

The Model of The International Banking Sector After The 2007 Financial Crisis¹

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Abstract

This paper by a German corporate banker reflecting his experience explores the global financial crisis which started in 2007 and developed into a worldwide debt and economic crisis. The economies of countries all over the world experienced the largest losses since the great depression in 1929 (Büschgen 1998). "The end of the banks like we know them" is the title of the magazine *Capital* 09/2014 (Steins 2014). To prevent the world economy from collapsing, governments all over the world had to set up bail-out programs (Admati & Hellwig 2014). The paper explores the reasons for the outbreak of the crisis, examines what happened in consequence to the crisis, elaborates the legal changes due to the crisis and the basic changes for a bank business model and at the end to derive and propose an ideal bank business model from the findings at the end of the thesis.

This paper is based on the a qualitative approach supported by a quantitative analysis. The survey was made to identify the problem which were the lack in capital equity strength, management skills, moral concept and risk strategy. Banks for a long time ignored the trends of digitalization, while evaluation by Rating Agencies was not very reliable and internal and external (public/legal) regulation and supervision failed. There was a change in the business model that making profit is not at the top of all other strategic goals. Summarized, the business models aren't contemporary anymore.

External changes have made a drastic impact on the bank, such as centralization of the supervision (in the EU), new laws about equity capital level, permanently monitoring risks taken by the banks, as well as the trends in digitalization of the business of a bank. More and more services can be offered online more efficiently and cheaper, lowering barriers for new competitors. More importantly, some global non-bank high-tech companies offer innovative online payment services, especially transfer and payments. Banks have to follow the new digital trends or set new trends. In recent years this aspect has almost

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completely been ignored. Nowadays, Fintechs and other innovative companies enter the market and gain market share. Banks have the opportunity to take over these companies and implement these into their processes.

Internal changes are being forced by the above mentioned external changes, such as new government regulation and laws needing to be implemented into the strategy and the business model of the bank. The banks nowadays are stuck in a profound structural change. Profits are shrinking or there are even only losses, as core business is increasingly taken away by non-banks. The banking sector is in a consolidation process. The implementation of the new legal standards cost money, while banks need to raise their equity capital. And the consistently low interest rate policy reduces bank earnings.

For a new bank business model, banks need to concentrate number of branches to a few strategic well located financial centers and implement a regional focus instead of worldwide. Then the trend to a institution that has to offer all products that occur on the market has to be stopped. The product portfolio shall be limited and at least high risk products need to be kept in the proper proportion. That also means that the offered business should be linked mainly to the real economy again and speculation should be contained. Banks have to focus on their core competencies which mean to concentrate on the traditional banking and separate investment and deposit banking and create independently acting divisions. Establishment of private Banking Units to offer high net-worth customers banking and investment services may help offset business taken away by non-banks. In addition, refinancing from the money market in extending loans must be contained to avoid risks and instability. Risk management of banks has to be intensified and the responsibility of the management for failure needs to be raised. Bonuses and the salary can be linked to the success whereat a focus should be less on short term profit but more on sustainable success. The accounting standards have to be overworked. There has to be a maximum leverage ratio and minimum equity capital and the size of banks has to be limited to avoid systemic risk. Over all, the business model has to become less complex and less nontransparent.

Keywords: financial crisis, bail-out, bank business model, digitalization.

Introduction

The crash of the world financial sector still has a large impact on companies with emphasis on financial services, especially banks. The low interest rate policy of the central banks as a economic recovery plan such as legal changes, credit defaults, higher equity capital request and more competition have a significant high impact on the business model of a bank. The supervision and monitoring policy of



central bank and supervision authority became stricter, products that seem to bring profit without any risk turned out to be limited in trade. In addition competitors enter the market with innovative (Online-) solutions for the customers.

Driven by these and other internal and external factors the goal must be to change the business model in that way that it can fit into the present circumstances and lead to more profit again. The sentence "our goal is to achieve a return on investment of 25%" by Joseph Ackermann (Heusinger & Brost 2005), former CEO of Deutsche Bank, is not contemporary anymore and is still criticized in the media as the "ugly face of capitalism" which stands for the greed of the banks.

