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The future of banking:

Are innovative business models a threat to traditional banks?

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Statutory Declaration

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Abstract

The financial crisis of 2008 forever changed the landscape of the financial services industry. To prevent the recurrence of the crisis and foster safe and sound banking system which is resilient against sudden shocks, a series of new regulatory measures were introduced. Starting with a structural analysis of the European banking system, this paper intends to provide an overview of the recent trends characterizing the banking industry as well as the immediate challenges facing the banks in the post-crisis world. Moreover, both positive and negative effects of Basel III are being discussed whereas emphasis is being put on the potential effect of increased regulatory demands on banks' ability and/or willingness to lend and on the economic recovery. Furthermore, this paper also argues that the increased risk aversion of banks coupled with the banks' reluctance to lend has created a perfect opportunity for alternative financial services providers to come and fill up the void left by banks. Other contributing factors include digital revolution, low barriers to entry, demographic shifts, and trust in banks being at all-time low as well as poor customer service. This paper concludes that while banks will still play an important role in the financial services industry, their importance might decline over time. In the future, we might expect to see more and more financial services which were traditionally offered by banks being offered by innovative non-bank financial services providers. These developments will not only foster a more competitive financial system and more efficient capital allocation, but most importantly they will benefit consumers who will enjoy better access to finance also in times of bank distress. Other benefits include improved customer experience and cost savings for credit takers.

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List of Abbreviations

BIS	Bank for International Settlements
CET 1	Common Equity Tier 1
ECB	European Central Bank
FED	Federal Reserve System
FCA	Financial Conduct Authority
FDIC	Federal Deposit Insurance Corporation
FinTech	Financial Technology
FSCS	Financial Services Compensation Scheme
IPO	Initial Public Offering
ISA	Individual Savings Account
LCR	Liquidity Coverage Ratio
NSFR	Net Stable Funding Ratio
OTC	Over-the-counter
P2P	Peer-to-Peer
ROE	Return on Equity
RWA	Risk-weighted Assets
SAFE	Survey on the Access to Finance of Enterprises
SBA	Small Business Act
SEC	Securities and Exchange Commission
SME	Small and Medium-Sized Enterprises
SPV	Special Purpose Vehicle
TLTRO	Target Long Term Refinancing Operations

1 Introduction

While the financial crisis of 2008 will definitely go down in history as one of the main events shaping the landscape of the financial services sector around the globe in the years ahead, in order to be able to move forward and not repeat the past mistakes, one needs to go down the memory line and try to understand the roots of the crisis. There are differing views about what caused the financial crisis ranging from the increased globalization, financial innovation, too accommodative monetary policy and the prolonged period of the low interest rates as well as different initiatives aimed to promote homeownership in the US. While all these factors have without doubt had their share in the recent crisis' buildup, one needs to also consider the part played by regulation. According to some industry observers, the roots of the crisis can be traced back to the 1980s, which saw the formation of bank capital regulation, the so called Basel I. Paradoxically, while the main goal of the regulation was to promote stability and improve the resilience of the banking sector, evidence suggests that it indirectly contributed to its 'near collapse'. Not only did the capital regulation failed to contain or alleviate the consequences of the financial crisis, it has later on also contributed to the European sovereign debt crisis.

In their attempt to prevent the recurrence of the crisis, policymakers introduced an updated set of regulatory requirements, known as Basel III. Most significant changes include the higher CET 1 capital ratio, stricter capital definition, new liquidity rules as well as some macroprudential measures. While bank lobbyist argue that the capital regulation in its present form is too restrictive and might exert a negative impact on lending, they often forget the positive effects a better capitalized banking system entails as well as the fact that before the Basel I took effect, banks held more capital than they do now.

To reduce the potential negative impact of the regulation on the economy and the banks' willingness and/or ability to supply new credit, the deadline for banks to implement the Basel III requirements has been extended to 2019. While there has certainly been a need to transform the banking system and the newly introduced regulation has all the prerequisites to make the global financial system safer and more resilient toward future shocks, some industry observers worry that the regulation in its current form might harm the much needed economic recovery in Europe.

While the demand for credit has been rather subdued in the years after the crisis due to the bleak economic outlook, the banks' ability and/or willingness to provide new lending has also decreased especially as a result of the increased regulatory demands. Instead of providing new credit, banks have been concentrating on cleaning up their balance sheets and reducing their overall assets to comply with the new regulation. In this new world, the banks which wanted to survive needed to fundamentally change their strategy and focus on their core markets and products, reduce their presence abroad as well as retrench from non-core assets and services. As a result, the banking sector in Europe has substantially shrank in size in the recent years leaving a lending void.

While banking sector has been going through series of changes, digital revolution has been already underway allowing non-bank financial services providers to step in and fill up the void left by the banks. The advances in technology have significantly decreased the barriers to entry and enabled the new players to take away part of the business which was traditionally perceived to belong exclusively into banks' territory. While these new entrants might not seem to pose a threat to banks at first glance since they tend to offer non-core banking services and are small in size, they might start to as they grow in size and expand their presence into more and more services traditionally offered by banks. At present, we might find alternative financial service providers offering loans, foreign exchange as well as wealth management services and other.

While current accounts and mortgage business is still dominated by banks, this might also change in the few years' time. The threat of new entrants consists in the fact that they are better able to serve customer needs and what is even more important as they embraced the new technology they can more easily adapt to the changing trends what unfortunately cannot be said about the conventional banks which are constrained in their responsiveness/innovativeness due to legacy issues. Technology will without doubt shape the future of banking and change the old ways of banking. Once again, banks willing to survive will need to innovate and refocus toward improving the customer experience, otherwise they risk losing substantial share of their customer base to technologically more agile and innovative competitors. There is also a high probability that banks will see the emergence of new fintech start-ups rather as an opportunity and will in consequence form partnerships. The competition might also come from some established players from other industries such as telecoms, retail or tech giants like Google or Apple.

Now the question remains, how can it be that these new players, novices to the banking world do even stand a chance against large, well established banks, shouldn't all the new regulation that came into force following the crisis make the banks look more credible in the eyes of a public, convince them that their money is safe at banks and that the scenario in which banks had to be bailed out with their money is not going to happen again? The answer is not entirely and the reason is that the financial crisis of 2008 changed public perceptions of banking industry. Nowadays, we are living in times when trust in banks is at the all times low, people are fed up with banks who pursue their own interests, undertake risky venues not thinking about their depositor's money, charge exorbitant fees and different banking scandals only further fueled their discomfort.

