# Regulatory Impacts from the Financial Crisis on German Banks

Michaela Hönig

*Goethe University Frankfurt, 60323 Frankfurt am Main*

**Abstract**

The changes in Europe's financial regulatory framework implemented since the 2007-2009 financial crisis have a major impact on many aspects of the banking industry. The implementation from the regulatory guidelines is facing the bankingsector with cost increasing challenges. I observe approximately 35 regulatory guidelines that will be in force from 2012 until 2019.
Commercial banks and private banks are the worst prepared for regulation implementation. These banks have high costs that have been increasing since 2009, when regulation started. I show that the cooperative banks and the savings banks are better prepared for the implementation of the multiplicity legislations.

*Key words:* Financial Crisis; Regulation; Business Models; EMIR; OTC Business

## 1 Introduction

In 2014, many of the primary new banking regulations are taking effect. Beginning in January 2014, the Third Basel Committee on Banking Supervision (Basel III) Capital Requirements Directive IV goes into effect. In the first quarter of 2014, the European Central Bank will begin examining the performances of the largest European banks. In January 2014, the law to protect banks from risk and planning for reorganization/settlement goes into effect, in advance of the European commission law taking effect in July 2015, whose primary goal is to effect an institutional separation between commercial and investment banking functions.

In section one, I address approximately 34 new laws, rules and guidelines that German Banks must implement. Several of these rules are amendments to acts such as the Markets in Financial Instruments Directive (MiFID) II and Basel III, but others are new major rules that go into effect between 2012 and 2015. I cluster the regulations into European Union (EU) and German legislation. I begin with the extensive EU legislation; then, I move to less extensive EU legislation and finally address German laws. The columns show the years from 2010 to 2015 and show the information regarding the development of the legislation from 2010 to 2015. Most legislation (twelve laws) go into effect in 2014. Seven laws went into effect in 2013, and the remaining laws go into effect in 2015.
I investigate the effects of regulation on the three-pillar system in Germany. These observations show that the cooperative banking sector is good prepared to implement and comply with the new legislation: it has the lowest project, administrative and personnel costs for establishing structures to satisfy the regulation. The savings bank pillar has the same advantages. Conversely, commercial/private banks are poorly prepared to implement regulation. These banks have substantial costs that have been increasing since new regulations began to be implemented following 2009. They have a high cost-income ratio (CIR) compared with the other pillars; in the years from 2008 to 2010, these banks had negative net income. By contrast, savings banks and cooperative banks managed well during the crisis, and they were a stable factor in the German banking system, given their weight. The results show that these groups were also well positioned to implement the regulation requirements after the crisis.

In section three, I investigate in detail the European Market Infrastructure Regulation (EMIR) (which resembles the Dodd Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) in the US) because it is a wide-ranging regulatory scheme with multiple steps and different effective dates. It involves a completely new regulatory structure for OTC derivatives and repositories and has exemptions for savings banks and cooperative banks in Germany. In the banking literature, the related questions of whether and

how regulations impact banks' business are also investigated from an academic perspective. Subsections 1.2 and 1.3 provide an overview of this literature.

In section four, I using the discussion about regulation as a burden for financial institutions. With major regulations taking effect in 2014 (such as BaseI III), more and better quality capital will be required. The new liquidity rules will require banks to have sufficient liquidity and will result in increased refinancing costs. (Lautenschläger, 2012)

High burdens on the supply side confront decreasing revenues. The longer the low interest rate policy persists, the longer that all banking institutions are impacted by the revenue squeeze. Whether a piece of regulation has an influence on structural policies must be analyzed.

Savings banks and cooperative banks are independent and self-sufficient institutions.(Fahrenschon, 2013) It follows that all the supervisory requirements must be met and then processed internally. The necessity of implementing these requirements causes fixed costs to increase. A problem occurs when the regulation requirements imposed by European politicians are not adapted to the business model of individual banks. In particular, small- and medium-sized institutions—such as savings banks and cooperative banks—suffer from the additional costs, which leads to increased consolidation that is only partially offset by financial savings from combining institutions.

In fact, it becomes clear at this point that regulation has an influence on structural policies. It is not known whether this recognition occurs unconsciously or simply by accepting consequences. However, change in structural policies occurs at the expense of the stability of the financial system. By establishing supervisory regulations, politicians create larger institutions that become increasingly important to financial stability, which is counter to the intention of such regulations because politicians originally aimed to avoid creating large institutions that are "too big to fail."

From the socio-political and economic perspectives, there is sufficient evidence that local banking has many benefits for the market and the banking structure. However, small and medium-sized institutions would not be economically viable if they acted individually as independent and self-sufficient institutions. Most of the benefits of local banking actually stem from the fact that these smaller institutions are part of a combined structure. Among others, those lasting structures of local banks are created by connecting the back office tasks of the institutions while not affecting their local autonomy.

These challenges and changes have led to debates regarding how these regulations will impact business models and the future role and institutional forms of these banks. (Bülbül et al., 2013) Schmidt (2013) characterizes the form and current role of savings banks and cooperative banks and speculates about their future prospects. (Schmidt, 2009)

## 2 Overview of Regulations

### *2.1 Essential Regulations*

Since the financial crisis, questions and hypotheses have been raised and discussed regarding banking regulation and its continuing impact on the banking business, particularly the OTC derivatives business. The EU is similar to a federal system in many ways: the European Commission represents the executive branch, the European Parliament and the European Council represent the legislative branch, and the European Court of Justice represents the judicative branch.

The European Commission is the executive body of the EU and represents and preserves the interests of the EU as a whole. Its primary tasks are to organize the day-to-day business of the EU by managing the EU's budget and allocating funding, enforcing laws and representing the EU internationally. In addition, the European Commission has legislative tasks that oblige it to draft proposals for new European laws (regulations, directives and rules). In fact, it is the only institution that has legislative authority (although it is an executive arm) inside the EU.
The members of the European Council include the heads of the governments of the member states of the EU, the President of the European Council and the President of the European Commission. Its task is to define "the general political directions and priorities" of the EU (under the Treaty of Lisbon) by adopting laws and by coordinating policies. However, it has no directly authorized legislative power.

Together with the European Council, the European Parliament decides on the laws of the EU. In contrast to the European Council, the European Parliament has the right to pass laws that are enforceable in member states. Therefore, it represents the legislative body of the EU. A regulation of the EU is a legal act that is immediately enforceable in each EU member state. In contrast to a directive, it need not be transposed into national law. Therefore, there is no national flexibility because changes or amendments to the regulation are not typically permitted. In fact, regulations are part of the secondary law of the Union. If a regulation is considered a legislative act, it has been brought into

force by the European Commission, the European Council and the European Parliament. Directives can be directed toward the EU itself, to all member states or to all citizens of the EU.
Directives have general application, and they are binding on the member states to which they are addressed and must be implemented during a specific time period. Similar to regulations, directives are part of the secondary law of the EU. However, they differ from directives because they typically do not dictate the means of achieving particular results; instead, they leave implementation to the discretion of the member states. Thus, member states can choose which legislative procedures they should implement to achieve the intended outcome. Typically, the European Commission proposes a new directive that is approved or rejected by the European Parliament and the European Council.

