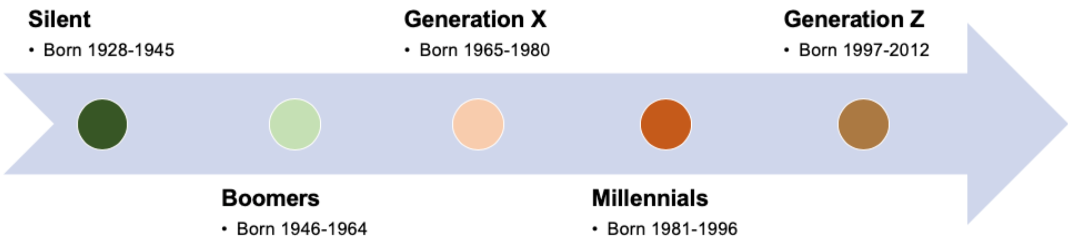

Figure 2: Generations Timeline[97]

6.2.2 Generations Characteristics

Table 1: Characteristics of Generation X, Y and Z

	Generation X	**Generation Y**	**Generation Z**
Age Group[98]	1960-1980	1981-1996	1997-2012

[96] King 2018, p.257.

[97] Own Illustration based on Dimock 2019.

[98] Cf. Dimock 2019.

Context[99]	Capitalism and meritocracy	Globalization Emergence of internet	Mobility Multiple realities Social networks
Signature Product[100]	Personal Computer	Tablet Smartphone	Google Glass 3-D Printing autonomous driving
Communication Media[101]	E-mail Text message	Social Media Text message	Hand-held communication devices

6.2.3 Millennials in Germany

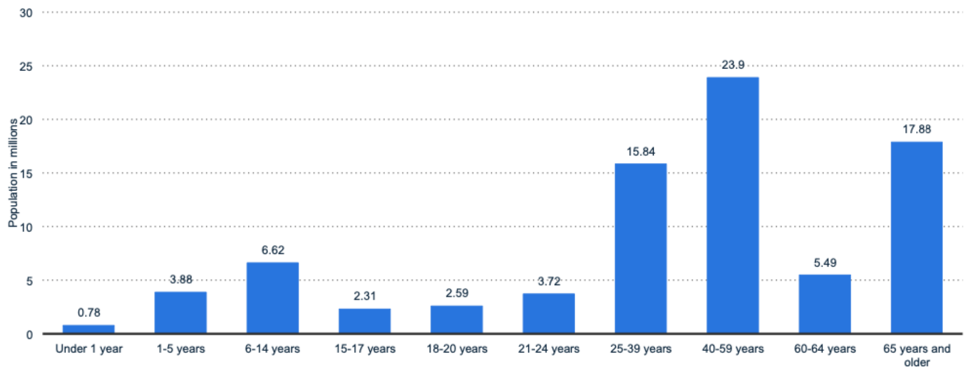

Figure 3: Population of Germany, by Age Group (in Millions).[102]

99 Cf. Francis/Hoefel 2018.

100 Cf. Francis/Hoefel 2018.

101 Cf. Francis/Hoefel 2018.

102 Statista GmbH 2019.

6.2.4 Most Commonly Completed Online Activities

Figure 4: Most Commonly Completed Online Activities.[103]