But this is only one side of the coin, another aspect to consider is the fact that in the aftermath of the crisis it became increasingly difficult to obtain the credit so naturally people started to look for alternatives and peer-to-peer lending, crowdfunding and other alternative financial services providers managed to some extent to fill the void left out by banks. Difficulties with obtaining credit due to insufficient credit history, high fees, poor customer service, bank's lagging in mobile banking services all constitute possible reasons for opting for alternative financial service providers.

Results of various polls point out the fact that banks to a large extent fail to meet the expectations and demands of their customers who are as a consequence more prone to consider offerings from alternative providers (Scratch/Viacom Media Networks, 2014). One of the reasons why many customers stick with their banks is due to the long and arduous process of switching accounts. This is however also changing thanks to different initiatives that seek to foster the competition in the banking sector by making switching accounts easy and carefree.

Another alarming fact these studies showed is that the Millennials (generation born between 1981 – 2000, called also Generation Y) perceive their banking relationships to be purely transactional, not delivering any value-added and are therefore more willing to switch to new banking providers with more customer centric approach. Some of them (33%) even share the view that they will not be needing a bank in the future. The majority (73%) would even welcome the possibility to bank with likes of Google, Amazon or Square (Scratch/Viacom Media Networks, 2014). These are alarming findings which banks should not ignore because if they do they risk losing significant part of their customer base.

Nevertheless, while every day sees an emergence of a new competitor in this or that business area, it is unlikely that banks will be completely replaced by alternative financial service providers, what we might observe instead is a more diversified financial system which is better able to serve the needs of consumers. Banks and non-financial service providers might even work together to improve the customer experience. All in all, customers are to benefit from this technological shift.

The main purpose of this paper is to provide an overview of major events that shaped the European banking sector landscape in the years following the crisis as well as the main drivers behind the emergence of the alternative financial services providers. At the same time, this paper aims to answer the question of how increased regulatory requirements aimed to increase the confidence and safeguard the stability of the financial system contributed to the emergence of new players outside of the banking industry and their growing popularity. The paper is divided into three parts. The first provides an overview about the state of the European banking system as well as the newly introduced regulation. The second part talks in more detail about the impact the current economic environment and regulation have on the bank lending and the economic recovery. Finally, we will talk about peer-to-peer lending platforms, a relatively new class of alternative financial service providers that are starting to gain traction in consumer lending industry and what is their competitive advantage compared to the conventional banks.

2 Structural analysis of the European Banking sector

The financial crisis of 2008 forever changed the landscape of the banking industry as we knew it. In the years leading up to the crisis banking sector assets grew substantially as banks continued to expand their operations overseas and became more interconnected, all of which only aggravated the build-up of the systemic risk in the financial system. In the European Union alone, the value of total assets held by the financial institutions was equivalent to 350% of EU's GDP. The largest banks' assets totaled more than €1 trillion each. In order to grow their balance sheets and maximize their returns, banks significantly increased their leverage ratios. Banks grew not only in size, but also in complexity meanwhile a short-term wholesale funding became the preferred funding source. The introduction of new, complex financial instruments helped banks to grow their on and off balance sheet activities which once again contributed to the growing size of the sector (European Commission, 2014).

Weak supervision, a failure to adapt the regulations to the new reality of increasingly integrated international markets, too big to fail problem, risks associated with growing derivatives and shadow banking systems which remained largely unregulated, poor risk management and governance, insufficient capital buffers - the crisis revealed serious inefficiencies and vulnerabilities of the banking system and led to a series of structural reforms, a long process which has still a long way to go and whose effectiveness and adequacy has spurred a lot of criticism over the years (Cosimano & Hakura, 2011; Acharya V. M., 2012). While the proponents of the new set of regulation argue that stricter capital regulation will benefit the economy as it will prevent banks from using excessive leverage and therefore decrease the likelihood/severity of future financial crises as well as the costs to the taxpayers and promote a more stable financial system, there are others who predict that these new regulatory rules will negatively affect the banks' lending activities and dampen the much needed economic growth. There is enough academic research lending support to both theories as well as invalidating the arguments of each other. Nevertheless, one thing remains clear and that is that things could not have proceeded the way they were in the past, the banking landscape had to be transformed so that financial institutions can go back to their original mission - serving and meeting the needs of the society and supporting the economic growth.

Although it might appear that it was the Wall Street bankers who started it, the financial crisis of 2008 alone could not have sufficed to trigger a sovereign debt of such multitude which erupted in the Europe in the years ahead. If Europe did not face other

structural problems at that time, it would be now, seven years after the crisis, also on the path toward the recovery as the US. The introduction of the single currency in 1999, the flawed design of economic and monetary union, the lack of banking and fiscal union, the excessive credit boom in the periphery countries in the years 2003-2007 financed by the banking sector and the consequent use of these funds to finance house bubbles or excessive government spending, the high current account deficits run by the periphery and the sudden stop in the cross-border capital flows as a result of the financial crisis of 2008 all lie at the roots of the crisis. It was just a matter of time for the vulnerabilities of the European financial system to be revealed.

The financial crisis has had far-reaching consequences for the European economy. In the four years following the crisis the European governments combined contributed more than EUR 1.5 million in state aid to help the financial system to stay afloat and prevent the complete breakdown. Moreover in its attempt to provide struggling banks with the necessary funding during interbank market freeze, the ECB pumped additional € 1 trillion in liquidity to the European banks between 2011 and 2012 as part of their long term refinancing operations. GDP losses, rise in unemployment and inequality, the loss of household wealth during the crisis all shattered the public's trust in the financial system. According to the survey carried out at the request of European Commission, 63% of EU citizens lost trust in the financial system whereas 41% report losing confidence in their own banks (European Commision, 2013).

