

MASTERARBEIT

Titel der Masterarbeit

„Development of the Austrian Banking System in
the Past Century: Structural Change in the 1970ies
and Crisis 2008-2012“

Verfasst von

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angestrebter akademischer Grad

Master of Science (MSc)

Wien, 2014

Studienkennzahl lt. Studienblatt:
Studienrichtung lt. Studienblatt:
Betreuer / Betreuerin:

A 066 915
Masterstudium Betriebswirtschaft
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Wien, am 10.April 2014

Andreas Prüller

*I would like to express my gratitude to my supervisor Prof. Peter Eigner for his commitment,
support and guidance throughout the process of this master thesis.*

*Special thanks also to em. Prof. Erich W. Streissler,
who sparked my interest in the topic of this thesis.*

*Thank you to my mother for all the sacrifices she has made on my behalf
and to my beloved family.*

*I am blessed with true friends who accompany my ways and make me laugh.
I am grateful for that.*

Thank you Helga for the precious time we spend together. I am one lucky guy.

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List of Abbreviations

AG	Joint Stock Company (Aktiengesellschaft)
ATS	Austrian schilling
CESEE	Central, Eastern and Southeastern Europe
CDO	Collateralized debt obligation
CDS	Credit default swap
EAD	Exposure at default
EU	European Union
EU-15	Member countries in the European Union prior to the accession of ten candidate countries on 1 May 2004
GDP	Gross domestic Product
IRB	Internal-ratings based
LGD	Loss given default
MBS	Mortgage backed security
ÖGB	Austrian Trade Union Federation (Österreichischer Gewerkschaftsbund)
ÖVP	Austrian People 's Party (Österreichische Volkspartei)
PD	Probability of default
SME	Small and medium-sized enterprises
SPÖ	Social Democratic Party of Austria (formerly known as Socialist Party of Austria)
UK	United Kingdom
US	United States of America

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1 INTRODUCTION

*„Noch niemals zuvor hat die Weltwirtschaft so große Entscheidungen gefordert, ist das Schicksal der Menschen und der Menschheit so sehr vom Stoff her bedroht gewesen wie heute. Unausgeglichene Spannungen führten zur Krise. Hier sieghaftes Drängen und Stürmen, Arbeit bis zur Erschöpfung, rücksichtslos von Erfolg zu Erfolg schreitende Machtausbreitung. Dort Arbeitslosigkeit, dumpfe, beklemmende Stille, düsteres Bangen und Brüten, aufgrollende Empörung, deren Folgen nicht abzuschätzen sind.“*¹ Scheffer (1933)

The words of Egon Scheffer, Austrian economic journalist born in 1895, refer to the state the world was in in the beginning 1930ies. May the term „Great Depression“ not yet be born - a dark chapter in history was about to begin. Political systems veered towards extremism, backed by economic developments that hit the majority of the population hard. A situation that paved the way for World War II.

Interestingly enough, one might be terribly wrong about the age of Scheffer 's words as they turn up alarmingly up to date in 2014.

The framework conditions in Central Europe have changed in the recent 80 years. Social security systems have taken hold and peace is taken for granted by citizens who do not know anything else. The global economic crisis that began in 2007 as a result of banks failing to carry out their risk management functions affects the lives of people worldwide directly. Unemployment, social unrest and fears for the future spread.

The current economic recession has a direct effect on the business of banks in Austria. Increasing unemployment rates and decreasing fiscal revenues lead to high uncertainty when it comes to reclamation of outstanding loans to both, public and private clients. Payment defaults bother all involved institutions. The business models of banks require stable economies and economic growth in the covered markets. Both factors are at stake and threaten business success.

This thesis approaches the question, how the banking system in Austria developed from the post World War I era until now and how times of structural change and

¹ (Scheffer 1933), Preface

crisis affect the business processes of Austrian banks. In these decades, two periods are of special interest to the author. Firstly, the 1970ies when the Austrian economy has experienced essential structural changes and secondly the global recession that emerged from 2007 on and still challenges the world when these lines are written.

This thesis is structured as follows.

Chapter 2 deals with the history and structural change in the Austrian banking industry from 1914-2014. A turbulent century lies between those two dates. Two World Wars, the Wirtschaftswunder which as a term even found his way into English-language encyclopedias and a number of economic crises with the most recent still not overcome have directly affected the Austrian banking industry. In this chapter, the reader will be presented a work on the history of banking in Austria. A matter that is inevitable tied to the political, economic and social occurrences in the former Danube Monarchy. The reader shall develop an understanding for the foundation, banking operations are based upon in this country.

Based on the findings of the previous section, chapter 3 discusses banks' capital structures, their technical features as well as the influencing factors that affect required levels of capital. Balancing in commercial banks will be explained as well as the concepts of risk and uncertainty, which have become more important in times of economic turmoil and instability. Also, operational risk has become of rising importance in the last decades. A fact that has lead to the evolution of the Basel Accords, which will also be introduced within this chapter.

In chapter 4, the recent economic crisis and the relevance for the operation of commercial banks in Austria will be of interest. Following a chronology of the events that have lead to the first contraction of the world economy after World War II in 2009, the direct implications on the Austrian banking sector are discussed.

2 THE AUSTRIAN BANKING INDUSTRY: HISTORY AND STRUCTURAL CHANGE

The following chapter aims to give the reader insight into the development of the Austrian banking industry within the past century (1914-2014). First, the interwar period between World War I and II will be described, followed by the post-war times of growth in the 1950ies and 1960ies that have introduced monetary stabilization in the country. A trend towards Europeanization was observable from the 1970ies on, a decade of structural change for the Austrian financial market.

2.1 Austrian Banking Industry in the Interwar Period

After the First World War from 1914 – 1918, the value of the Austrian “Krone” fell to 1/15,000 of its 1913 pre-war value until the peak of inflation in summer 1922. So inflation was not only going along with the war times but also the first years of peace which were essential for the economic redevelopment of the Austrian republic. Initially, the effects of inflation were of ambivalent character. Being intermediaries, banks were both debtors and creditors at the same time. In 1925, the gold opening balances have unveiled significant losses of 70 - 90% compared to 1914. An essential weakening of Austrian banks through war and inflation was indisputable.²

The following Table depicts this development. Numbers are calculated in Schillings in order to be able to compare the gold opening values to the pre-war figures.³

	1913	1923	Gold Opening Balances 1.1. 1925
Creditanstalt	187,766	28,604	62,026
Boden-Creditanstalt	48,010	22,527	58,304
Niederösterreichische Escompte-Gesellschaft	83,298	34,017	42,914
Wiener Bankverein	123,562	20,104	29,962
Unionbank	65,390	23,593	30,210
Mercurbank	34,582	6,640	11,294
Verkehrsbank	29,527	6,031	9.946

Table 1: Accounts of the Big Viennese Banking Houses [in 1,000 ATS]⁴

² See (Stiefel 1993), p.438

³ See (März 1981), p.457

Inflation had the effect of the shrinking of deposits and the running business. The growth of interest rates could not keep pace with currency devaluation, which resulted in a negative margin of interest. Loans were almost entirely granted within the own banks, which raised problems when it came to the financing of entities in countries with stable currencies like Czechoslovakia and others. As a result, business activities shifted progressively towards foreign currencies and liabilities that were held in Kronen were transformed to foreign currency debt. Exemplarily, in 1923, creditors in foreign currency amounted to two thirds of all for the Credit-Anstalt.⁵

The growing demonetization diluted the equity base of corporations and triggered a reinforcement of working funds through increases in capital for both banks and non-banks. For this reason, economic operations shifted towards stock exchange activities. The number of Austrian stock companies increased significantly in these days from 1,230 in 1920, to 4,143 in 1924. In the year from September 1922 to September 1923, the market value of all traded shares on the Viennese stock exchange multiplied by five. The 1923 stock market crash hit the economy hard, it took decades to recover.⁶

Another source of losses for the Viennese banks was the breakdown of the Habsburg Empire. The new countries, that came to being, strived to support their political independence through economic disengagement from Vienna. Only Austria, which had inherited the former center of operations, Vienna, aimed for economic coherence with the successor states. The Viennese banks had an important role since they did not want to limit their operations to the rather small Austria but considered themselves to be Central European multinational banks that only for historic reasons had their headquarters in Vienna. For this reason, unpatriotic behavior was accused occasionally.⁷

Keeping up the network of branches in all countries was hardly possible due to diverging national legislation. Foreign bases had to be set up under majority holding of

⁴ See (März 1981), p.457

⁵ See (Stiefel 1993), p.438; (Teichova 1994), p.6

⁶ See (Stiefel 1993), pp.438; (Kernbauer and Weber 1993), p.585

⁷ See (Stiefel 1993), p.439

national banks. Of the 143 branches that were operated by the ten largest Viennese banks in 1918, only nine remained in 1924. Similar developments could be observed for group participations.⁸

The peace treaty of Saint Germain, which required a detachment from foreign assets was another weakening for Austrian banks. Although compensations had to be paid, losses were unavoidable. The arrangement to value adjust debts from the time prior to the war was also settled in the peace treaty of Saint Germain. Only the pre-war value had to be paid back, resulting in massive losses from inflation for the bank institutes. Two banks used the opportunity to transfer to foreign ownership. The Anglobank and the Länderbank maintained branches in Paris and London and consequently had a high degree of foreign debt. While the Anglobank came into possession of a British consortium, lead by the Bank of England, the Länderbank moved its headquarters to Paris under the new name “Banque de Pays de l’Europe-Centrale”. While the Anglobank had to discontinue its activities in the middle of the 1920ies, the Länderbank came through the interwar period without substantial trouble.⁹

Value adjustment also lead to transfer of share capital to foreign countries. This policy was carried out in various intensity by the Viennese banks and had the goal of strengthening the ties to western capital and to be able to demonstrate independency towards governments in the successor countries and Austria. Also subsidiary banks in the western countries were founded which served as credit intermediaries to the parent banks.¹⁰

Year		Credit-Anstalt	10 largest Viennese banks
1913		4%	10%
1923		20%	30%

Table 2: Foreign Fraction of Share Capital¹¹

Multinationalization of the Viennese Banks was a consequence of the breakdown of the multinational Habsburg Empire, which constituted their regional area of operations all along. On the other hand, it was deliberate corporate policy with the

⁸ See (Stiefel 1993), p.439; (Teichova 1994), p.8

⁹ See (Stiefel 1993), p.440; (Teichova 1994), p.8

¹⁰ See (Stiefel 1993), p.440

¹¹ See (Stiefel 1993), p.440

aim not to appear as mere Austrian bank. Supported by western financial institutions, banks had the funds to keep up their Central European activities. Vienna became the trading center for western financing to eastern creditors with formally high margins of interest. Western investors aimed for taking hold of the former monarchy economy in this way without getting enmeshed in the day-to-day business. Striving for protection of the investors, funds were only transferred as short-term loans. While the foreign obligations of the large Viennese banks amounted to ATS 250 million Schilling in 1924, this amount raised to ATS 1,000 million in 1931. In Austria, these revolving credits were mostly renewed and considered as long-term deposits. It was known, that this course of action was problematic, nevertheless due to the extremely unstable conditions on the capital markets, no alternative was addressed.¹²

Concentration and Economic Crisis

The times of inflation lead to a number of newly founded banks, which vanished with currency stabilization as quickly as they emerged.¹³

Year		1913	1919	1923	1927	1935
Number of Banks in Austria		175	180	358	192	150

Table 3: Number of Banks in Austria¹⁴

The scale, to which banks –some of them also large and with long tradition– were in trouble due to inflation and speculation became visible only in the 1920ies. Prestigious institutes such as Biedermannbank, Depositenbank, Unionbank and Centralbank der deutschen Sparkassen were affected. Subsequently, the Viennese financial center had to put up with numerous spectacular bank collapses and liquidations. Crisis management was mostly carried out through fusions, sometimes with, sometimes without support of the state or the Nationalbank. Thereby, smaller and weakened banks were incorporated by larger ones. The Boden-Credit-Anstalt for example had to pick up six banks in the 1920ies. Although these fusions were identified as another cause of crisis, they remained the typical anti-crisis measure in the inter-war banking industry.¹⁵

¹² See (Stiefel 1993), p.441; (Kernbauer and Weber 1993), pp. 586

¹³ See (Stiefel 1993), p.441

¹⁴ See (Stiefel 1993), p.441

¹⁵ See (Stiefel 1993), p.442

This solidarity within the industry involved burdens for the larger institutes which were hard to estimate at the point of fusion. Overall costs have increased due to disintegration and inflation. Calculation efforts were high, which required the placement of additional staff. From 5,500 Viennese bank employees in 1913, this number increased to 16,000 in 1923. Reducing staff back to a lower level lasted until the 1930ies and was costly because of labor market laws that were implemented after the war. Activities in the successor states were costly too: The formerly united region suddenly had six different currencies in six different national legal systems. As a result, banks tried to balance their efforts with high margins of interest at 9 – 10%. For this conduct, banks were criticized as being of negative influence to the economy.¹⁶

Simultaneously, the business activities of many private corporations did not develop satisfactory, leading to payment defaults and conversion of debt into joint stock. Moving this stock in the own portfolio lead to inflexibility. Most banks could have afforded an orderly withdrawal but chose to hope for positive economic development and keep the shares. Optimistic balancing was very common.¹⁷

The hope to keep up the strong Central European position in the banking industry broke down with the spread of the Great Depression in 1929. First, the Boden-Credit-Anstalt had to be merged with the Credit Anstalt which itself collapsed 2 years later in 1931 and triggered the start of a worldwide banking crisis.¹⁸ The cause of the Credit Anstalt collapse was not illiquidity but the refusal of parts of the executive board to keep hiding losses in the balances. Since 40% of the share capital was under foreign ownership, international political efforts to restructure the bank followed. In the end, the state guaranteed for the banks debts and it came under majority state ownership. Losses of about a billion Schilling were mostly borne by the state and foreign creditors.¹⁹

In 1934, a conclusive restoration of the Austrian banking system was carried out, when the Credit-Anstalt was merged with the troubled Wiener Bankverein and Escompte

¹⁶ See (Stiefel 1993), p.442;

¹⁷ See (Stiefel 1993), pp.442

¹⁸ See (Teichova 1994), p.9

¹⁹ See (Stiefel 1993), p.443, (Kernbauer and Weber 1993), p. 600

Gesellschaft. Vienna that used to be a financial center that was home to eight major banks saw a reduction to only one bank, being the Creditanstalt-Bankenverein.²⁰

This process was enhanced by the annexation of Austria to the German Third Reich 1938. Within short time, substantial changes in ownership were executed. Exemplarily, the Aryanization of Rothschild Bank or Bank Ephrussi & Co can be quoted. At the same time, the large Viennese banking institutions were the target of German economic expansion. Under political pressure, the Länderbank came in the sphere of influence of Dresdner Bank, and the Credit Anstalt Bankenverein was lead by Deutsche Bank. For both Viennese institutes, the merger went hand in hand with a revival of the traditional activities in Southeast Europe. Under German influence, the Credit Anstalt operated in Bulgaria and Romania.²¹

Austrian banks were forced to surrender their industrial holdings to public and private German arms industry. As many other sectors of the Austrian industry, banks lost their independence and became an extension of German institutes.²²

2.2 Transformation of the Austrian Banking System after World War II

In the course of the reconstruction of the Austrian economic system, the monetary and financial economy was highly regulated and segmented. This was true in terms of regional market segmentation as well as the allocation of duties.

Times of growth in the 1950ies and 1960ies did not change this aspect. The legal framework was the Banking Act of 1938, which was introduced in times of National Socialism in what was then the “Ostmark” (Austria’s name when it was part of Nazi Germany). Based on its standards, the reconstruction of the Austrian monetary and credit service industry took place in the first post-war decade.

Involved institutions were:²³

- Savings Banks (Sparkassen) Sector,
- Co-Operative Sector divided in

²⁰ See (Stiefel 1993), p.443; (Kernbauer and Weber 1993), p. 594f; (Teichova 1994), pp.28

²¹ See (Feldman 2006), pp.539

²² See (Stiefel 1993), p.443

²³ See (Dirninger 2010) p.5

- Raiffeisen Organization and
- People 's Bank (Volksbanken),
- Federal Mortgage Institutions (Landeshypothekaranstalten),
- Post Office Savings Bank (Postsparkasse) and
- Trade Unions Worker 's Bank (Arbeiterbank) formerly known as BAWAG

The Banking Sector was dominated by the Viennese big banking houses which were nationalized in 1946.

These were the

- Creditanstalt-Bankenverein,
- Österreichische Länderbank and
- Hypotheken- und Credit-Institut AG.