Implementing provisions are regulations that accompany laws, regulations and directives and clarify how a law is to be administered. They typically enter into force by means of executive bodies, such as ministries that have been authorized by the legislative body. The European Commission plays a central role in implementing provisions. Because of the complexity of many regulations, EU member states are dependent on the specific knowledge of the European Commission and its advice. Thus, the process of implementing provisions typically occurs via cooperation.

In the column labeled “concern,” I investigate which pillars of the German banking sector are concerned with the legislation. The abbreviation labels are “P” for private/commercial banks, “C” for cooperative banks and “S” for savings banks. The stars on certain abbreviations indicate whether there are exceptions for pillars in the legislation. The exceptions are described in the following section.

Table 1

OVERVIEW REGULATION PART 1

| No. | Regulation | Legislation | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | concern | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Basel III / CRD IV | EU | Proposal | | Implementation | | in force | | P | C* | S* |
| 2 | CRR / Solvency Regulation (LCR, NSFR) | EU | | Proposal | | Implementation | In force | in force | P | C | S |
| 3 | Large value credit | EU | | | | Draft Basler Commission | Guidelines from EBA | Plan 2016 | P | C | S |
| 4 | MiFID II | EU | Draft | | | final Constitution | | Implementation | P | C | S |
| 5 | Financial Transaction Tax | EU | Draft | | | Guidelines | in force | | P | C | S |
| 6 | EMIR | EU | Draft | Implementation | in force, in force | in force | TX-Register | Clearing, in force | P | C* | S* |
| 7 | Banking Union | EU | | Foundation: EBA, EIOPA, ESMA | | ECB takes over supervision | | | P | C | S |
| 8 | SEPA | EU | | Regulation | | Implementation | in force | | P | C | S |
| 9 | FATCA | US/EU | in force US | Implementation | | in force EU | | | P | C | S |
| 10 | MaSan | EU | | Proposal | EBA Consultation | Implementation | | in force | P | C | S |
| 11 | Separate banking system | EU | | | Draft | Implementation | | In force | P | C | S |

Describtion of the main prio 1 regulations:

(1) Basel III-CRD IV: Basel III CRD IV: Basel III is a voluntary global regulatory standard for bank capital adequacy, stress testing and market liquidity risk. Basel III was agreed upon by the members of the Basel Committee on Banking Supervision in 2010–11 and was scheduled to be introduced between 2013 and 2015. However, changes in April 2013 extended its implementation until March 31, 2018. (Basel Committee on Banking Supervision, 2010) The third instalment of the Basel Accords (see Basel I and Basel II) was developed in response to the deficiencies in financial regulation revealed by the financial crisis. Basel III is meant to strengthen bank capital requirements by increasing bank liquidity and decreasing bank leverage. (European Commission, 2006) (European Commission, 2013)

(2) CRR/LCR: CRR/LCR: The Capital Requirements Regulation (CRR) is part of the Basel III Framework and transfers the liquidity figures of the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) into applicable law. The CRR takes over 95% of the Solvency Regulation. Savings banks and cooperative banks have an intragroup exemption (§ 113 passage 7 CRR). LCR positions must be reported to national supervision monthly beginning on March 31, 2014. Beginning on January 1, 2015, banks must fulfill and cover 60% of a liquidity buffer. By January 2019, the degree of fulfillment will be 100%. Beginning March 31, 2014, positions in a stable refunding must report to national supervision quarterly.

(3) Large value credit: Large value credit: Regarding the large exposures regime, the German regulation on recording, measuring, prioritizing and

reporting of loans (GroMiKV) will contain supplementary provisions on decision-making requirements, reporting issues and regulations on implementing the remaining national options and exemptions for certain loans. The reporting system for loans of 1.5 million Euros or more does not stem from European legal requirements. Changes to the reporting system for loans of 1.5 million Euros required by the GroMiKV are the result of the general overhaul of the reporting system, and these changes affect how loan amounts are calculated and the content of reporting on loans of 1.5 million Euros or more. (BaFin, 2013)

(4) MiFID II-MIFIR: MiFID 2004/ 39 /EC, as subsequently amended, is an EU law that provides harmonized regulation for investment services across the 31 member states of the European Economic Area (the 28 Member States of the EU plus Iceland, Norway and Liechtenstein). The primary objectives of the Directive are to encourage competition and increase consumer protection in investment services. As of its effective date, November 1, 2007, it replaced the Investment Services Directive. (European Union, 2004) The MiFID is the cornerstone of the European Commission's Financial Services Action Plan, and its 42 measures will significantly change how the EU financial service markets operate. The MiFID retained the principles of the EU "passport," which was introduced by the Investment Services Directive (ISD), but added the concept of "maximum harmonization," which places greater emphasis on home state supervision. This addition is a change from prior EU financial service legislation, which featured a "minimum harmonization and mutual recognition" concept. "Maximum harmonization" does not allow states to be "super equivalent" or to "gold-plate" the EU requirements if doing so harms the "level playing field." (European Union, 2008)

(5) Financial transaction tax: A financial transaction tax is a levy placed on a specific type of monetary transaction for a particular purpose. The concept has been most commonly associated with the financial sector; it is not typically considered to include consumption taxes paid by consumers. (European Parliament, 2012) A transaction tax is not a levy on financial institutions per se; instead, it is charged only on specific transactions that are designated as taxable. Thus, an institution with no taxable transactions is not subject to the transaction tax. (European Comission, 2011)

(6) EMIR (European Market Infrastructure Regulation): EMIR: EU Regulation No. 648 – 2012 of the European Parliament and of the Council of July 4, 2012 on OTC derivatives, central counterparties (CCPs) and trade repositories (TRs) entered into force on August 16, 2012. The following are the primary obligations under the EMIR: central clearing for particular classes of OTC derivatives; the application of risk mitigation

techniques for non-centrally cleared OTC derivatives; reporting to trade repositories; the application of organizational, business conduct and prudential requirements for CCPs; and the application of requirements for trade repositories, including the duty to make certain data available to the public and relevant authorities. The following entities are covered by various provisions of the EMIR: financial counterparties and non-financial counterparties above the clearing threshold, non-financial counterparties below the clearing threshold, CCPs and trade repositories. (European Parliament, ESMA, 2012)
The Dodd-Frank Act contains similar legislation aimed at improving the stability of the US financial market. (U.S. Government, 2010)

(7) The banking union contains proposals from the EU regarding financial supervision, deposit insurance, stabilization and settlement from banks inside the EU. (Council European Union, 2013)

(8) SEPA (Single Euro Payments Area) The Single Euro Payments Area (SEPA) represents a migration of depository transfers and debit advice to the new European standards. (European Payments Council EPC, 2012)