6.3 Expectations Towards Online Banking

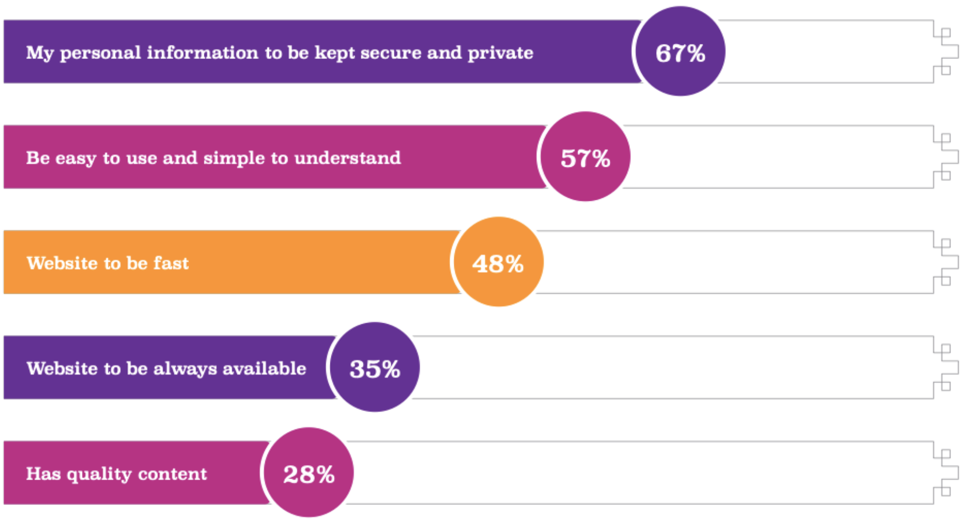

Figure 5: The Expectations of Millennials Towards Online Banking.[104]

103 Akamai 2015.

104 Akamai 2015.

6.4 General Information about N26

6.4.1 Development of Customer Numbers N26

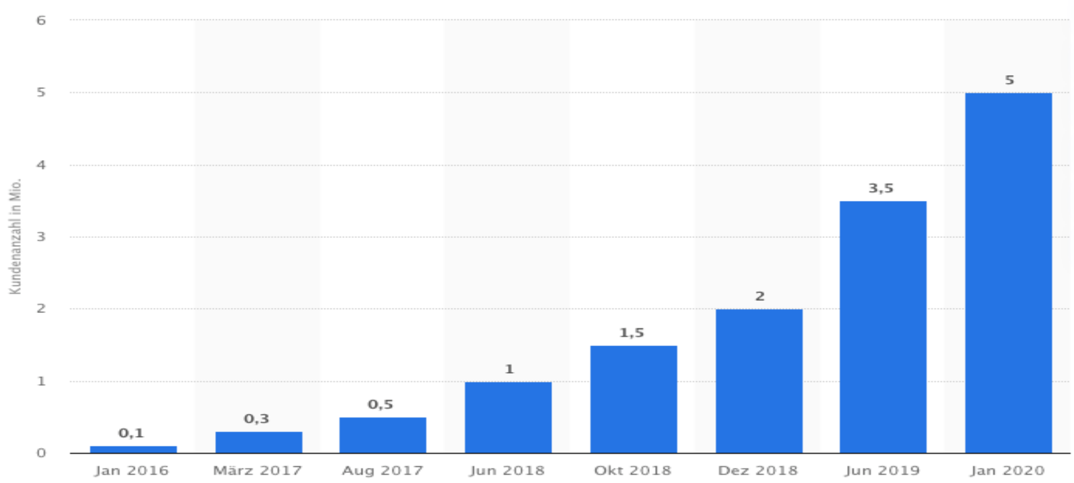

Figure 6: Development of the Number of N26 Customers from 2016 to 2020[105]