Those institutions had significant economic importance due to their comprehensive industrial holdings and were operating in industrial financing and wholesale banking.²⁴

Retail banking was up to the Sparkassen, Raiffeisenkassen, Volksbanken, Postsparkasse and the Arbeiterbank. Sparkassen existed as they were formed in the 19th century without owner and as own legal personalities.²⁵

The two institutions

- Erste Österreichische Spar-Casse and the
- Wiener Zentralsparkasse

were based in Vienna, together with medium-sized institutions in the federal capitals and small institutions in the communities, a system of hierarchical size structure was in place. The re-construction of syndicate-organization of the savings banks sector with federal entities and a main entity "Hauptverband der österreichischen Sparkassen" in

²⁴ See (Dirninger 2010) p.5; (Feldman 2006), pp.259

²⁵ See (Dirninger 2010) p.5

Vienna was in line with this federal structure. As main institute, the Girozentrale was established under public law.²⁶

In the co-operative sector, the detachment of the Nazi organization systems lead to federal organizational structures on three levels as they existed in the pre-war time for Raiffeisenbank and Volksbank:

Local cooperative credit associations (lokale Kreditgenossenschaften) set up the primary level, composed of federal entities (Landesverbände und Landeszentalkassen) and the nationwide general office (Verbands- und Kassenzentrale).²⁷

Federal Mortgage Institutions (Landeshypothekenanstalten) had explicitly federal character. Majority shareholders were the federal states, providing regional financing structures.²⁸

The only centralized Austrian entity was the Postsparkasse. One of its duties was the enforcement of account processing for the federal state and acting as a financier for communities. In this function, it had to support the measures initiated by the government and ministries. The Postsparkasse had a network of branches that was accessible throughout the country. By this very fact, it was able to contribute to the redevelopment of payment transactions after the war.²⁹

A bank that was in direct affiliation to the political system was the labor-bank (Arbeiterbank). It existed from 1922 to 1934 and started operations again in 1947 after the war by overtaking the financial administration of labor union and co-operative association (Konsumgenossenschaft). The Arbeiterbank was considered the bank of the “common man”. An important tool were the so-called “works council members loans” (Betriebsratskredite) that were granted through the employee organization within the businesses. Owners of the Arbeiterbank were the Austrian Federation of Trade Unions (Österreichischer Gewerkschaftsbund – ÖGB) at 70% and consumer societies at 30%. In the year 1963, the institution was renamed to “Bank für Arbeit und Wirtschaft” (BAWAG).³⁰

²⁶ See (Dirninger 2010) pp.5; (Venus 2006), pp.513

²⁷ See (Dirninger 2010) p.6

²⁸ See (Dirninger 2010) p.6

²⁹ See (Dirninger 2010) pp.6; (Venus 2006), p.522; (Teichova 1994), pp.37

³⁰ See (Dirninger 2010) p.7; (Teichova 1994), pp.22

Co-operative building societies existed in Austria since the 1920ies, when the “Bausparkasse Wüstenrot Österreich” in 1925 and the “Bauspar- und Realkreditkasse der gewerblichen Erwerbs- und Produktionsgenossenschaft” in 1929 were founded. The legal framework for co-operative building societies was established through the “Deutsche Bausparkassenregelung” (German building societies regulation) in 1940. Introduction of this ruling in Austria (called “Ostmark” these days) was in 1945. The “Bausparkasse der Sparkassen” (Building Society of Savings Banks) was established in 1941 and integrated in the newly built General Office of Giro (“Girozentrale”) in 1945. In 1961, a building society was founded also in the Raiffeisen sector.³¹

The era until the end of the 1950ies comprised the processing of financial war damage. Monetary order was the prerequisite for normalization of the banking systems structure. Through a currency reform, the “Reichsmark” was about to be exchanged by the Austrian currency “Schilling”. A restrictive package of economic measures in 1951/52 lead to internal stabilization.³²

In the 1950ies and 1960ies, the sectoral structure was characterized by a high degree of nationalization. The major Viennese banks (Creditanstalt-Bankverein, Länderbank AG and Österreichisches Creditinstitut AG) were affected by this nationalization. From 1949 on, all of them reported directly to the ministry of finance, although it did not (at least not officially) intervene in a regulatory capacity. At the same time, personnel decisions were dominated by proportional representation of the ruling parties in the government. The Creditanstalt-Bankverein and the Österreichische Credit-Institut was in the reach of the Austrian People’s Party, while the Länderbank was close to the Socialist Party of Austria (SPÖ).³³

Austria’s National Bank (“Nationalbank”) was especially affected by nationalization and political system. As the result of a political tradeoff, half of the shares were subscribed by the republic, the other half was split to institutions close to the ruling parties SPÖ and ÖVP according to proportional representation. Another typical characteristic of the Austrian banking sector these days was the allocation of customers, and the setting of interest rates. Customers were allocated on a regional

³¹ See (Dirninger 2010) p.7

³² See (Theurl 1993) pp.587

³³ See (Dirninger 2010) pp.7

basis. National bank and chamber of commerce negotiated number and location of branches. This agreement was implemented into branch concessions by the responsible ministry of finance. It was also responsible for negotiating the benchmark interest rate (the interest rate on short-term savings). Foreign exchange controls had a prohibitive effect on international interest competition and lead to a relatively low level of interest, which supported the profitability of small branches in rural locations.³⁴

Markets were not only separated regionally, as guided by the regulatory framework, but also concerning the business segment. Institutions at this point of time concentrated on their segments of customers. The business model of most bank was to disclose customers that were located in areas with poor financial infrastructure.³⁵

While wholesale and investment business was up to the banks, the retail and mass market was in the hands of the Sparkassen, the co-operative institutions, the Postsparkasse and the Arbeiterbank (BAWAG). Another key feature of the Austrian banking sector in the 1950ies and 1960ies was the shift of market shares from banks in direction of decentralized structures. In the years from 1953 to 1970, the share of banks contribution to the balance sheet total of credit institutions decreased from 47.3% to 32.0%. In the same time span, the share of Sparkassen went up from 21.9% to 26.9%, of Raiffeisenkasse from 7.1% to 18.1% and of the Volksbanken from 4.12% to 6.43%. This development is credited to the increasing savings quota in the lower and middle levels of income, from which especially Sparkassen and co-operative institutions could benefit.³⁶

The weight of debt financing was significant in this time. Market capitalization and financing via stock exchange on the other hand only had minor importance. As a result, the economic system of financing was highly dependent on banks. Political system and money economy were closely interlinked, which can be highlighted by the

³⁴ See (Dirninger 2010) p.8; (Teichova 1994), pp.22

³⁵ See (Theurl 1993) pp.588

³⁶ (Dirninger 2010) p.9

dominating role of public-sector loans on the demand side and the dominant position of the major banking houses on the supply side of the capital market.³⁷

An essential boost to development for the Austrian monetary and credit system resulted from monetary stabilization in 1953 and the newly established growth policy starting in the mid 1950ies. Efficiency and performance capability of the monetary system were an essential part of the “Raab-Kamitz-Policy”, named after Federal Chancellor Julius Raab and his Finance Minister Reinhard Kamitz.³⁸

They enforced the laws governing the admission of shares to the capital markets (“Kapitalmarktgesetze”) in the years 1954/55 and the Schilling opening balance law (“Schilling-Eröffnungsbilanzgesetz”) which made it possible for financial institutions and all balancing businesses to enforce value adjustments that were necessary because of the creeping inflation in the previous years. This stabilizing measure made gains from the fair value adjustments tax-free and was endorsed by government and social partners. Based on the reconstruction law (“Rekonstruktionsgesetz”), a single annual financial statement for the years 1945 until 1954 could be compiled. This time was then considered an exceptional financial year.³⁹

In 1955, the National Bank Law (“Nationalbankgesetz”) was passed, granting the National Bank more influence on the monetary and financial market and consequently on the economic trends. Such measures, along with assistance measures had influence on the setup of an economic savings ratio and on allocative efficiency of credit supply.⁴⁰

A strong growth momentum of the Austrian economy as a whole characterized the years beginning in the mid 1950ies. Changing dynamics in the financing system and the structure of the monetary system in the following years were the result.

³⁷ (Dirninger 2010) pp.9

³⁸ (Dirninger 2010) p.10

³⁹ (Dirninger 2010) p.10

⁴⁰ (Dirninger 2010) pp.10

2.3 Structural Change in the Austrian Economy of the 1970ies

An integral structural feature of the Austrian monetary sector in the post-war era was the high share of bank transactions of the overall economic financing flows. Exemplarily, federal bonds are put in the portfolio of banks and refinanced by the means of issuing banks bonds. The significance of the stock and bond market in Austria is traditionally relatively low due to a lack of differentiated products and the general market conditions. The financing and investment conditions in Austria are shaped by a high level of bank intermediation, structural weaknesses of the capital market and neglect of the servicing business. A cause for this is the public sponsorship of savings, certain types of investment as well as direct lending. In 1988, the proportion of publicly subsidized loans to domestic businesses and private persons was 41.6% of the overall grant of credit to this group.⁴¹

The following table depicts the structural development of aggregate bank balances from 1960 – 1991.

⁴¹ See (Theurl 1993) p.585

		1960	1970	1980	1991
Assets					
Cash liquidity		4.5	4.3	2.3	1.4
Domestic interbank claims		20.1	22.7	23.4	17.4
Domestic securities		17.8	10.0	11.1	9.9
Direct loans to domestic nonbanks		48.4	49.9	41.6	46.6
Other domestic assets		9.2	5.9	5.2	5.5
Foreign assets		1.0	7.7	16.9	19.8
(-Rediscounts)		1.0	0.5	0.5	0.6
Liabilities					
Domestic interbank obligations		21.4	23.4	24.2	18.1
Deposits of domestic nonbanks		58.4	53.3	38.5	39.7
Own issues		3.9	6.9	10.8	11.7
Equity		6.6	4.7	2.8	4.3
Other domestic liabilities		7.7	4.6	4.2	3.7
Foreign liabilities		2.0	7.1	19.5	22.5
(+Rediscounts)		1.0	0.5	0.5	0.8

Table 4: Structural Development of Aggregate Bank Balances in Austria 1960-1991 [% of Balance Sheet Total]⁴²

The framework conditions for Austrian banks, its transaction volume and structure as well as the relative prices for financial products have lead to adverse bank balances from the 1960ies on. The following table compares the growth rate of balance sheet assets with the nominal growth of the Austrian GDP.

		1961/70	1971/80	1981/85	1986/91
Aggregate Balance Sheet Total [%]		14.2	18.1	10.6	5.6
Nominal GDP [%]		8.6	10.4	6.3	6.0

Table 5: Average Annual Growth of Aggregate Balance Sheet Total and Nominal GDP⁴³

⁴² See (Theurl 1993) p.585

⁴³ See (Theurl 1993) p.586

A strong growth of balance sheet total can be observed for the 1960ies and 1970ies. Starting in the 1980ies, this growth started to decline significantly. Similar tendencies can be observed for the Austrian nominal GDP although the growth rates range at a lower level not exceeding 10.4%.⁴⁴

A tendency towards universal banks can be observed, starting in the 1960ies until the 1970ies. In the course of growing competition, traditional market segments vanished. The former merchant banks started to be interested in the mass market concerning both, deposits and private loans. Market segments of Sparkassen, Raiffeisenkassen and Volksbanken were directly affected by these activities. At the same time, these institutions showed increased interest in the commercial business, a field they did not work on previously.⁴⁵

A typical example of the structural conditions in the monetary and financial market was the conversion of the “Girozentrale” from a public institute to a private business, concretely the stock corporation of the savings banks (Sparkassen) “Girozentrale der österreichischen Sparkassen”.⁴⁶

The 1970ies in Austria were characterized by a co-existence of successful businesses and failed ones. Economic policy was effective when it came to putting fundamental problems on hold and reacting to temporary crises. Acting this way went hand in hand with the sacrifice of long-term strategies.⁴⁷

In 1981, Gunther Tichy stated:

*“We have not really solved a single serious problem in the recent years. We did not even approach most problems, just disposing for the immediate world of today. We are about to handicap the future substantially by our means of approaching problems.”*⁴⁸

What Tichy saw as a hazard and what needed to be strived against were the insidious effects of unsolved problems of politics that generally take a very short-term view only. He identified a loss of importance in several disciplines:

⁴⁴ See (Theurl 1993) p.586

⁴⁵ See (Dirninger 2010) p.10

⁴⁶ See (Dirninger 2010) pp.10

⁴⁷ See (Tichy 1981), p.5

⁴⁸ See (Tichy 1981), p.5

There was an Austrian School of Economics, a Viennese School of Medicine, there were style-defining performances at the Imperial Court Theatre (Burgtheater). Austria was the breeding ground for excellence.⁴⁹

Step by step, the circumstances, that attracted these excellence vanished. Contentedness with short dated successes along with anxiety about the future lead to structural problems that became evident in the 1970ies.

The basis sector of the Austrian economy was inflated. Too many primary and half-finished products as well as simple consumer goods were produced. At the same time, too little activity was observed in the sector of R&D intensive products:

In 1981, only 31% of Austrian exports were technical final products. In Switzerland, this number was 38%, in Germany even 49%. Not only the amount of final products was behind these two direct neighbors, also the products were much simpler. For 100kg of final products from Austria, 10.000 Austrian Schillings (ATS) were earned, while for the same amount from Germany, the earnings were 11,000 ATS, from Switzerland even 26,000 ATS.⁵⁰

Several reasons had to serve as explanations for these structural problems:

The rising price of oil and commodities, the equity gap, deficits in the budget of the national household, the lack of profitable private businesses, tame demand management and generally weak economic policy.

All these structural problems are a manifestation of a far reaching structural break that became visible in the 1970ies but did not affect the behavior of politicians and businessmen in those days.

In the first half of the 1970ies, the European catching-up process with regards to the US has come to an end. In the previous time, Europe has made up its backlog in terms of wealth, technology and organization with tremendous speed. European growth had to level off at some point inevitably, which also had effects on the expansion opportunities of the US.

⁴⁹ See (Tichy 1981), p.6

⁵⁰ See (Tichy 1981), p.6

Concurrent with the end of the European catching-up, commodity and energy prices increased and exchange rate movements became more volatile. These factors, along with a new way of international division of labor have changed the relationship between developing and developed countries fundamentally.⁵¹

The Austrian economic policy dealt with the situation as a temporary interference, as if the improvement of domestic behaviors could resolve challenges of global economic scale.⁵²

According to Tichy, the goal setting of politics and businesses should have been specialization and differentiation instead of growth, focus on marketing and sales instead of focus on production, from investment to information and development, from centralization and merging to de-centralization and divisionalization and from mass production to customized production.⁵³

A structural break as it appeared in the 1970ies led to a higher error frequency and higher uncertainty. Because of this uncertainty and also because of lack of information and time, important decisions were delayed.

The result of this structural break concerning the financial market was the development of banks towards universal banks. Instead of increasing efficiency of monetary markets, the effect was that banks started to enter into customer segments of the competition. A fight for market shares began and consequently the range of offered products increased significantly.⁵⁴ This time can be separated into three phases of competition:⁵⁵

- **1970 – 1976:** Quality competition through product innovation and advertising
- **1977 – 1980:** Geographical competition through intensive extension of branch networks
- **1980 – 1985:** Price competition after liberalization of credit interest controls

⁵¹ See (Tichy 1981), p.7

⁵² See (Tichy 1981), p.7

⁵³ See (Tichy 1981), p.7

⁵⁴ See (Theurl 1993), p.589; (Teichova 1994), p.9

⁵⁵ See (Theurl 1993), p.590

2.3.1 Structural Change: A Challenge for the Market and Economic Policy

Structural change is a challenge for the market as well as it is for economic policy. Exemplarily, the monetary policy of the Austrian National Bank shifted towards the European idea in 1986 when foreign exchange transactions were liberalized.⁵⁶ The National Bank can be seen as an intermediary between politics and the market, acting as a role model for private institutions when it comes to dealing with structural change.

The theory of bounded rationality is coined by the American economist and political scientist Herbert A. Simon, who earned the Nobel Prize in Economics in 1978 for his findings in this field. This theory explains, why the greater part of businessmen and economic politicians seek for a satisfactory solution rather than for an optimal one. Applied to the challenges of structural breaks, this means that the reactions of these decision makers often arrive delayed and in weak shaping.⁵⁷

The question about the responsibility to act in times of structural change is if it is up to the market (the businesses and entrepreneurs) to force structural change or to economic policy?

Gunther Tichy identified six arguments, why structural change and its implications shall not be left entirely to the market:⁵⁸

- The regulation and information system of prices usually works in short and mid-term. For periods that exceed this time-span, this allocation function does not work. Commodity and energy prices underline this argument.
- Structural change, left solely to the market might turn out to be too slow because it is accompanied by external effects from which society profits more directly than businesses.
- Structural change from primary goods to technology-driven final products requires specialized technicians as well as structured technological and organizational information. Centralizing these tasks brings significant cost

⁵⁶ See (Theurl 1993), pp.590

⁵⁷ See (Tichy 1981), p.9

⁵⁸ See (Tichy 1981), p.9

advantages but requires huge investment, which will not be carried out on private basis.

- Numerous social and economic framework conditions that essentially work for a good purpose often (but not always) hinder mobility and the ability and readiness for structural change. Examples for such framework conditions are a high degree of external financing, a lack of risk capital, short-sighted attempts to save jobs instead of employment and attempts of participation that make investment decisions more costly and time-consuming.
- Maximizing profit is often attained by intervening rather than by investing. When approaching a professional association or a ministry, a civil servant that is willing to support a business or a right legal interpretation is more effective than long-term planning, the market will not steer structural change in the right direction.
- Structural change lead by the market would (at least in short-term) give rise to high unemployment rates, a price that society is not willing to pay.

Tichy points out, that both businessmen and politicians lack the courage to take risks. Businesses and banks ask for state liability for projects even if they are only of moderate risk. Politicians ask voters (who lack detailed information on many subjects) for their direct decision. Tichy calls this “direct democracy of lacking courage” (“direkte Demokratie des mangelnden Mutes”).⁵⁹

Also, Tichy identifies arguments against leaving the leading role in times of structural change up to the state:⁶⁰

- The preserving conduct of bureaucracy delays decisions. Before a decision is taken, a matter has to pass many writing tables and is in the end mostly watered down to a construct that does not harm the existing fundamentally. Since structural change always means vanishing as well as becoming, bureaucracy inhibits both: Through the backing of undertakings that would

⁵⁹ See (Tichy 1981), pp.9

⁶⁰ See (Tichy 1981), pp.10

not be economically reasonable otherwise at the one hand and through the lack of courage, generosity and competency to give much to one and nothing to another.

- Politicians want to be re-elected. Structural conservatism of economic policy lies in its very nature. This leads to a situation where only problems that voters consider important can be tackled. For the problems that are left, only solutions that do not harm the majority of voters are an option.