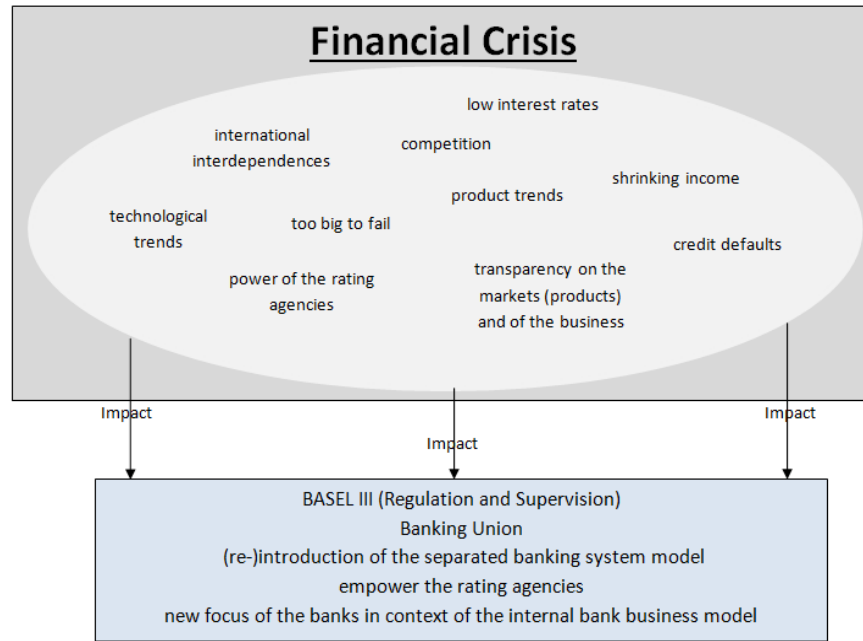
Objective

1. Find out the reasons for the outbreak and examine of the financial crisis and examine its consequence
2. Elaborate the legal changes due to the crisis and the basic changes for a bank business model,
3. Derive and propose an ideal bank business model from the findings at the end of the thesis by incorporating elements of business models from relatively successful German bank business model.

Conceptional Framework

The purpose of the conceptual framework is to lift out and present the main things to be studied (Miles & Huberman 1994). The research questions concern how the banking sector changes and how banks have to adapt to the new environment.

Based on the findings from the literature that has been discussed above, the researcher needs to identify the data that must be collected in this research. It was shown from the discussion above that there are two main blocks to be investigated.



The background of the study is the financial crisis the banking sector faces since 2007. There were different factors that led to the worst crash since 1929. Hence, this crisis revealed the deficiencies first of the banking sector as a whole and of the particular financial institutions on the other hand. These facts had and still have consequences for the whole financial sector. The consequences have an impact on the legal and business policy level.

Literary Review

The cascade of the crisis

Strictly speaking, the crisis began in 1999. To promote economic recovery, lax policies on lending and the low interest rate policy of the US Federal Reserve created a glut of cheap money. The banks could fulfill the dream of owning a home even to small earners. The expected increase in value of the houses let a risk initially appear conceivable low. Also another problem let those responsible completely disregarded: Interest is - unlike in the Germany case - committed only for a short time. In the event that interest rates rise again, there is a danger that the debtor cannot pay the rates (Bianco 2008, pp. 3-8). The banks conceived a seemingly ingenious method to reduce its exposure under the real estate loans. They bundled it into securities and sold them (Mildner 2012). Rating agencies helped by giving good grades to those securities (Weimann 2009). Thanks to the high rate of return, the offer was very popular for institutions such as banks, insurance companies and investment funds in Europe. Private customers were affected by purchasing certain funds, which invested in such securities. From June 2004, the US central