It has been almost seven years since the onset of the crisis and whereas the things seem to be turning around for the US banks, the European banks are still far away from reaching the pre-crisis profitability. These differences can be partially explained by the overall state of the economy. While there are clear signs that the US is heading towards recovery with GDP growth expected to reach 3.2% in 2015, the outlook for Euro Area remains dim with expected growth at only 1.1% (World Bank Group, 2015). Another important factor driving the recovery in the US is an unemployment rate, which is in case of the Euro Area at 11.5% twice as high as in the US, where the jobless rate declined to the 5.6% (Trading Economics, 2015). Moreover, the US banks have in comparison to their European peers an advantage of stable revenue stream, lower loan loss provisions due to the improved quality of their assets and most importantly the growth in corporate lending which is still sluggish in Europe (Schildback, Wenzel, & Speyer, 2013).

2.1 The Banking System Structure in the Euro Area

Ever since the crisis erupted, the euro area as well as EU banking sector has been going through profound restructuring and consolidation process. Banks which wanted to survive needed to adapt to the new reality of a post-crisis world and the increased regulatory demands, repair their balance sheets, deleverage and build up capital buffers. Nevertheless, not all were able to withstand the crisis and its consequences and as a result were forced to go out of the business.

According to the ECB's banking structures report (2014), the number of the credit institutions both in the EU and euro area has been steadily declining after 2008. In just five years following the crisis, 742 credit institutions ceased to exist, if calculated on non-consolidated basis. This represents an overall reduction of 11.1% in the total number of financial institutions (see figure 1). However, this does not necessarily mean that all these institutions went bankrupt, many of them engaged in within-group consolidation with a few examples of mergers. Most banks have also reduced the number of bank branches in order to optimize costs (ECB, 2014).

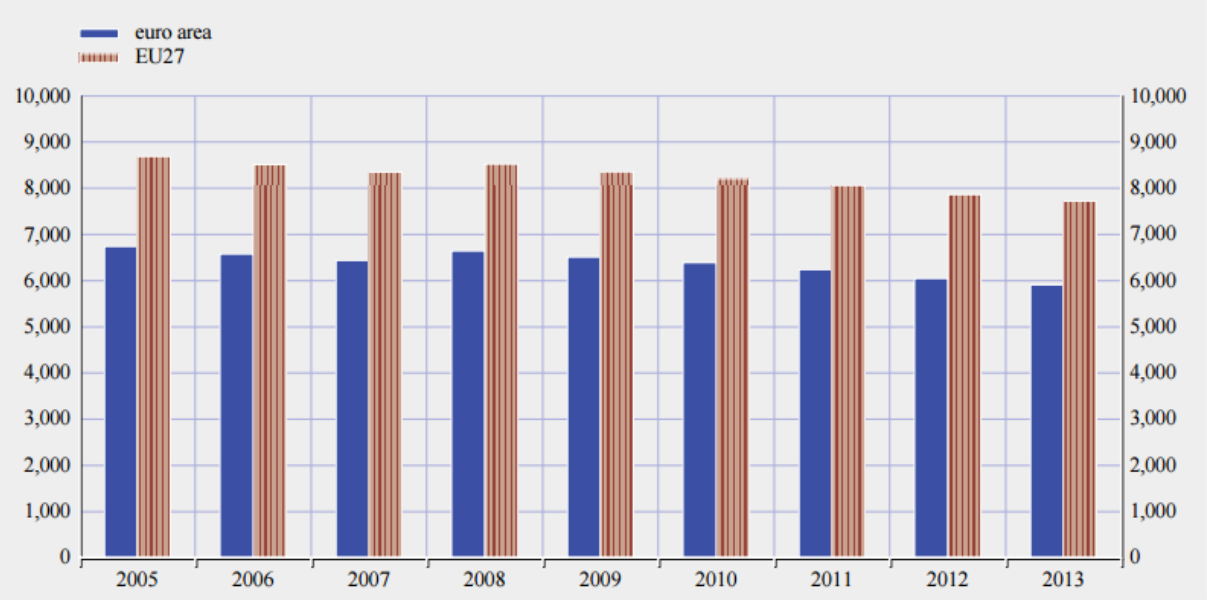


Figure 1: The number of credit institutions in EU27 and the euro area. Adapted from (ECB, 2014)

Nevertheless, the consolidation in the European banking sector has not been as profound as one would have wished for. Ever since the financial crisis erupted in 2008, the level of M&A has been steadily declining both in terms of total volume and number of deals. Although there has been a short revival in 2013 in the M&A activity in terms of number of transactions it still far below the levels seen 2001 when it hit a new peak of 100 transactions.

Moreover, majority of the mergers which took place since 2008 were domestic and low transaction value suggesting that they were not 'actual mergers or takeovers' but rather a result of within group consolidation efforts. The total value of transactions has been also steadily declining since 2008. In just five years it contracted by €31 billion, representing a decline of 80%. In 2013 and the first half of 2014 there were just 3 examples of M&A transactions exceeding € 1 billion in value (ECB, October 2014).

The size of the Eurozone banking sector shrunk by almost 20% since 2008, amounting to approximately €27 trillion at the end of 2013, with Cypriot and Estonian banking systems experiencing the largest reductions in terms of total assets. The main drivers behind the reduction in the total assets were strong deleveraging efforts on part of the banks, an inevitable part of the balance sheet repair exercise as well as unwinding of derivatives business and the wide-spread cutback in the lending activity (ECB, 2014).

One thing that remained unchanged was the clear dominance of Austrian, German, Italian and French banks which even after the rationalization process account for almost 65% of the Eurozone banks. Germany continues to lead the ranks as a country with the largest banking system with total assets amounting to €6.7 trillion. The second place goes to France with total assets worth €6.3 trillion. Nevertheless, the picture looks quite different when taking total assets as a share of GDP as a proxy for determining the size of the banking sector. In that case, Luxembourg would win a country with the largest banking sector with total assets reaching 1579% of GDP (ECB, 2014).

Moreover, as the total number of institutions and the ongoing consolidation process is negatively correlated with the level of market concentration, those countries which saw the highest reduction in the total number of credit institutions after the crisis were also the ones where market concentration levels increased the most. In 2013, the countries with most concentrated banking sectors were the ones going through the most comprehensive restructurings such as Greece, Cyprus and Spain while the ones with most fragmented banking sectors include Luxembourg, Germany, Austria and Italy (ECB, 2014).

