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MASTER

IN FINANCE

MASTER´S FINAL WORK

INTERNSHIP REPORT

THE NEW BANKING MODEL – DIGITAL REVOLUTION OF THE BANKING SECTOR: THE EXAMPLE OF COMMERZBANK AG

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Abstract

Digitalization is one of the most interesting and important topics nowadays in the banking industry. The objective of this internship report is to understand the importance of the Challenges for the banking sector and see the start of the digitalization on the example of the Commerzbank AG. This internship report starts with the description of activities developed during the internship at Commerzbank AG Branch Luxembourg. Going over to a Literature Review which deals with Regulation of the banking sector, current banking business models and further Challenges in the Banking industry. Most interesting in the current Challenges for the banking industry are covered by investing the topics of FinTechs & digital revolution, low interest rate environment & banks profitability and the Overcapacity in the banking sector. Next, applying the topics from the Literature review on Commerzbank AG, by explaining what is the solution and strategy for the current challenges. Finally, an outlook for Commerzbank AG and personal impression from the internship will be narrated.

Keywords: Digitalization, Challenges of the Banking industry, Commerzbank AG, FinTechs, Banking Business Model

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1. Introduction

This report is aimed at the description of the internship attended at Commerzbank AG Branch Luxembourg, for six months, and represents the master's final work of the Master in Finance at ISEG.

This internship was my second contact with the job market within the banking industry. Previously I worked in the audit industry concerning banking and corporate clients in Luxembourg. The internship purpose was to acquire experience in banking activities, namely in credit department. During my time, it was also possible to attend in different department within the branch, as of the treasury department and local credit office.

For a better understanding of the internship, this report is divided in the following four parts:

The first part presents the internship framework, starting with the description of Commerzbank AG Branch Luxembourg, followed by a description of the internship including the activities carried out over the period.

The second part concentrates on the literature review, starting with a general overview of the Basel Agreements followed by the current banking business models and the challenges in the banking sector. This part also addresses the topics FinTechs and the digital revolution, the low interest environment and the overcapacity in the banking sector. The following part of the report presents a practical example of the digital revolution / digitalization at the Commerzbank AG, known as Commerzbank 4.0.

The last part is the result of the work developed during the internship and the report presenting further topics for discussion and limitations of this work.

2. Internship Framework

2.1 Commerzbank AG presentation

Commerzbank AG

The „Commerz- und Disconto-Bank“ was founded in 1870 by merchants, merchant bankers and private bankers. Later on after a merger in 1920 with the Mitteldeutsche Privat-Bank, the merger in 1929 with the Mitteldeutsche Creditbank and the government ordered merger in early 1932 with the Barmer Bank-Verein Hinsberg, Fischer & Co., in 1940 the Commerzbank AG was officially adopted (Commerzbank History a, 2017).

Along side with opening new branches, merger and acquisition as well as sells of shares/products from 1990 on, Commerzbank announced in 2008, in corporation with the Special Fund Financial Market Stabilization (SoFFin), the take over of Dresdner Bank (Commerzbank History b, 2017).

Today Commerzbank AG is along with Deutsche Bank the biggest German bank, which are represented at all the world´s major stock exchanges. Also Commerzbank is one of the international leading commercial bank with branches and offices in over 50 countries. Business areas are Private Customers, Mittelstandsbank, Corporates & Markets, and Central & Eastern Europe, its private customers and corporate clients, as well as institutional investors, profit from a comprehensive portfolio of banking and capital market services, as stated by the of “Commerzbank Press release a (2016)”.

In 2016, it generated operating profit of €1.4 billion and gross revenues of €9.4 billion with an average of approximately 49,900 employees (Commerzbank Press release b, 2017).

Commerzbank AG Branch Luxembourg

The representation office in Luxembourg of Commerzbank has been opened in 1969. The Commerzbank branch office was established in 2006 as a service provider for the Luxembourg subsidiaries, and later expanded to exploit the advantages of this location for Commerzbank units in other locations throughout Europe.

The Corporates & Markets division in Luxembourg operates as center for the trading of precious metals worldwide. Also the settlement and posting of physical and non-physical precious metal transactions are completely handled in Luxembourg until end of 2017.

Within the context of syndicated lending business, the Luxembourg branch acts as the center within the Commerzbank AG for the global management of agent mandates for international syndicated loans and bonded loans.

Additionally, the Commerzbank Branch Luxembourg provides various functional services to the companies of the Commerzbank group, such as in the areas of information technology, accounting, settlement, human resources and risk management (Commerzbank description).

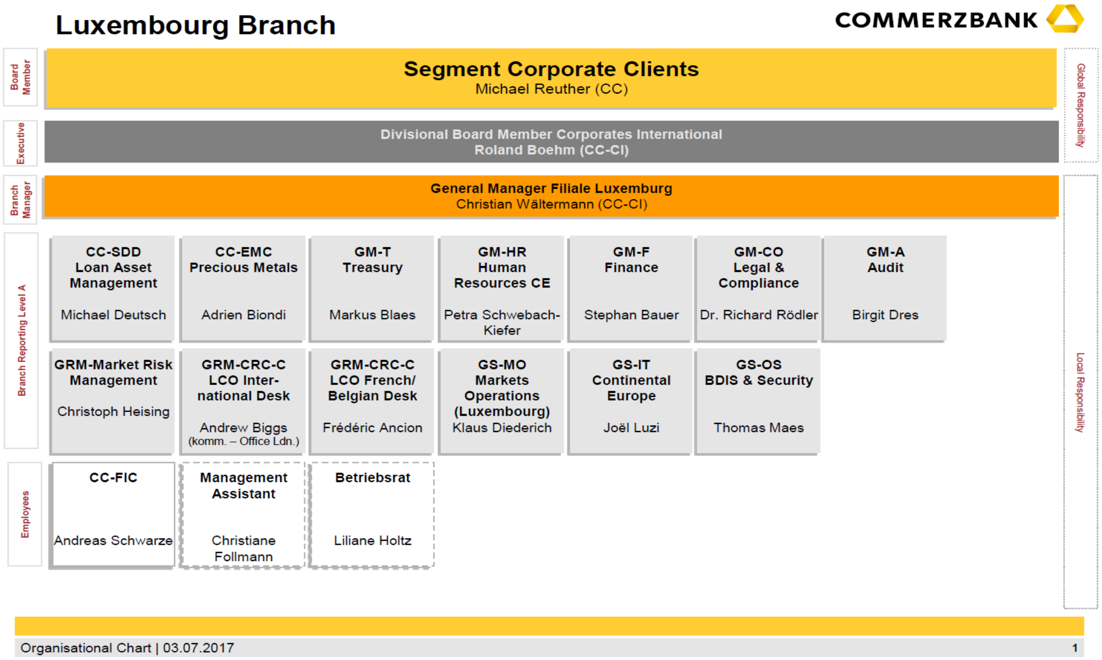

Figure 1 – Organizational Chart of Commerzbank AG Branch Luxembourg – source: Commerzbank OrgaChart 2017

2.2 Internship description

The internship had duration of six months and was accomplished by working in the credit department of Commerzbank AG Branch Luxembourg.

The main purpose of this internship was to have a clear view of how a bank operates and how the departments of a bank interact with each other.

2.3 Activities during the internship

The main activities of the internship can be described as the participation to the internal credit application in the context of new credit facilities and annual prolongation of existing credit lines, as well as the maintenance of relevant credit databases ensuring data quality in the credit systems. Another major point to be done is to keep loan files up to date including credit applications, financials, and ratings at the expected audit quality standard. As my team works in the western Europe area, which includes Austria, Switzerland, Spain, Italy, Netherlands, France and Belgium, the communication and collaboration with local colleagues and colleagues from each branch is the key to success. Other activities are financial spreading of customer annual reports, handling of Pre- & Post-administration tasks, collect economic and financial information on your customer portfolio and handling of ad-hoc reports to Head Office & local authorities.