bank was increasingly concerned about the high rate of inflation and started to raise interest rates continuously. But that initiated a chain reaction. Due to the variable interest rates, the mortgage rates began to rise as well (Mildner 2012). Many homeowners were confronted almost overnight with an interest burden that they could not. Even high-income earners, who pledged the supposed value profit of their houses on new loans in times of boom were concerned. The dramatic increase in foreclosure sales was also at the wrong time: The real estate market was in a downturn and completely broke down as a result of oversupply. The number of bad loans was rising rapidly, banks, insurance companies and investment funds were forced to write off large amounts. Dozens of mortgage lender went bankrupt. With the collapse of the British bank Northern Rock, the wave moved to Europe. In Germany, the IKB bank was in trouble (F. A. Z. 2009). Within a few months, it finally caught a number of important companies: Bear Stearns, Lehman Brothers and the mortgage banks Fannie Mae and Freddie Mac. Suddenly all those involved were aware of how hot the papers were. The result, no more bank trusted the other, even one-day loans were denied. Central banks injected billions to keep the money cycle in motion. The fear of the incalculable risks captured the financial sector worldwide. A bank crash followed upon the others. In particular, the case of the US investment bank Lehman Brothers shocked the markets. LB had a systemic role within the economy and obviously was too big to fail (Goldstein & Véron 2011). At that time the massive loss of value on the stock market brought even healthy appearing banks in acute financial distress. After fierce debate, the US government brought in a bailout-package of 700 billion dollars. The money would be ready to buy up bad loans and to expel the paralyzing fear. Europeans moved on their own initiatives. Berlin launched a rescue package, London began to nationalize banks. Iceland was meanwhile nearing bankruptcy (Peukert 2010). Increasingly, the financial crisis hit the real economy (Konrad Adenauer Stiftung 2009). The stock-exchanges worldwide experienced dark weeks with price collapses (Felsenheimer et al. 2011, pp. 25-28). Companies reported profit losses. The credit crunch threatened the middle class.

The Business Model of Banks

The Business Mode is part of the strategic level and “interacts” with the imposed strategy. For example, the desired competitive advantage with the competitive strategy or the market performance with the market segment strategy. The description of the business model always refers to a specific date and thus can relate to past or present experiences, or it can be forward-looking. The forward-looking business model thus specifies a part of the business strategy and describes the desired value added, the cooperation, the resources and services based on its stakeholders. Thus, it describes the market, value chain an potential state of a company, related to a particular date at the strategic level. This happens on



the basis of relevant and determinable dimensions and their mutual relations. Alternatively, it can be a business unit, which acts independently in the market (Heinrich 200, p. 11).

Research Methodology

This study would like to find out what is the best way for financial institutions to prevent potential repeated crises and establish a sustainable business model.

Therefore, two complementary research methods have been used, qualitative research to identify the hypothesis resulting from the analysis of the case study Lehman Brothers as an example of a failed business model and on the other hand the case study HSBC as an example of a business model that succeeded during the crisis. The other supporting method is a quantitative one that implies a survey. That survey addressed the 60 largest banks (according to the amount of their balance sheet) in Germany by using the convergence sample method. That German banking sector was chosen because of their relatively successful standing during the crisis. The addresses were collected by looking for information on the websites or calling the banks.

The questionnaire asked the following main questions:

- What do you think about the reasons for the breakout of the financial crisis?
- What do you think about the reasons for the bankruptcy of Lehman Brothers?
- What do you think how the crisis could have been prevented?

Under these questions there were several opportunities given which have been pulled out from the analysis of the cases. The addressee could choose if he or she agrees or disagrees by a given scale and adding a value (1 for strongly disagree - 6 for strongly agree) to each answer. In the evaluation part, the researcher wanted to find out the average answer of all respondents. The following formula has been used:

value (v) is the score for the particular answer option; answer (a) is the number of answers

The number of the population is 21 and represents the basis for the formula.

$$\text{average answer} = \frac{\sum(v*a)}{21}$$

Average from 1.00 to 1.50 is considered strongly disagree

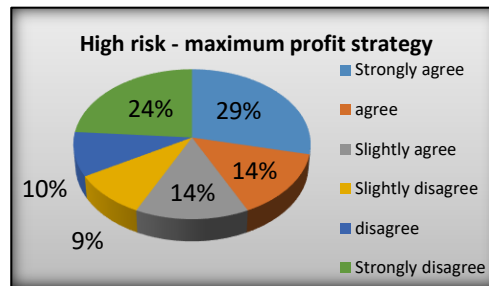
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Average from 5.51 to 6.00 is considered strongly agree



Results

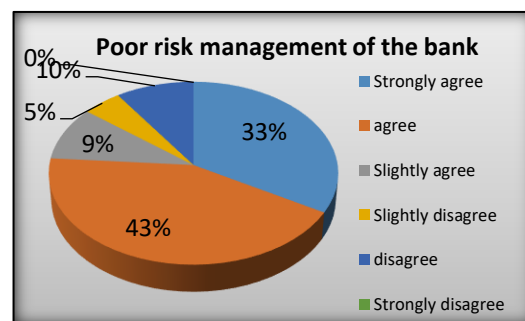
From the case study research, there could be elaborated several hypotheses. These were used as the basis for the questionnaire to validate the assumptions. After that an recommendation about what a business model of a bank should be designed like and what aspects need to be taken into consideration. The survey of the 60 largest banks shows the following results.