2.3.2 The Contribution of Economic Policy to Structural Change

An important contribution of economic policy to structural change is what Tichy calls “stabilization of economic policy ”(Verstetigung der Wirtschaftspolitik). He argues for breaking with traditions of uncoordinated interventions and only announced of measure that are never put into operation. Overstated trust in the power of economic policy measures has moved the Austrian economy into a state of inefficiency. Tichy constitutes a lack of concepts as a consequence of the weakening of ideologies. It is a challenge, that the duration, until an economic policy measure takes full effect, is in most cases very long. Political-economic measures are said to take 9 months, structural measures even years to take full effect. Generally speaking, the reduction of administrative barriers and the facilitation of access to risk capital are measures that can be supported by economic policy in times of structural change.⁶¹

2.3.3 Credit System and Structural Change

The public opinion on how the banking sector shall act in times of structural change is pretty concrete: Banks have to become more dynamic, they are the ones to finance the conversion process and provide risk capital. In short, they shall be obstetrician and financier of new businesses.⁶²

According to Tichy (1981), there are five main arguments that contradict this requirements catalog:

⁶¹ See (Tichy 1981), pp.11

⁶² See (Tichy 1981), p.14

- Lack of equity capital within the banking sector
- Challenges of risk and collateralization
- Shortage of means (known as equity gap)
- Structural crisis of the banking sector itself
- A fiscal policy that sabotages long-term planning within the banking industry

The challenge of calculating risk

The biggest challenge of financing structural change can be traced back to calculability of risk. Lenders are in a situation of little and hard to predict growth. The risks of a restructuring phase and lower equity bases are accompanied by difficult asset backing of loans. Modern production facilities often do not have real property, less buildings, machines or warehouses that stock standardized products that can be of public use.

Instead of traditional securities, banks are to estimate potential for development and earning prospects.⁶³

Lack of equity within the banking sector

In 1981, Austrian banks held equity of only 3% of the balance sheet total. This is only half of the amount 20 years earlier and equals the amount in the post-war era. At that time, the Austrian bank-reconstruction law (Bankenrekonstruktionsgesetz) was passed in order to counteract this low equity ratio. Reasons for the low equity ratio in the early 1980ies are the following: The Austrian credit market has grown over proportionally (even faster than the real economy that has seen a boom in the 1960ies and 1970ies in Austria). From a cost perspective, banks could operate with margins below average; accumulation of reserves on the other hand had the opposite development. Costs for holding reserves were high, a reason for low equity ratios. It is typical, that the internal financing cannot keep pace in times of high growth rates. The underlying reason is the same as it is in real economics: Costs are too high and subsequently the interest in holding additional equity drops. In times of growth, risk was not taken seriously. The lack of interest in equity of the financial sector had other

⁶³ See (Tichy 1981), p.14

reasons as well: Main goal was the expansion of transaction volume. Business proceedings that promised to increase the balance sheet total were in focus, compared to business proceedings that only yielded commission such as capital-market operations, asset management or trustee funds.⁶⁴

So the lack of equity was in many cases not unindebted. Reason for it to be very burdensome is that there are no easy ways to change the situation. Equity injection is not possible in all cases, where it is possible, it is not very likely due to pressure on banks earnings.⁶⁵

Equity gap

The equity gap is commonly traced back to the lack of saving among households and the excessive claim of financial resources of the federal state. In the Austrian economy, this was only true to a certain extent in the 1960ies and 1970ies. Savings were at a level that could be expected. More problematically was the stagnation of incomes, which was a consequence of the structural crisis and a lack of competitiveness of Austrian products on both domestic and foreign markets. If households were to save more in this situation, demand and subsequently income and savings activities would decrease. At the same time, unemployment would go up, possibly hand in hand with the equity gap.⁶⁶

The appearance of the equity gap is closely tied to the Austrian monetary policy in the late 1970ies. The level of interest rates was held a bit higher than necessary due to the circumstances on the international interest association. The federal state thus was able to attract more financial resources than necessary to cover the balance of current transactions. The effect was that the Austrian credit system was forced to a restrictive policy and the credit supply of the Austrian economy was covered by foreign institutions. Statistically, it appeared as an equity gap what is actually an implication of a current account deficit and inflated capital imports.⁶⁷

⁶⁴ See (Tichy 1981), p.15

⁶⁵ See (Tichy 1981), p.15

⁶⁶ See (Tichy 1981), p.15

⁶⁷ See (Tichy 1981), p.15

Risk-averse granting of credits

The credit system had greatly contributed to the financing of the years of rapid industrial expansion in Austria at the end of the 19th century. Compared to the late 1970ies, the criterion for granting credit was much more easy-going. At that time, both banks and businesses possessed much more equity and economic policy much more focused at stabilizing the financial market (and especially the interest rate) rather than stabilizing employment and production. Late 19th century in Austria had seen considerable fluctuations of unemployment rates and production capabilities. Economic policy in the decades after World War II pursued the goal of a robust labor market and production facilities. Interest rate and credit expansion had become instruments that supported reaching this objective. According to this, these factors vary significantly.⁶⁸

In a recession, as it was predicted for the near future in the late 1970ies, the approach was the following: The credit system was allowed to grant many credits at low interest rates while in times of a booming economy, the credit market was consciously curbed as a political instrument of economic policy.

Structural change within the banking sector

The banking sector has seen fundamental change in the decades after World War II in Austria. From a sector characterized by entities that were close to the state, competition took over. Furthermore, a worldwide trend of universality in the banking sector has arrived in Austria. Most institutes expanded their commercial activities into new fields where they had little experience. Especially in small institutes, this approach ballooned costs and risk. Rising costs could not be balanced by upscaling business operations in banks.⁶⁹

Despite this trend towards universality, the Austrian banking system still featured elements of specialization as for instance a noticeable grouping of customers and division of responsibilities between main institute and branches.⁷⁰

⁶⁸ See (Tichy 1981), p.16

⁶⁹ See (Tichy 1981), p.16

⁷⁰ See (Theurl 1993), p.586

So the financial sector was hit by the dropped economic growth even more directly than its customers.⁷¹

The challenges of the Austrian credit market were evident. In the face of structural change, the capacity to act was very limited for institutes granting credits. The goal was to reduce the structural challenges of the financial system with the goal to contribute to structural change.⁷²

2.4 The Austrian Banking Sector in the 1980ies until Today

The Austrian Banking system showed the following characteristics in the 1980ies and 1990ies:⁷³

- There was a close interlocking between state and the banking industry (government share of large banks, state as the biggest borrower on the bond market, public bank subsidies and liabilities)
- Bank holdings in industrial and trade corporations to a great extent
- Payment was dominated by transferals. Fees were not cost-covering and had to be subsidized internally.
- Until 2002, the Austrian bank secrecy was constitutionally obliged and supplemented by optional portfolios for securities and accounts for resident persons.

A broad range of economic policy and economic development has taken place in the environment where Austrian banks operated in the past decades. A liberalization of the regulatory framework that was linked to the EU integration had direct impact on the Austrian financial market from the mid 1990ies on. Through the establishment of the Economic and Monetary Union, the competitive pressure increased at the EU level, leading to the efforts to set up a single market for financial services by 2005. Especially for Austrian banks, a key development was the disclosure of the Central, Eastern and Southeastern European (CESEE) markets. These markets lead to a shift in

⁷¹ See (Tichy 1981), p.16

⁷² See (Tichy 1981), p.16

⁷³ See (Theurl 1993), p.587

orientation of many Austrian banks from national to international. Since then, Austrian banks are intensely involved in financial business activities in this region.⁷⁴

Today, Austria has a very concentrated banking sector. The five largest banking groups represent 60.60% of the balance sheet total of the overall Austrian Banking Sector. The aggregated balance sheet total of the five large players amounts to the 2.29 multiple of the Austrian GDP (2009).

The following table lists the balance sheet totals of these institutions:

Institution	Balance Sheet Total (2009)
Erste Group	€ 201.710m
Bank Austria	€ 195.500m
RZB Group	€ 147.940m
Volksbank AG	€ 48.120m
Bawag	€ 41.230m

Table 6: Balance Sheet Totals of the Largest Austrian Banks in 2009 [€m]⁷⁵

⁷⁴ See (Rumler and Waschiczek 2010), pp.49

⁷⁵ See (Schuller 2010)

3 CAPITAL STRUCTURE

In order to understand how a bank conducts business, it is advisable to take a close look at the balance sheet. A balance sheet states sources of bank funds (liabilities) and uses for funds (assets). The total assets always equal total liabilities.⁷⁶

The balance sheet is a snapshot of what a bank owes (liabilities) and owns (assets) at a given point in time, for example at the end of the fiscal year.⁷⁷

Capital structure refers to the composition of the sources of funds (liabilities) of an entity. Banks as well as non-financial firms have to decide, how to compile their sources of funds. The larger the proportion of bank capital relative to total liabilities, the lower is the leverage.⁷⁸

3.1 Balancing in Commercial Banks

Banks fund money by issuing liabilities such as deposits and by borrowing from other banks or corporations. With these funds, they acquire assets as for example securities and loans. A bank's profitability comes from the higher interest rate, it charges for asset holdings compared to the expenses on liabilities.⁷⁹

The following table shows, how the balance of commercial banks is set up. Exemplarily, the balancing of US banks is depicted. Structurally, balancing in Europe and Austria is equivalent.

Assets (Uses of funds)		Liabilities (Sources of Funds)	
Reserves and cash items	15%	Checkable deposits	10%
Securities		Nontransaction deposits	
U.S. Government and agency	13%	Small-denomination time deposits (<\$ 100,000) + savings deposits	41%
State and local government and other securities	6%	Large-denomination time deposits	14%
Loans		Borrowings	23%
Commercial and industrial	10%	Bank Capital	12%
Real estate	28%		
Consumer	9%		

⁷⁶ See (Mishkin 2007), p.219

⁷⁷ See (Apostolik, Donohue, and Went 2009), p.29

⁷⁸ See (Mishkin 2007), pp.231

⁷⁹ See (Mishkin 2007), p.219

Interbank	1%		
Other	8%		
Other Assets (ex. physical capital):	10%		
Total	100%	Total	100%

Table 7: Balance Sheet of all US Commercial Banks in 2011⁸⁰

3.1.1 Liabilities

Generally speaking, liabilities are debts or obligations in terms of money.⁸¹

The following positions typically show up on the balance sheet of a bank:

Checkable Deposits: The owner of this account has the right to write checks to third parties. This kind of accounts used to be the most important source of bank funds (in 1960: 60% of bank liabilities) and has lost importance to banks' total liabilities over time. Checkable deposits must be paid out immediately if the owner requests so. The same is true for checks written on a bank account. From the banks' point of view, this is the lowest-cost source of funds. Depositors seeking access to a liquid asset are willing to forgo some interest. Banks' costs for checkable deposits include servicing these accounts (processing monthly statements, maintaining branches, marketing and sales activities) and interest payments. Servicing accounts makes up approximately 50% of banks operating expenses, while interest paid on deposits accounts to 25% of operating expenses.⁸²

Nontransaction deposits: Today, nontransaction deposits are the main source of bank funds. Interest rates paid on this kind of accounts are usually higher than for checkable deposits. In return, owners are not able to write checks on nontransaction deposits. The two basic types are savings accounts and time deposits:

Savings accounts used to be the mostly used kind of nontransaction deposit. Funds can be added or withdrawn at any time. All transactions including interest payments are recorded either in a passbook held by the owner or in a monthly statement.

⁸⁰ See (Federal-Reserve-System 2011)

⁸¹ See (Rosenberg 1992), p.200

⁸² See (Mishkin 2007), pp.220

Time deposits are accounts with a fixed maturity. Early withdrawal involves substantial penalties for the owner. Due to the limited liquidity for the owner, banks have to pay higher interest rates than for savings accounts.⁸³

Borrowings: Banks obtain funds through borrowing from banks and corporations. In the US, the Federal Reserve System is involved in overnight and other borrowings.⁸⁴ Another source for borrowings are loans made to banks by parent companies. Borrowings are used to have enough deposits to meet the regulatory requirements and therefore often raised and repaid in very short time-periods.

While borrowings only made up 2% of bank liabilities in 1960, this number is 26% today.⁸⁵

Bank Capital: Being the cushion against a drop in asset's value, bank capital is crucial for banks stability. If liabilities exceed assets, a bank is forced into liquidation. Bank capital equals the difference between total liabilities and total assets and is also referred to as the bank's net worth. Banks raise capital from retained earnings or by selling new equity (stock).⁸⁶

3.1.2 Assets

On the opposite side of liabilities on the balance sheet, assets are by definition anything owned by a business that has commercial or exchange value. Specific property or claims against others are categorized as assets.⁸⁷ Only a small proportion of a bank's assets is typically held in cash.⁸⁸

Reserves: Reserves include deposits at central banks plus physically held currency. Reserve requirements state, that for every unit of checkable deposit, a certain fraction (the required reserve ratio) has to be kept as reserve. Banks hold excess reserves to meet the requirements if funds are withdrawn.⁸⁹

Cash items in process of collection: Checks written on an account at another bank that are not yet received are classified as a cash item in process of collection. It is an

⁸³ See (Mishkin 2007), p.221

⁸⁴ See (Apostolik, Donohue, and Went 2009), p.31

⁸⁵ See (Mishkin 2007), p.221

⁸⁶ See (Mishkin 2007), pp.221

⁸⁷ See (Rosenberg 1992), p.17

⁸⁸ See (Apostolik, Donohue, and Went 2009), p.29

⁸⁹ See (Mishkin 2007), p.222

asset for the bank where the check is deposited as it is a claim on another bank and will be received shortly.⁹⁰

Deposits at other Banks: Through a system called “correspondent banking”, larger banks provide services including check collection, foreign exchange transactions or securities purchases for smaller banks. In return the small banks hold deposits at the larger bank.⁹¹

Reserves, cash items in process of collection and deposits at other banks are classified as cash items and have lost importance over time. While in 1960, cash items constituted for 20% of all assets, its share has decreased to 4% today.⁹²

Securities: Banks hold securities from states and local governments as an important income-earning asset. At the same time, these instruments make it more likely that local governments do business with the holder of the security. Default risk is higher at a more local level. State securities are considered safer, as states are considered to be more likely to pay interest and the face value when a security matures.⁹³

Most securities are rather liquid and can be sold quickly if a bank is in need of cash. This is why sometimes securities are also referred to “secondary reserves”.⁹⁴

Loans: This is the main source of bank profits. For the individual or corporation receiving it, a loan is a liability while the issuing bank considers it as an asset as it provides income to the bank. Until maturity, loans are typically not turned into cash. Therefore, this type of asset is less liquid than other assets. Also, loans have a higher probability of default than other assets. For these reasons, loans pay the highest returns for banks. Depending on the structure of a bank, the proportion of commercial, industrial, consumer and interbank loans varies.⁹⁵ Loans have a high variance in terms of their liquidity.⁹⁶

Other Assets: All physical capital of a bank (buildings and equipment) is collected in this asset category.⁹⁷

⁹⁰ See (Mishkin 2007), p.222

⁹¹ See (Mishkin 2007), p.222

⁹² See (Mishkin 2007), p.222

⁹³ See (Mishkin 2007), pp.222

⁹⁴ See (Cecchetti 2008), p.274

⁹⁵ See (Mishkin 2007), p.223

⁹⁶ See (Cecchetti 2008), p.275

⁹⁷ See (Mishkin 2007), p.223

3.2 Bank Lending and Control Systems

The appropriate level of bank capital differs from institution to institution, depending on its fields of operation. Since the large Austrian banks are typical commercial banks, engaging in retail banking, business banking and corporate banking, lending plays a crucial role in their activities. For this reason, this chapter examines the asset class “loans” in greater detail, explaining how bank lending is conducted and which control systems have been put in place.

A healthy banking sector is crucial to a well- functioning real economy. Compared to other industries, a great amount of positive externalities flows to the economy, based on banks activities. This makes the banking industry a special one due to some reasons: Banks supply a large share of financing for governments, businesses and consumers and operate the national payment systems that enable transfer payments from buyers to sellers. Last but not least, banks are the main transmitter of government’s monetary policy to the economy.⁹⁸

Traditionally, bankers use a set of criteria for evaluating and judging loan requests. The goal is to understand the potential borrowers’ business strategy, industry and its position within, the past financial performance as well as predictions of future outturns. Cash generation in recession conditions (a worst case scenario) has to be evaluated as well. All these factors influence the decision whether or not to grant the loan, whether to request security and the rate of interest to be charged.⁹⁹

The fundamental question from the banks’ perspective is

“Will we get our money back, when and how?”¹⁰⁰

Commercial Bank Lending Criteria

It is in the nature of banks to take risk. Hale (1983)¹⁰¹ offers 18 principles of credit analysis, which are summarized below. The first seven refer to the lenders’ behavior, the latter to the borrower:

⁹⁸ See (Eisenbeis and Kaufman 2010), p.341

⁹⁹ See (Buckley 2011), p.89

¹⁰⁰ (Buckley 2011), p.89

¹⁰¹ See (Hale 1983), pp.78

1. Quality of credit is more important than exploiting new opportunities.
2. Every loan should have two ways out that are not related and exist from the beginning – that is, through operational cash generation or realization of assets. Guarantees from an utterly sound guarantor would be another possibility, but the former two are normally expected to provide the way out with the third a back-up in weaker cases.
3. The character of the borrower – or in case of corporations, the principal management and shareholders – must be free of any doubt as to their integrity.
4. If the banker does not understand the business, there should be no lending deal.
5. Lending and its structuring is the banker's decision, and they must feel comfortable with it according to their judgment.
6. The purpose of a loan should contain the basis of its repayment.
7. If the banker has all the facts, he does not need to be a genius to make the right decision.
8. The business cycle is inevitable. In other words, the loan should be evaluated assuming good and bad times.
9. Although it is harder than evaluating financial statements, assessing a company's management quality is vital.
10. Collateral security is not a substitute for repayment.
11. Where security is taken, a professional and impartial view of its value and marketability must be obtained.
12. Lending to smaller borrowers is riskier than lending to larger ones.
13. The banker should not let poor attention to detail and credit administration spoil on otherwise sound loan.
14. Local banks should be participants in lending to local borrowers.
15. If a borrower wants a quick answer, it is "No".
16. If the loan is to be guaranteed, the banker must be sure that the guarantor's interest is served as well as the borrower's.
17. The banker must be clear as to where the bank's money is going to be spent and the banker needs continued assurance and confirmation through the life of the loan that this is where the money has gone.