3. Literature Review

3.1 Regulation of the banking sector - BASEL I-III

From Basel I to Basel III

Core pillars of the Financial System and the banking industry are risks and return, for example in the case of lending and borrowing, Commerzbank has credit risk or risk of default (Roy et al, 2013). The fundamentals of the accords are to promote equality in international competition and stability of the international banking system (Federal Reserve Bulletin, 2003).

Basel I

In 1988, the Basel Committee of Bank Supervision introduced the first Basel Accord as an international standard to compute banks regulatory capital. This first Accord was accepted since 1980 by over 130 countries, which equals ¾ of the International Monetary Fund´s member countries (Roy et al, 2013).

The three main objectives were to the banks to held sufficient capital to cover their risks (minimum ratio of capital to risk-weighted assets of 8%," History Base Committee (2016)"), to level the playing field among international banks competing cross-border and to facilitate comparability of the capital position of banks (European Parliament, 2016).

The Basel one accord was mainly focused on credit risk. In November 1991 the accord was defined to a general provision or general loan loss reserve, which was now included in capital adequacy calculations. (History Basel Committee, 2016).

As of end 1995 the accord was amended with the clause “to recognize the effects of bilateral netting of banks credit exposures in derivative products and expand the matrix of add-on factors”, “History Basel Committee (2016)“.

In 1996 it was updated with a market risk amendment. Reason for this, according to the Bank for International Settlement, was due to “rising banks exposures to foreign exchange, traded debt securities, equities, commodities and options. This amendment allowed banks to use internal models, as for example value-at-risk models, as basis for measuring their capital requirements”, “History Basel Committee (2016)”.

Basel II

In June 2004 the Base Committee on Banking Supervision introduced the “International Convergence of Capital Measurement and Capital Standards: A revised Framework” or better known as Basel II. Additionally, to the risk covered by Basel I, Basel II included operational Risk (included in the Capital Adequacy Ratio calculation) (Roy et al, 2013).

The new accord was built upon three pillars. Pillar one as the minimum capital requirements added the operational Risk alongside credit risk and market ratio. Pillar two was concerning the supervisory review whereby higher capital requirements can be requested upon supervisor judgment. And finally pillar three introduced the disclosure and market discipline principles (European Parliament, 2016).

Basel III

In December 2010 new Basel Accords were released. Main reason was the financial crisis of 2008 and a need to strengthen the system of banks (Roy et al, 2013).

Both the quantity and quality of capital were increased compared to Basel II requirements. The framework of Basel II was added with an additional layer of common equity, a countercyclical capital buffer, a leverage ratio, liquidity requirements and additional proposals for systemically important banks.

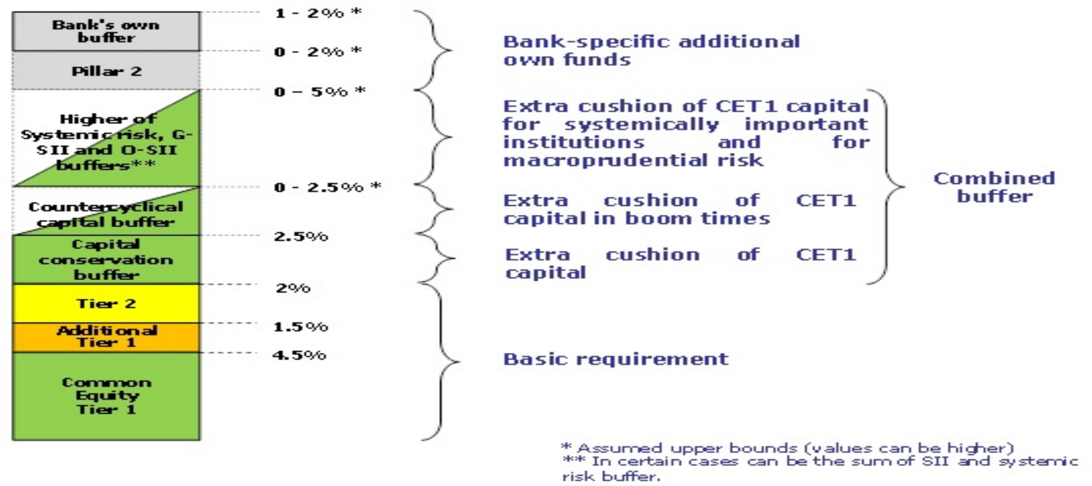

Figure 2 – Basel III capital requirement – source: Basel III capital requirement

This transformation will take time to implement the international agreed standards into national legislation. Furthermore, the new definition of capital is schedules for the next five years, implemented in 2013 until end of 2017. As of 2015, higher minimum for common equity and Tier 1 capital became effective.[1] The capital conservation buffer of

1 „The minimum common equity and Tier 1 requirements increased from 2% and 4% to 3.5% and 4.5%, respectively, at the beginning of 2013. The minimum common equity and Tier 1 requirements rose to 4% and 5.5%, respective-

additional 2.5% started progressively on 01.01.2016 and becomes fully effective by 01.01.2019. The leverage ratio test began in 2013 and will run until 2017, with a view to migrating to a Pillar 1 treatment on 1 January 2018 based on review and appropriate calibration, stated by the “History Basel Committee (2016)”. Two liquidity ratios were also introduced. As of beginning of 2015, the liquidity coverage ratio will require banks to hold a buffer of high-quality liquid assets to ensure their financial activities without. The minimum liquidity coverage ratio requirement was set up at 60% constantly annually increasing by 10 percentage points to reach 100% on 1st January 2019 (Basel III, 2013). The second and additional liquidity ratio is the Net Stable Funding Ratio. This liquidity ratio will be introduced by 1st January 2018 and can be explained by:

$$100 \leq \frac{\text{available amount of stable funding}}{\text{required amount of stable funding}}$$

Figure 3 – second liquidity ratio– source: Roy et al, 2013

3.2 Current Banking Business Models

In this part we mention the most relevant business models in European Banking. Since the financial crisis of 2007 – 2009, there have been major changes in the banking sector, already introduced in the previous sections as the Basel accords. New regulations and requirement in order to avoid major fallouts of banks, as well as market pressure from investors, forced banks to change their business model (ECB Financial Stability Review, 2016). The classification performed by the BIS in 2014 was done by selecting the

ly, at the beginning of 2014. The final requirements for common equity and Tier 1 capital were set at 4.5% and 6%, respectively, at the beginning of 2015”, “History Basel Committee (2016)”.

three key ratios: the share of loans[2], the share of non-deposit debt and the share of interbank liabilities to total assets (net of derivatives exposures).[3]

retail-funded commercial bank

The first business model is named as retail-funded commercial bank with the main characteristics of high share of loans and high reliance on stable funding sources.[4]

This is the largest group in our universe with 737 bank/year observations over the entire period (BIS, 2014). Such banks are for example UniCredit SpA or Commerzbank AG, even though Commerzbank AG can be counted partly as capital-market-oriented bank.

wholesale-funded commercial bank

The second business model is labeled as "wholesale-funded" and also reliant on bank funding. Whereas wholesale-funded banks have a higher share of interbank liabilities (13.8% versus 7.8%, see ***Figure 4***) and a much higher share of wholesale debt (36.7% versus 10.8%, see ***Figure 4)***, with the balance being a lower reliance on customer deposits (35.6% versus 66.7%, see ***Figure 4***). This model is the half as big as the first group on this study (BIS, 2014). Examples for wholesale-funded banks are State Street Bank Luxembourg SA or the Bank of New York Mellon SA/NV.

2 related to the composition of the banks assets.

3 related to the banks funding structure.