The Case of Lehman Brothers-the Failure

Poor Management

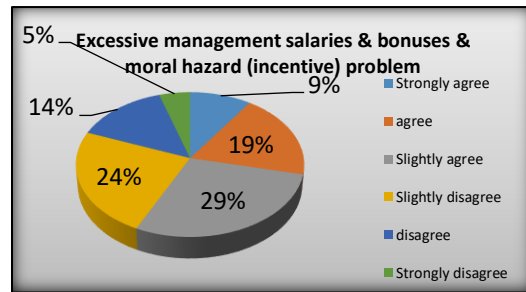
The management of LB assured the public that finances were healthy, liquidity levels were high, and leverage was manageable. They still traded mortgage-backed securities while the domestic and global economies were instable. When the collapse occurred most likely, Lehman Brothers didn't react by trimming its portfolio of high-risk, illiquid assets. It seemed like there was no clear strategy behind the business model of LB. The survey supported this fact of poor management mainly: poor risk management of the bank (4.86)



The sole strategy of making profits and ignore risks

The management obviously only followed the goal of making profit. They no had competencies in commercial banking but still decided to enter the housing market. They ignored the warnings that the housing market in the USA would become an enormous bubble and that mortgage brokers by gave out loans to those who weren't creditworthy. Business model was doomed to failure due to unpredictable

risks taken by large expansion of debts. The interviewees generally agreed (5,48) to this hypothesis as the next answer shows:



With its enormous debts, Lehman Brothers followed its high risk strategy until the end and whitewashed the books by “creative accounting” in many ways. Houses were provided with exceedingly high value to be able to give more loans. Lehman Brothers had been overwhelmed by the profits from bundling packages of America's mortgages into securities, which did not have the value they were traded at. The next chart shows that the interview agreed to the idea that the high risk for maximum profit strategy was one reason that led to the collapse of Lehman Brothers. (4.86)

Going on with business as usual was only possible by faking the appearance of the bank. Lehman Brothers concealed its misery through the utilization of questionable accounting tools which helped to create positive net leverage and liquidity measures on the balance sheet. The survey slightly agreed (3,76) that accounting fraud was a reason for the collapse of LB.

There occurred to be a huge moral hazard problem in management of banks. The idea of maximum profit and no risk led to an ignorant behavior. Mortgage default reached highest percentage because loans were given to almost everyone, even to people who couldn't afford to pay it back. Nevertheless, bonuses and management salary were exorbitant high und inappropriate. To restore moral hazard the governmental authorities decided that there will be no bailout for Lehman Brothers. The survey on average slightly agreed (3.71) but still the answers were indifferent. The reader should know that the target group of the survey were bank authorities.

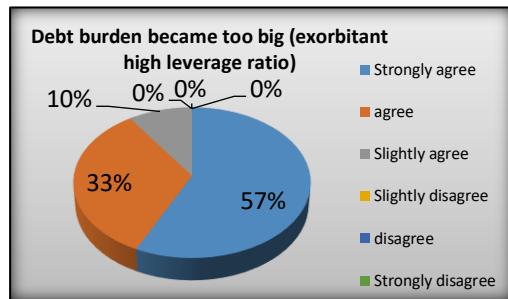
Obviously no one had an idea what exactly was happening within the bank. The business model and the products became too complex and intransparent. Almost everyone agreed that Lehman Brothers was too big to fail. It was clear that the follow-up of not achieving a deal (bail-out for LB) could be disastrous. In September 2008, USA insisted there would be no money to save LB from the collapse. The market was shocked and lost. Markets were in panic, investors and clients drew money from potential dangerous banks in order to keep their money from further losses, leading to the world financial crisis. The survey agreed with this analysis (4.05)