(9) FATCA (Foreign Account Tax Compliance Act) The Foreign Account Tax Compliance Act (FATCA) is a US law consisting of US tax reporting rules for foreign financial institutions. (Internal Revenue Service IRS, 2012)

(10) MaSan (Guideline from the European Commission for the rehabilitation and settlement of banks): Guidelines from the European Commission for the rehabilitation and settlement of banks (MaSan): On March 11, 2013, the European Banking Authority (EBA) launched a consultation on the Draft Regulatory Technical Standard (RTS) for the content of recovery plans. In so doing, the EBA began preparatory work to implement the Recovery and Resolution Directive (RRD), which is currently being discussed by the EU legislators. The consultation runs until June 11, 2013. The RTS will contribute to the European Single Rulebook in banking and aims to enhance financial stability and to minimize the probability of bank failure. (European Banking Authority, 2012)

(11) Separate banking system: These laws shield credit institutions and financial groups from risk and plan their recovery. The resolution serves to stabilize the European banking system during a crisis. The German law takes three regulatory areas into account. First, it provides a simplified reorganization of credit institutions and financial groups. Credit institu-

tions must devise plans for their own recovery and resolution in case of a market drop. Second, they should separate the riskier areas defined by the deposits. Third, the act introduces clear rules regarding criminal liability for the business lines of banks and insurance companies when they do not fulfill their duties. (Deutscher Bundestag/Bundesrat, 2013)

(12) EU Deposit Insurance: The EU Deposit Insurance aims to protect deposits by depositors and to ensure the stability of the banking system in the European market. (European Comission, 2010b)

(13) The Revision of the EU Guidelines amends regulations regarding public offers for securities and approvals for trading securities.(European Union, 2010)

Table 2

OVERVIEW REGULATION PART 2

| No. | Regulation | Legislation | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | concern | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | EU Deposit Insurance | EU | EU Guideline | | Discussion | | Conclusion Trilog | in force | P | C | S |
| 13 | Revision EU Guidelines | EU | Review | | in force | Review | in force | | P | C | S |
| 14 | Shadow Banking | EU | | Green Book | | Draft | Implementation | in force | P | C | S |
| 15 | Fee based consulting | EU | | | Proposal | Draft | in force | | P | C | S |
| 16 | EURIBOR/LIBOR Manipulation | EU | | | | Investigation on banks | | | P | C* | S* |
| 17 | OGAW | EU | Draft | in force | | | | | P | C | S |
| 18 | European Green Book | EU | | | | Submission long term finance on EU economy | | | P | C | S |
| 19 | Legal Entity Identifier | US/EU | | | | Application | in force | | P | C | S |
| 20 | Tax on financial transactions EU countries and the U.S. | EU | | | France | Spain, Italy | US | | P | C | S |
| 21 | Taxation of Public Float | EU | | | | Approved law | | | P | C | S |
| 22 | Regulation of Rating Agencies | EU | | Proposal | Regulation | in force | | | | | |

(14) Shadow Banking: The European Financial Stability Board developed arrangements and sanctions for better and more transparent regulation of shadow banks. (European Comission, 2013b)

(15) Fee-based consulting is subject to new rules from the EU that require greater transparency and registration in this sector. (Bundeskabinett, 2012)

(16) Euro Interbank Offered Rate (EURIBOR)/London Interbank Offered Rate (LIBOR): The national supervisory investigations will extend to all the included banks. (BaFin, 2013)(BaFin, 2013)

(17) OGAW Undertaking for Collective Investment in Transferable Securities Directives (UCITS; OGAW in German): Legal and administrative guidelines from the EU regarding investments in securities.(European Parliament, 2009)

(18) European Greenbook: Rules and implementations regarding how to manage the salaries of board members of listed companies and the long term finance of the European economy.(European Comission, 2010a)

(19) Legal Entity Identifier:The decision from the G20 through the Financial Stability Board that each financial counterpart in Europe must receive an explicit legal identifier to provide better transparency in the OTC derivative business. (BaFin, 2014)

(20) Tax on financial transactions for other EU countries and the U.S.: This new regulation provides for a tax from foreign governments on the purchase of the stock of listed companies. (European Comission, 2013a)

(21) Taxation of Public Float Dividend: This law establishes taxation of future earnings from the dividends of capital companies received from small corporate investments. (Bundestag, 2012b)

(22) Regulation of rating agencies: These regulations consist of new and tightened rules for rating agencies. (European Comission, 2013c)

(23) IFRS 9 Credit Losses: The main objective in developing these proposals is to provide the users of financial statements with more useful information about an entity's expected credit losses on its financial assets and its commitments to extend credit. All entities that hold financial assets or commitments to extend credit that are not accounted for at fair value through profit or loss would be affected by these proposals, including financial assets measured at amortized cost or that are mandatorily measured at fair value through other comprehensive income, trade and lease receivables, loan commitments and financial guarantee contracts.

(24) FINREP Reporting: Financial reporting, or FINREP, is a European regulation that applies to "credit institutions" (e.g., banking organizations) that will significantly increase the level of reporting of financial information to regulators. The regulation was developed by the EBA and is to be implemented by local country regulators.

(25) MaComp II: In August and December of 2012, the German Federal Financial Supervisory Authority (BaFin) published further new versions of its Minimum Requirements for the Compliance Function and Additional Requirements Governing Rules of Conduct, Organisation and Transparency pursuant to Sections 31 ff. of the WpHG, which addressed the increasing importance of multilateral trading facilities.

Table 3

OVERVIEW REGULATION PART 3

| No. | Regulation | Legislation | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | concern | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | IFRS 9: Credit Losses | EU | | | | Draft IASB | Discussion | in force? | P | C | S |
| 24 | FINREP Reporting | EU | | | | Proposal EBA | in force | | P | C | S |
| 25 | MaComp II | EU | | Guidelines ESMA | | in force | | | P* | C* | S* |
| 26 | Guidline Money Laundering | EU | | Recommendations Financial Action Task | | Draft | Discussion, no time table | | | | |
| 27 | Performance Fee | G | | | | in force | | | P | C | S |
| 28 | Investment fund regulation(KAGB) AIFM-Implementation law | G | | Implementation | | in force | | | P* | C* | S* |
| 29 | Investor Protection Improvement Pact | G | | in force | | | | | P* | C* | S* |
| 30 | Withholding Tax | G | | in force | | | | | P | C | S |
| 31 | Grey Capital Market | G | | Law announcement | in force | | | | | | |
| 32 | Share Law Amendment | G | | Draft | Update | | In force | | P | C | S |
| 33 | Redesign Investment Tax | G | | | | Draft | | | P* | C* | S* |
| 34 | Tax Treaty Switzerland Germany | G | | Agreement | Discussion | rejected | | | | | |

(26) Guidline Money Laundering: All companies in the financial sector are expected to have formal business policies to prevent transactions with individuals with criminal backgrounds and to work toward detecting and combating such transactions. This requirement is of particular relevance to transactions that support money laundering or terrorist financing and other criminal offenses that may imperil the assets of an institution. Such criminal activities not only threaten the reputation and financial strength of an institution that is abused for these purposes but also endanger the integrity and stability of the entire financial market.