4 customer deposits equal two thirds of the overall liabilities on this average first business model

Capital markets-oriented bank

The last and smallest business model is the more capital markets-oriented model and therefore named as “trading bank”. This business model is followed by large investment orientated banks such as, BNP Paribas SA or Deutsche Bank AG. Half of their assets are hold in form of tradable securities and Banks are primarily funded in wholesales markets. This group is mostly active in the interbank lending and borrowing (then average banks, see ***Figure 4***).

Business model profiles

Average values of ratios to total assets[1] (in per cent) Table 1

Choice variable[2]	Retail-funded	Wholesale-funded	Trading	All banks
Gross loans	62.2	65.2	25.5	57.5
Trade	22.4	20.7	51.2	26.5
Trading book	5.1	7.1	17.3	7.1
Interbank lending	8.5	8.2	21.8	10.5
Interbank borrowing	7.8	13.8	19.1	11.2
Wholesale debt	10.8	36.7	18.2	19.1
Stable funding	73.8	63.1	48.6	66.9
Deposits	66.7	35.6	38.0	53.6
Memo: number of bank/years	*737*	*359*	*203*	*1,299*

Trade = trading assets plus liabilities, net of derivatives; trading book = trading securities plus fair value through income book; interbank lending = loans and advances to banks plus reverse repos and cash collateral; wholesale debt = other deposits plus short-term borrowing plus long-term funding; stable funding = total customer deposits plus long-term funding; interbank borrowing = deposits from banks plus repos and cash collateral.

[1] Total assets are net of derivatives. [2] Variables in **bold** are those that were selected as the key drivers in defining the partition.

Sources: Bankscope; authors’ calculations.

Figure 4 – Business model profiles - source: BIS 2014

Another paper presented by “Rym Ayadi et al (2016)” Banking business models Monitor 2015 Europe, classifies European banks into five business models. Focused retail, diversified retail (type1), diversified retail (type 2), wholesale and investment banks. This paper is performing a cluster analysis by using five key indicators, such as Loans to banks (as % of assets), Customer loans (as % of assets), Trading assets (as % of assets), Debt liabilities (as % of assets) and Derivative exposures (as % of assets). (Banking business models Monitor 2015 Europe, 2015), coming to the comparable result as in "BIS, 2014". As the paper from „Rym Ayadi et al (2016)" uses a more global universe of banks, a breakdown for an exact comparison between the two models would need to compare individual banks in the two universes.

3.3 Challenges in the Banking Sector

3.3.1 FinTechs & Digital Revolution in the Financial Sector

FinTech – the combination of the words "financial service" and "technology", which can be explained by start-up´s that provide specialized and in particular customer-oriented financial services using technology-based systems (Bafin, 2016).

These FinTechs are taking the advantage of the digitalization and big data techniques to the damage of banks and insurances. Banks will and need to adopt the new techniques to defend their market position (Vitor Constâncio, 2016).

Particularly the less knowledge-intensive and easily standardized financial services are affected. The offer of the new players already extends from digital payment solutions to information services, saving and deposit deposits, through to modern online banking, cross-channel consulting and securities trading as well as simple financing solutions and the use of compatible financial software (Deutsche Bank, 2014).

A study of "McKinsey (2015)" includes a database of FinTechs. As of April 2015, this database counted 800 start-ups, as of now over 2000 FinTechs. This study also sorted out that over the last five years USD 23 billion of venture capital and equity has been invested, rapidly increasing as 2014 itself USD 12.2 billion can be accounted. Most investment were concentrated in payment services, following by Lending and financing area.

Other segments of FinTechs are Asset Management, such as Social Trading, Robo- Advise and Investment Banking; Financing, which includes Crowdfunding as well as Credit and Factoring; and other FinTechs, namely as Insurances, Search Engines and Comparison sides or Technology, IT and Infrastructure FinTechs. (see ***Figure 5***)

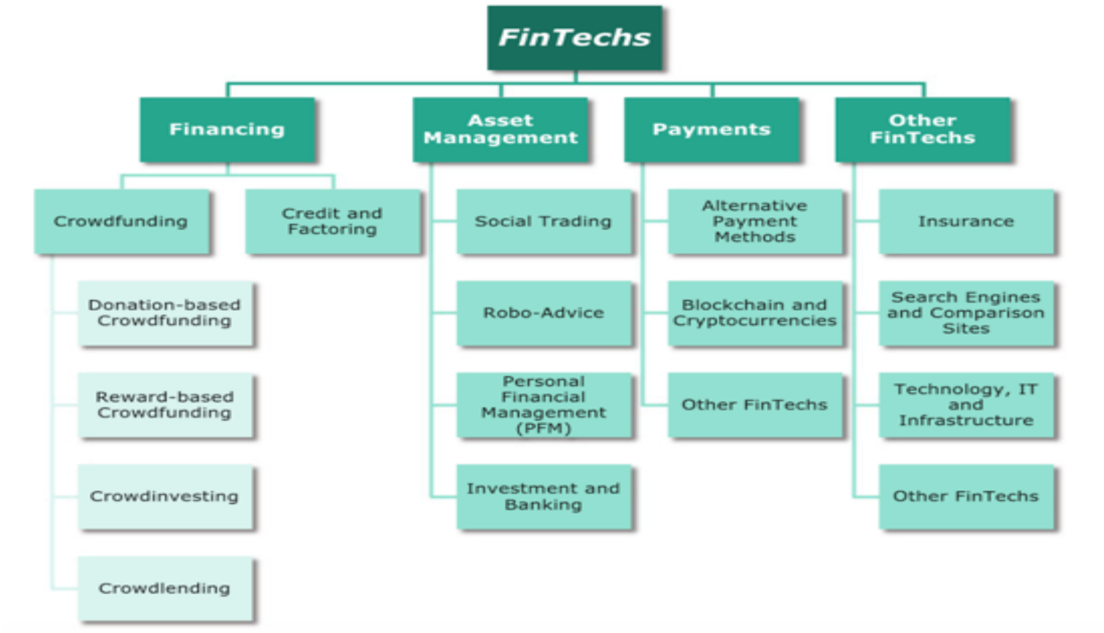

Figure 5 – Segments of the Fintech Industry – source: Dorfleitner, Gregor – Fintech in Germany

FinTechs are represents a potential threat for banks. If they don't interact and respond effectively to the FinTechs, this could let to several disadvantages for banks. Namely that the technical advantage creates a new internet-based consume-, media-use and communication-needs for the consuments, their adaption and integration in daily life. Or that the increase of digital offers and services of FinTechs (digital business model) will replace the old and traditional business model, that means the revenues and turnover will decrease rapidly. As consequence market shares of the established companies will fall, on the other hand the market share of FinTechs will rise, which can end up in consolidations and market exists (Deutsche Bank, 2014).

Additionally, the survey from "McKinsey (2015)" pointed out that 10% to 40% of revenues and between 20% and 60% of profits of the five major retail banking-businesses (consumer finance, mortgages, SME lending, retail payments and wealth management) will be at risk by 2025.

Another important topic is the regulation of these FinTechs. As of now these companies are not directly supervised or regulated by a federal banking regulatory agency. Especially concerning Consumer protection, the Bank Secrecy Act, Anti-Money Laundering (BSA/AML) and Know your customer (KYC) should be subject to all FinTechs firms according to "Deloitte (2017)". Also the Federal Financial Supervisory Authority of Germany (Bafin, 2016b) states that it is not always clear at first glance, if FinTechs require authorization and supervision and that there might arise issues regarding collective consumer protection. Federal Financial Supervisory Authority is following up on this point. Additionally, they mention the changing supervision on established financial service providers, after entering cooperation agreements with FinTechs (Bafin, 2016b).