Too high debt burden and no liquidity

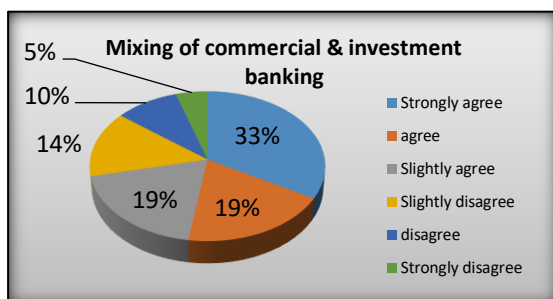
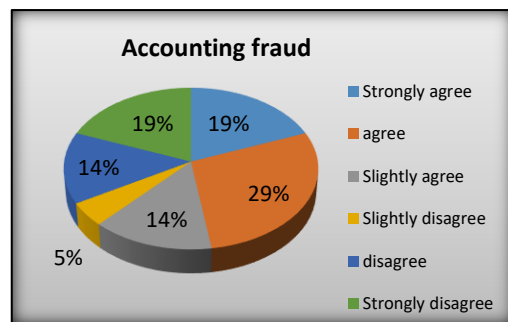
LB reported a positive image of its net leverage, including a deep liquidity pool. The truth was, its \$20 billion in tangible equity and \$782 billion intangible assets made its leverage ratio increase to 39 to 1. Growth and profits were only generated by making debts. At that point when it came out that the assets were almost worthless, it became clear that there was on the other hand no liquidity (equity capital) to catch up the debts.

The survey strongly supported this view (5.48)



Failure of supervision (internal and public)

Due to the fact that it became obvious that the trades of LB had no valuable substance, it is surprising, that they could do it. Monitoring and supervision mechanisms and institutions were already in existence. But the rating agencies which had the task to evaluate the risk in companies and products still gave LB a top-grade until the very end. Obviously, they just failed in making their job or even just couldn't find out about it because of the increasing complexity of the markets. The survey generally supported this finding (4.62)



Separation of investment and deposit banking

This is an interesting aspect within the discussion of minimizing market risks. The potentially highest risks in a bank came from the investment banking division. In the 1990s former US President Bill Clinton repealed the Glass-Steagall Act which was supposed to divide the interests of commercial and investment banks. The ideal was to protect the economy from a domino effect in the case of one sectors' breakdown. With the repeal of the Glass-Steagall Act, Lehman Brothers as one of the largest investment banks in the world, became an important player in the US housing boom, without having any long grown competencies and experiences in this field. From this point, it was possible for financial institution to have a business model in which investment banking and deposit banking can be

made under the roof of one single business model. The problem is that money from the deposits of customers is used in highly risky trades. When the investment banking division fails, it will affect the deposit banking division as well. There was no clear separation between the divisions of LB. The survey slightly agreed (4.38).

The Case of HSBC – the bank that survives

HSBC has straight risk mechanisms that try to avoid crises like happened to LB. First of all, the bank invest only in countries where it can evaluate the risk and tries not to becomes a global player by opening branches all over the world. In relevant markets they opened representative offices but main focus is Asia-Pacific territory. Decision making is held by strategic relevance for the economic development and connectivity. On the second step, the bank evaluates if the returns are attractive according to the profitability, efficiency and liquidity. On the last step, the HSBC bank evaluates how big the financial crime risk is. With this three actions, the HSBC bank is using the following six filters in decision making (HSBC 2014) p. 12 of the annual report 2014:



According to that model, HSBC bank evaluates the risk of investing or not. One main competitive advantage is their “stable funding base, with about US\$ 1.4 trillion of customer accounts of which 72% has been advanced to customers and their local balance sheet strength and trading capabilities in the most relevant financial hubs” (HSBC 2014, p. 12 of the annual report 2014). Indeed HSBC's business model is exemplarily for what other banks should do in future. Focus on core competencies and territories they know, such as having a risk management that works well. Nevertheless, even HSBC faced some losses during the crisis. But these losses occurred in companies that were taken over by the banks and held separately from the main business.



The German Banking Structure

One section of the German banking structure consists of large credit and private banks which struggled slightly due to the crisis. Characteristics for these banks are the high degree of internationalization and large investment banking divisions.

The other sector consists of the national saving banks and state banks which have mainly public owners. These institutions compared to the hardly affected. The characteristics of the business model are primarily the regional focus, limitation of high risk business (max. amount of loan to one borrower unit), the regional principle and the absence of investment banking division such as moderate growth. The emphasis of the business in this group is still the traditional one, i.e. receiving deposits and giving loans on this basis. In this groups only the state banks and central giro institutions which are subsidiaries of the national savings banks slithered into the crisis because the character of their business model were comparable to the private large banks.