(27) Performance Fee: Performance Fee: A performance fee is a payment made to a fund manager for generating positive returns. Performance fees are generally calculated as a percentage of investment profits, frequently both realized and unrealized. It is typically a feature of the hedge fund industry in which performance fees have made many hedge fund managers among the wealthiest people in the world.BaFin has sent a sample module for performance fee arrangements to the representative of the German investment fund and asset management community, the BVI. The sample module from the BaFin ignores the compromise proposals of the BVI and contains an extensive catalogue of new requirements on performance fees.

(BaFin, 2011)

(28) Investor Protection and Improvement Pact: New regulations to improve the efficiency of the capital markets and strengthen investor protection. (Bundestag, 2011)

(29) Withholding Tax: Revisions in German tax law that provide new rules, including a 25% taxation on all financial earnings. (Bundesfinanzministerium, 2009)

(30) Regulation in grey capital markets: A regulation providing new rules for depositors to minimize damage from grey financial markets, including tax offers, gambling offers, property investments, and forward dealing. (Bundesministerium für Finanzen, 2012)

(31) Share law amendment 2013: A revision of and new rules for the stock corporation act. (Bundestag, 2012a)

(32) Redesign of the investment tax: This amendment provides greater transparency and other improvements to the current investment tax law. (Bundestag, 2013)

(33) Tax treaty between Switzerland and the Federal Republic of Germany: This tax treaty was rejected by the federal government of Germany. (Bundesrat, 2012)

(34) Annual Tax Act 2013 and 2014: New and tightened regulations within the annual tax act for banks in Germany. (Bundesrat, 2013)

### *2.2 The Literature on Regulation*

In the banking literature, the related questions of whether and how regulations impact the banking business have also been investigated from an academic perspective. Using employment data for 3,000 banks from 86 countries, Demirgüç-Kunt and Detragiache (2011) do not find support for the hypothesis that better regulation and supervision result in sounder banks. These authors use adherence to the Core Principles for Effective Bank Supervision as issued by the Basel Committee on Banking Supervision (BCPs) as indicators of bank

regulation and supervision. (Demirgüc-Kunt and Detragiache, 2011)

Klomp and de Haan find that banking regulation and supervision have an effect on the risks of high-risk banks. However, most measures for bank regulation and supervision do not have a significant effect on low-risk banks (Klomp and Haan, 2011) Some investigations employ the World Bank survey on financial institution supervision to construct measures of bank regulation and supervision. Barth et al. (2004) analyze the effects of various dimensions of bank regulation and supervision on bank stability using an earlier version of the survey dataset and suggest that policies that induce accurate information disclosure and (incentives for) private sector corporate control of banks work best to promote banking sector stability. (Barth et al., 2004)

Pasiouras et al. (2006) use this survey to construct indicators of bank regulation and supervision. Employing bank level data from 71 countries and 857 banks, they find that certain dimensions of bank regulation and supervision have a significant impact on bank ratings. (Pasiouras et al., 2006)

By the end of 2008, many banks throughout the world had seen most of their equity destroyed by the crisis that began in the US subprime mortgage sector in 2007. However, not all banks across the world performed equally poorly. Beltratti and Stulz (2012) examine how firm-level and country-level factors (e.g., bank characteristics, governance indices, bank regulation, and macroeconomic factors) relate to bank performance and investigate, in particular, how banks that performed better during the crisis differed from other banks before the crisis by measuring performance using stock returns. (Beltratti and Stulz, 2012)

### *2.3 The Literature on Counterparty/Systemic Risk and OTC Derivatives*

Darby (1994) investigated the concept of systemic risk, which holds that the failure of one firm can lead to the failure of a large number of other firms and the collapse of the international financial system. Alternative proposed definitions are considered and integrated, and the effects of OTC derivatives on these risks are discussed. The key conclusion is that systemic risk has been reduced by the development of the OTC derivatives market due to shifting economic risks to those better able to either bear the risk or, in many cases, cancel it against offsetting risks. The implications of the Basel II capital proposals for systemic risk are analyzed and shown to increase this risk because some of these proposals encouraged transactions that increase dealer portfolio risk and discouraged transactions that decrease such portfolio risk. (Darby, 1994)

Singh and Aitken (2009) address the role of central counterparties and estimate that the adverse impact of counterparty risk on high-grade collateral flows and global liquidity caused by a decrease in rehypothecation, reduced securities lending and hoarding of cash by major banks is at least 5 trillion USD. To mitigate counterparty risk, there have been regulatory initiatives to establish CCPs. From a policy perspective, counterparty risk currently remains large, and recent experience has shown that OTC derivative positions are not supported by sufficient capital, which constitutes a major risk for participants in this market. (Aitken and Singh, 2009)

Koeppl and Monnet (2012) focus on the role of insurance in markets for OTC derivatives. Applying the latter view to the market for OTC derivatives, they argue that the risk transfer that characterizes CCP clearing leads to incentives for individual risk-taking and a collective failure of participants to account for the fact that the OTC derivatives market concentrates system-wide aggregate risk. This systemic risk externality worsens with central clearing because CCPs concentrate this risk further and become “too big to fail.” To correct this problem, I propose establishing systemic risk insurance as a necessary component of CCP clearing in OTC derivatives markets. (Koeppl and Monnet, 2012)

Wellink (2010) observes that the risk management systems of Central Counterparties (CCPs) are not necessarily equipped to clear all types of derivative contracts. In addition, central clearing concentrates risk and may actually increase systemic risk. Thus, it is crucial that CCPs have robust risk management systems in place. Furthermore, enhancing the safety and transparency of bilateral clearing also merits attention because a certain share of OTC derivative trades will continue to be cleared bilaterally. Given the international character of the OTC derivative markets, coordination between national supervisors and regulators is crucial for any initiative to succeed. (Wellink, 2010)

## 3 Effects of Regulations on German Banks

### *3.1 Banking Structure*

In Germany, there is a clear classification of banking groups defined in the German law Kreditwesengesetz KWG. According to this law, there are three pillars: private banks, banks governed by public law (savings banks) and cooperative banks. Based on the number of institutions, these three sectors represent 87% of German banks; the remaining 13% are distributed among special bank categories. Hackethal and Schmidt (2004)

There is one central bank, the Deutsche Bundesbank, and three clearing institutes: EUREX, Swiss Euro Clearing Bank GmbH – SECB and Clearstream Banking AG Frankfurt. The Federal Financial Supervisory Authority supervises banks, credit institutions and financial service companies and must explicitly approve the practice of a financial business.

Commercial banks belong to private proprietary groups, to which earnings are disbursed. With a listed bank, shareholders are liable for their share. As opposed to private banks, the business models of cooperative and savings banks do not emphasize profit maximization.
Cooperative banks are the property of their members. Earnings are paid in the form of a dividend, which is a limited amount given to members. The cooperative sector targets the economic advancement of its members.