18. The banker must think first for the bank. Risk increases when credit principles are violated.¹⁰²

Bankers require financial data from a potential borrower such as balance sheets, cash flow statements and forecasts of income. If they doubt the forecasts, they generate their own. Sufficient operational cash generation for serving the loan is what banks have to ensure. Part of this procedure is the financial ratio analysis, where the plausibility of the provided forecasts is checked. At this stage, the bank also has to rule out that these forecasts do breach any financial covenants that it is about to impose. Such failure to comply with covenants would legally and technically trigger the immediate repayment of the full loan.¹⁰³

This operational generation is the first –and desired– way out of the loan (see criterion 2 above). If this option should turn out to fail or deliver too little contribution, the realization of business assets, personal loan securities or guarantees are the alternatives.¹⁰⁴

Which loan structure to choose is another key question for the lender. While in some cases short-term loans are used to handle an export contract or to cover seasonal capital requirements, long-term loans are often used for the setup of new property or equipment.

Mortgage lending is a type of long-term lending, making use of real property as an instrument of securitization. It gives conditional ownership of an asset, secured by the financed asset.¹⁰⁵ This lending-type is often used by individuals to finance the real estate they live in. Decisions involving residential mortgage require evaluation of the quality and character of the borrower. Criteria such as occupation, length of time on the job, income, prospects or wealth influence the analysis.

Key issues that are defined by the bank are:

- Loan to value ratio
- Interest and capital payments versus income
- Interest and capital payments versus risk
- Maximum loan size

¹⁰² See (Buckley 2011), pp.89

¹⁰³ See (Buckley 2011), p.90

¹⁰⁴ See (Buckley 2011), p.90

¹⁰⁵ See (Fitch 2006), p.304

- Minimum down-payment¹⁰⁶

Loan to value ratio refers to the percentage of the granted loan, relative to the value of the asset used for securitization. The traditional loan to value ratio for mortgage loans used to be around 75% to 80% with the loan set at a maximum of 4 times the borrower's yearly income.¹⁰⁷

Lending Control Systems

Risk management refers to the procedures, that manage the exposure of a bank to various risks that are associated with banking.¹⁰⁸

The foundation of credit risk management is a clear credit philosophy set by the company management. The range of possible strategies is broad: Highly conservative low-risk standards will lead to a highest quality loan portfolio while a strategy aiming for growth of loan volume and market share demands highly flexible risk standards. Most banks formally state their lending philosophy in a loan policy.¹⁰⁹

The following figure visualizes the direct relationship between the risk, a bank is willing to take and the possible returns. While the graph suggests a linear relationship, in reality this may not exactly be a straight line.

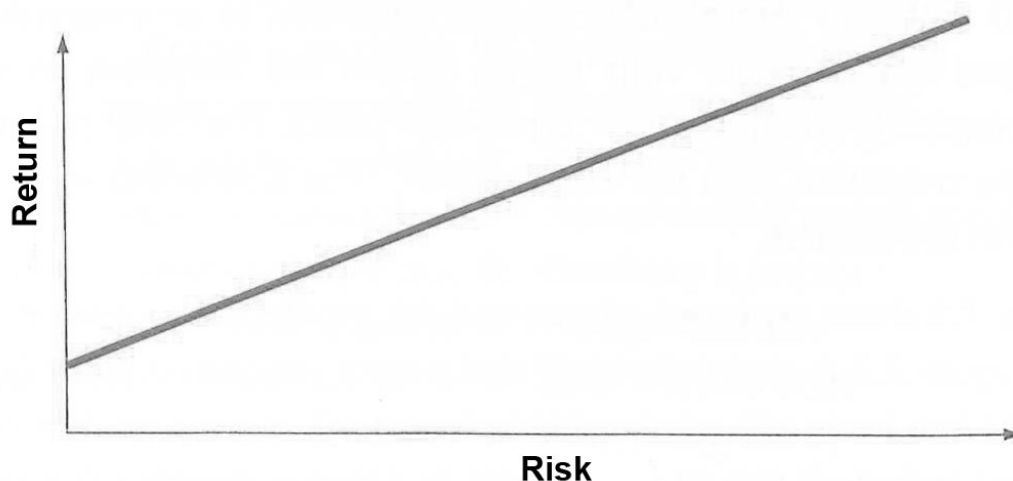


Figure 1: Risk and Return Trade-off¹¹⁰

¹⁰⁶ See (Buckley 2011), p.92

¹⁰⁷ See (Buckley 2011), p.92

¹⁰⁸ See (Fitch 2006), p.401

¹⁰⁹ See (Buckley 2011), p.93

¹¹⁰ See (Buckley 2011), p.94

When a bank goes for a growth strategy, accepting riskier and more flexible standards, the expected returns increase. At the same time, volatility of returns increases drastically. This sales-driven aim at increased market shares leads to a risky portfolio with unstable earnings in bad times and high returns in good times. Conservative credit culture, as the following graph illustrates in contrary has significantly lower volatility of returns with a low-risk credit portfolio and high asset quality.¹¹¹

The following figure depicts returns and risks through the credit cycle. While conservative credit culture leads little fluctuations in return, a sales driven credit culture of high risk displays much higher volatility.

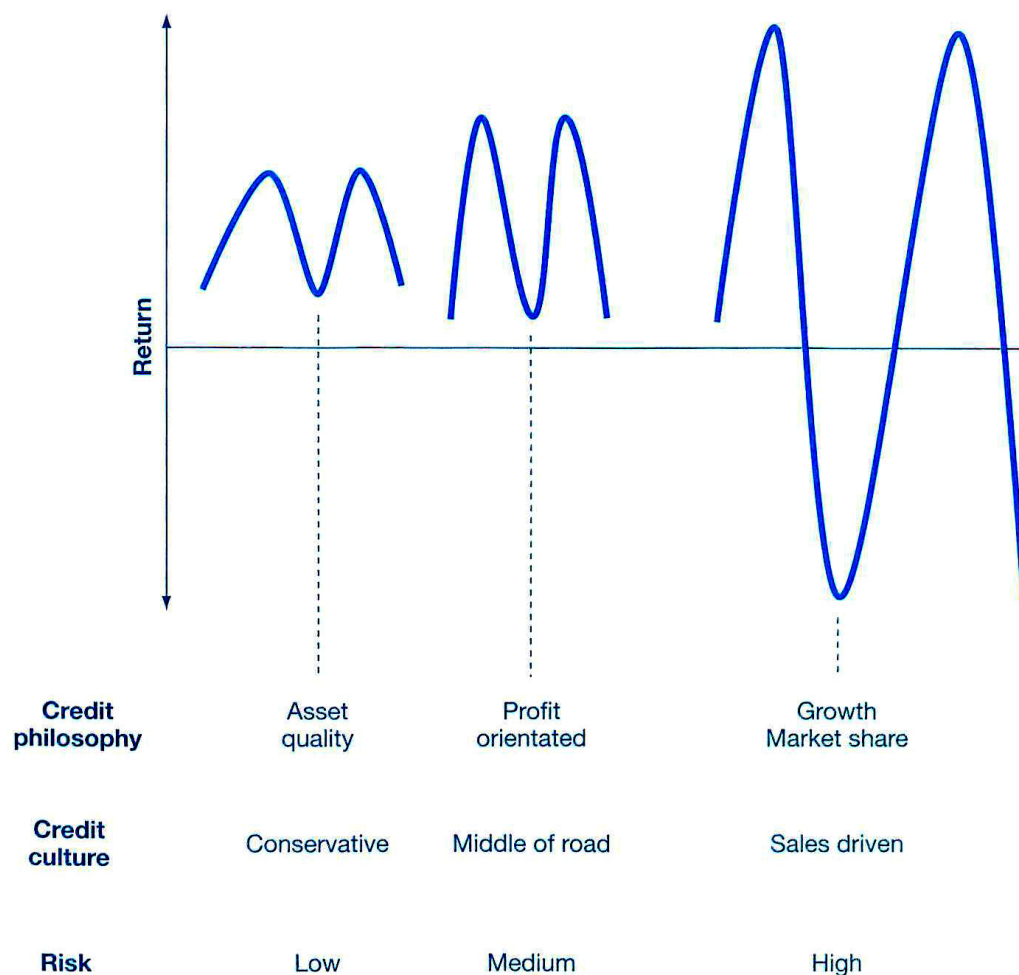


Figure 2: Returns and Risk through the Credit Cycle¹¹²

¹¹¹ See (Buckley 2011), p.94

¹¹² See (Buckley 2011), p.95

The control systems in banks show a certain level of decentralization. While there is freedom to decide up to a certain amount for branch offices, loan committee approval is required for larger transactions. These committees have the task to approve only those loans that are conform to the loan policy. Experienced senior loan officers are appointed for such committee positions.¹¹³

In many banks, a special assets committee is concerned with loans that are in trouble. Here, progress of such bad loans is monitored and plans on how to achieve repayment are worked out.¹¹⁴

3.3 Definition and Classification of Risk

Typically, a distinction is made between risk and uncertainty. Under risky conditions, the outcome of an event is not known for sure but there is a known probability distribution for the possible outcomes available. Subjective probability distributions are for example historical experience or an opinion about what is likely or less likely to happen. Alternatively, an objective probability distribution is for example the outcome of tossing a fair coin or throwing a dice. Under uncertainty, on the other hand, no probability distributions are available; there is a lack of knowledge regarding possible future outcomes of an event.

For economic and business means, risk is a vital part of corporate life and crucial for the business model of most financial institutions. It is complex, often interlinked and highly multifaceted. From a financial perspective, eliminating risk entirely would require closing down the business.¹¹⁵

In the financial world, where banks operate, risk is an element that affects financial behavior fundamentally.¹¹⁶

It is important to distinguish between the related concepts of “loss” and “risk”. Risk is an “ex ante” concept, and a potential source of loss. Being exposed to risk may or may not lead to a loss. In the “ex post” concept of loss, as a result of exposure to risk, a loss has actually materialized.

¹¹³ See (Buckley 2011), p.94

¹¹⁴ See (Buckley 2011), p.94

¹¹⁵ See (Moosa 2008), p.1

¹¹⁶ See (Chernobai, Rachev, and Fabozzi 2007), p.15

On the basis of its characteristics, there is not one single valid definition of risk. Depending on the field of application, there are various risk definitions in the literature:

- Chance of loss
- Possibility of loss
- Deviation of expected outcome from actual outcome
- Dispersion of present results around the expected result
- Probability of generating outcomes, different to the expected outcome

What all definitions have in common are loss (at least one undesirable outcome) and indeterminacy (more than one outcome is possible).¹¹⁷

Classification of Risk

Risk classification can be carried out under several schemes. A simple and common way of classification is to distinguish between financial and non-financial risk. Financial risk deals with the risk of losses through financial transactions and is separated into credit risk (risk arising from possible default on the borrower's part) and market risk (risk from changes in financial prices). Market risk can include risk from interest, foreign exchange, equity, commodity, energy or real estate. Interestingly, energy and real estate are no financial assets; still they are sources of financial risk. This is due to the fact that they are used as underlying assets for derivatives (such as options or future contracts). If the price of the underlying asset changes, the derivatives' prices change immediately, since the latter is a financial price, energy and real estate lead to financial risk in this context. All non-financial risks are classified in operational and other kinds of risk. Operational risk is risk of loss as a result from a failure of processes, systems, people or from external events. It is a very diverse risk type and may contain risks from liquidity, crime, disaster, legal framework or compliance.¹¹⁸

Other risks include credit risk, the risk that a counterparty will not meet its obligations within the agreed terms and market risk, the risk of loss as a result from changes in market prices.¹¹⁹

¹¹⁷ See (Moosa 2008), p.2

¹¹⁸ See (Moosa 2008), pp.8

¹¹⁹ See (Apostolik, Donohue, and Went 2009) p.26

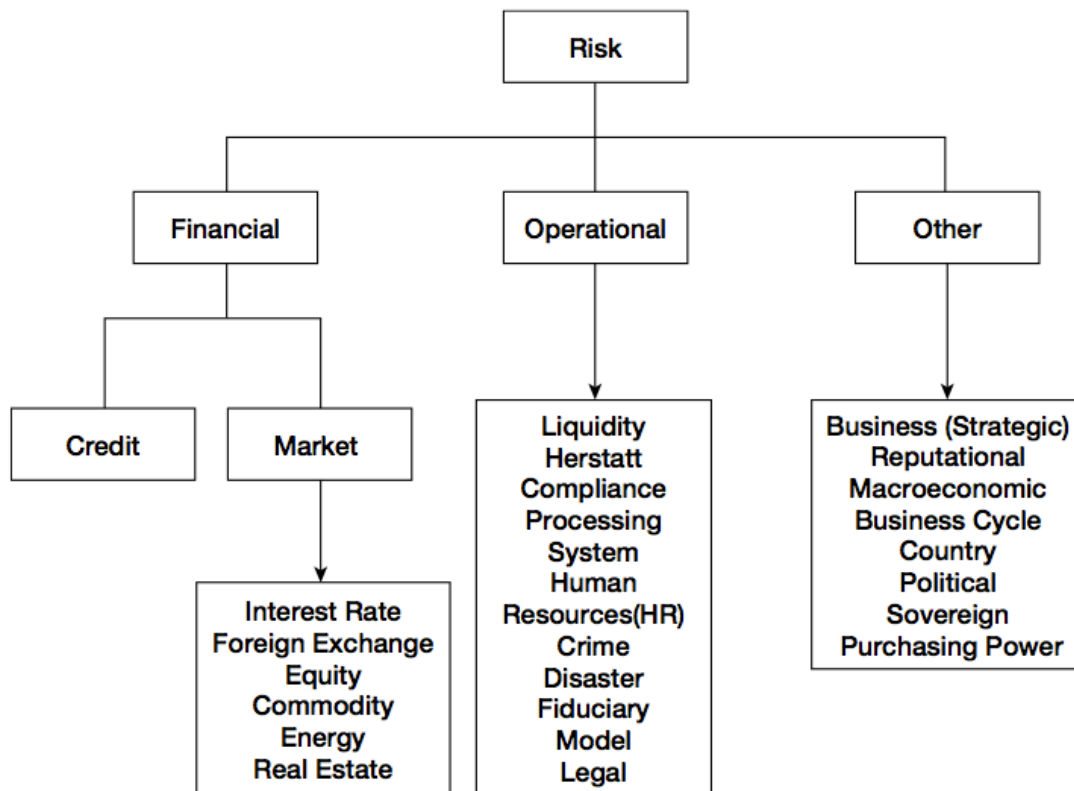


Figure 3: Classification of Risk¹²⁰

3.4 The Rising Importance of Operational Risk

According to the Bank for International Settlements, operational risk is the risk of loss that can be traced back to failed or inadequate internal processes, systems or people as well as to external events.¹²¹

Spectacular corporate losses in the first decade of the 21st century have assigned particular attention to the rising importance, assigned to operational risk.

Generally, operational losses involve the following components:¹²²

- Direct loss from operations
- Indirect loss from operations

¹²⁰ See (Moosa 2008), p.8

¹²¹ See (Matthews and Thompson 2005) p.237

¹²² See (Moosa 2008), pp.20

- Opportunity losses
- Costs of direct compliance and
- Costs of assurance

Among other things, direct operational losses include damage to physical assets and fines. Costs of idle employees made idle as a result of computer downtime are an example of indirect operational losses. If an investment opportunity is lost due to bad analysis, this is an example for an opportunity loss. Costs of direct compliance are connected to an intervention by the authorities as a response to operational failure, while the costs for assurance refer to internal assurance audits.¹²³

Historically, most operational losses have been of very small magnitude in banks, occurred frequently and were predictable and partly preventable. Some operational-risk related losses however were more severe concerning the magnitude of loss. Unauthorized trading activities, business disruptions due to natural disasters, vandalism or tax noncompliance are examples for such cases.¹²⁴

The term “operational risk” was not well known to the financial world until the mid-1990s. It refers to the possibility of loss that results from deviations in settling transactions or instructing payments.¹²⁵ Even though the risk of fraud and external events have been existing ever since the beginning of banking, it is attributed to technological progress that the potential of operational risk has increased dramatically. Operational risk is not a new risk, it is the management of operational risk that has become a new and distinct discipline.¹²⁶

It was in 1999, when bank supervisors for the first time announced to assign capital requirements for operational risks within the Basel II regulations.¹²⁷

Besides technological progress, other factors such as globalization, E-commerce, increasing outsourcing activities and intensive competition have contributed to increasing operational risk. Also the increased size and complexity of the banking

¹²³ See (Moosa 2008), pp.20

¹²⁴ See (Chernobai, Rachev, and Fabozzi 2007) p.1

¹²⁵ See (Matthews and Thompson 2005), p.211

¹²⁶ See (Moosa 2008), pp.21

¹²⁷ See (Hull 2010), p. 367

industry lead to higher operational risk. The large set of factors that have lead to rising operational risk is depicted in Figure 4.¹²⁸