6.4.2 Age Groups of the N26 Customers

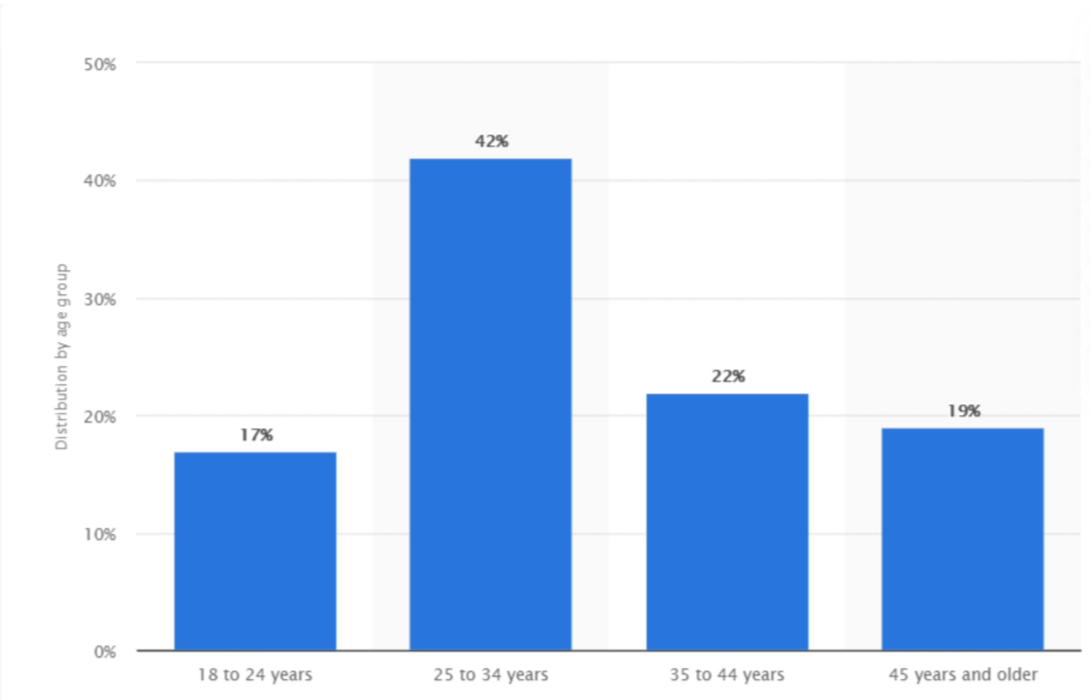

Figure 7: Age Groups of the N26 Customers in Germany[106]

[105] Statista GmbH 2020.

[106] Koptyug 2018.

6.5 N26 App

6.5.1 N26 App Example Landing Page

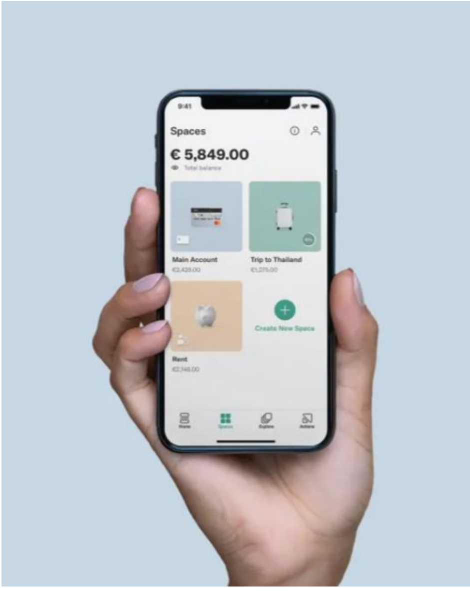

Figure 8: N26 App Example Landing Page[107]