The unique characteristic of German savings banks is their public service remittance. This remittance constitutes supplying a full range of financial services to all sections of society, particularly small and medium-sized businesses. (Brämer et al., 2010). Above all, this remittance implies material access to credit: on the one hand, regional access through providing a nationwide network of branches, and on the other hand, sectoral access for all industries and structural access for SMEs and economically weaker sections of the population. (Brämer et al., 2010) Savings banks have the most extensive branch networks and the most balanced regional distribution of branches in Germany. (Bundesbank, 2009) (Bülbül et al., 2013)

### *3.2 Data and Descriptive Analyses*

The balance sheet data in this study are based on a dataset from Bankscope (2013) from Bureau van Dijk and represent a sample of all financial banks and

institutions from 2003 to 2011. I separate the Landesbanken (the central institutions of the savings bank sector) and the central banks from the cooperative sector.

Table 4

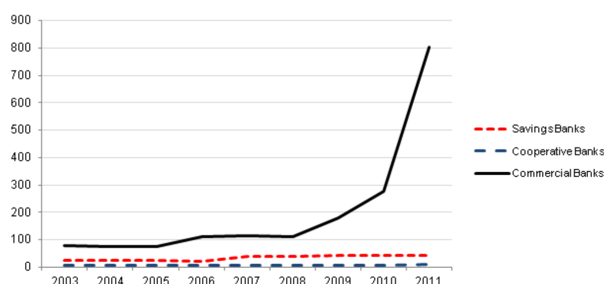
DATA ANALYSIS

| Overview German Banks | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|
| Savings Banks | 405 | 405 | 413 | 415 | 418 | 416 | 416 | 416 | 416 |
| Cooperative Banks | 661 | 671 | 927 | 947 | 949 | 951 | 946 | 947 | 942 |
| Commercial Banks | 84 | 88 | 92 | 99 | 106 | 106 | 108 | 113 | 111 |
| Bank Holding and Holding Companies | 6 | 8 | 8 | 9 | 10 | 11 | 11 | 11 | 11 |
| Central Banks | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Clearing Instituations Custodies | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| Finance Companies | 24 | 26 | 31 | 36 | 39 | 41 | 41 | 46 | 40 |
| Investment and Trust Corporations | 2 | 2 | 3 | 4 | 4 | 4 | 2 | 2 | 2 |
| Investment Banks | 12 | 15 | 20 | 21 | 24 | 21 | 24 | 24 | 25 |
| Micro-Financing Institutions | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Other Non Banking Credit Institutions | 2 | 3 | 4 | 8 | 11 | 9 | 10 | 9 | 9 |
| Private Banking and Asset management Companies | 25 | 24 | 30 | 29 | 30 | 30 | 29 | 28 | 29 |
| Real Estate and Mortgage Bank | 34 | 34 | 34 | 36 | 35 | 38 | 39 | 39 | 39 |
| Specialized Governmental Credit Institution | 13 | 12 | 12 | 15 | 15 | 16 | 16 | 16 | 16 |
| Securities Firm | 5 | 6 | 7 | 9 | 11 | 12 | 12 | 12 | 12 |
| CB Cooperative Bank | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Landesbanken | 11 | 11 | 11 | 11 | 11 | 11 | 10 | 9 | 8 |
| Total | **1,277** | **1,302** | **1,591** | **1,646** | **1,670** | **1,673** | **1,672** | **1,681** | **1,670** |

In the descriptive analyses, I focus on the three pillars: savings banks, cooperative banks and commercial banks. The first examination focuses on operating expenses. Project costs and implementation costs attributed to the voluminous regulation requirements are booked in the income statement operating expenses.

Table 5

OPERATING EXPENSES

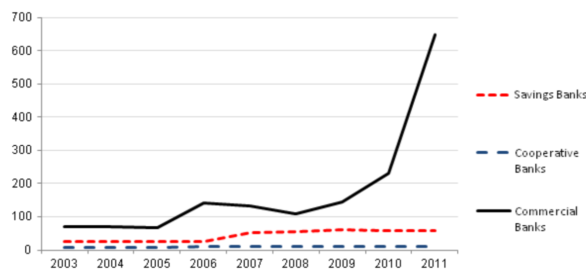


Operating expenses are an expenditure category that a business incurs as a result of performing its normal business operations. One of the typical responsibilities that management must address with is determining how low operating expenses can be reduced without significantly affecting the firm's ability to compete in the market. (Dugmore and Lacy, 2006)
Such operating expenses have increased from an average of 110 billion Euro in 2008 to 800 billion Euro in 2011. Savings banks and cooperative banks have constant costs that average under 50 billion Euro per year.

Personnel expenses include wages, benefits, training, and payroll taxes incurred by the organization during the reporting period. Personnel expenses increased in a manner similar to operating expenses. (Standards, 2013).

Table 6

PERSONEL COSTS

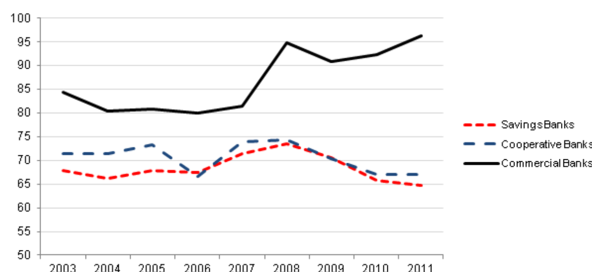



Considering the cost-income ratio of the three pillars (figure 6, next page), it can be observed that commercial banks have a high cost-income ratio that has increased since 2007 from a mean of 80%to 95% in 2011. Considering the cost income ratio of the three pillars (figure 6, next page), I can see that commercial banks have a very high cost income ratio that has increased since 2007 from a mean of 80% to 95% in 2011.

In the opposite direction, since the financial crisis, savings banks and cooperative banks have worked to reduce the cost-income ratio, particularly during the years with a low interest margin. These banks have reduced the mean cost-income ratio since 2008 from 75% to 65% in 2011. This strategy has augmented the strength of both pillars compared with commercial banks.

Table 7

COST INCOCME RATIO




Cooperative and savings banks have the lowest costs as a result of consolidation and optimization in the processes and workflows of these sectors. Both sectors have a central association. Cooperative banks have a further advantage in that they have only one large central institution and their back-office functions are handled by a settlement bank, dwpbank. This well-structured and efficient formation is a substantial advantage in implementing the several regulations for the following reasons:

(1) Uniform IT: There is consistent central management for developing the IT platform and systems used by all cooperative bank branches. Technical implementation and development occur only once and then are rolled out to the entire sector. This centralized management saves money, time and resources.

(2) Straight-Through-Processes: Based on the IT environment, the process workflows are also standardized and have a high number of straight-through processes, which lead to low fixed costs.