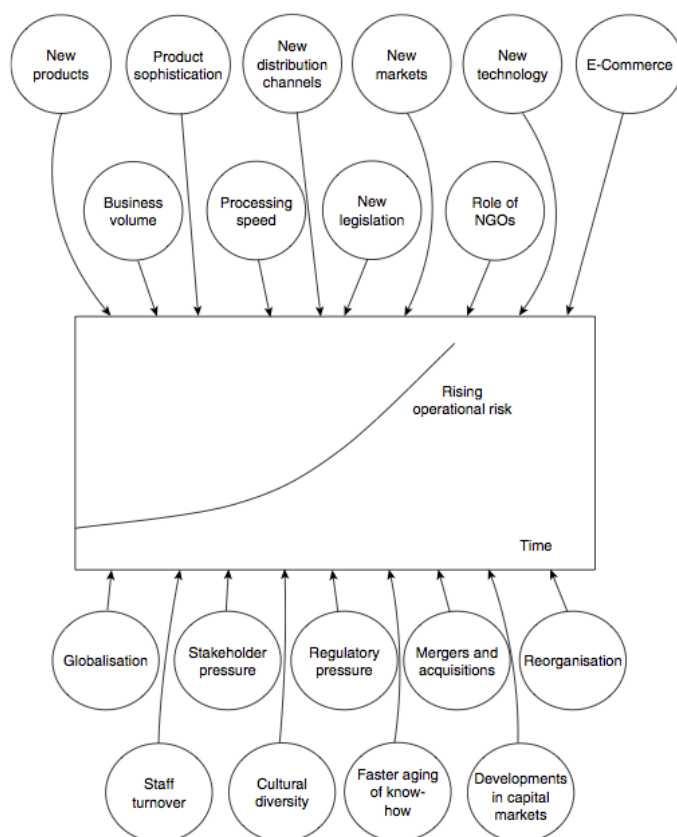


Figure 4: Factors that Lead to Rising Exposure to Operational Risk¹²⁹

From 1990 on, the financial industry was characterized by deregulation and globalization, advances in the information network, accelerated technological innovation and an increase in the scope of financial products and services. These factors have turned the financial markets in a unified complex network. Many of the new developed and optimized financial products protect the buyer from credit and market risk, while other factors that did previously not exist have become a larger part of the complex risk profile. Among risk managers, academics and regulators, operational risk has become a heated subject of discussion.¹³⁰

¹²⁸ See (Moosa 2008), pp.21

¹²⁹ See (Moosa 2008), p.23

¹³⁰ See (Chernobai, Rachev, and Fabozzi 2007) pp.2

For this reason, the interest of firms, the general public and regulators towards operational risk has increased recently. Reason for firms being interested in operational risk is that failure to control operational risk exposure can be fatal. For example the decline in market value during the days around the announcement of a large loss can be significantly greater than the loss itself.¹³¹ Also, rating agencies started to consider management of and exposure to operational risk when it comes to the analysis of creditworthiness of individual firms. Regardless of the regulatory capital requirements set by the authorities, the management of operational risk has become an important factor for participants on the financial markets, especially for banks. The greater amount of commercial activity related to e-commerce and new technology is an important source for operational risk and represents a crucial reliance on new technology. A fundamental part of banking business is struck by operational risk more than ever. Therefore, it is a common interest for financial institutions as well as supervisors to identify, monitor and control operational risk.¹³²

3.5 The Role of Capital

The level of capital banks have to hold directly impacts their returns. If a bank has to hold a lot of capital, it is much harder to generate a certain return rate than if the amount of capital that has to be held is lower.¹³³

Capital adequacy has become the common term to describe if a bank or other financial institution holds a sufficient level of capital.¹³⁴

The Basle accords, which will be introduced in the following chapters have two main objectives, to

- „strengthen the soundness and stability of the international banking system“
- and to
- „diminish (...) an existing source of competitive inequality among international banks“.

¹³¹ See (Moosa 2008), pp.22

¹³² See (Moosa 2008), p.24

¹³³ See (Matten 2000), pp.7

¹³⁴ See (Hull 2010) p. 513

The second objective aims at competitive imbalances within the financial system if there is no global harmonization. The pricing of financial products in countries with lower capital requirements would be significantly lower, assuming equal target levels of profitability. The first goal protects both banks and societies from bank failures, increasing stability to the financial sector.

Earlier systems of cartel agreements and regulated deposit rates have been replaced by capital requirements in the Basle accords.¹³⁵

These accords are very precise, when it comes to the definition. Generally speaking, the most essential element of capital is its availability to neutralize unidentified losses that might occur in the future. A bank's nature is to act as intermediary between borrowers and savers, collecting the money of depositors and lending it out to customers in need of credit. Due to this concept, only a very small part of the funds of depositors is available in cash at a given point in time. If many depositors draw out their deposits at the same time, a bank may be unable to provide them with the necessary cash. The following rumors that the bank may be out of cash may lead to more depositors, willing to withdraw their money and ultimately to a bank run. The so called „margin for error“ must consider very improbable events and not only serve as a cushion against everyday losses. High capital levels of private banks can be explained by this phenomenon. Even though, they do not lend money to risky projects and only trade for their customers account, those still demand levels of perceived safety well above average.¹³⁶

As opposed to the creditor protection for normal companies, where simply the difference between assets and liabilities has to be positive, banks have to build a capital base that is capable to absorb losses to a certain degree and still leaves it able to operate at an unchanged level of capacity.¹³⁷

3.6 The Basel Accords: Approaching Operational Risk

The Basel Accords are issued by the Basel Committee on Banking Supervision. Operational Risk, as discussed in the previous chapters, has become a threat to

¹³⁵ See (Matten 2000), pp.7

¹³⁶ See (Matten 2000), p.8

¹³⁷ See (Matten 2000), pp.8

banking operations and is tackled through the most recent Basle Accords for the first time. The Basle Committee has developed an approach to determine a bank's required operational risk capital.¹³⁸

3.6.1 Basel Committee on Banking Supervision

The Basel committee on banking supervision is a forum for the means of regulatory cooperation among its member countries.¹³⁹

In 1974, the central-bank governors of the group of ten-countries at that time established the Basel Committee. Since then, it meets on a quarter-yearly basis. The four main working groups also meet regularly. Today, the members of the committee come from 27 countries: Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. Usually, countries are represented by their respective central bank or, if the central bank is not the authority with responsibility for supervision, by the concerned authority. The governor of Sveriges Riksbank Stefan Ingves is currently chairman of the committee.¹⁴⁰

The aim of the committee is to provide the players on the financial market with supervisory standards that the individual authorities implement through individual arrangements. The committee has published numerous documents since 1975. Substantial milestones were the „Basel Capital Accord“ (also „Basel I“) in 1988 and „Basel II: International Convergence of Capital Measurement and Capital Standards: a Revised Framework“ in 2004.¹⁴¹

As a result of the 2008 financial crisis, the committee worked on a reform programme with the aim to target the causes of the crisis. Those global standards which try to

¹³⁸ See (Chernobai, Rachev, and Fabozzi 2007), p.200

¹³⁹ See (Apostolik, Donohue, and Went 2009), p.66

¹⁴⁰ See (Basel Committee on Banking Supervision 2013a)

¹⁴¹ See (Basel Committee on Banking Supervision 2013a)

consider systematic risk as well as firm-specific risk are known as “Basel III”. It was published in 2010 and is currently in implementation in the European Union.¹⁴²

The committee is based in Basel at the Bank for International Settlements. Operational work is carried out by four sub-committees:

- The Standards Implementation Group
- The Policy Development Group
- The Accounting Task Force
- The Basel Consultative Group¹⁴³

3.6.2 Basel I Accord

The 1988 Basel I Accord defined benchmarks for the measurement of capital adequacy and sets minimum standards regarding the implementation in the different national laws until the end of 1992. Basel I was signed by all of the 12 Basel committee members in 1988 and was the foundation for significant increases of resources, banks had to devote to management, measurement and understanding of risk.¹⁴⁴

The two most fundamental objectives of Basel I were:

- “*Strengthening the soundness and the stability of the international banking system*”¹⁴⁵ by setting minimal common capital adequacy requirements for banks that were active internationally in order to put aside cushion capital for the level of risk taken¹⁴⁶ and
- creating a “level-playing field” among internationally active banks, through a fair and consistent framework with regards to applicability to banks in different countries.¹⁴⁷

In the 1988 framework, market risk, operational risk and liquidity risk were only considered implicitly in credit risk. This credit risk was set in relation to capital. Banks

¹⁴² See (Banh et al. 2011), p.2

¹⁴³ See (Basel Committee on Banking Supervision 2013b)

¹⁴⁴ See (Hull 2010), p.223, (Basel Committee on Banking Supervision 1988) pp.1

¹⁴⁵ See (Basel Committee on Banking Supervision 1988), pp.1

¹⁴⁶ See (Ayadi 2013), p.409

¹⁴⁷ See (Ayadi 2013), p.409

were required to hold “regulatory capital” of at least 8% of all risk-weighted assets (loans and securities) and exposures off the balance sheet, which were considered asset-equivalent (standby letters of credit, obligations on derivatives contracts or loan commitments) in their portfolios. This capital was a combination of equity and other instruments (subordinated debts, loan-loss reserves or some other instruments) and has provided a comparable and relatively common measure of solvency.¹⁴⁸

Weighting the risks was based on the credit quality of the individual obligor. Every exposure off the balance sheet was converted to the respective amount of asset and subsequently weighted. The Basel I Accord set out four categories of capital charges:¹⁴⁹

1. Exposures to OECD country governments:
0% credit risk capital charges
2. Non-OECD governments and OECD banks:
1.6% credit risk capital charges (20% corresponding risk weight)
3. Mortgages:
4% credit risk capital charges (50% corresponding risk weight)
4. Exposures to SMEs, other banks and all remaining exposures:
8% credit risk capital charges (100% corresponding risk weight)

¹⁴⁸ See (Ayadi 2013), p. 409

¹⁴⁹ See (Ayadi 2013), p. 410

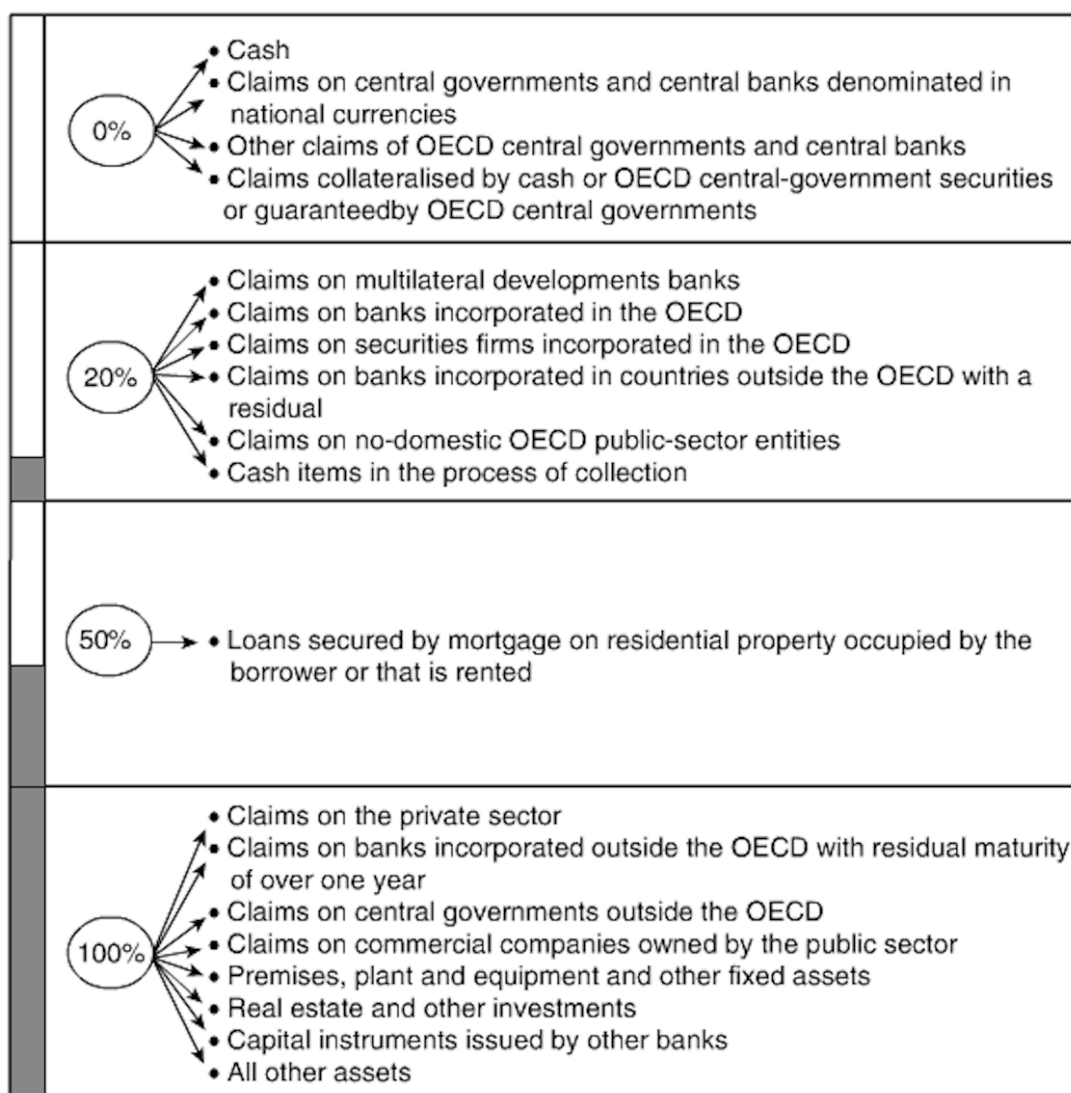


Figure 5: Risk-Based Weights under Basel I¹⁵⁰

Basel I gave banks incentive to allocate their financial resources in direction of government securities as they had no or very little risk charges. At the same time, exposures to SMEs and other corporates faced restrictions due to this framework especially in direct comparison to mortgages.¹⁵¹

These unintended effects lead to market developments that built the foundation for future problems, especially on the mortgage market.¹⁵²

Only considering credit risk while at the same time not taking into account many other risks that are relevant to today's banking business is a very simplified and partial

¹⁵⁰ See (Moosa 2008), p.47

¹⁵¹ See (Ayadi 2013), p.410

¹⁵² See (Ayadi 2013), p.410

approach, one reason why Basel I is criticized heavily. Using only four categories of credit risk provides little granularity when different levels and types of risks are to be assessed in a portfolio. Especially the activities of the most complex financial organizations cannot be monitored sufficiently. Differentiation among degrees of risks leads to the calculation of capital ratios and other financial benchmarks which are often uninformative and not comparable. Through innovative constructions, banks took advantage of Basel I and found ways to comply with the minimum standards set by Basel I. One way of doing so was the transfer of exposure risk to other participants on the financial market. Through securitization, exposures for which the bank believed regulatory capital to exceed economic capital were transferred to third parties. To a large part, Basel I was rendered ineffective through such measures. For residential mortgages, securitization was widely carried out by banks in the time after implementation of Basel I.¹⁵³

3.6.3 Basel II Accord

The Basel Committee has worked on a revision of the initial 1988 Basel I Capital Accord since 1998 in cooperation with the banking industry. In June 2004, the Basel II Capital Accord was released formally.¹⁵⁴ In the European Union, first banks implemented simpler standardized approaches in 2007, the others were implemented by the rest in January 2008.¹⁵⁵

It is hard to assess the implication of Basel II on the following economic crisis since it has been implemented gradually and probably too late. As a response to the weaknesses of Basel I, a more sophisticated, flexible and more risk-sensitive approach to banking supervision and regulation was chosen. The risk-sensitivity of the guidelines were refined significantly by limiting cross-subsidization, defining higher capital levels for risky borrowers and introducing risk inputs from external sources such as rating agencies. Also securitization and mitigation techniques, that banks have developed over the years, were approached by Basel II. Further, the new framework offered rules

¹⁵³ See (Ayadi 2013), p.410

¹⁵⁴ See (Ozdemir and Miu 2009), p.3

¹⁵⁵ See (Ayadi 2013), p.411

for market disclosure, supporting market discipline and providing guidelines for the banks' management practices and internal risk assessment.¹⁵⁶

All measures introduced by Basel II are based on three pillars:¹⁵⁷

- Pillar 1: Minimum capital requirements
- Pillar 2: Supervisory review for risk capital
- Pillar 3: Market discipline

The minimum supervisory capital is computed by summing up capital requirements from credit risk, operational risk and market risk. Estimation of the minimum capital required can be carried out by the banks on their own through the internal ratings-based approach or external through the standardized approach. For banks that do not have the needed management capacities and internal risk management resources, the latter approach provides simplicity. Those banks have to rely on external rating agencies when it comes to risk charges. If an institution is operated under this approach, there is little incentive to improve internal management systems and risk measurement. A group of „second best“ banks that do not run at an optimum level of risk comes up as a consequence. Only if all corporations would be rated, and if their ratings would exactly reflect their risk profile would this approach deliver comparable risk sensitivity. All entities that are not rated are treated with the same risk charges as under Basel I. This leads to a situation where exposures that are highly risky are better off when they stay simply unrated.¹⁵⁸

¹⁵⁶ See (Ayadi 2013), p.411

¹⁵⁷ See (Hull 2010)