3.3.2 Low interest rate environment & banks profitability

Furthermore, the low interest environment plays an important role for banks and also ourselves. For the European Central Bank this is a challenge. "Low investment and an increased tendency to save have resulted in a fall in the equilibrium interest rate – the price at which savings and investment are in equilibrium", stated by "Mersch (2016)". As interest rate plays an important role in the adjustment of the monetary policy of the ECB or other central banks. Additional there is a leverage and connection of monetary policy to investment, savings behavior and the economy. Meaning that if the key interest rate is equal or below the natural interest rate[5], savings are lower and consumption is higher. This will let to an increase in aggregated demand, which favors the incentive for corporates to invest and request new loans. On the other hand, if this new demand for new loans is not met by savings, a gap will occur, which can only be closed by creating new money. Additionally, the increasing investments let to higher salaries, which will also rise the prices of goods more rapidly (Wicksell,1898).

"The problem of a lower equilibrium rate is that it limits a central bank's leeway for supporting measures. If then in such an environment further economic shocks occur on the demand side, the central bank has to resort rather to unconventional measures, as it can only lower the policy rate to a limited extent", stated by "Mersch (2016)".

First steps taken by the central banks for the short term perspective, was to reduce the key rate to zero and so to alter the attractiveness of saving versus investing. As addition, the asset purchase program and long-term loans to bank at favorable conditions where offered. Goal is to keep market rates below their long-term level and create incentive for investment and consumption, as concluded by "Draghi (2016)".

Concerning the relation between interest rates and bank profitability, the existing academic literature does not find any consensus. Due the limitation of this report I choose two academic literatures and one report of a Swedish bank.

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5 The natural rate is the loan interest rate at which this reacts in an entirely neutral way to goods prices, "Mersch (2016)"

First one is Bernanke, he argues that if banks depend primarily on wholesale funding, large depositors and foreign depositors, negative short-term rates should not be expected to have large effects on bank profitability. Other when it comes to banks that rely primarily on retail deposits, they suffer larger margin compression than wholesale funding bank (Bernanke, 2016).

A different view is provided by a survey published by the "ECB (2016c)", which suggests that negative interest rates hurt banks' profitability. More than 80% of the participating banks stated that the negative deposit rate, as well as the asset purchase programs, reduced net interest margins and profitability, other then improving capital gains.

Additionally, the view of Riksbank in their Monetary Policy report of April 2016. As most of the banks are dependent on interest income from savings, and now consumers are more willing to invest as saving. These cuts are squeezing deposits margins with negative impact on banks 'profitability. At the same time, the ECB monetary measures take account, so the demand for loans increases, which increases lending volumes and improves earnings (in fees and commissions). Another point of influence on banks´ profitability may be costs for IT systems dealing with negative interest rates (Riksbank, 2016).

Also lower interest rates lead to fewer bad loans and credit losses, meaning that banks offer with the reduction of funding costs, lower lending rates to existing customers without reducing the interest margin. This will let to better debit servicing ability of the customer and the reduction of credit losses. In connection with the Basel Accords, banks liquidity surplus need to be placed at the central bank. As the interest rate for this placed amount is either equal or clos to the policy rate (negative currently), banks have to pay interests for their surplus placed (Riksbank, 2016).

3.3.3 Overcapacity in the banking sector

Another point for the recent bank profitability is related to the overcapacity in the banking industry. As mentioned on ***Figure 6***, there are still significant differences in the European Union. For countries as Germany, Luxembourg or Austria, the share of the five largest credit institutions tend to be much less concentrated then in countries such as Greece or Netherlands. "Vitor Constâncio (2016)", added in his speech at the Navarra University in Madrid in July 2016," that these stark differences in market concentration are partly a reflection of structural features of the banking sector, due to the important role of savings or cooperative banks".

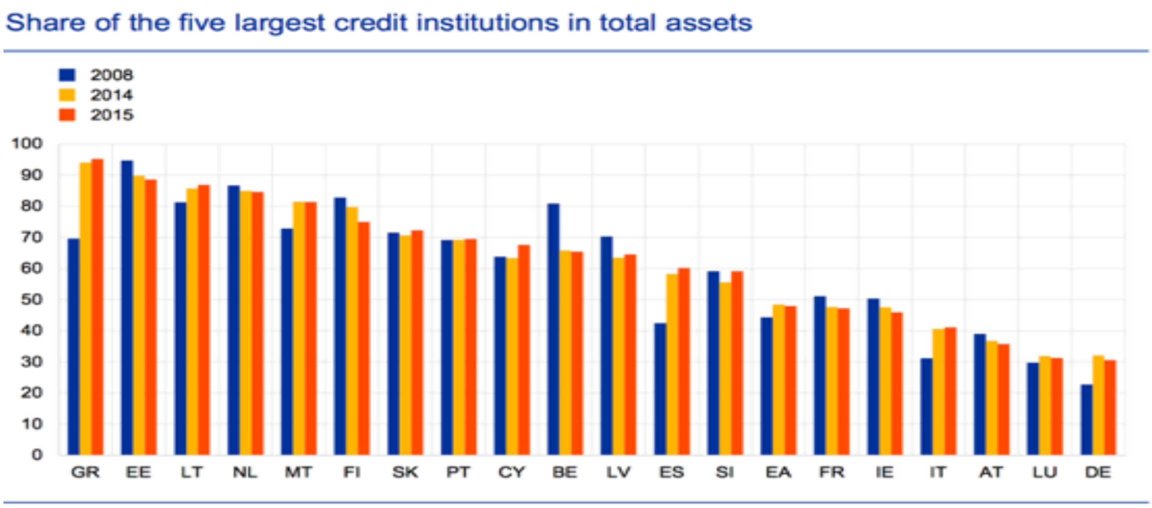

Figure 6– ECB – source: Report on financial structures October 2016

Due to rationalization and resizing in the European Area, we are dealing with a decreasing number of bank branches (***Figure 7***)[6] and a decrease in the employees per population (***Figure 8***)[7] since the Financial crisis.

While this generally brought about some improvement in banks' cost-to-income ratios, some banking systems continue to show indications of excess capacity (Constâncio, Vitor, 2016).

6 "...the number of local bank units (i.e. branches) in the euro area declined by 17.6% or 33,274 branches, 3,884 of which between 2014 and 2015. Almost half of the decrease since 2008 is accounted for by Spain, but other big economies, such as Germany, Italy, the Netherlands and France, also contributed significantly to the decrease. As regards the smaller countries, there was a strong decline in the number of local units in Greece. ", "ECB – Report on financial structures October (2016)"

7 "As regards the population per bank employee, the relative increase since 2014 was particularly marked in Lithuania as well as in Ireland and the Netherlands. ", "ECB – Report on financial structures October (2016)"