(3) Central Management: The third advantage is that there is one central institution and one association that bundle know-how and a uniform presetting for all branches. Only the high number of branches, which stems

from the historical growth of cooperative banks, will be a challenge in the coming years, particularly in the rural areas of Germany. Increased online banking and changes in demography will likely lead to further mergers and consolidations.

(4) Exemptions for members of the same group: Exemptions for members of the same group: Another advantage for cooperative banks is that members are exempt from certain regulations. These exemptions lower the costs and effort required for implementation. As an example, here is the original text from the EMIR:

"Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories. Article 3 about exemptions: Intergroup transactions. In relation to a non-financial counterparty, an intergroup transaction is an OTC derivative contract entered into with another counterparty which is part of the same group provided that both counterparties are included in the same consolidation on a full basis and they are subject to an appropriate centralized risk evaluation, measurement and control procedures and that counterparty is established in the Union or, if it is established in a third country, the Commission has adopted an implementing act under Article 13(2) in respect of that third country."

# 4 Impacts from European Market Infrastruktur Regulation (EMIR) on German Banks

## *4.1 Definition of the EMIR*

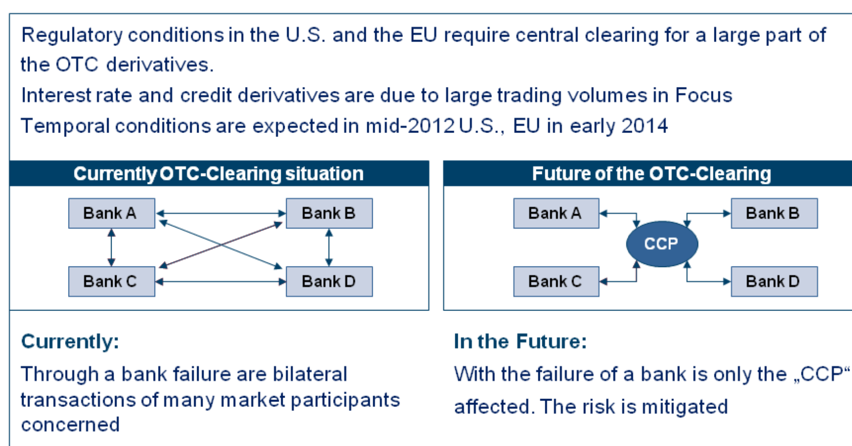
As discussed above, one significant advantage for savings and cooperative banks is their exemption from certain regulations by members of the same group. These exemptions result in lower implementation costs and effort. The original text from the EMIR offers one example of these exemptions: The EMIR entered into force on August 16, 2012.

The primary obligations under the EMIR are as follows: central clearing for particular classes of OTC derivatives; the application of risk mitigation techniques for non-centrally cleared OTC derivatives; reporting to trade repositories; the application of organizational, business conduct and prudential requirements for CCPs; and the application of requirements for trade repositories, including the duty to make certain data available to the public and the relevant authorities.

The following entities are covered by various provisions of the EMIR: financial counterparties and non-financial counterparties above the clearing threshold, non-financial counterparties below the clearing threshold, CCPs and trade repositories. (European Parliament, ESMA, 2012)

Table 8

OTC-BUSINESS BEFORE AND AFTER REGULATION




The aim of the EMIR is to reduce and mitigate systemic risk and to cre-

ate transparency in business relationships in the OTC market, which allows participants to identify clot risk. Before this regulation, the OTC derivative business was characterized by business among the counterparts, but mostly without any bilateral collateralization.

Collateralization was voluntary and resided in each institution as a financial precaution. A default by one business participant affected and meant implications for all participants that had a business relationship with this counterparty.

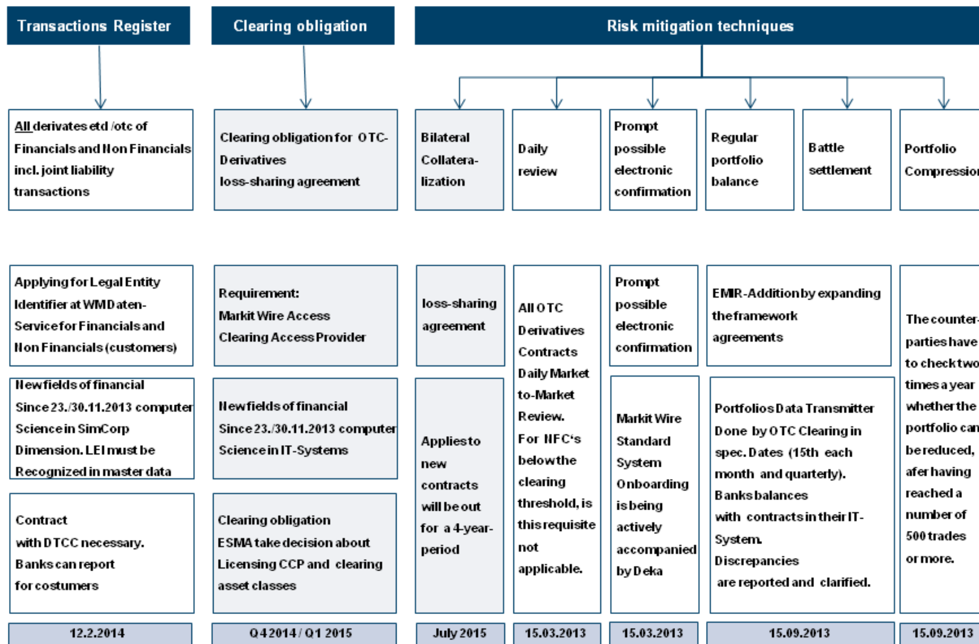
Through the regulation, the duty defined asset classes through the European Securities and Marketing Authority (ESMA) to clear a central counterparty called the "CCP". When a bank fails, only the CCP is affected. The barriers to becoming a member of a CCP are high; institutions must establish sufficient proprietary capital and a functional IT department that is able to work under pressure with high OTC volumes. Twice yearly, the CCP uses a stress test to confirm the health of the direct members.
The CCP model provides multiple security mechanisms: the members must pay a default fund contribution; the OTC business is covered by the initial margin (at the portfolio level); and the daily market fluctuations are covered by a variation margin. In addition to these three requirements, the Basel III regulation CRD IV requires various levels of deposit equity capital.

Before I investigate the advantages and disadvantages of the EMIR, I must examine its three core parts to deduce the advantages and disadvantages for the three pillars.

The gray-colored boxes indicate those aspects that are exempt for companies in the same financial group. These exemptions are considered an advantage for the public and governmental sectors because they reduce costs without concurrently increasing costs or effort for the group and its branches.

Table 9

EMIR-CONTENTS




Compared to the commercial sector, the public and governmental sectors meet the transaction report requirement through a technical and legal group solution to the DTCC, which is the largest transaction register in the world.
In the clearing segment, the public sector has six clearing providers (Landesbanken and DekaBank) that act as clearing providers for their branches. In the governmental sector, the DZ Bank acts as a clearing provider for the Volks- and Raiffeisenbanken in Germany. To participate, the clearing clients require the web-based front end MarkitWire. On the one hand, MarkitWire offers a new confirmation platform. On the other hand, it offers the only accepted

clearing platform from the LCH. The central institutions cover and support their branches in the on-boarding process with MarkitWire.