¹⁵⁸ See (Ayadi 2013), p.411

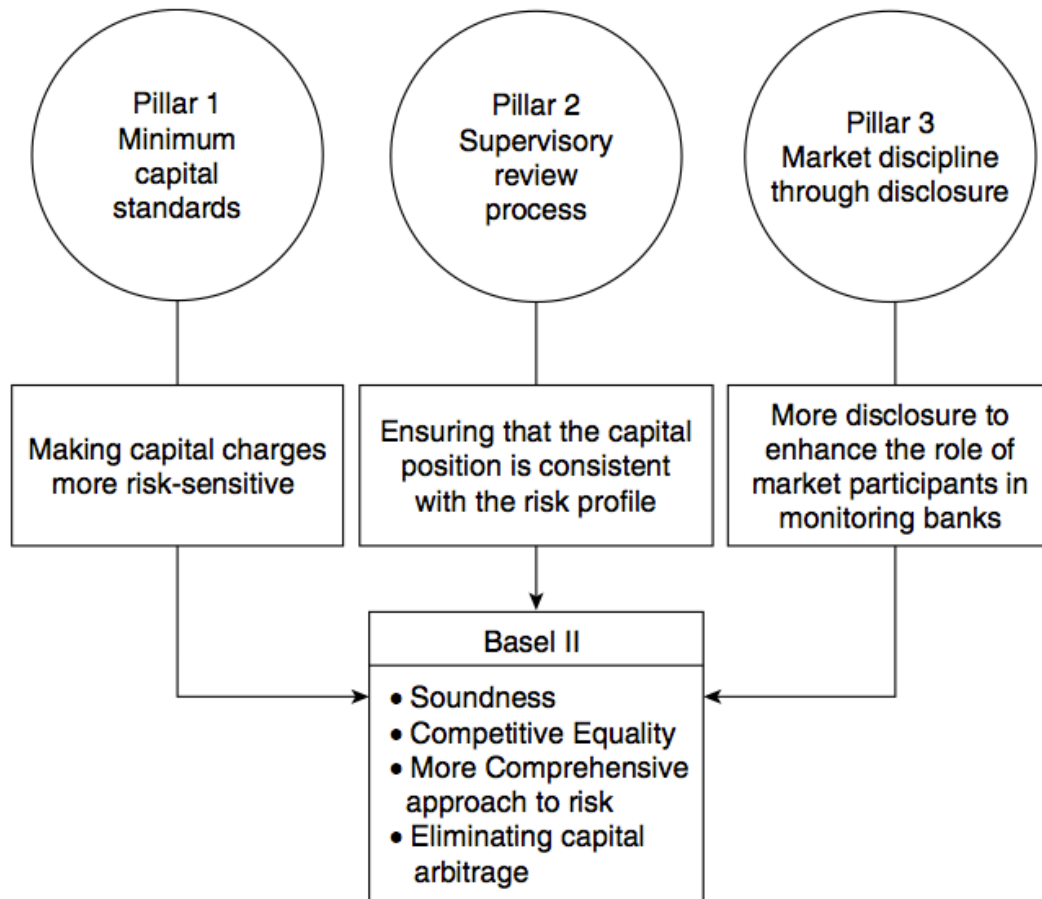


Figure 6: Pillars and Objectives of Basel II¹⁵⁹

This Basel II novelty created a perverse incentive not to rate companies at a rating of B and below. The standardized approach also may create a negative incentive for riskier companies to obtain cheap finance by preferring not to be rated. This behaviour is even encouraged by the rising of private rating assesment providers that carry out confidential rating services for companies, guaranteeing not to make the results public. This confidentiality makes shopping around for more convenient ratings possible.¹⁶⁰

¹⁵⁹ See (Moosa 2008), p.56

¹⁶⁰ See (Ayadi 2013), p.411

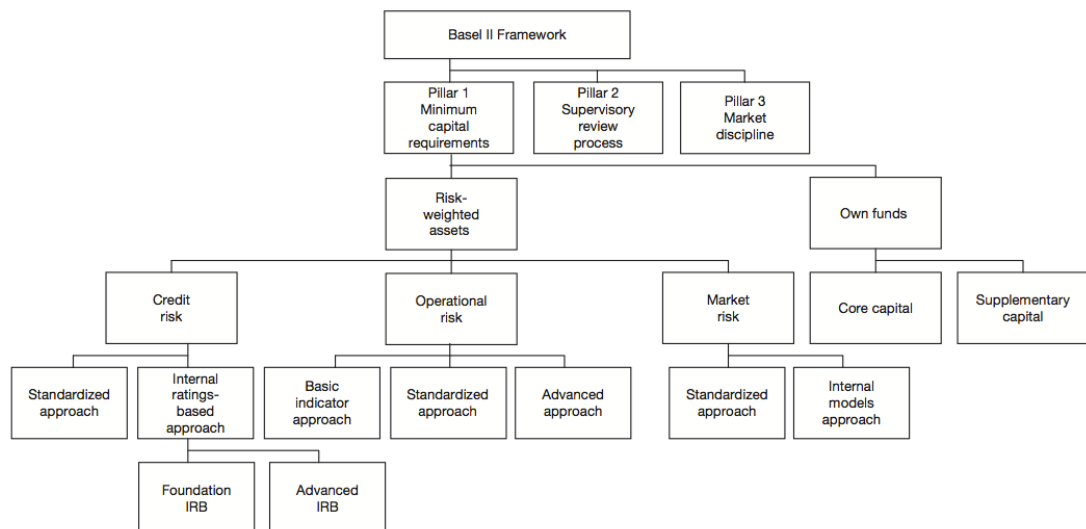


Figure 7: An Overview of the Basel II framework¹⁶¹

Basel II requires banks to develop own internal risk rating systems.¹⁶² As in the standardized approach, the internal-ratings based (IRB) approach makes use of weighting different risk classes (equity exposures, bank, corporate, retail or sovereign) according to their supervisory risk. Banks that choose (and are allowed to choose by national supervisors) to use an own rating system have to hold capital against each credit exposure. This capital is a function of the following four risk parameters:

- Probability of default (PD)
- Loss given default (LGD)
- Exposure at default (EAD)
- Remaining maturity of the exposure (m)

For the determination of required capital, supervisors provide the formular for calculation, while banks provide the quantitative inputs. The Basel Committee on Banking Supervision has designed the system in such a way, that retail portfolios are treated more favorable than large corporate borrowers.¹⁶³

¹⁶¹ See (Ayadi 2013), p.411

¹⁶² See (Ozdemir and Miu 2009), p.1

¹⁶³ See (Ayadi 2013), p.413

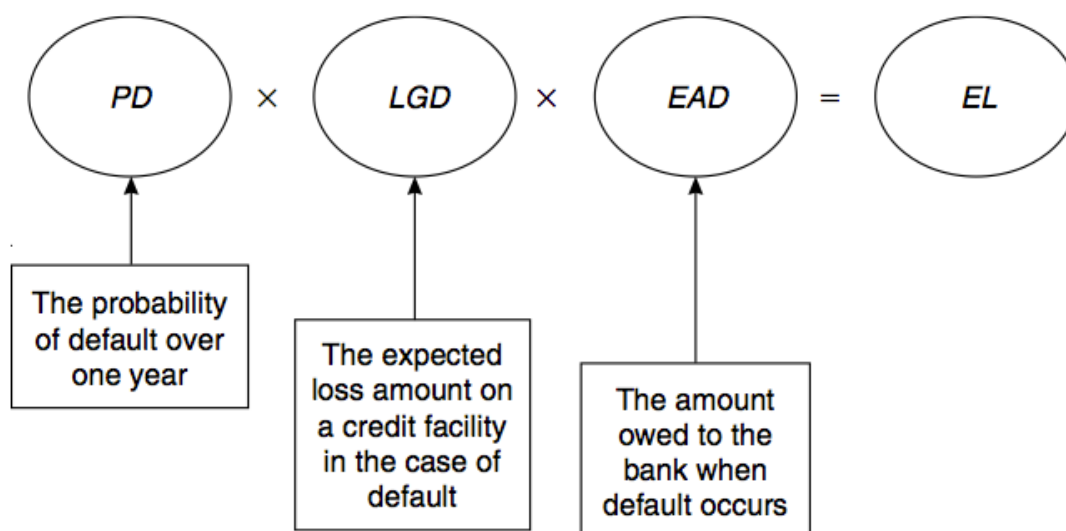


Figure 8: Components of Credit Risk¹⁶⁴

Internal-ratings based (IRB) approaches are divided in the foundation IRB and the advanced IRB. The foundation IRB only requires the issuing bank to determine a loan portfolio's probability of default, while all other risk inputs are provided by the supervisor. On the other hand in the advanced IRB, banks have to determine all parameters on their own. All data still has to be validated by the supervisor.

The retail asset class is only available for the advanced IRB approach, all other asset classes are available for both IRB approaches.

In order to qualify for the use of one of the IRB approaches, banks have to meet minimum criteria with regards to internal risk assessment capabilities. In many cases, the use of internal banking models has lead to overly optimistic assumptions. This is due to the fact, that most banks strive to operations with minimum capital in order to maximise value creation for the shareholder. If internal models are designed for shareholder value creation, they are not meeting the intended Basel goals.¹⁶⁵

3.6.4 Basel II Accord: Criticism

Basel II is a significant improvement compared to the initial Basel I accords. Nevertheless, there are weaknesses that persist after after the implementation of Basel

¹⁶⁴ See (Moosa 2008), p.57

¹⁶⁵ See (Ayadi 2013), p.413

II. It is criticised for little interaction between the individual pillars and for allowing too much flexibility.

The first pillar of Basel II uses a so-called silo approach for the assessment and management of the three risk types (credit, market and operational risk) meaning that all risk types are combined under one. Also, the high dependency on external rating agencies and their ratings are heavily criticised especially in the aftermath of the 2008 financial crisis. Also internal models prove to be inaccurate as they are mostly too optimistic and do not consider external events such as crises or economic stagnation.

At the tipping point of the 2008 financial crisis, even the Institute of International Finance, the most powerful banking lobby, addressed integration of risk management systems.¹⁶⁶ Also other major analysts like the Senior Supervisors Group argued for breaking down silos and „a comprehensive approach to viewing firm-wide exposure and risk“.¹⁶⁷

¹⁶⁶ See (Institute of International Finance 2008), p.10

¹⁶⁷ See (Ayadi 2013), p.413

4 THE GLOBAL RECESSION OF 2008

For many, financial crises were considered a thing from the past in the developed world, today only an issue that emerging markets have to deal with. As all crises do, the current one came as a surprise for most and it came from an unexpected source.

Generally speaking, according to the concept of a financial crisis, it is a systematic event that involves exit from bank debt. In a crisis, banks are either insolvent or dependent on action by the government or central banks. The challenge with crises is that certain events are clearly visible but it is hard to tell the whole story behind. Historically, bank runs acted as clear indicators for crises. In the modern era of banking and the financial system, it is much harder to define certain events as a crisis or even to define start and end point of it. Governments and central banks are much more involved today and this involvement influences the behavior of the stakeholders on financial markets. This results in lack of unanimity on definition which events are crises and little unanimity with regards to starting and end dates of crises.¹⁶⁸

This chapter aims to give an overview on the events that made the end of the first decade in the third millennium a very turbulent time not only from a financial perspective. For the first time since World War II, the world economy contracted in 2009, causing a global recession affecting both developed economies as well as emerging markets. Figure 9 depicts the GDP development from 2004 – 2010 for the world economy, developed countries only and developing countries only.¹⁶⁹

¹⁶⁸ See (Gorton 2012), p.1

¹⁶⁹ See (Gore 2010), p.714

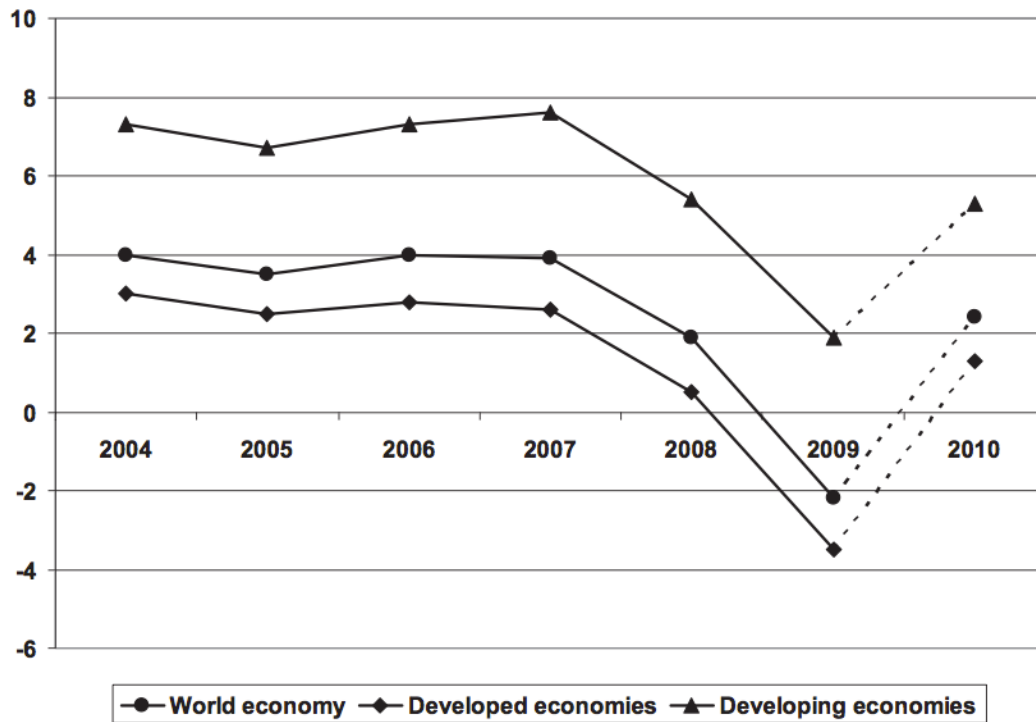


Figure 9: GDP Growth 2004-2010: World Economy, Developed Economies and Developing Economies¹⁷⁰

In the sequel, roots of the recession will be identified. New models of lending and investing that appeared on the financial markets in the previous years will be discussed, followed by a description of the events in late summer 2008 and its implication on the Austrian banking sector.

4.1 Roots of the Global Recession

In order to understand the crisis that boiled up in 2007, one has to take a look at the decade before. Globally, real interest rates (actual quoted interest rates minus actual achieved rate of inflation) were negative in major economies. At the same time, public expenditures were massively growing. Banks (among other market participants) made good use of the situation and increased their levels of debt in proportion to total financing. This behavior can be explained by the fact that debt was cheap at this point. From a bank's shareholder perspective, the other side of the coin is that risk has

¹⁷⁰ See (Gore 2010), p.715

increased. In case of liquidation of a bank, debt repayment ranks above shareholders' capital and debt interest ranks above dividends. While banks had debt to equity ratios of around 10:1 in the post-war decades, this number went up to 25:1 or even 33:1 in some cases. Traditional, non-banking businesses consider one part debt versus two parts equity to be a reasonable magnitude, at the same time some banks had 33 units of debt for every unit of equity.¹⁷¹ Also, observers argue, that a considerable part of the effective demand in the years prior to the crisis was maintained by credit.¹⁷²

Another factor that is considered to indicate the upcoming crisis is the decreasing GDP in many developed countries in the years prior to 2008.

Exemplarily, figure 10 depicts the percentage change in the US GDP in the decades from 1970 onwards.

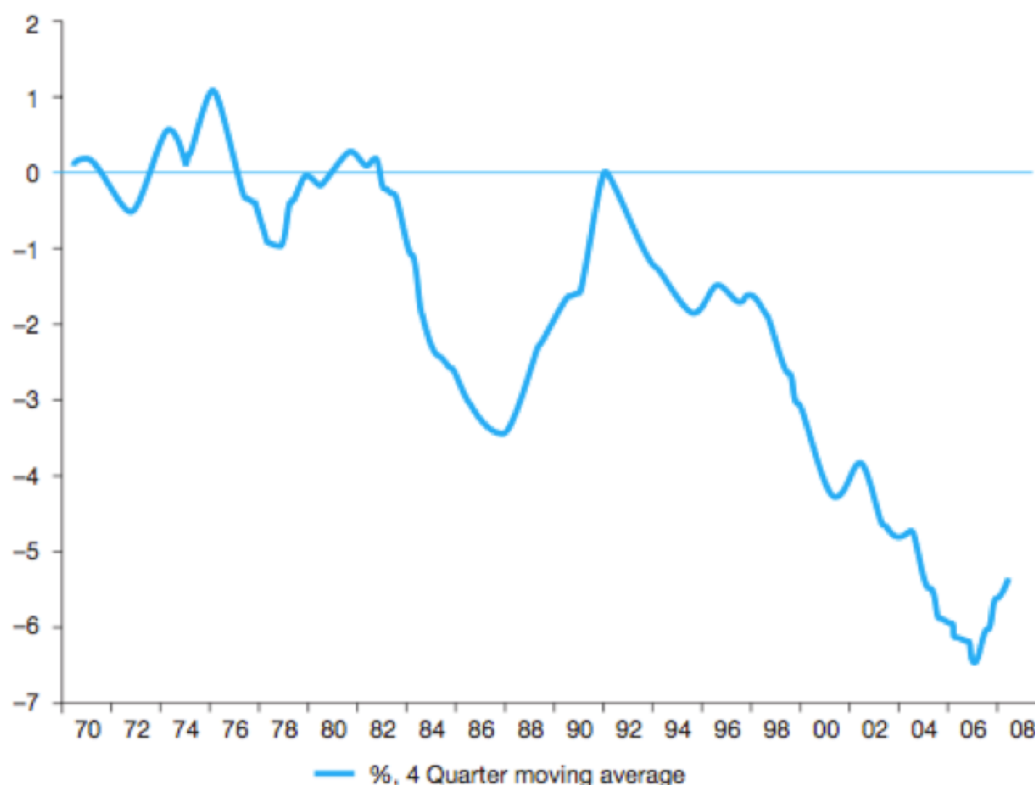


Figure 10: US Current Account GDP%¹⁷³

¹⁷¹ See (Buckley 2011), p.1

¹⁷² See (Dore and Singh 2012), p.295

¹⁷³ See (Buckley 2011), p.22

But where is the source of this change in the world economy?

In 2005, Alan Greenspan was about to retire as chairman of the US Federal Reserve Bank. At the annual meeting of high ranked economists, where he was about to be honored, Raghuram Rajan, professor at the University of Chicago's Booth Graduate School of Business delivered his much noticed paper "Has Finance Made the World Riskier?"¹⁷⁴. Rajans conclusions answered in the affirmative.