6.5.2 N26 Advertisement Campaign

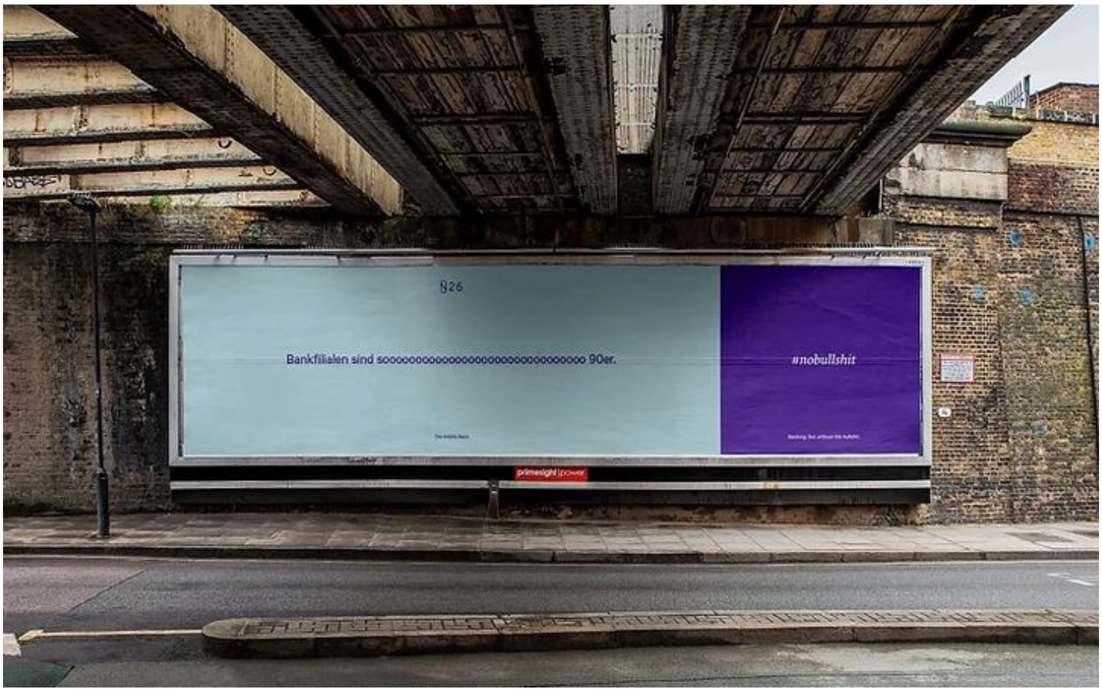

Figure 9: N26 Advertisement Campaign #nobullshit[108]

[107] N26 GmbH 2020.

[108] McGath 2018.

6.6 Trade Republic General Information

6.6.1 Trade Republic App

Figure 10: Trade Republic App[109]

6.7 General Information Phone Usage

6.7.1 First Phone Usage

Table 2: Age of American Children at First Smartphone Usage[110]

Age	Percentage
1-2 years	12.2%
3-4 years	16.1%
5-6 years	12%
7-8 years	14.1%
9-10 years	16.2%
11-12 years	15.1%
13-14 years	9.1%
15-16 years	5.2%

[109] Trade Republic Bank GmbH 2020.

[110] Cf. O'Dea 2020.

List of References

Accenture (2018): Financial Services Transformation in the Era of the Emerging Digital Consumer. Online: https://advertiseonbing-blob.azureedge.net/blob/bingads/media/library/insights/fy18/financial-services-whitepaper/financial-services-white-paper-en.pdf. [last access date: 2020-07-30].

Aithal, Sreeramana (2016): Realization of Ideal Banking Concept using Ubiquitous Banking.In: International Journal of Modern Education and Computer Science, dated 2016-11-01, vol. 1, p. 119-135.

Akamai (2015): Digital Transformation, Millennials and the Future of Financial Services. Online: https://www.akamai.com/us/en/multimedia/documents/white-paper/akamai-performance-matters-digital-transformation-millennials-and-the-future-of-financial-services-white-paper.pdf. [last access date: 2020-07-30].

Anderie, Lutz (2018): Gamification, Digitalsierung und Industrie 4.0 - Tranformation und Disruption verstehen und erfolgriech managen. vol. 1. Wiesbaden: Springer Gabler.

Augustine, Stefanie (2018): Die Generation Y und Integrated Reporting - Konsumentenverantwortung durch Nachhaltigkeitsberichterstattung?. vol. 1. Wiesbaden: Springer.

Aydin, Mustafa (2018): THE LEVANT, Search for a Regional Order. Konrad Adenauer Stiftung. Tunis: Regional Program Political Dialogue South Mediterranean.

Christ, Ry (2017): How Technology Is Driving Change In Almost Every Major Industry. Online: https://www.forbes.com/sites/jaredhecht/2018/11/30/how-technology-is-driving-change-in-almost-every-major-industry/. [last access date: 2020-08-02].