In the credit risk mitigation areas, I observe exemptions for the members of the same group in bilateral collateralization. As I have shown, public and governmental institutions have the following advantages in terms of regulation.

They have the support of and free service for their branches from the central institutions, particularly IT management in their core systems, i.e., WVS for the governmental sector and Simcorp Dimension for the public sector.

There is know-how from within the group (legal, IT, regulatory and process-design), which comes in the form of training, documentation, working groups and special task forces.

These matters help to reduce costs and effort in these pillars.

There are no such listed advantages in the private sector of German Banks. The private sector is characterized by heterogeneity in the IT landscape and the individual histories of the businesses, clients and products. For the EMIR, the private banks must discuss whether they are large enough to become a direct member of a CCP or to connect with a clearing provider. If the latter is the case, they must search for and research possible providers. Apart from clearing, the private sector has no exceptions from the regulations.

To handle these flows of new regulations, banks have established project teams, obtained external consulting support for their reporting efforts and established new infrastructure in a short time for implementation. Furthermore, banks face new challenges to their businesses. In particular, with the introduction of Basel III, all banks not only must hold more available capital but also must hold higher quality capital.

With an average core capital ratio of approximately 10.5%, savings banks are well-capitalized. They are also less affected by other Basel III-induced capital effects because the trading business only plays a minor role for these savings banks. Moreover, savings banks have significant reserves that can be reclassified and used when needed to meet Basel III capital requirements. (Basel Committee Banking Supervision Board of the International Organization of Securities Commissions, 2013).

Nevertheless, some savings banks must increase their capital resources because

the current core capital components frequently do not fulfill the requirements under Basel III. This increase in capital could become a greater challenge if risk factors appear that affect savings banks in particular.

In their study, the BCBC and IOSCO indicate that the liquidity impact of margin requirements cannot be considered in isolation. Instead, it is important to recognize that ongoing and parallel regulatory initiatives will have significant effects on liquidity.

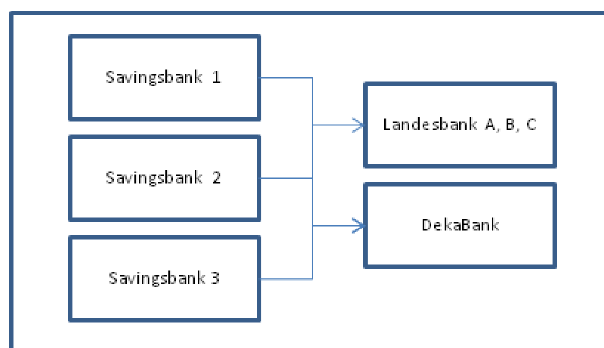
Consequently, one option for many smaller institutions is to avoid particular transactions or business areas. For example, some savings banks may decide to refrain from executing OTC derivatives to avoid being subject to the new regulations for these businesses. Restricting business activities by curtailing or halting transaction executions may result in a decline in income.

### *4.3 EMIR Exemption for Members of the same Group*

The relevant regulations, the EMIR and CRD IV, include an exemption from the clearing obligation within the joint liability scheme of the banking group. For instance, if savings banks conduct OTC business within the German Savings Finance Group, there will be no obligation to meet the clearing requirements because they will be exempt from the EMIR. Thus, they have no margins to pay. The risk between the trading partners is not secured; there will also be no obligation for bilateral collateralization. Figure 9 shows that these banks conduct business through their central institutions (e.g., Landesbanks) within the banking group.

Table 10

OTC-BUSINESS INSIDE THE BANKING GROUP



Another possibility is that savings banks continue to conduct OTC business with counterparties outside the banking group. In that case, savings banks are obligated to clear the trade through a central counterparty (a CCP, e.g., Eurex or London Clearing House) if the asset class is clearing binding. These banks must become a member of these central counterparties. However, the membership criteria for the CCPs are too stringent for most German savings banks. Therefore, these banks must choose a General Clearing Member, which can be a large bank, such as UBS or Deutsche Bank.

Some Landesbanks and DekaBanks offer clearing provider functionality for savings banks. Therefore, the banks can also choose to collaborate with these institutions within their banking group. Savings banks must pay margins (initial and variation margin) for the business and a fee for the trade.

Therefore, the effort in terms of cost and the process is higher than the business generated within the group. However, the advantages of better swap spreads from commercial banks may reduce costs.

### *4.4 EMIR Process Workflow*

An EMIR process workflow on the example of the savings banks group is described in figure 10.

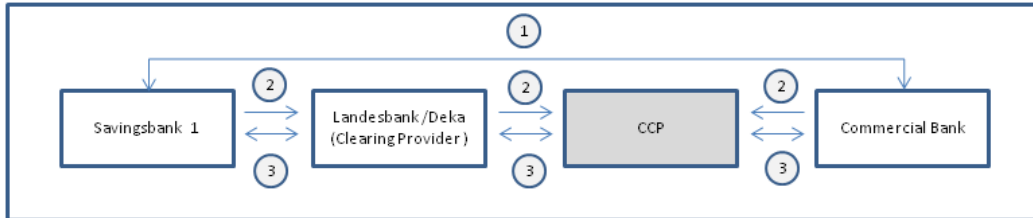
(1) Savings banks conduct trades over the counter with market partners (banking institution) outside of the banking group. These trades are mandatory for clearing according to the new regulations. The counterparty risk exists between the original counterparties of the trade as long as the CCP has not accepted this trade for clearing. Once the CCP has accepted this trade and a provider is integrated into the process, the counterparty risk shifts to the clearing provider (the General Clearing Member of the CCP).

(2) The savings bank's trade will be transferred through the clearing provider (General Clearing Member) to the CCP for clearing.

(3) Once the trade is cleared, initial margins are paid and variation margins will be settled daily between the CCP, the clearing provider and the original counterpart (the savings bank).

Table 11

OTC-BUSINESS OUTSIDE THE BANKING GROUP




Thus, in light of the recent regulatory changes, banks face several alternatives.

They can continue engaging in OTC-Derivatives to the same extent as they have been. In exchange for this right, they must make sure that they fulfill the new regulatory requirements for participating in the derivatives market.

Alternatively, they could decide instead to conduct business within the banking group and thus bypass the new regulatory requirements to a large extent.

Finally, they could decide not to conduct OTC-business any longer and avoid the obligation to fulfill the new regulatory requirements.

## 5 Discussion

The changes in the regulatory framework have a major impact on all the financial institutions in Germany. Furthermore, the banking industry is confronting cost-increasing challenges. The federal association of German banks conducted a survey in December 2013 with the aim of determining the major challenges confronting banks. (Bundesverband Öffentlicher Banken Deutschlands, 2013) The graph shows that 60% of the interviewed institutions believed that the regulatory impacts would be the greatest challenge, which was followed by 25% of the institutions that indicated that the policy of low interest rates was the greatest challenge. Modified customer behavior to multi-channel use and new competitors were also mentioned as additional challenges.