2.2 Balance Sheet Structure of the EU Banks

As mentioned in the previous chapter, the size of the euro area banking sector continued to shrink also throughout 2013. While decline in the reported derivative positions accounted for around half of the decrease of the total banking assets, reduction in lending contributed to the decline by further 25%. Nevertheless, given the fact that total assets diminished at faster pace than the loan book, the share of loans in total banking assets and receivables has increased on aggregate. There are however differences in the banks' asset structure across different euro area countries. For instance, while the share of total loans in the total assets reaches around 80% in Cyprus and Greece, in Germany and France it is only slightly above 50%. German and French banks, on the other hold more trading assets as they are traditionally more active in investment banking compared to the other EU countries which have continued to reduce their trading books throughout 2013. This tendency was also more pronounced in larger banks then medium-sized and small banks. All in all, the share of debt securities remains still pretty high despite most banks' continuing efforts to decrease their sovereign debt exposure with most notable examples being Spain and Italy. It is mainly driven by the reduction in the total value of assets (ECB, 2014).

The reliance on wholesale sources of funding has also continued to decrease as banks refocused on using predominantly retail deposits as a main funding source. The subdued lending activity combined with the rising share of retail deposits contributed to the overall reduction in the median loan-to-deposit ratio by another 8% to 112% in the period from 2012 until the mid-2014. Moreover, in 2013 multiple banks paid back the crisis loans they received from EBC as part of their long term refinancing operations thereby reducing their reliance on ECB for funding (ECB, 2014).

The year 2013 was a successful year as many banks continued to improve their capital ratios. The Tier 1 capital ratio for EU-28 credit institutions stood at 13.65% by the end of 2013. This improvement is to a large extent attributable to banks´ continuing efforts to reduce their stock of risk-weighted assets and, to a lesser extent, new equity issuances. Similarly, banks also increased their levels of total equity-to-total assets to 5.83% as of the end of 2013 driven mainly by reduction of the total assets (see figure 2).

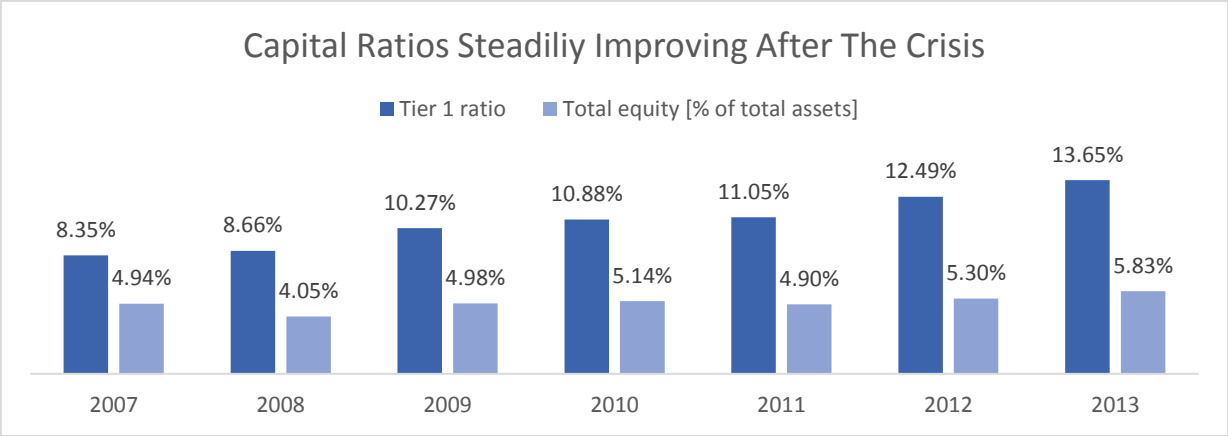


Figure 2: The historical development of capital ratios. Source: ECB Statistical Data Warehouse

2.3 Special Focus: Comprehensive Assessment

The period from November 2013 to October 2014 was especially intense for Europe's banking sector as 130 largest and/or most significant Eurozone banks underwent the most comprehensive review of their assets so far and stress tests which besides increasing the transparency and confidence into the European banking system aimed to examine the resilience of banking models in case of adverse economic conditions and by identifying the potential problem areas ahead of time to strengthen banks' balance sheets and make banks more resilient. Both exercises were compiled as part of the Comprehensive Assessment under the auspices of ECB prior to the ECB taking over the role of a central supervisory body in November 2014. The scope of this review was unprecedented mainly because the participating banks on aggregate hold approximately €22 trillion in assets, representing 85% of total Eurozone banking assets. Moreover, according to the estimates, around 58% of total RWAs were subject to review (ECB, 2014).

The improvement in capital ratios observed in the recent years has been without doubt influenced by this exercise as it has ordered banks to hold a minimum 8% Tier 1 capital (4,5% CET 1 + 2,5% capital conservation buffer + 1% surcharge for systematically important banks). It is estimated that banks raised approximately €257 in additional capital since the announcement of the exercise in July 2014 until September 2014 (ECB, 2014).

Both, Asset Quality Review and Stress testing are believed to have contributed to the banks' reluctance to supply new credit as banks wanted to avoid carrying any more risk on their balance sheets and pass the test. In fact, by reducing lending they were able to boost their capital ratios. Now that the exercise is over, it remains to be seen if banks will become more willing to lend although the latest total lending volumes to both non-financial companies and

households as well as the continuing trend toward credit standards easing show that this is already happening. Nevertheless, it seems as if these positive developments were driven mainly by the launch of ECB‘s quantitative easing than by the fact that the exercise is finally over. One also needs to consider that growth in bank lending goes hand in hand with credit demand which given the ongoing economic weakness of the Eurozone remains still subdued compared to the pre-crisis levels.

2.4 Profitability

New regulatory requirements, continuing balance sheet repairs, high loan loss provision coverage ratios due to still high amounts of non-performing loans, impairment charges, restructuring costs as well as legal charges are all taking a toll on bank’s profitability. Taking all this account, it is not much of a surprise that the European banking sector’s performance continued to be weak also throughout 2013. In the years leading up to the crisis, banking business was thriving. The invention of mortgage-backed securities and other innovative derivative products drove the bank’s profits to record highs. Seven years later, most of the European banks are still far away from their pre-crisis profitability levels (ECB, 2014).