Conclusion and Recommendation

The crash of the world financial market had been producing a deep impact on the world economy. The survey that slightly agreed the bail-out of LB could probably have prevented the crisis (3.62)

The first thing, banks need to initiate is to separate the investment banking from the deposit banking. This measure will minimize risks in banking considerably. The goal will be to keep any potential risk of failure in the division of investment banking and away from customers deposits. This is to be under the control of the public. The legal sphere contains furthermore, BASEL III with its higher standards/requirements to the equity capital, maximum leverage ratio, higher supervision standards, increased deposits protection, limitation of size in balance-sheet amount. The Banking Union is an important step towards a more stable and harmonized banking sector. For rating agencies there should be more legal requirements in the evaluation process. Then there is the low interest policy of the central banks. Indeed, to avoid a loan credit crunch, this might be necessary. But flooding the markets with money for a long period may have negative consequences. Due to the findings from the research, the following image drafts the optimal business model of the present-day banks.

To prevent further crises in the banking sector and create an ideal sustainable bank business model, the following success factors need to be implemented. First of all, the number of branches has to be reduced to a few strategic well located financial competence centers. This helps to cut costs and make the organization less complex. Within these and in general, banks should focus on their core competencies, which means to go back to the traditional banking business (deposit and lending business),



link it to the real economy what in consequence leads to a more regional focus instead to a worldwide activity. At the same time speculation with high-risk products on the markets need to be stopped/limited or at least the speculative investment division has to be separated from the deposit banking. But regional focus and linkage to the real economy does not mean to ignore digital trends. Banks has to act more like trendsetter in their branch but not leave the market to their competitor from others branches. At this point, most banks missed the trend but have the opportunity to jump on by M & A with the relevant companies. To restore moral hazard, salaries and bonuses could be linked to the success of the bank and thereby raising the responsibility of management for their actions. Public authorities has to set new rules for banking. There has to be a maximum leverage ratio and a minimum equity capital quota. To avoid systemic risk, a bank should not be bigger in size than \$100 bn in balance sheet. This also makes it possible to let these banks go bankrupt without creating systemic failure which brings the economy into trouble. Another problem which occurred during the crisis was that the accounting standards weren't clear enough. These have to be overworked to prevent too much creative accounting. Overall, bank business models have to be less complex and less nontransparent and this can be achieved by less complex products, size limitation and clear focus on core competencies.

In summary, to meet the new business environments and requirement, a new sustainable business model for a bank should at least contain the following elements of a business model:

- regionalization,
- limitation of risk in particular trades,
- traditional banking (separation of investment and deposit banking),
- limitation of size such as moderate and sustainable growth goals.

The analysis of this paper showed that the banking system of the future will be different from that of the last several decades, as the crisis made unlimited profits a past phenomenon. First of all, the high risk business must be separated from other divisions. Risky investment banking has to be separated from the deposit business to protect the depositors. Then, there must be the return to a more conservative and traditional practice of reliance on customer deposits, not refinancing from the money market, which involves risks and instability, in extending loans. The repercussion of another worldwide breakdown in the future will be minimized in that way. Furthermore, even with modern hi technological support, banks suffer from an enormous cost pressure and there is no cost-efficient processes. Banks turned to be quite less developed in terms of digital trends. Meanwhile, there are non-bank players in the market that start



gaining market share. They conquered the online-market, while conservative institutions didn't give any respect to this distribution channel. Because of these development, bank branches become too many and economically not profitable. Therefore, a new distribution channel must be established, in view of the digital trend in the financial sector. The banking business is clearly undergoing a revolution, and there are a number of small start-ups, the Fintechs, that offer traditional banking functions from payments to stock trading for Smartphone, Tablet or PC. In addition, the Internet giants with their huge customer bases, are becoming big competitors of banks in payments business. Banks must find as additional source of income. The most natural way out is to establish Private Banking Unit, to offer high net- worth customers banking and investment services to help offset the business taken away by the non-banks, private Banking business involves little risks and without risks to and financial burden on the main banks.

A good idea is to offer a checklist for an adequate bank business model which contains requirements for a more sustainable business model (e. g. minimum requirements for the formulation of a bank business model). By this step a more harmonized and standardized banking sector can be achieved which at least pulls out the complexity. This makes the institutions more transparent and easier to monitor and supervise. And finally limits the risk that could arise from an uncontrollable bank.

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