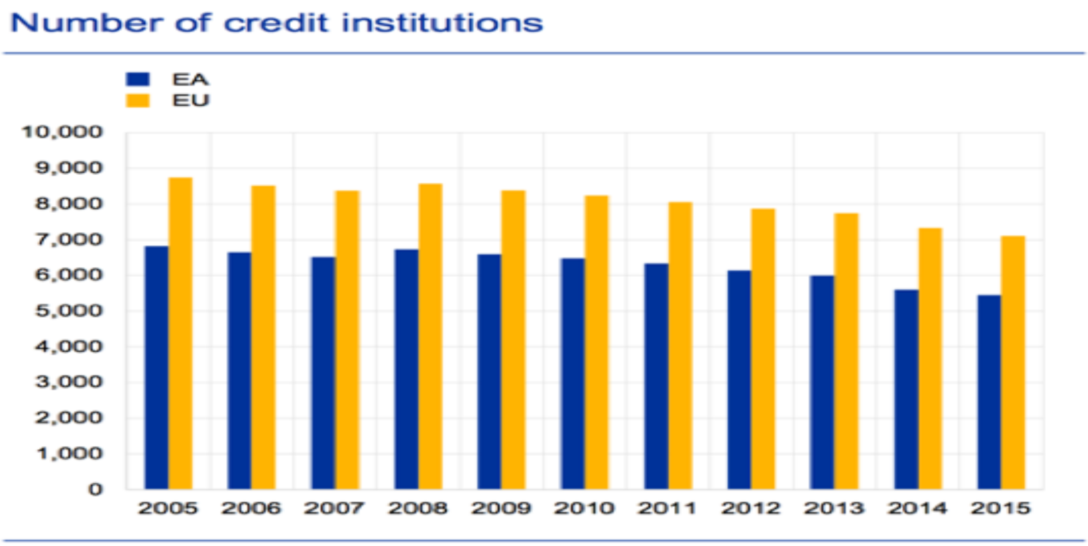

Figure 7 – ECB – source: Report on financial structures October 2016

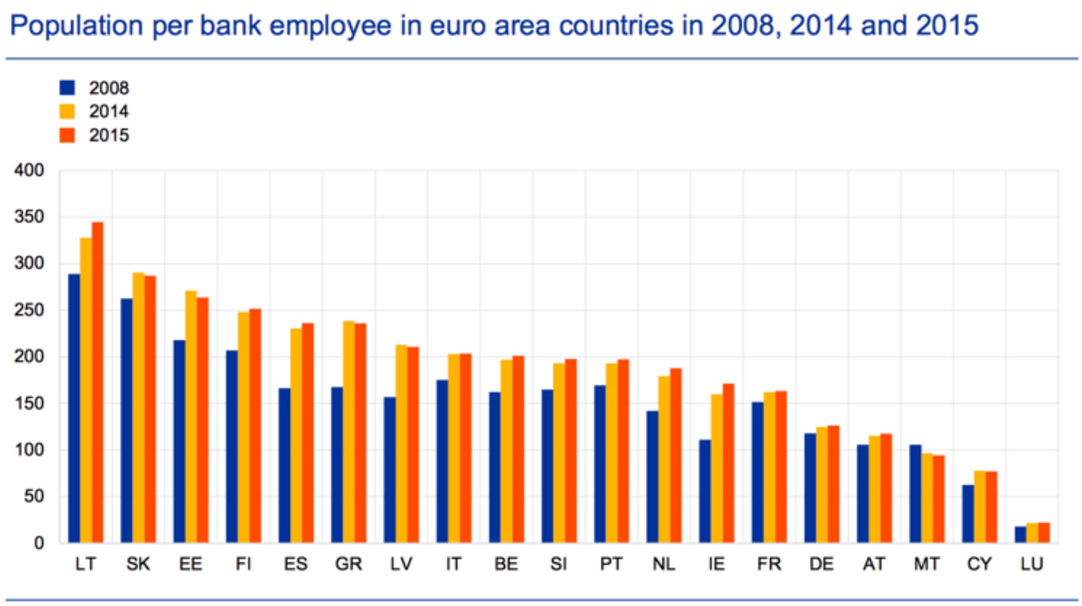

Figure 8 – ECB – source: Report on financial structures October 2016

The financial stability indicators suggest that excess capacity lasts in the European banking sector. Additionally, the European Systemic Risk Board has indicated that the EU banking industry is too large and concentrated.

The possible ways of decreasing the excess capital in the banking industry are Mergers and Acquisitions (M&A, domestically and across borders), the downsizing of business activities as well as resolution and orderly exits. As “Vitor Constâncio (2016)” stated,” the euro area economy needs banks that are large and efficient enough to operate and diversify risks on a cross-border basis within a European single market, but small enough to be resolved with the resources of the Single Resolution Fund.” After the financial crisis a lot of consolidations happened. Since 2007, where the high values were recorded, M&A activities are declines, in terms of value and number of transactions (see ***Figure 9***).

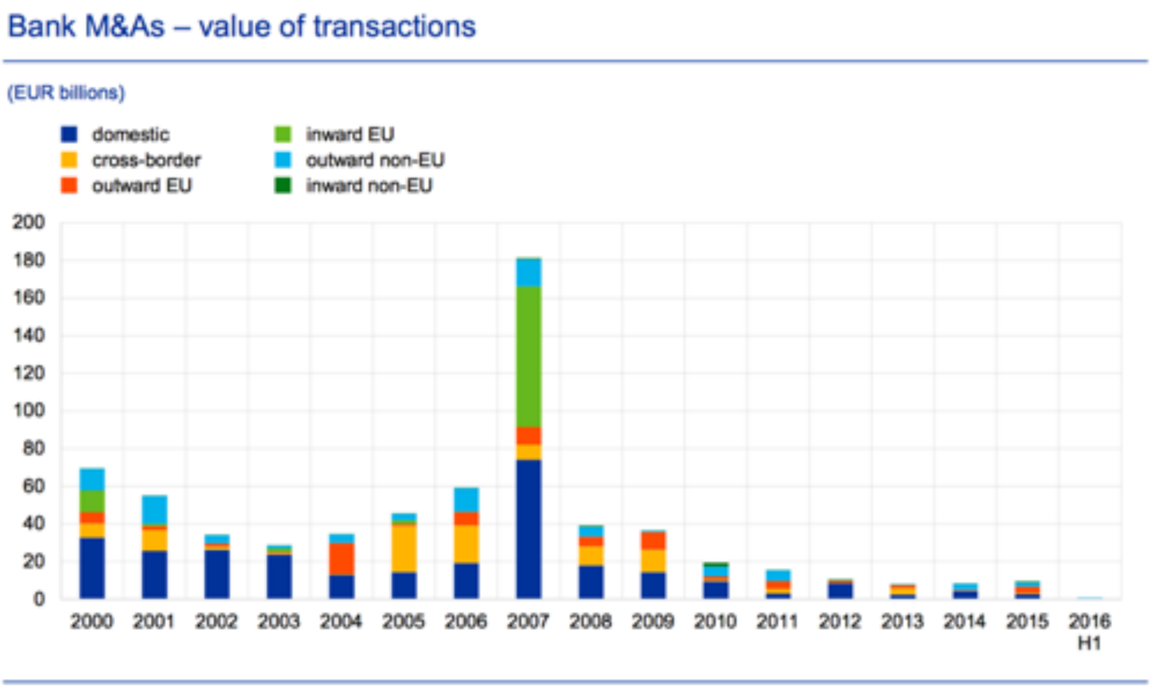

Figure 9 – ECB – source: Report on financial structures October 2016

3.3.4 SWOT Analysis on the Banking sector

This part will explain a SWOT analysis on the banking sector, also taking in consideration the previous chapters of this Internship report (see ***Figure 10***). Strengths of the banking industry are, that they already have the most valuable good of this business sector, customers. Also, most banks are due to regulations relatively well capitalized and offering existing competences for complex products, such as financing of ships or aircrafts. Additionally, most banks in Europe have an existing network with a high number of branches, which supports working internationally. Weaknesses for the banking sector can be explained by recent events. Lack of trust due the financial crisis of the customers or the raising commissions of bank accounts due to the low interest environment. Other points here are the low process for innovation and also low investment in the digital revolution over the last years. Nowadays, where FinTechs already invented new technology to optimize and smoothen the process of banking, banks support and finance these FinTechs, but the initial investment for own research wasn't done until this digital change and innovations are become a requirement by politics and customers. In contrary to the strength of the branch network of the banks, inflexible opening hours became not acceptable for customers in 2017. Opportunities on the other hand for the banking sector are expansions, Joint Ventures, mergers and acquisitions or consolidation to strengthen against the upcoming threats and to be more effective in terms of costs. The biggest chance is probably the digital change itself. Change in socio-cultural and demographic factor, population tend to be older and huge increase in population in developing countries and changes in customer preferences, could be supported by the digital change. For example, the older customers preferred to go to a bank including the personal advisory, but nowadays younger and digital grown-up customers might prefer doing everything via an Application on your phone.