Covi (2019): Millennials and money - Banking in the age of the robot. Online: https://www.wearepay.uk/wp-content/uploads/2019/12/Millennials-and-Money-Banking-in-the-age-of-the-robot.pdf. [last access date: 2020-07-30].

De Roover, Raymond (1999): The Rise and Decline of the Medici Bank: 1397-1494. vol. 1. Washington D.C: BEARD GROUP INC.

Digital Marketing Institute (2020): HOW IS DIGITAL CHANGING THE FINANCIAL INDUSTRY?. Online: https://digitalmarketinginstitute.com/blog/how-is-digital-changing-the-financial-industry. [last access date: 2020-07-23].

Dimock, Michael (2019): Defining generations: Where Millennials end and Generation Z begins. Online: https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/. [last access date: 2020-08-02].

Dörner, Astrid/Demling, Alexander (2020): Tesla auf dem Weg in den S&P 500. In: Handelsblatt, vol. 141, S. 21.

Eickhoff, Matthias/Muntermann, Jan/Weinrich, Timo (2017): What do FinTechs actually do? A Taxonomy of FinTech Business Models. Association for Information Systems. Goettingen: International Conference on Information Systems (ICIS).

Emmons, Mark (2016): Millennials are likely the most studied generation in history.. Online: https://dynamicsignal.com/2018/10/09/key-statistics-millennials-in-the-workplace/. [last access date: 2020-08-02].

Fernandez, Francisco (2018): Banken brauchen neue Geschäftsmodelle. Online: https://www.springerprofessional.de/bankstrategie/fintechs/banken-brauchen-neue-geschaeftsmodelle/16233104. [last access date: 2020-07-31].

FinTech Weekly (2020): FINTECH DEFINITION. Online: https://www.fintechweekly.com/fintech-definition. [last access date: 2020-08-01].

FINTECHTRIS (2020): Sector Spotlight: Fintechs in payments. Online: https://www.fintechtris.com/blog/sector-spotlight-fintech-in-payments. [last access date: 2020-07-31].

Forbes (2015): How Millennials' Money Habits Could Shake Up The Financial Services Industry. Online: https://www.forbes.com/sites/laurashin/2015/05/07/how-millennials-money-habits-could-shake-up-the-financial-services-industry/#4b5679ed7176. [last access date: 2020-07-30].

Forbes (2020): Amazon Prime Rewards Visa Signature Card 2020 Review. Online: https://www.forbes.com/advisor/credit-cards/reviews/amazon-prime-rewards-visa-signature-card/. [last access date: 2020-08-02].

Francis, Tracy/Hoefel, Fernanda (2018): 'True Gen': Generation Z and its implications for companies. Online: https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gen-generation-z-and-its-implications-for-companies. [last access date: 2020-08-02].

Fromm, Jeff/Garton, Christie (2013): Marketing to Millennials - Reach the Largest and Most Influential Generation of Consumers. vol. 1. New York City: Amacom.

Fry, Richard (2016): Millennials are the largest generation in the U.S. labor force. Online: https://www.pewresearch.org/fact-tank/2018/04/11/millennials-largest-generation-us-labor-force/. [last access date: 2020-08-02].

H2 Ventures & KPMG (2019): 2019 Fintech100, Leading Global Fintech Innovators. Online: https://h2.vc/wp-content/uploads/2020/02/2019Fintech100.pdf. [last access date: 2020-07-31].

Handelsblatt (2020): Mit dem passenden Online-Broker durch die Coronakrise. Online: https://www.handelsblatt.com/finanzen/anlagestrategie/trends/handelsblatt-testet-mit-dem-passenden-online-broker-durch-die-coronakrise/25793104.html?ticket=ST-14173962-AcPdpeKcHkzsqs0EzH2U-ap3. [last access date: 2020-07-30].

Hecht, Jared (2018): How Technology Is Driving Change In Almost Every Major Industry. Online: https://www.forbes.com/sites/jaredhecht/2018/11/30/how-technology-is-driving-change-in-almost-every-major-industry/. [last access date: 2020-08-02].