Nevertheless, the good news is that in 2013 most banking sectors across Eurozone observed gains in their operating profits with exception of just five countries which recorded a decrease in their operational profits but which still managed to stay away from the negative territory. The main driver behind these positive developments is on one hand side, the increase in the net income generated through fees and commissions as well as the overall gains on the financial assets. However, one needs to be careful when making generalizations because there are significant inter-country variations. For instance, banks based in countries with more developed capital markets are likely to earn more on fees and commissions as a result of being active in underwriting business. The net interest income remained subdued and still far away from the pre-crisis levels mostly due to reduction of lending business as well as the balance sheet cleanup efforts (ECB, 2014).

Unfortunately there is no data available in the ECB Statistical Data Warehouse for return on equity for EU 28 banks prior to 2010. Nevertheless, the most interesting observation is anyway the drop which occurred in 2011 just around the time when European sovereign debt crisis was spiraling out of control (see figure 3). This is particularly interesting as European banks did pretty well in the years after the crisis, particularly in 2009 and 2010 when they even outperformed their US counterparts, the real trouble occurred once the

European debt crisis unfolded (Schildback, Wenzel, & Speyer, 2013). Nevertheless, despite the improvement in ROE levels in the last two years, it is still pretty low compared to the historical levels. In 2007, the (after-tax) ROE was around 16%.

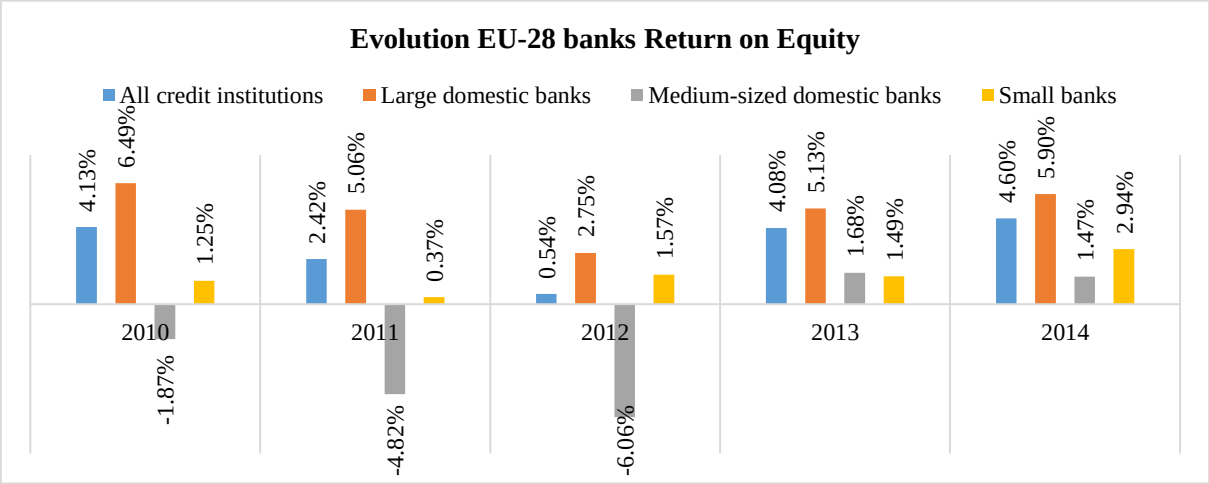


Figure 3: The return on equity. Source: ECB Statistical Data Warehouse

In their recent report, Boston Consulting Group looked at the current state of the banking industry in different regions of the world from the period 2009-2013 and came to an alarming conclusion that European banks are severely lagging behind the financial institutions from the rest of the world in terms of profitability and are as of now the worst performers (Grasshoff, Pfuhler, Gittfried, & Saelens, 2014). While US banks generated an economic profit of roughly €25 billion in 2013, their European peers were the only ones still in a negative territory recording an economic loss of -€136 billion (see figure 4). The Asia-Pacific banks are by far the most profitable ones generating as much as -€112 billion of EP in 2013.

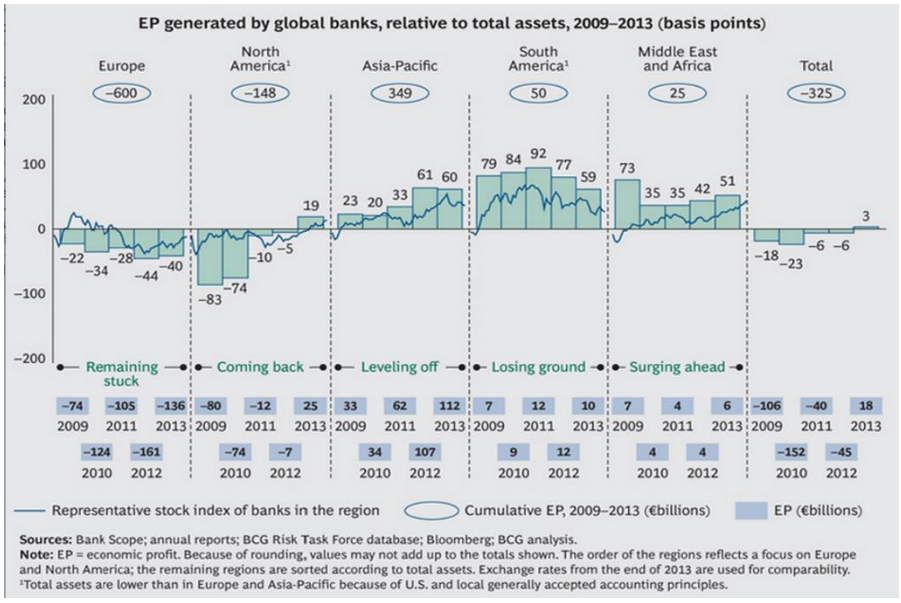
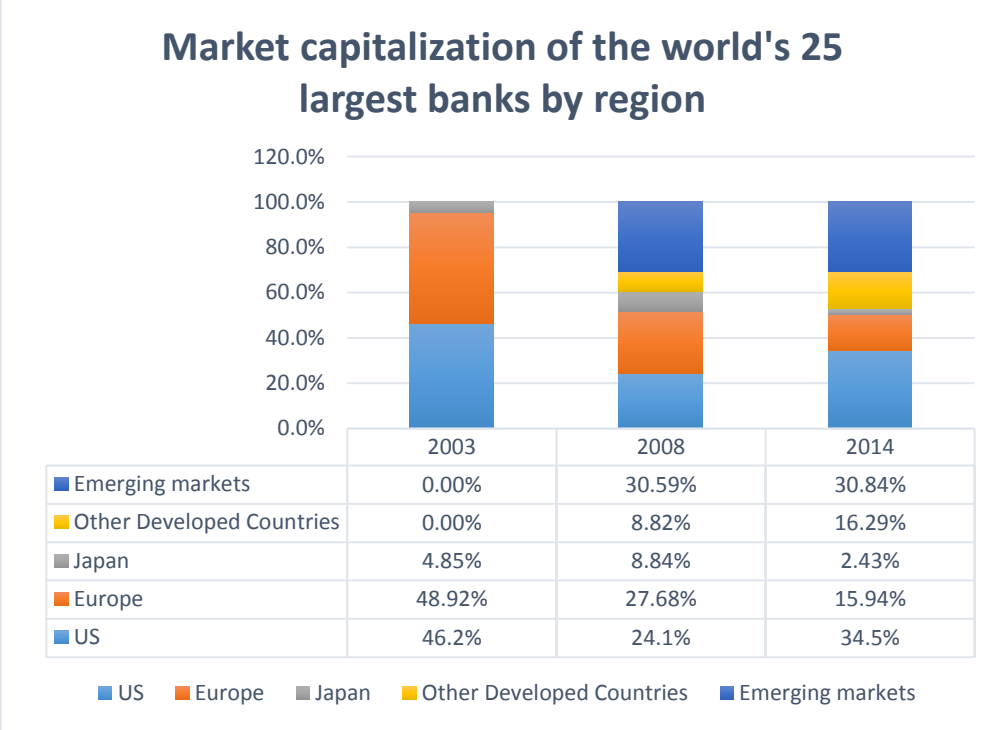