Table 12

CHALLENGES ON BANKS

| N° | Challenge | Description | Impact on banks | |
|---|---|---|---|---|
| 1 | **Regulation** | | large / medium / low / insignificant | |
| | Implementation of new regulations | Increasing number of regulations (e.g. MiFID II, Basel III) | 60 / 40 | Increasing costs of financial regulation, impact on profitability as a result of higher equity requirements, reduction in return on equity |
| | Challenges in business policy because of changes in financial regulatory framework | | 30 / 60 / 10 | |
| 2 | **Market** | | | |
| | Market environment | Policy of low interest rates and a flat yield curve as structural challenge; declining securities business | 25 / 65 / 10 | Decreasing interest and commission income |
| | Margin pressure | | 10 / 70 / 20 | |
| 3 | **Changing customer behavior and technical progress** | | | |
| | Improvement of IT support | Because of digitisation changes in customer behavior (multi-channel offering), differentiated customer requirements demand adjustments in the branch network and differentiation of branch formats, high expectations of customers on fairness, transparency and prices, increasing information advantage of customers | 20 / 50 / 30 | Multi-channel offering while maintaining personal customer relationships |
| | Changing customer behavior | | 75 / 25 | |
| 4 | **New competitors** | | | |
| | Availability of qualified staff | Predatory competition in stagnating retail banking market, increased competition (e.g. direct banks, captives, non-banks), new providers for innovative banking services | 10 / 50 / 40 | Losses of market share in particular of deposits, securities and loans |
| | Intensified competition | | 30 / 60 / 10 | |

With the major regulations becoming effective in 2014 (for instance BaselI III), more capital and higher quality capital will be required. The new liquidity rules will require banks to have sufficient liquidity and result in increased refinancing costs. (Lautenschläger, 2012)

High burdens on the cost side are countered with decreasing revenues. (Fahrenschon, 2013) The quantity of difficulty on the policy of low interest rates for savings banks is 500 million Euros. All banking institutions will be affected by the squeeze on revenues as long as the low interest rate policy persists.

Customer deposits with good solvency will exacerbate competition among banks. New providers will enter the banking market due to the shift in the relevance of distribution channels. (Weill, 2009)

These challenges and changes have led to discussions regarding the business models and the future role and institutional forms of these banks. (Bülbül et al., 2013) Schmidt characterizes the form and current role of savings banks and cooperative banks and speculates about their future prospects. (Schmidt, 2009)

There are also discussions revolving around whether the evidence regarding the German banking market supports the belief that savings banks and cooperative banks are not so efficient like private banks. In this regard, in two cross-country studies of regional banks in Europe for the periods of 2000 to 2008 and 1996 to 2006, (Ayadi et al., 2009) Adain investigated whether banking groups with various institutional features also differ in efficiency and did not find any systematic differences. (Ayadi et al., 2010)

Whether regulation influences structural policies must be analyzed.

Savings banks and cooperative banks are independent and self-sufficient institutions. Thus, all supervisory requirements need to be met and processed internally. The necessity to implement these requirements results in fixed costs. A problem occurs when the regulation requirements imposed by European politicians are not adapted to the business model of individual banks. Small and medium-sized institutions, such as savings banks and cooperative banks, in particular, suffer as a result of these additional costs, which leads to increased consolidation that is only partially offset by financial aid from combined institutions.

In fact, this point is where it becomes clear that regulation has an influence on structural policies. It is unknown whether this recognition occurs unconsciously or simply by accepting consequences. However, the change in structural policies occurs at the expense of the stability of the financial system. By establishing supervisory regulations, politicians have created larger institutions that are becoming increasingly important for financial stability, which is counter to the intention of such regulations because politicians originally aimed to avoid creating large institutions that are "too big to fail."

From the socio-political and economic perspectives, there is sufficient evidence that local banking has many benefits for the market and the banking structure. However, small and medium-sized institutions would not be economically viable if they acted individually as independent and self-sufficient institutions.

Most of the benefits of local banking actually stem from the fact that those institutions are part of a combined structure. Among other benefits, those lasting structures of local banking are created by connecting the back office functions of the institutions while not affecting their local autonomy.

From my perspective, the combined institutions might represent an intermediate organizational structure between the group of companies and the fully independent market participants. Furthermore, it would be interesting to analyze why some attempts to implement structures similar to those of savings banks in Germany have failed, such as in Spain and Great Britain.

## 6 Conclusion

The changes in Europe‘s financial regulatory framework that have been implemented since the financial crisis continue to have a major impact on many aspects of the banking industry. Many more regulations go into effect in 2014, as described in section one. All financial institutions must adhere to the time limits found in the regulatory guidelines and adapt to the changes in business processes and IT environments required by these new regulations.

Cooperative banks and savings banks have the lowest average project and personnel costs among bank types. As shown above, the costs for commercial banks rose abruptly from 110 million Euro in 2008 to 800 million Euro in 2011. The average costs of savings banks and cooperative banks are below 50 million Euros per year. Advantages for both pillars (savings banks and cooperative banks) result from the following features affecting commercial banks.

Uniform IT: For years, both pillars have had a consistent, centralized management to develop their IT platform and systems. Technical implementation and development occur only once and then are rolled out to the entire sector. Thus, centralization saves money, time and resources.

Straight-Through Processes: Based on the IT environment, process workflows are also standardized and have a high number of straight-through processes, which lead to low fixed costs, as shown by CIR. Commercial banks have a high cost-income ratio that has increased from a mean of 80% in 2007 to 95% in 2011. In the opposite direction, since the financial crisis, savings banks and cooperative banks have worked to reduce their CIR, particularly during the

years with low interest margins. Since 2008, these banks have reduced their mean CIR from 75% to 65% in 2011. This strategy has augmented the strength of both pillars compared with that of commercial banks.

The third advantage is that savings and cooperative banks have one central institution and one association that bundle know-how and a uniform presetting for all their branches. Only the high number of branches, which stem from the historical growth of cooperative banks, will be a challenge in the coming years, particularly in the rural areas of Germany. Increased online banking and changes in demography will also lead to further mergers and consolidations.

The last advantage for cooperative banks and savings banks are the exemptions in some regulations for members of the same group and for intragroup transactions. In contrast to the large banks that experienced large losses due to overly risky investments and off–balance sheet activities of a precarious nature in the years preceding the financial crisis, local German savings and cooperative banks weathered the storm largely unharmed. Almost all these banks managed to remain stable and profitable during the crisis years.

The financial crisis has strengthened the positions of the savings and cooperative banks. The results of this investigation show that they have strengthened their position by implementing the regulatory framework after the crisis.

Savings banks and cooperative banks have been shown to be a stabilizing factor for the German financial system and economy. In so doing, they have also stabilized the traditional three-pillar structure of the German banking system.

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