Banks had every incentive to keep the boom going which they translated in lobbying activities towards (among others) European and the American government. Deregulation of the banking systems along with low (or even negative) real interest rates lead to booming economies with happy customers and consequently happy voters. Built on the foundation of borrowed money, a wave of consumerism flooded "First World" economies, leading to the purchase of goods and properties beyond all economic measure. Household debt as a percentage of disposable income increased while housing prices went up as well as a consequence of increasing demand.¹⁷⁵

4.2 New Models of Lending, new Models of Investing

The nature of bank lending changed significantly in the past decade. The main forces, altering the financial landscape were technical change, deregulation and institutional change.¹⁷⁶ Costs of computation and communication could be reduced by technical change, as well as costs for acquisition, processing and storage of information. At the same time, technical change introduced methods like financial engineering, portfolio optimization or credit scoring. Deregulation has drastically changed the environment regarding barriers preventing entry, jurisdictions and competition between markets, institutions and products. Last but not least, new entities that have been created within the financial sector represent institutional change. Such entities are hedge funds, private equity firms as well as new legal, political and regulatory settlements.¹⁷⁷

¹⁷⁴ See (Rajan 2006), pp.499

¹⁷⁵ See (Buckley 2011), p.1

¹⁷⁶ See (Rajan 2006), p.500

¹⁷⁷ See (Rajan 2006), p.500

In the original “originate-to-hold” model, the mortgage bank (as an example) lends the principal against the security of a home. While it holds the debt, it receives interest and capital repayments from the borrower. The “originate-to-distribute” model is different: While the bank still lends against security of a home, it does not hold the debt directly but sells it to another financial institution. There, several similar loans are bought from various banks, packed together and sold to others in a “mortgage backed security” (MBS) package. Another way of trading housing debt is the mix with other debt such as credit-card debt, corporate loans or consumer loans through “collateralized debt obligations” (CDO). This proceeding is called securitization. A critical issue under this new model is the screening of borrowers by the bank giving out the loan. Banks used to be very careful in checking customers’ ability to repay in the traditional “originate-to-hold” model because payment defaults would have directly affected their business.¹⁷⁸

Not only mortgage banks sold debt to be repackaged. Commercial banks (which are an important player in the European banking market) started doing the same:

Most individuals stopped depositing significant portions of their savings at banks directly. Instead, they directly invested in the financial markets through pension funds, insurance companies, mutual funds or in firms through hedge funds, venture capital funds or private equity.¹⁷⁹

Standards and procedures that have evolved over generations in banking were dumped within only a few years.¹⁸⁰

The trend to lend more to weak customers is an effect of these new models of lending. Such loans to borrowers with weak credit history are called subprime loans (sometimes also “B and C loan” or “nonprime loan”). Borrowers that have previous charge-offs or delinquencies have to accept higher rates of interest than top-rated borrowers.¹⁸¹

Because banks did not hold such subprime loans on their own balance sheets, banks were inclined to process customers, they would not have dealt with otherwise.

¹⁷⁸ See (Buckley 2011), p.2

¹⁷⁹ See (Rajan 2006), p.500

¹⁸⁰ See (Buckley 2011), p.3

¹⁸¹ See (Fitch 2006), p.447

Traditionally, banks gave out loans of three times the borrower's income or 90% to 95% of the value of the mortgaged property. In the years before the 2007 financial crisis, there were lenders, offering 100% or more of loans.¹⁸²

An extreme example is the UK mortgage bank Northern Rock: Its "Together" brand offered 125% based on the property value (95%) plus an unsecured top-up loan (30%). Lending facility was based on six times annual income.¹⁸³

Credit Default Swaps

Another new phenomenon was the emergence of "credit default swaps" (CDS). It is an instrument, that gives the owner the right to sell a bond at its face value in the event of default of the issuer.¹⁸⁴

A CDS is a *"swap agreement, enabling the transfer of third-party credit risk in exchange for a stream of regular payments for a set time period"*¹⁸⁵.

Through a contract, party (A) makes a series of payments to counterparty (B). In exchange, (B) is obliged to pay a capital sum to (A) if the credit instrument related to the CDS defaults. This is typically a loan of a third party (C). Credit default is defined as non-payment of capital or interest by the third party. A has to pay to B for the lifetime of the CDS if there is no default by C. CDS contracts can to a certain extent be compared with insurance. The crucial difference is that the underlying security does not have to be owned by one of the involved parties. Thus, CDS were used to hedge risk and to gamble.¹⁸⁶

The market for CDS has grown massively from the 1990ies on.¹⁸⁷

CDS were available for a country's bonds, company's debt as well as instruments like MBS or CDOs.¹⁸⁸

¹⁸² See (Buckley 2011), p.3

¹⁸³ See (Buckley 2011), p.4

¹⁸⁴ See (Hull 2010), p.516

¹⁸⁵ See (Fitch 2006), p.119

¹⁸⁶ See (Buckley 2011), p.4

¹⁸⁷ See (Hull 2010), p.294

¹⁸⁸ See (Buckley 2011), p.4

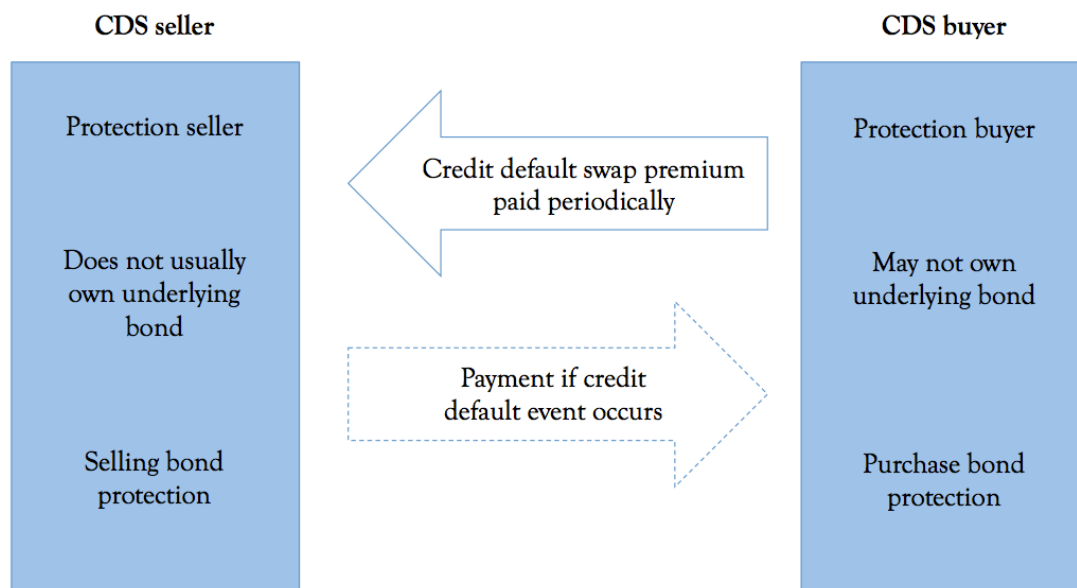


Figure 11: Credit Default Swap Transaction ¹⁸⁹

Another feature that distinguishes CDOs from insurance is the lack of a legal limit to the amount of CDOs that can be transacted with respect to a particular risk.¹⁹⁰

Exemplary, company C can have debt of €1m outstanding, while at the same time there are CDS on this debt amounting to €100m or even €1,000m.

What happened in the time before the 2007 crisis is that many MBS and CDO securities that included subprime mortgages were ranked with triple A status (this is the highest grade debt). This could be done, by trenching the mortgage pool of the MBS: In case the MBS produces losses, they first fall on the lowest ranked tranche (for example the B-rated tranche). The following loss falls on the next tranche and so on until the last tranche involved is the AAA rated section of the MBS.¹⁹¹

¹⁸⁹ Own representation based on (Buckley 2011), p.4

¹⁹⁰ See (Buckley 2011), p.4

¹⁹¹ See (Buckley 2011), pp.4

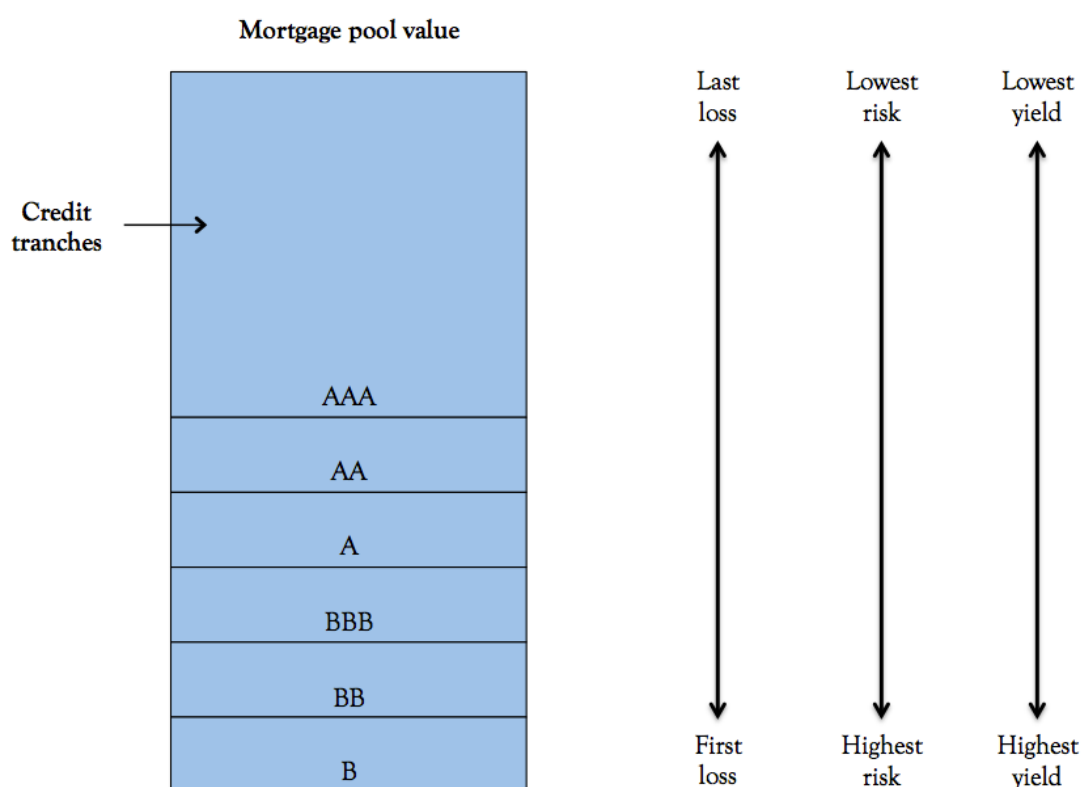


Figure 12: Tranche Rating, Risk and Return¹⁹²

While the collapse of the financial markets was triggered by both, subprime debt as well as CDS, the latter had the more disastrous impact. In the US, the subprime mortgage market had \$1,3 trillion of debt outstanding. At the same time, \$ 60 trillion were exposed at the CDS market at its peak. To give the reader an idea of the amount of money circulated by the CDS market: US GDP added up to \$ 14 trillion in 2009.¹⁹³ For the whole European Union, this figure was € 11.7 trillion in the same year.¹⁹⁴

When first defaults of mortgage securities occurred, this had negative implications for numerous CDS positions. The valuation of CDS proved to be challenging: With a low or no probability of default, a CDS has a positive value based on the discounted value of the stream of incoming premiums minus the expected payout under default. With accumulating defaults, a CDS did not only lose its value, it turned from an asset into a liability. A CDS that was valued 100 initially might turn into a liability of 500 within

¹⁹² Own representation based on (Buckley 2011), p.4

¹⁹³ See (Buckley 2011), pp.4

¹⁹⁴ See (Eurostat 2014)

very short time. This is what happened to Lehman Brothers and caused its bankruptcy.¹⁹⁵

The breakdown of all subprime mortgages itself without a doubt would have been painful. What made the situation extremely dangerous to deal with was the ballooned market for CDS, which was highly dependent on the mortgage market.

4.3 Onset of the Crisis in Summer 2008

On the CDS market, banks and other financial institutions act as sellers and as buyers. Declines in the housing market had a direct impact on the value of the CDS, affecting the value of all securities and financial products dealing with CDS.

The US housing market was characterized by a drop in housing affordability in the years 2004 – 2006 which was a result of an increase in loan interest rates.¹⁹⁶

In the US, the Federal Reserve Funds rate increased from 1% in 2005 to 5% in 2007. When properties had to be foreclosed, capital repayments and mortgage interest failed to materialize, the market prices of MBS and CDOs containing such bad debt started to fall immediately. Liquidity was close to standstill and the drop in existing US home sales was the steepest since 1989.¹⁹⁷

The subprime mortgage business collapsed, causing foreclosures to accelerate and interest rates to peak.¹⁹⁸

Economics textbooks usually assume, that if the price of a good falls, demand sparks at some point (at some low price) and kick starts commercial intercourse. What happened in the second half of 2007 in the US housing market did not match this theory. Having very weak liquidity in the market, market participants started to lose trust among each other. They suspected each other to have large amounts of liabilities to pay out due to outstanding CDS deals. On the one hand, banks stopped dealing with CDS with one another, on the other hand, the inter-bank market stopped to operate. This essential feature of the banking industry enables firms to square off

¹⁹⁵ See (Buckley 2011), p.5

¹⁹⁶ See (Goodman et al. 2008), p.5

¹⁹⁷ See (Buckley 2011), pp.5

¹⁹⁸ See (Buckley 2011), p.6

differences from daily cash in to cash out. The subsequent fear and panic hit Wall Street, the City of London and other financial centers of the world in the late summer of 2008.¹⁹⁹

On 7th of September 2008, the US government took control of the mortgage companies Freddie Mac and Fannie Mae which guaranteed or owned \$ 5 trillion of debt which accounted to nearly half of the home loan market. The government judged the risk of failure of either of them to the financial markets in the US and worldwide to be too high. Only a few days later, the situation was judged differently, when Lehman Brother filed for bankruptcy protection on 15th of September. At the very same day, one of Wall Streets “big three” investment banks, Merrill Lynch, announced to be taken over by Bank of America.

In the literature, the fall of Lehman brothers is considered to be the turning point from a downturn to an acute crisis. Banking systems worldwide were contaminated with toxic assets such as MBS and CDS which in many cases turned out to be worthless. For this reason, governments worldwide had to step in and prevent the financial system from collapsing through loans or equity injections. More than 30 banks in Europe and the US received this kind of support, among them HBOS, RBS, Goldman Sachs, Morgan Stanley, Citigroup, Commerzbank or UBS. This public intervention proved to be efficient, by early 2009, the situation seemed to have calmed down.²⁰⁰

However, the financial debacle proved to have direct implication on the real economy quickly. In the OECD area, the GDP shranked by 2,0 % in the third quarter of 2008 and by 2,1 % in the first quarter of 2009. The unemployment rate increased from 5,6% in April 2008 to 7,8% in April 2009.²⁰¹

¹⁹⁹ See (Buckley 2011), p.6

²⁰⁰ See (Cassis 2011), p.50

²⁰¹ See (Cassis 2011), p.50

4.4 The Austrian Banking Market in the Aftermath of the 2008 Recession

This section takes a look at the performance of the Austrian banking system in the years of the financial crisis.

From 2000 on, the unit labor costs in Austria – a main measure of price competitiveness – have developed considerably better than the European average. The same is true for productivity per hour and productivity per employee. Also the development of employment was positive. All these figures have the year 2000 as the base year. The Economic crisis of 2008 is clearly represented in the statistical data. Real unit labor cost increased sharply in 2008, while productivity and employment saw a trend in the opposite direction.²⁰²

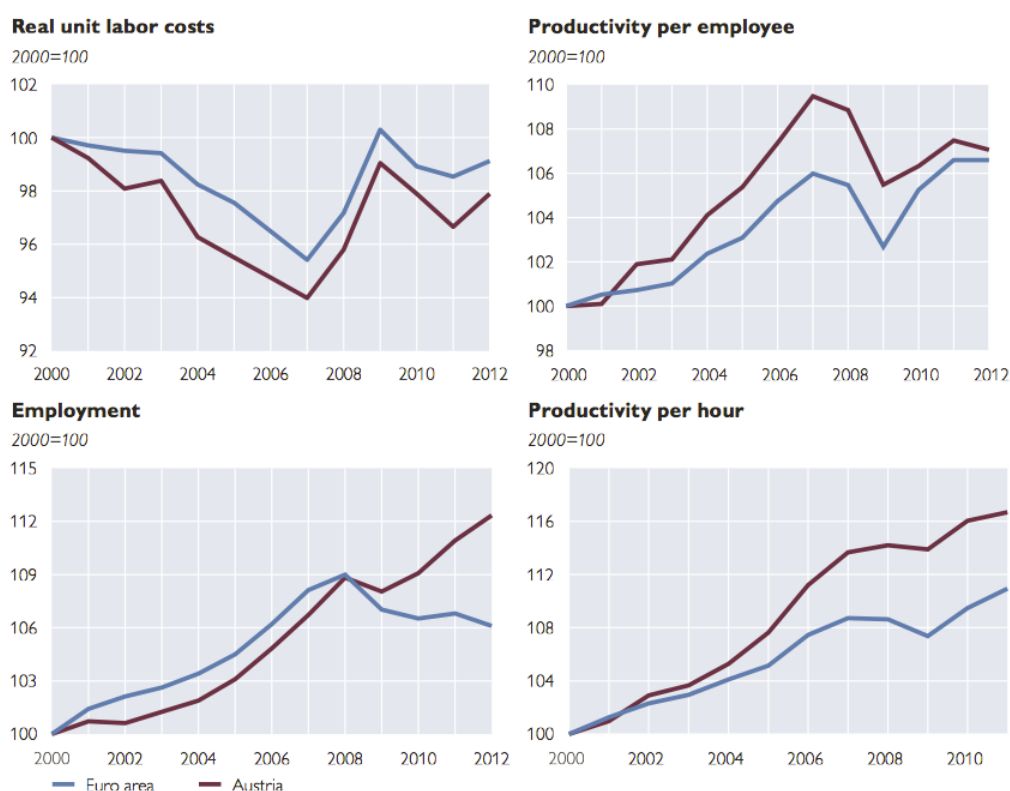


Figure 13: Austrias International Competitiveness after 2000²⁰³

In 2008, during the bankruptcy of Lehman Brothers, the Austrian Government had to intervene in order to stabilize the banking system. The parliament decided for a set of

²⁰² See (Österreichische Nationalbank 2013) p.13

²⁰³ See (Österreichische Nationalbank 2013) p.13

actions in October of the same year. It included a federal guarantee of a maximum of € 90 billion which corresponds to 31.93% of the 2008 national GDP and a 1.31 multiple of the annual budget revenues.²⁰⁴ € 75 billion of this amount was comprised of state guarantees for interbank loans, a further guarantee for liabilities and assets was capped at €15 billion.²⁰⁵ In comparison, the German government has passed a bailout fund of only 20.09% of the national GDP.²⁰⁶