Figure 4: European banks' profitability vis-à-vis the rest of the world. Adapted from (Grasshoff, Pfuhler, Gittfried, & Saelens, 2014)

2.5 Market Capitalization

In the years leading up to the crisis, the European banks were strongly represented among the world's biggest 25 banks, accounting for almost a half of a combined market capitalization. Nevertheless, a lot has changed since the crisis. In 2014, the European banks held only 16% market share (see figure 5). While European banks started to lose their importance in global finance, the opposite held true for financial institutions from other developed countries as well as emerging countries, which strengthened their footprint in the world of finance. In 2014, the Chinese banks alone accounted for almost 29% of the global market share. US banks also seemed to gain traction with their market share rising to 34.5%, an increase of 10% since the height of the crisis (Relbanks, 2015).



	2003	2008	2014
Emerging markets	0.00%	30.59%	30.84%
Other Developed Countries	0.00%	8.82%	16.29%
Japan	4.85%	8.84%	2.43%
Europe	48.92%	27.68%	15.94%
US	46.2%	24.1%	34.5%

Figure 5: Market capitalization of the world's 25 largest banks by region. Source: (Relbanks, 2015)

2.6 The Rise of Shadow Banking

The unprecedented rise of the shadow banking sector since 1999 is not only a euro area phenomenon but a worldwide trend. In case of the Eurozone, the assets held by shadow banks commonly characterized as performing bank-like functions represented a quarter of the entire financial system assets in 1999, whereas by the end of the 2013 they amounted to more than EUR 19 trillion out of EUR 57 trillion, a third of the total assets. While the assets of the financial system as a whole almost doubled over this period, the growth of the shadow banks was the most profound owing to several factors, especially the gradual asset reduction undertaken by the banks from the mid-2012 onwards as a result of a need to meet new regulatory ratios (ECB, 2014).

Although the total assets held by the credit institutions were constantly rising over the last decade, their market share decreased by 7% to 52%. The Eurozone's financial system remains to be dominated by banks with exception of just three countries, namely Luxembourg, Netherlands and Ireland where shadow banks' market share is higher than that of the traditional banks. Shadow banks have proved especially helpful during the recent crisis when they helped to alleviate the negative consequences by stepping in to provide the much needed financing to the real economy, something what traditional banks were at that time constrained to do. Moreover, they also help to spread the risks. Altogether they provided more than €2 trillion in credit to the non-financial institutions. Nevertheless, the growing size of the shadow banking sector in the euro era is alarming because of the interconnectedness with the traditional banking sector as well as because these institutions similarly as banks engage in maturity transformation, face liquidity risks and are highly leveraged, although the amount of leverage differs depending on the specific type of shadow banking entity (ECB, 2014).

2.7 Regulation

The main purpose of the regulation is to ensure correct functioning of the financial markets, to correct market failures when needed and to minimize the negative spillover effects these market failures might have on the society and the real economy. The financial crisis revealed that the existing regulatory framework for financial institutions was both inadequate and insufficient. In fact, there is a growing amount of evidence that the regulation contributed to the financial crisis buildup (Slovik, 2012; Acharya & Richardson, 2009).

In their attempt to solve some of the problems of the previous regulation and prevent the scenario in which banks exploit regulatory loopholes in a way that might threaten the stability of the whole system, policy makers introduced an updated rulebook Basel III which is scheduled to take full effect in 2019.The Basel III aims to make the financial system more stable and resilient to future shocks by improving banks' loss absorbing capacity and discouraging the extensive use of leverage. This should be achieved by introducing stricter capital requirements, more restrictive definitions of capital and new liquidity rules. In addition, it also aims to increase the trust and confidence into the banking system by improving transparency and imposing additional measures on systematically important banks which were blamed for the recent crisis becoming a first regulatory approach which tackles the too-big-to-fail problem.

The impact of Basel III can be already observed in the recent steps of large banks which besides engaging in massive restructurings of their operations, reduced their total assets, trading and derivative business as well as withdrew from some non-core markets. One of the main goals of the recent regulatory initiative is also to facilitate a painless resolution of failing banks (Onaran, Comfort, & Moore, 2015) without severely impacting the broader financial system. It also aims to prevent the scenario where large banks needed to be bailed out by taxpayers' money. Despite the recent improvements, various scholars voiced their concern that the Basel III might fail to achieve the goal of safer and more resilient financial system.