Threats on the other hand are FinTechs, which are inventing technology that simplifies banking. An example could be mobile payment options, such as Apple Pay, Samsung Pay, Wechat Pay or others. Mobile payment apps offering users a wide range of services without using cash or credit cards. Another risk for the banking industry is the low interest environment, where banking already generating revenues over commissions from saving accounts or withdrawals. Also can be the uncertainty of politics, legal and regulation seen as threat. A new president or leading party which influences the laws or taxes of and for the sector or new Basel agreement, which requires more liquidity. Lastly to mention is employees fear due to the digital change and the relating job cuts. Would someone still choose to work in a banking sector as a credit administrator, which could be replaced by a program or robots in ten years time?

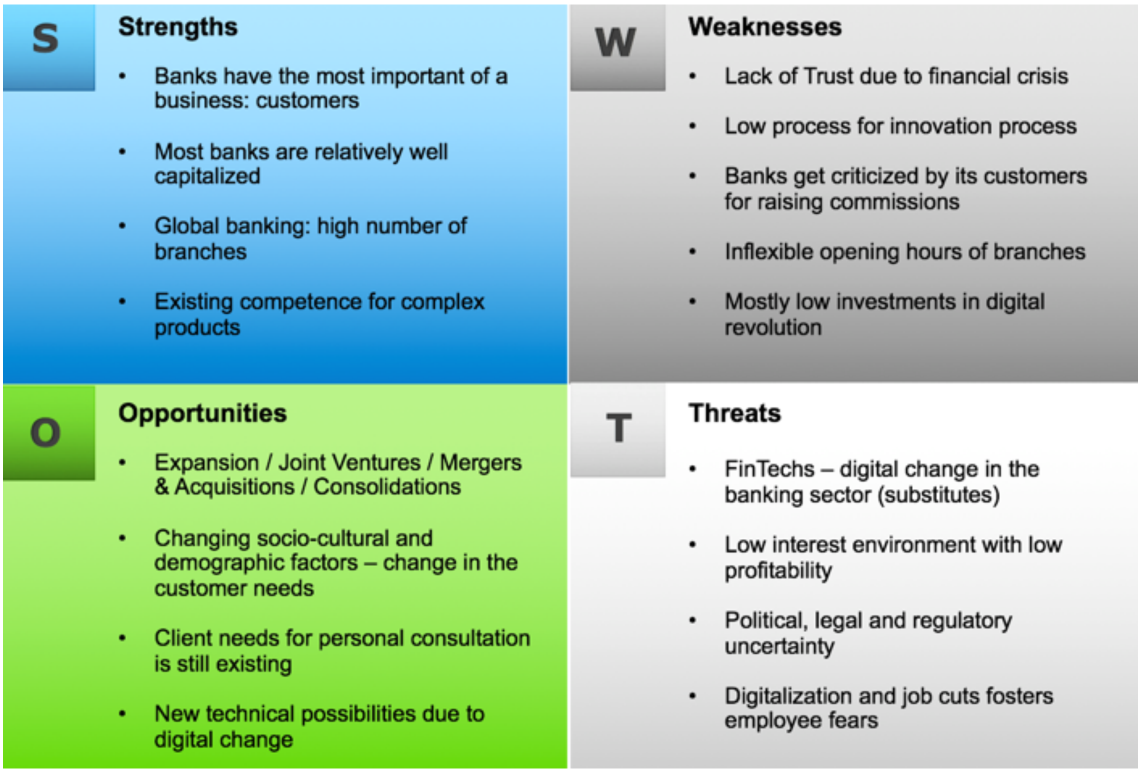

Figure 10 – SWOT Analysis Banking Sector – source: Author

4. Digitalization at Commerzbank AG

4.1 Commerzbank 4.0

In 2016 Commerzbank introduced a new strategy named Commerzbank 4.0. “Our business model will be simpler, more efficient and fully digitalized, enabling us to sustainably increase our profitability.”, stated Martin Zielke in “Commerzbank 4.0. - Press Release 2016”, Chairman of the Board of Managing Directors of Commerzbank. This strategy has his main focus on growth, digital transformation and increased efficiency. Concentration will be set on the customer business. Here especially on the two segments, “Private and Small Business Customers” and “Corporate Clients”. The Mittelstandsbank and Corporates & Markets segments will be consolidated into a single unit and trading activities in investment banking scaled back. This will reduce earnings volatility and regulatory risk. By the end of 2020 it is planned to sustainably increased the profitability. Additionally, to the concentration on core businesses, digitalization (about 80%) of the relevant processes is in focus, in order to cut costs and achieve significant efficiency gains. On one hand this process in areas of business growth will create about 2,300 new jobs. On the other hand, side effects from digitalization and optimizing business activities will lead to about 9,600 full-time staff reductions. From the regulation and financial side, by end of 2020 the net return on tangible equity is aimed at 6%, taking in consideration that the interest rate environment will remain challenging. Expected revenues by end of 2020 are between €9.8 and 10.3 billion, costs reduced to €6.5 billion, which will improve the cost/income ratio to below 66%. Several scenarios, where the interest rate improves, would let to a net return on tangible equity of more than 8%, revenues over €11 billion and a cost/income ratio of around 60%. The Common Equity Tier 1 (CET 1) ratio, after full application of Basel 3, is expected to stay at around 12%

and by end of 2020 Commerzbank is expecting a ratio of above 13% (Commerzbank 4.0. - Press Release 2016).

4.2 Strategy & digitalization of business model

Commerzbank is facing major challenges (***Figure 11***). As already explained in the Literature review of this internship report, they are facing under the challenging interest rate environment, the digitalization, competition trough FinTechs and the regulation requirements. The answer for these challenges is named Commerzbank 4.0., where focused growth, digitalization and efficiency are at the heart of the new strategy.