The aggregated net profits of Austrian Banks were positive in the period from 2006 to 2012. In the challenging years starting in 2008, the net profits decreased sharply with a low in 2008 of € 0.6 billion. Due to regulatory requirements that have been introduced as a reaction to the crisis, banks had to strengthen their capital positions, which had a negative impact on profitability. The following table shows the aggregated profit and loss accounts of Austrian banks within 2006 - 2012.²⁰⁷

	2006	2007	2008	2009	2010	2011	2012	Q2 13
<i>EUR billion</i>								
Net interest income	14.9	18.0	19.3	19.5	20.4	20.4	19.3	9.3
Fee and commission income	6.8	8.2	8.5	7.2	7.7	7.6	7.3	3.8
Trading income	1.2	0.9	-2.1	2.6	1.0	0.8	1.1	0.0
Operating profit	9.2	11.1	7.9	15.6	13.5	10.4	12.1	5.0
Net profit	7.5	6.8	0.6	1.5	4.6	0.7	3.0	1.1

Table 8: Aggregated Profit and Loss Account of Austrian Banks between 2006 and 2013

In 2008, the aggregated capital ratio of Austrian banks was at a low with a solvency ratio of 11.0% and a tier 1 ratio of 7.7%. In the following years, these numbers have steadily increased thanks to capital measures from both private and public and a reduction in risk-weighted assets.²⁰⁸

²⁰⁴ See (Schuller 2010)

²⁰⁵ See (Goddard, Molyneux, and Wilson 2010), p.825

²⁰⁶ See (Schuller 2010)

²⁰⁷ See (Österreichische Nationalbank 2013), p.20

²⁰⁸ See (Österreichische Nationalbank 2013), p.20

	2006	2007	2008	2009	2010	2011	2012	Q2 13
	% of risk-weighted assets							
Solvency ratio	11.3	11.6	11.0	12.8	13.2	13.6	14.2	14.9
Tier-1 ratio	7.8	8.1	7.7	9.3	10.0	10.3	11.0	11.5

Table 9: Capital Ratios of Austrian Banks between 2006 and 2013

Foreign Banking Operations of Austrian Banks

The international exposure of Austrian Banks was still at a relatively high level after the 2008 crisis. In 2013, the total international exposure summed up to € 332 billion or 105% of the Austrian GDP. This is approximately at the level of the French and Spanish banking System and is well below the level of the Netherlands and the United Kingdom. The following figure depicts the consolidated foreign claims of the EU-15 Banking System as of 2013.²⁰⁹

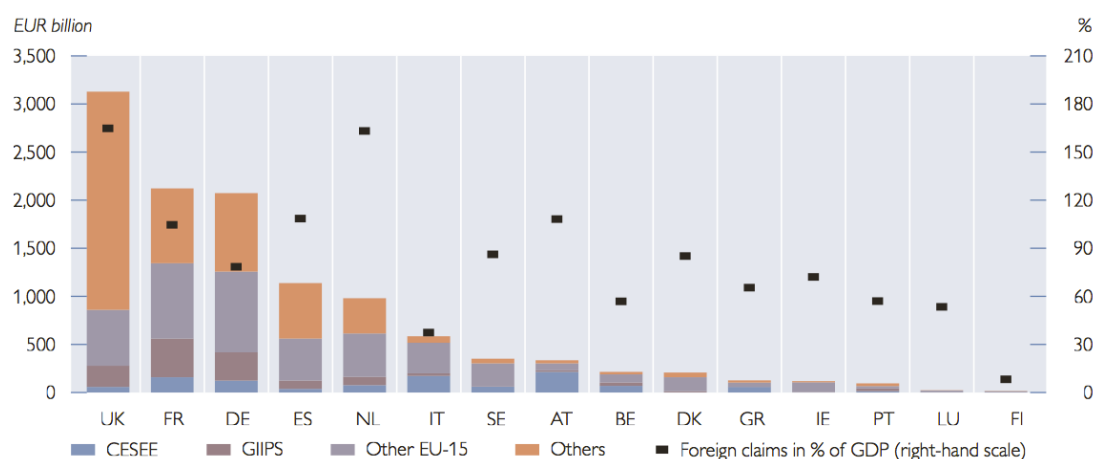


Figure 14: Consolidated Foreign Claims of the EU-15 Banking System²¹⁰

The Austrian banks were still strongly involved in the CESEE (Central, Eastern and Southeastern Europe) countries in 2013. Their involvement in countries such as Ireland, Spain or Greece was very limited. Within the CESEE region, Austrian banks accounted for 18% of the total exposure. A number, higher than for any other lender.

²⁰⁹ See (Österreichische Nationalbank 2013), pp.21

²¹⁰ See (Österreichische Nationalbank 2013), p.22

The following figure gives an overview on the involvement of foreign banks in the CESEE region.²¹¹

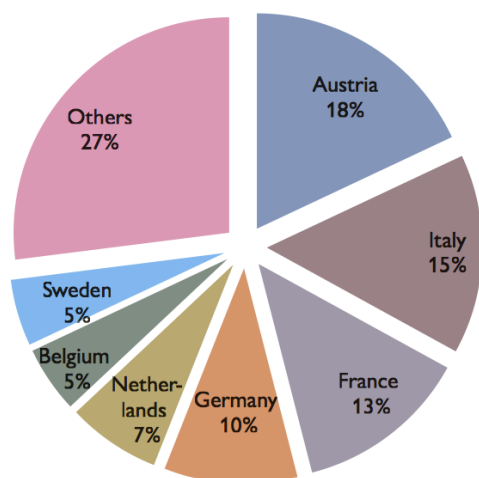


Figure 15: EU-15 Banks' Shares in Total Exposure to CESEE Countries in 2013

These activities have proven to be profitable for most institution. Nevertheless, there are certain risks that have to be considered. Exemplarily, Bank Austria has announced a record loss of € 1.6 billion in March 2014 which is a result of writing off goodwill from the activities in CEE. Also, the bank will get rid of the Ukrainian subsidiary in the near future.²¹²

Since the Austrian banking system acts as a major gateway to CESEE, it carries out significant cross-border lending. A slowdown in economic activity and growth in the CESEE countries would lead to a lower profitability, a higher share of non-performing loans and potentially solvency problems for Austrian banks. Also, the depreciation of local currency in the host countries is a potential threat for lenders, as the debt burden of borrowers increases accordingly.

If banks carry out deleveraging in the CESEE countries, a negative feedback loop could be fueled and the two previously mentioned effects could be amplified. Also the impact of public liabilities related to the financial sector may influence adverse market dynamics.²¹³

²¹¹ See (Österreichische Nationalbank 2013), p.22

²¹² See (Höller 2014)

²¹³ See (Blancher 2013), pp.43

The exposure of Austrian banks had an exposure of € 209.7 billion to the CESEE area. CESEE region is a profit driver for Austrian banks, even though the high profitability of these activities is linked to higher risks. The aggregate period result of CESEE subsidiaries was about € 2 billion in 2012, a large part of this profit came from the Russian Federation and the Czech Republic.

The macroeconomic environment has developed poorly from 2008 on. As a result, the credit quality decreased and the aggregate loan loss provision was at a high level of 8% in June 2013. Another challenge is the large amount of foreign currency loans. 44% of all loans outstanding in CESEE in 2012 were foreign currency loans.²¹⁴

The following table depicts the Austrian banks' consolidated claims as of June 2013.

Region / Country	Foreign Claims [€ billion]
CESEE & CIS	209.66
Euro Area	33.15
Slovakia	24.60
Slovenia	8.49
Estonia	0.06
Other EU Member States	140.77
Bulgaria	3.92
Latvia	0.21
Lithuania	0.15
Poland	16.46
Romania	26.65
Czech Republic	50.66
Hungary	19.39
Croatia	23.33
Other non-EU countries	17.41
Azerbaijan	0.11
Bosnia and Herzegovina	4.21
Kazakhstan	0.21
Montenegro	0.88
FYR Macedonia	0.37
Serbia	4.95
Turkey	1.46
Ukraine	5.23

²¹⁴ See (Österreichische Nationalbank 2013), pp.22

Selected Western European countries	
Germany	30.87
France	11.02
Greece	0.19
United Kingdom	14.58
Ireland	1.22
Italy	12.06
Netherlands	6.94
Portugal	0.55
Sweden	1.46
Switzerland	5.45
Spain	3.06

Table 10: Austrian Banks' Consolidated Foreign Claims²¹⁵

Bank Branches and Employees of Austrian Banks

The domestic Austrian banking market is crowded with a large number of branches, compared to the population and a low average size of a bank branch.²¹⁶ Operational costs subsequently increase and lead to lower profitability as well as lower economies of scale.²¹⁷

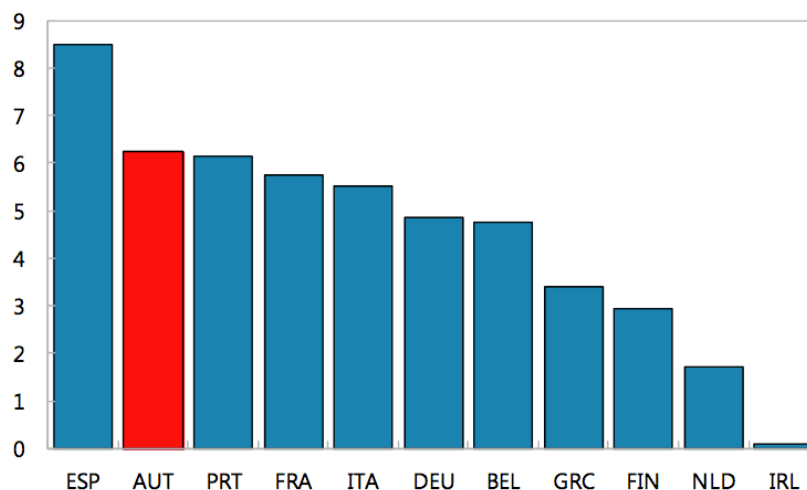


Figure 16: Selected Euro Area Countries: Bank Branches per 10000 Inhabitants in 2012²¹⁸

²¹⁵ See (Österreichische Nationalbank 2013), p.23

²¹⁶ See (Theurl 1993), p.586

²¹⁷ See (Blancher 2013), pp.20

²¹⁸ See (Blancher 2013), p.21

Also, the bank employee density is very high in Austria. 93 bank employees per 10.000 inhabitants is the highest value of all European countries. The following figure gives an overview on the situation in Europe when it comes to bank employee density.

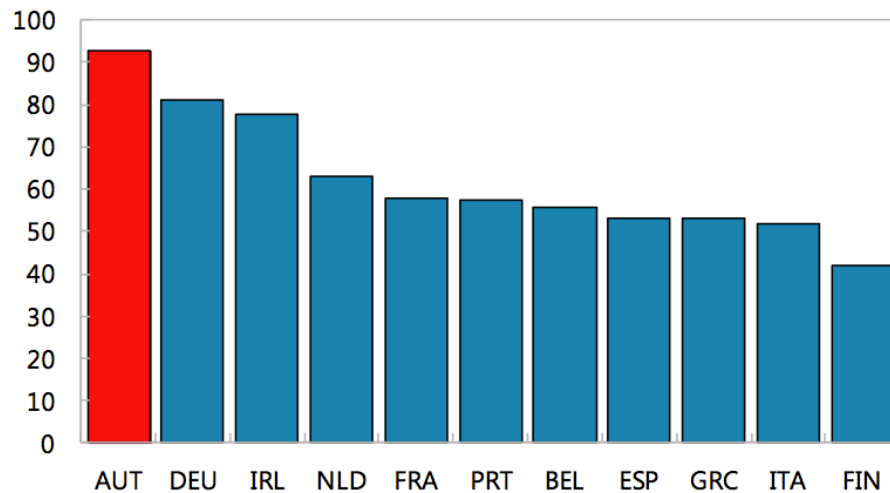


Figure 17: Selected Euro Area Countries: Number of Bank Employees per 10,000 Inhabitants (2011)²¹⁹

Another structural challenge for Austrian banks in the aftermath of the 2008 crisis is the increasing penetration of non-traditional retail banks as well as co-branching, retail banking and online banking.²²⁰

²¹⁹ See (Blancher 2013), p.21

²²⁰ See (Blancher 2013), p.21

5 CONCLUSIO

The text at hand aims to give the reader a historical overview on the Austrian banking industry within the last century. After the First World War, hyperinflation which peaked in 1922 lead to significant losses of the large banking houses. Only 9 branches of previously 143 in former non-Austrian territories of the Habsburg Monarchy remained in 1924. In the 1950ies when World War II was overcome, Austrian banks faced a highly regulated and segmented environment. Post-war growth changed the dynamics and structure of the monetary system and paved the way for structural change in the 1970ies. From a system of specialized banking institutions, a trend towards universal banks was observable. At the same time, economic circumstances also changed. Many primary and half-finished products were produced, while R&D intensive products were of relatively subordinated standing. Rising oil and commodity prices, the equity gap as well as weak economic policy served as explanations for these structural problems and changes. While Europe has experienced a continuous catching-up process compared to the US, with the structural break in the 1970ies, this development has come to an end, leading to higher uncertainty not exclusively but also in the banking industry. Observers diagnose that the courage of taking risks has suffered from this break in politics as well as among businessmen. Subsequently, the challenge of calculating risk has become harder in these times of little growth.

Still in the 1980ies, the Austrian banking system displayed close interlocking with the state and considerable holdings in industrial and trade operations. Prior to the Austrian entry to the EU in 1995, the national banking environment has seen liberalization of the regulatory framework. Along with the EU accession, competitive pressure increased and accessibility to the CESEE countries was facilitated. Today in 2014, the Austrian banking sector is very concentrated with the five largest banks representing more than 60% of the balance sheet total of the overall banking sector.

The history of the banking system in Austria suggests, that the capital structure of a bank can feature indications for future disruption. The composition of sources and uses of funds, which constitute the capital structure of a banking institution, is depicted in the balancing scheme of a bank. How to calculate the appropriate level of capital is one of the key features of a successful institution. The literature features

various concepts how to evaluate potential borrowers' creditworthiness. A rather new feature that challenges banks since the structural break in the 1970ies is embedded in the rising importance of operational risk. It is the risk that is connected to failed internal processes, to people or to external events. These risks have triggered spectacular corporate losses in the first decade of the 21st century. The Basel Accords that have been implemented in the banking industry since 1988 are an attempt by politics and financial authorities to approach challenges that emerged since the structural break by providing supervisory standards that strengthen the stability of financial systems. Key elements of the Basel Accords are minimum capital requirements, supervisory review for risk capital and measures to monitor market discipline.

Introduction of the Basel Accords did not have the stabilizing effect that the inventors wished for, nevertheless the global recession of 2008 came as an unexpected event for many market participants, leading to a shrinking global economy in 2009 for the first time since 2009. In the literature, one major trigger for the crisis was the high debt to equity ratio of many banks that was only possible due to deregulation in the banking systems worldwide prior to the 2008 recession. New models of lending and new models of investing that involved financial instruments such as credit default swaps and mortgage backed securities laid the foundation for the proceedings starting in summer 2008, when the Lehman Brothers had to file bankruptcy. The effects of the financial crisis on the Austrian banking market were apparent quickly: The Austrian government provided a bailout fund with federal guarantees of € 90 billion in order to stabilize the situation. Also credit quality decreased in the aftermaths of 2008, especially in the CESEE region, where the Austrian banks traditionally hold high exposures.

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7 ABSTRACT

English

This thesis examines the development of the Austrian banking system from 1914 - 2014 with an emphasis on the structural change in the 1970ies and the roots and consequences of the global recession of 2008. After the First World War, significant losses in the sector lead to a significant decrease of bank branches. The situation did not calm down until the 1950ies, when banks faced a highly regulated and segmented environment. In the 1970ies, a structural break in the banking environment was observable. A system of specialized banking institutions made way for universal banks. I argue, that the capital structure of a bank can feature indications for future disruption. Based on this argumentation, capital structure and balancing of commercial banks are investigated, introducing explanations for the emergence of the 2008 recession. Operational risk, that has received increasing attention in the past decades is tackled through the Basle Accords, which are introduced in this thesis. The effects of the crisis of 2008 on the Austrian banking sector are introduced as the concluding subject.

German

Diese Arbeit untersucht die Entwicklung des österreichischen Bankensystems im Zeitraum von 1914-2014. Dabei werden die beiden Perioden der strukturellen Veränderung in den 1970er Jahren und die globale Rezession 2008 Schwerpunktmäßig betrachtet. Nach dem ersten Weltkrieg hatte der Bankensektor mit großen Verlusten zu kämpfen, was sich in einer signifikanten Reduktion der Bankfilialen niederschlug. Die Situation hat sich bis in die 1950er Jahre nicht beruhigt, in denen Banken in einer hochregulierten und segmentierten Umgebung operierten. In den 1970er Jahren war eine strukturelle Veränderung im Bankenwesen wahrnehmbar. Ein System spezialisierter Bankenhäuser wurde von Universalbanken abgelöst. Vorliegende Arbeit argumentiert, dass die Kapitalstruktur einer Bank Indikatoren für künftige finanzielle Diskontinuität enthalten kann. Basierend auf dieser Argumentation werden Kapitalstruktur und Bilanzierung im Bankenwesen untersucht und stellen Erklärungsversuche für den Ausbruch der Rezession von 2008 vor. Operatives Risiko, welches in den vergangenen Dekaden wachsende Aufmerksamkeit erhalten hat, wird durch die Basel Bestimmungen adressiert, welche in dieser Arbeit auch behandelt werden. Die Auswirkungen der Krise von 2008 auf den österreichischen Bankensektor sind abschließend Untersuchungsgegenstand.

Curriculum Vitae

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Work Experience

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