Gehrig (2013) concludes that the resilience of the financial system cannot be strengthened as long as bank management has set their mind on achieving other strategic goals highlighting the importance of private initiatives. In the end, it was the bank management´s desire to maximize shareholder value that led to the depletion of equity capital in the years leading up to the crisis. As long as banks pursue profit maximizing strategies similar to 'economizing on equity' and ignore the potential risks their activities might impose on the broader financial system, no significant changes are likely to occur (Hellwig, 2010).

There are other initiatives which seek to complement Basel III rules such as the Dodd-Frank Wall Street Reform in the US, the Liikanen report in the EU or Vickers report in the UK, and several other local initiatives which among other things take a closer look at the banking structures.

2.7.1 Basel Accords– History and Consequences for the Banking Industry

In his book, Goodhart (2011) looks at the first 23 years of the Basel Committee's activities. While Basel I came into existence in 1988 with 1992 being scheduled as a deadline for implementation, the process of harmonizing the banking regulation and improving the resilience of the global financial system has its roots already in the 1970s. While some might believe that the formation of the Basel Committee was a first attempt to standardize the banking practice, it came rather as an answer from Anglo-Saxon countries to the forum created by six continental European countries in 1972, the so called 'Group de Contact' which strived toward a similar goal. The formation of international forum was also driven by the desire of the US banks to level out the playing field in the light of US banks becoming overly exposed to the Latin American Crisis which put them at disadvantage compared to the Western banks. Due to its international nature, the Basel Committee soon eliminated the European version of the forum (Gehrig T. , 2013).

Under Basel I, banks were required to maintain a minimum total capital ratio of 8%. Interestingly, the Group de Contact set stricter definitions on the core capital then what was proposed by the Basel Committee. The Basel Committee, did however in the end push through the reduced requirements on the quality of capital allowing 4% to be composed of the high-quality capital and the other 4% of hybrid capital. The critics of Basel I argued that it ignored other important sources of risk such as operational or liquidity risk, used oversimplified calculations and offered limited differentiation of credit risk.

In its attempt to address the shortcomings of the previous capital regulation, the Basel Committee introduced the second accord in 2004. Besides refining the existing measures to better reflect the existing risks and introducing the capital requirements for operational risk, Basel II aimed to encourage the bankers to improve their risk management techniques. Basel II was, however, never really fully implemented. The deadline for implementation was scheduled for 2018, however, as the financial crisis broke out, other, more pressing issues took precedence over regulatory matters. Interestingly, the US was the only one holding back the adoption of increased regulatory requirements prior to the crisis. In total, there were only 12 US banks which implemented Basel II (Gehrig T. , 2013).

Despite the fact that the improved regulatory requirements were not mandatory until 2008, they have already shaped bankers' choices, especially those that involved exploiting potential regulatory loopholes and using the regulation to their advantage. With the benefit of

hindsight we know now that banks were left too much room for maneuver when it came to assessing the risk of their assets and calibration of their risk models calling into doubt the whole risk-weighted approach. Ever since the Basel I accords became mandatory in 1992, financial institutions steadily decreased their amount of risk-weighted assets. Whereas in 1992, the RWAs accounted for roughly 70% of the 15 largest systematically important banks' total assets, in the period just before the crisis this percentage stood at only 35% (see figure 6).

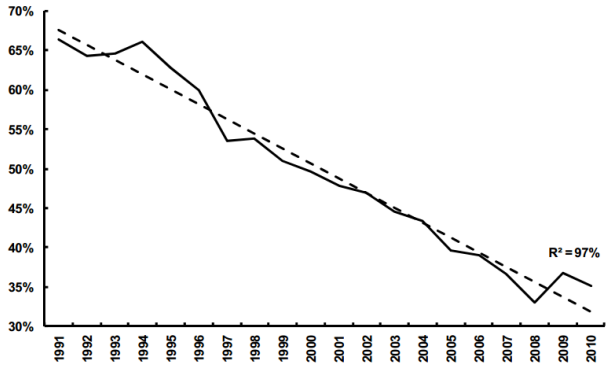


Figure 6: The historical development of RWA/TA ratio of systemically important banks. Adapted from (Slovik, 2012)

There are two possible explanations for this phenomenon, either the financial institutions somehow managed to de-risk their balance sheets over the years or there were some serious issues with the regulatory framework which was so focused on the risk-weighted assets that it missed the bigger picture and therefore the huge part of the actual risk exposure of the banks. Having experienced the crisis, the second option sounds more plausible. Since the drop in the RWA/TA ratio was not abrupt but gradual this suggests that the transition toward more risky business practices was happening continuously over the years not just in the years prior to the crisis. The ratio hit the lowest level in 2008 which essentially meant that the capital buffers required to be held by the banks were also low since formally the banks were perceived to be "safe".

Needless to say the crisis proved that the buffers were insufficient. This way the risk-weighted regulation which originally aimed to protect international financial system and safeguard its stability contributed to its near collapse as it encouraged the bankers to engage in risky lending practices and hold capital ratios below the minimum 2% requested under the Basel II (Slovik, 2012).

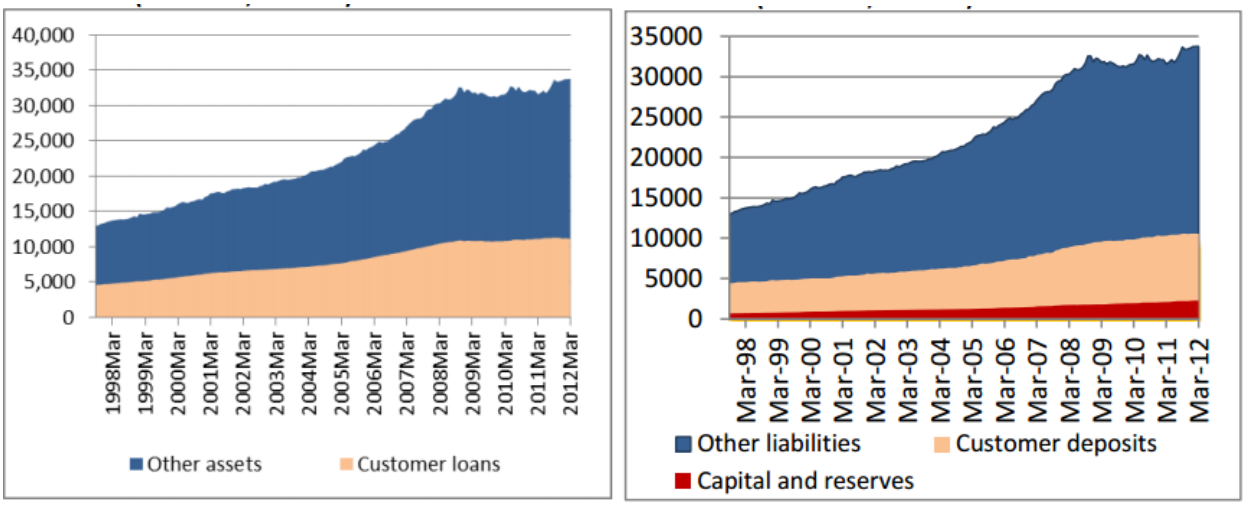


Figure 7: Balance sheet dynamics of euro area banks from 1998-1012 (in € billion). Adapted from (Liikanen, et al., 2012)