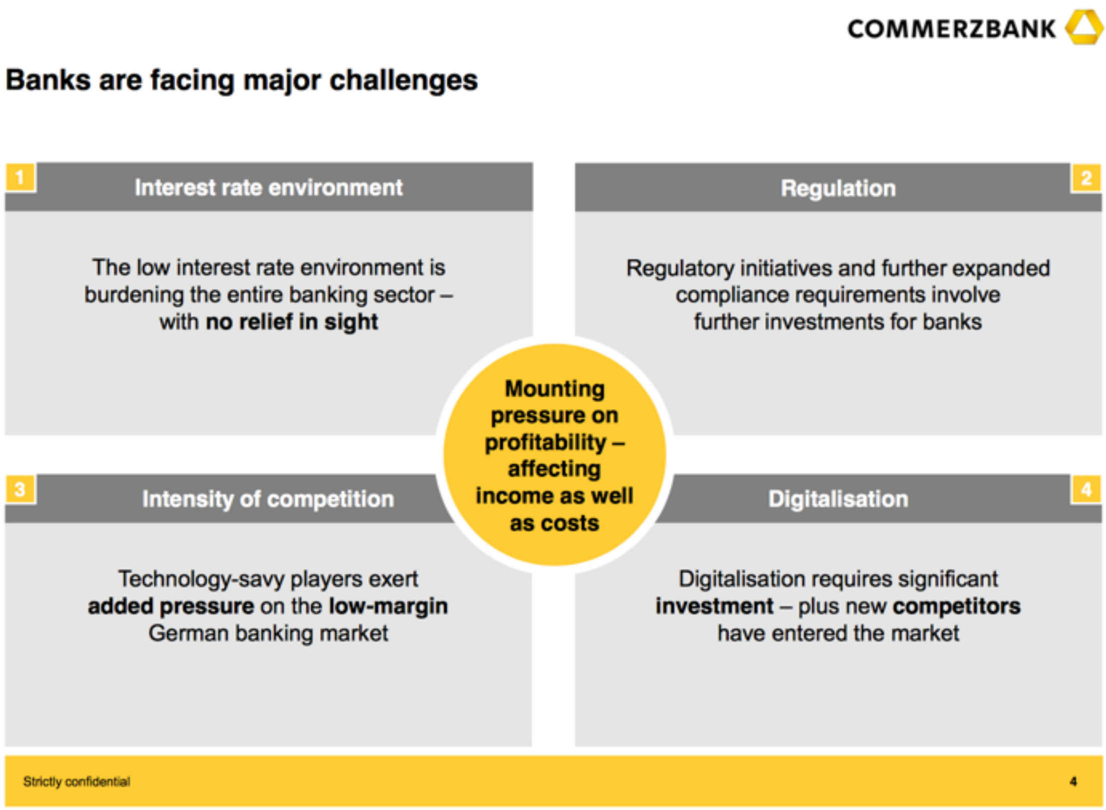

Figure 11 – Commerzbank – Commerzbank 4.0: simple –digital- efficient – May 2017

As already explained in previous chapter “Commerzbank 4.0.”, Commerzbank will concentrate on their two strong client segments, namely Private and Small Business Customers and Corporate Clients. Reason for this decision is that Commerzbank will remain the “Bank at your side”, which means a personally, digitally, fair and competent advisor. This means that the personal service for the private customers in approximately 1,000 branches will continue and that there will be a modernization process of the new branches. As well as the introduction of the new branch types, Flagships and city branches. Flagships includes all services and advisory, where as city branches have limited offers. Commerzbank also introduced for the Private and Small Business Customers segment the first real digital multi-channel bank, called ONE. This platform will offer enable sales personnel and customers to view information and conduct transactions on the same platform at any time. Regarding the small and medium-sized enterprises, Commerzbank will offer a new business area, called small business customers. Goal is to offer customized products, regional and digital, to small and medium-sized enterprises, to be the “bank at your side” for German SME´s. In addition, the Bank will put in place a flexible smart data architecture to enable customers to be addressed in a targeted way. An integrated cloud-based customer relationship management system for private, small business and corporate clients will then be introduced in the second half of 2017. Other points are simplifying the product portfolio by integrating the investment banking business into the new segment Corporate Clients or introducing new marketing campaigns. (Commerzbank 4.0: simple –digital- efficient, 2016 and see ***Figure 12***).

Figure 12 – Commerzbank – Commerzbank 4.0: simple –digital- efficient – May 2017

Also important to mention, is the digitalization process in Commerzbank. "The Bank will invest approximately €700 million per year in digitalization and IT by reallocating existing funds, without increasing its overall investment expenditure. In future, agile project teams working on a "Digital Campus" will drive forward digitalization projects and automate and optimize processes. By 2020 80% of relevant business processes will be digitalized. The Bank expects significant cost reductions and efficiencies as a result.", as said in the "Commerzbank 4.0. press release (2016)". With Commerzbank 4.0. new digital products where introduced. First around € three billion consumer loans were transfer to an own platform, where interest income replaces commission income. Secondly, funds based advisory mandates (funds without front-end fee) and Digital Asset

Management including Robo-Advice will be presented. Lastly, a brand new mobile mortgage App, which includes budget calculation, search engine, valuation of property and full digital financing. (see ***Figure 13***) Goal here is again to increase the efficiency and reduce costs from simplifying the product portfolio (Commerzbank 4.0: simple – digital- efficient, 2016).

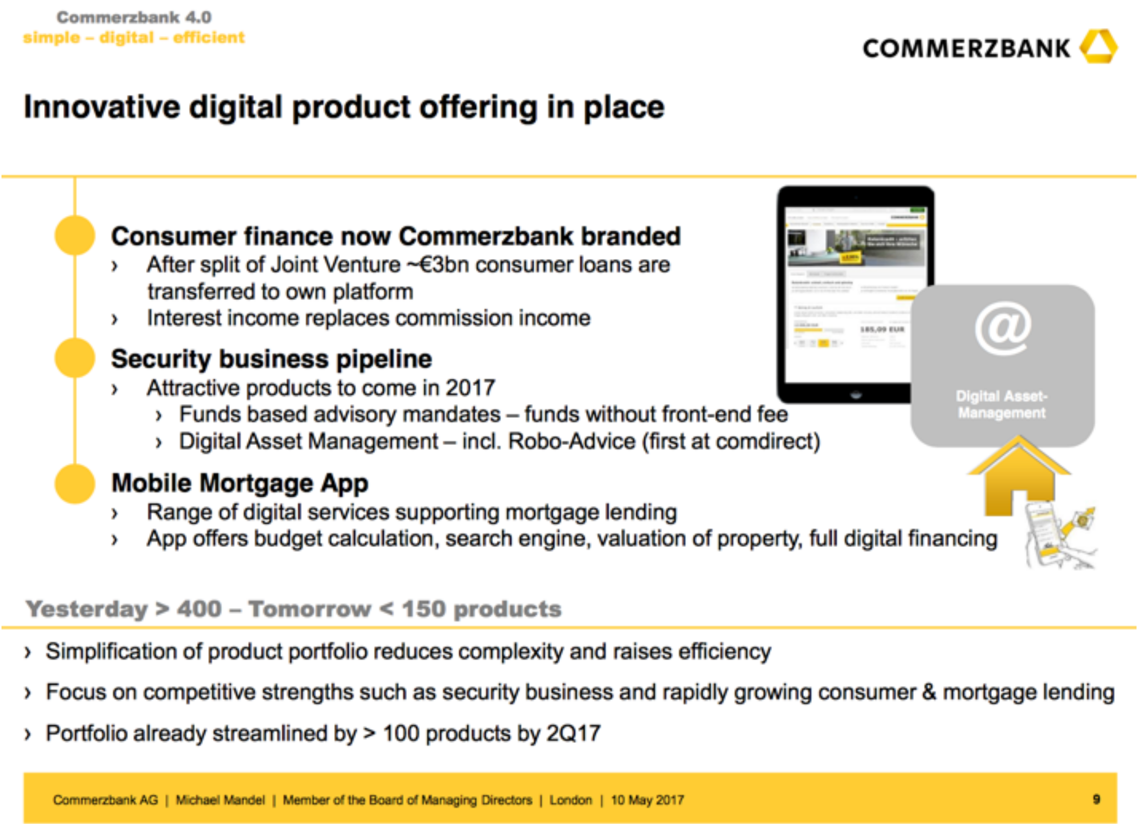

Figure 13 – Commerzbank – Commerzbank 4.0: simple –digital- efficient – May 2017

4.3 FinTechs & Start-Up´s with Commerzbank

One remarkable work in this digitalization process is the Main Incubator GmbH, short main incubator, which supports and promotes FinTechs with innovative banking products and solutions. The Main Incubator GmbH is a 100% subsidiary of the Commerzbank AG, where FinTechs will be accompanied until market launch of their products and gain a strategic partnership. Additionally, the main incubator supports FinTechs not only with access to private and corporate customers of Commerzbank, venture capital, banking know-how but also if needed with offices and IT-infrastructure. One major advantage for FinTechs in the main incubator is the direct and quick exchange of knowledge and expertise. Also several events of networking and information for FinTechs, Investors, economy and science, are hold by the main incubator since October 2014 (Main incubator – driving the future of banking). Examples of the portfolio of the Main incubator are: Candis, a software for automated accounting; or traxpay, a B2B dynamic payments platform which improves payment transactions between enterprises or retresco, a Fintech for automatic generation of digital content (Main incubator portfolio, 2017).

Additionally, Commerzbank AG introduced Commerz Ventures, Main Funders and the Start Up Garage. Commerz Ventures works as Venture Capitalist with their portfolio, focusing on value creation and sustained growth. Their initial investment size differs between €2 million to €10 million in the areas of Europe, Israel and the USA (Commerz Venture – Who are we). Current portfolio contains for example PayKey, a social network payment provider, or GetSafe, a mobile insurance broker. (Commerz Venture Portfolio).

Main Funders is a Peer-2-Peer-Lending Platform for companies, which offers borrowers financing from €200,000 to €10 million up to 5 years and also offers Investors investment opportunities on same volumes and terms (Main Funders, 2017).