Heyden, Thomas/Poppelreuter, Niklas (2018): N26: The Rise of a FinTech. Online: https://pef-jlu.de/wp-content/uploads/2018/10/heyden_poppelreuter_2018_brief_insights_n26.pdf. [last access date: 2020-07-31].

Kepios (2020): Digital Around the World. Online: https://datareportal.com/global-digital-overview. [last access date: 2020-08-02].

Kesting, Peter (2017): Wie sich Innovationen auf Märkte und etablierte Unternehmen auswirken. In: Smolinski, Remigiusz/Gerdes, Moritz/Siejka, Martin/Bodek, Martin C. / Smolinski, Remigiusz/Gerdes, Moritz/Siejka, Martin/Bodek, Martin C. (Hrsg.): Innovationen und Innovationsmanagement. Wiesbaden: Springer Gabler, p. 3-17.

Kienbaum Management Consultants (2010): Was motiviert die Generation Y im Arbeitsleben? - Studie der Motivationsfaktoren der jungen Arbeitnehmergeneration im Vergleich zur Wahrnehmung dieser Generation durch ihre Manager. vol. 1. Berlin: Kienbaum Management Consultants.

King, Brett (2018): Bank 4.0 Banking Everywhere, Never at a Bank. vol. 1. Singapore: Marshall Cavendish Business.

Koptyug, Evgeniya (2018): Share of N26 customers in Germany in 2017, by age group*. Online: https://www.statista.com/statistics/922408/customers-n26-by-age-germany/. [last access date: 2020-08-02].

KPMG (2017): Meet the Millennials. Online: https://home.kpmg/content/dam/kpmg/uk/pdf/2017/04/Meet-the-Millennials-Secured.pdf. [last access date: 2020-07-30].

Kumar, Kamal (2018): Impact of Digitalization in Finance & Accounting . Mascot Group of Institutions. India: Journal of Accounting, Finance & Marketing Technology.

McGath, Thomas (2018): Did someone say bullshit?. Online: https://mag.n26.com/did-someone-say-bullshit-46e6b2c5e44a. [last access date: 2020-08-02].

Mery, Katerina (2019): Millennials in the Workforce: How Technology Shaped Them (and What to Do About It). Online: https://www.fond.co/blog/millennials-in-the-workforce/. [last access date: 2020-08-02].

Moreno, Flor Madrigal/Avila, Fernando/Lafuente, Jaime Gil/Moreno, Salvador Madrigal (2017): The Characterization of the Millennials and Their Buying Behavior. In: International Journal of Marketing Studies, vol. 1, IV, p. 135 - 144.

N26 GmbH (2020): Banking with N26. Online: https://n26.com/en-us/bank-account. [last access date: 2020-07-31].

O'Dea, S. (2020): First-time cell phone use by children in the United States 2019, by age. Online: https://www.statista.com/statistics/1058911/first-time-cell-phone-use-by-children-in-the-us-by-age/. [last access date: 2020-07-30].

Omarini, Anna (2018): The Digital Transformation in Banking and the Role of FinTechs in the New Financial Intermediation Scenario. Bocconi University. Milano: MPRA Munich Personal RePEc Archive.

Parment, Anders (2013): Die Generation Y - Mitarbeiter der Zukunft. Herausforderung und Erfolgsfaktor für das Personalmanagement. vol. 1. Wiesbaden: Springer.

Fleiß, Jürgen/Gutschelhofer, Alfred/Mestel, Roland/Steffen, Viktoria (2019): Digitalisierung und Kundenverhalten im Retail Banking am Beispiel der Millennials. In: Pernsteiner, Helmut/Sumer, Haluk/Polat, Meltem Ulusat (publ.): Behavioral Finance. Wien: Linde Verlag Ges.m.b.H., p. 113-132.

Pospolit, Natalie/Weiher, Jennifer (2016): Performance der Generation Y - Management der Generationskonflikte. In: Künzel, Hansjörg / Künzel, Hansjörg (publ.): Erfolgsfaktor Performance Management. Berlin Heidelberg: Springer, p. 155 - 177.

PwC (2016): Blurred lines: How FinTech is shaping Financial Services, Global FinTech Report. PwC. London: PwC.

PwC (2020): PwC Umfrage: Coronakrise als Treiber für neue Geschäftsmodelle bei Banken. Online: https://www.pwc.de/de/pressemitteilungen/2020/pwc-umfrage-coronakrise-als-treiber-fur-neue-geschaeftsmodelle-bei-banken.html. [last access date: 2020-08-01].

Salesky, Joe (2017): Providing a Frictionless Banking Experience: What Banks Can Learn from Apple.In: ABA Banking Journal, dated 2017-01-01, vol. 1, p. 38-39.

Statista GmbH (2019): Millennials in Germany. Online: https://www.statista.com/study/61087/millennials-in-germany/. [last access date: 2020-07-30].

Statista GmbH (2020): Entwicklung der Kundenzahl von N26 in den Jahren von 2016 bis 2020. Online: https://de.statista.com/statistik/daten/studie/1132136/umfrage/anzahl-der-kunden-von-n26/#statisticContainer. [last access date: 2020-08-01].

The Guardian (2015): Google launches Android Pay to take over where Google Wallet failed . Online: https://www.theguardian.com/technology/2015/mar/02/google-launches-android-pay-take-over-where-google-wallet-failed. [last access date: 2020-08-01].

The Nielsen Company (US), LLC. (2016): MILLENNIALS ARE TOP SMARTPHONE USERS. Online: https://www.nielsen.com/us/en/insights/article/2016/millennials-are-top-smartphone-users/. [last access date: 2020-07-30].

Trade Republic (2020): Deutschlands erster mobiler und provisionsfreier Broker . Online: https://traderepublic.com/l/einfach-traden?utm_source=google&utm_medium=paid-search&utm_campaign=DE_SEA_GSE_TRA_BRAND_E&utm_content=452459218453&utm_term=trade%20republic&gclid=EAIaIQobChMInOLu_f786gIVzuJ3Ch2uOgMDEAAYASAAEgKnFvD_BwE. [last access date: 2020-07-30].

Trade Republic Bank GmbH (2020): Trade Republic. Online: https://traderepublic.com/onboarding/. [last access date: 2020-08-02].

van den Bergh, Joeri/Behrer, Mattias (2016): How Cool Brands Stay Hot: Branding to Generations Y and Z. vol. 3. London: Kogan Page Publishers.

Weuthen, Judith (2019): Das goldene Zeitalter des Konsumenten - Wie die Digitalisierung, der demografische Wandel und die Veränderung der Werte unserer Gesellschaft das Konsumentenverhalten beeinflussen. In: Heinemann, Gerrit/Gehrckens, Mathias H./Täuber, Thomas/GmbH, Accenture / Heinemann, Gerrit/Gehrckens, Mathias H./Täuber, Thomas/GmbH, Accenture (publ.): Handel mit Mehrwert - Digitaler Wandel in Märkten, Geschäftsmodellen und Geschäftssystemen. Wiesbaden: Springer, p. 107 - 134.

World Finance (2018): How leading banks are adapting to a constantly evolving financial sector. Online: https://www.worldfinance.com/banking/how-leading-banks-are-adapting-to-a-constantly-evolving-financial-sector. [last access date: 2020-08-01].

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Affirmation

This thesis was written by me independently, and I have given indication of sources whenever content was taken directly or indirectly from other sources or media. Verbatim and analogous quotes have been indicated as such. Furthermore, I confirm that there is no factual concurrence with any dissertation, final paper or thesis that I may have submitted within the scope of any previous studies. This thesis has not been submitted to any other institution or individual within the framework of an examination.

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