Lastly, the Start Up Garage supports Start-Up´s by offering excess to three Million clients, support from banking experts, technical resources, Co-Working Space, Infrastructure and financial support (Start Up Garage, 2017).

4.4 Outlook and personal Impression

“Efficient use of our capital is our top priority. Our capital ratio will remain comfortably above the foreseeable regulatory requirements”, said Commerzbank's Chief Financial Officer, Stephan Engels. “We are financing the implementation of our strategy through the targeted use of our resources and by retaining profits. Therefore, we are also ceasing dividend payments. We also have the necessary leeway by managing our risk-weighted assets.” (Commerzbank 4.0. - Press Release 2016)

As outlook for Commerzbank’s 4.0. strategy, main targets are the doubling growth in the domestic business, increase customers to more than 14 million, increasing Assets under Control to more than €400 billion, create additional revenues of more then €1.1 billion and to install the active cost management. (see ***Figure 14***)

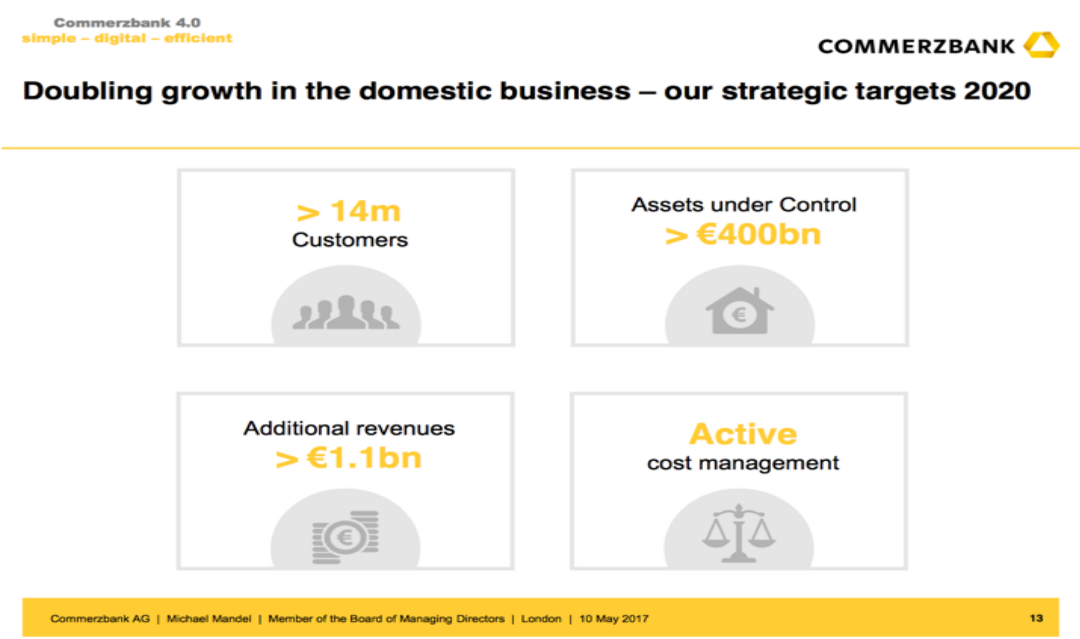

Figure 14 – Commerzbank – Commerzbank 4.0: simple –digital- efficient – May 2017

During my internship I got some first insides of Commerzbank 4.0. Job cuts and digitalization process was the first things I was confronted with. The team of Commerzbank Branch Luxembourg was significant decreased during Commerzbank 4.0.[8] and the remaining employees needed to work with the same or even more work load. Another change took place in name of outsourcing. In order to get more efficient and less costly, parts of the work will be outsourced to CERI International Sp. Z o.o. in Poland (100% subsidiary of Commerzbank AG). One Reason for the outsourcing is aiming to transfer task to a lower costs environment within Europe. Another one is to reduce high operational costs due to additional regulatory burden (e.g. automatic exchange of information) and adjust to the low interest environment.

Digitalization took place in terms of new software/programs. These program built now an easier access from both market and credit side. Also I was pursuing the monthly

8 Other circumstances which let to job cuts are described in the Internship framework part of this internship report.

“digital radar” from Michael Krause, which discusses actual topics about digital banking, such as Main Incubator, Main Funders, Commerz Venture or Start Up Garage.

Lastly the SWOT analysis of Commerzbank AG. Strengths are that Commerzbank AG is one of the leading banks in Europe and second largest bank in Germany. This also includes a good network of branches and Flagships. Commerzbank is the best bank in Germany for small and medium enterprises viewpoint, offering customized, regional and digital products with Commerzbank 4.0. Other strengths are the dominiant position in online banking by introducing the new platform “one” and the strong brand position including the increase from 12 million to 14 million customers. One weakness of Commerzbank AG is the fact that the major revenues result from retail banking and less from investment banking, while trading activities are scaled back with Commerzbank 4.0. Another disadvantage of Commerzbank AG is the presence in Asia and American countries, having only branches in the main cities such as Beijing, Shanghai, Tianjin Singapur, Tokyo, New York and Commerzbank Brasil S.A. Banco Multiplo Head office. Opportunties regarding this last weakness is by entering the market or expanding through acquisitions and alliances. Another chance for Commerzbank AG in terms of service offering and expending the customer base, are alliances with other banks. The biggest opportunity in terms of digitalisation for Commerzbank AG, can be explained by the Main Incubator GmbH. To support and accompy FinTechs and Start-up until market launch, could let Commerzbank AG to the Number one bank in European in terms of Digitalization. Also, outsourcing of work sources is an possibility for Commerzbank AG to increase efficiency and decrease costs. This can be also seen as operational risk, in case that the knowledge transfer of outsourcing will not be sufficient. Other threats are new regulations in the Euro zone and slowing growth and investment in the Euro zone due to the low interest enviroment.

Figure 15 – SWOT analysis on Commerzbank AG - source: Author

5. Conclusion

Banks are under groundbreaking challenges nowadays. The adaption of the new liquidity regulatory requirement will take full consideration later in 2018 – 2019. Threats as FinTechs can take market shares in the banking sector. However, banks need to adjust their business model in order to be competitive. Either by supporting start-up or FinTechs or acquire them. Interest environment and overcapacity are also interesting to observe. Some banks charge customer's deposits or saving accounts, as a new revenue source. In order to be cost efficient, consolidations are one good opportunity to strengthen the market position.

This internship report goal was to acquire an inside, how Commerzbank AG reacts to the mentioned challenges in the banking sector. With Commerzbank 4.0. they are responding with the concentration on growth in core business, digital transformation and efficiency. Introducing the new multi-channel platform "one", the new digital customer relationship management, the new mobile mortgage app or the new introduction of Flagships. As a response of the FinTech threat, Commerzbank opened four new institutions, namely Main Incubator GmbH, Commerz Venture, Main Funders and Start-up Garage. Regarding consolidation plans, latest rumor is a consolidation with BnP Paribas or Crédit Agricole, after the German Federal Republic is willing to sell his approximately 15% share of Commerzbank (Commerzbank´s shareholders, 2017).

Furthermore, this study was done on assess Commerzbank´s reaction on the digital change, namely Commerzbank 4.0. I believe that Commerzbank 4.0. is a very good start to a more digital Commerzbank and answer to the FinTech and low interest environment threats. Commerzbank is on a good path to combine a more efficient bank with digital innovations. With Commerzbank 4.0. they are offering 24/7 online banking, real time account access over the App, 4800 ATMs and over 1,000 branches across Germany. This will not only address younger customers, but also older customers, which prefer to go to a branch with personal advisory. Additionally, Commerzbank is more focusing on the German SME sector. This all changes Commerzbank's banking business model to a more digital retail banking business model and to a more digital, future-proof Commerzbank.

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