In the past, customer loans, too, represented a sizable share of large banks' assets. The introduction of the risk-weighted regulation, however, seems to have changed that. Since loans are generally perceived to be risky obliging the banks to set aside more capital, their share continued to decline throughout the time. Using a sample of 5 large banks from the US, the UK, Germany, France and Switzerland, Slovik (2012) shows that the share of loans as a proportion of the total assets fell from the peak of 75% in the early 1990s to 30% just before the crisis. Euro area banks showed similar tendency (see figure 7). Unconventional assets, on the other hand, started to gain in importance as they typically carried lower risk weights than the ones assigned for standard loans. Oetker-Robe & Pazarbasioglu (2010) found that between 2000 and 2008 the share of trading assets to total assets doubled from previously 20% to more than 40% for largest European, US and US banks. In the same vein, the derivatives market also recorded a significant growth with most of the activity being concentrated in unregulated OTC markets (see figure 8).

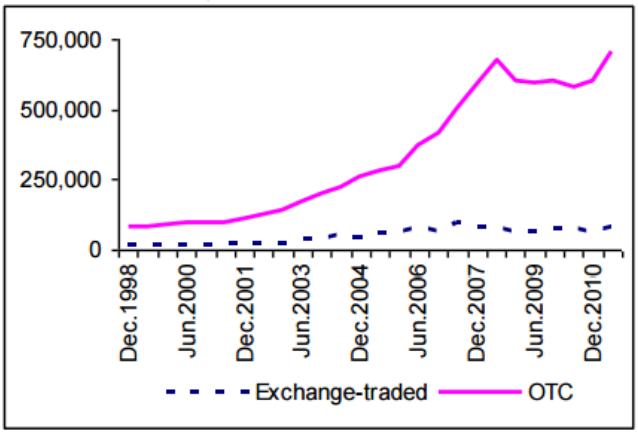


Figure 8: The rise of international OTC derivatives trading. Adapted from (Liikanen, et al., 2012)

As a result, the non-interest income very soon displaced the net interest income as the most important source of revenue. It appears that this process started around the turn of the century and coincides with the rise of securitization market and investment banking (Gehrig T., 2015).

On the liability side, the share of customer deposits grew only slightly over the years closely mirroring the evolution of capital while banks significantly increased their reliance on other liabilities, in particular the interbank and wholesale repo markets (see figure 7) (Liikanen, et al., 2012).All these developments only further highlight the shift in banks' orientation from traditional banking, which valued relationships over short-term profits and focused on deposit-taking and long-term lending toward trading models favoring dealer and market making activities and proprietary trading (Liikanen, et al., 2012; Gehrig T., 2015)

With the benefit of hindsight we now know that the risk-weighted approach in the form defined by Basel II was severely flawed as it did not account for most of the major risks and most importantly the systemic risk. On the other hand side, majority of those risks did not even exist before and have materialized for the first time during the crisis. According to Slovik (2012) a possible solution would be to introduce a regulation which looks at total assets, not just risk-weighted assets thereby not putting conventional lending activities at comparative disadvantage. The introduction of leverage ratio under Basel III should partly address his concerns. Furthermore, he believes that one should consider the potential consequences a tighter risk-weighted regulation would entail, on one hand side it might improve the loss-absorbing capacity of the banks but, on the other hand, it might once again encourage banks to engage in unconventional business practices.

The unprecedented level of financial innovation observed in the years leading up to the crisis might serve as yet another evidence of regulatory failure. While the general consensus is that the financial innovation is important in fostering the economic growth, if used for bad reasons it might cause the exact opposite. Unfortunately, the financial innovation that emerged prior to the crisis was mostly driven by a desire to circumvent the upcoming regulation and engage in regulatory arbitrage.

Securitization is one of the most important examples of financial innovation that can have detrimental consequences if it is not properly supervised. Not only did it lead to the gradual relaxation of the lending standards among bank and non-bank institutions alike and thereby encouraged excessive risk taking, it also reduced lender's willingness to carefully

evaluate and monitor borrower's ability to repay the loan while at the same time masking the buildup of the leverage (van Rixtel & Gasperini, 2013). In fact, evidence suggests that already in 1998 more than 25% of the total RWA of the 10 largest US banks were securitized with an intention to reduce the capital requirements (Jones, 2000).

However, one has to say that the securitization as such is not essentially a bad thing and if not misused offers quite a few benefits. First of all, through securitization financial institution can free up capital which they can then use to make additional loans at lower rates and therefore promote economic growth. Second, it is also a perfect tool for diversifying the risk. Investors favor securitized products especially because they are highly customizable when it comes to the combination of risk and return. Last but not least, they enable to turn various illiquid assets into liquid ones.

In their attempt to get around the regulation banks created and sponsored various special purpose vehicles, also known as off-balance sheet entities to park there their risky assets such as residential loans which they traditionally kept on their balance sheets. By engaging in this practice, banks were essentially removing the assets from their balance sheets thereby lowering their capital requirements which allowed them to increase leverage, make even more loans and therefore maximize the short-term profits. Since these vehicles do not classify as regular banks they were also not subject to the regulation and due to their flexibility they turned out to be a perfect tool for fraud and reckless management. The shadow-banking sector thrived. Thanks to special purpose vehicles, banks were able to hide the amount of debt from both regulators and investors and as it later turned out to threaten the stability of the whole financial system.

Nevertheless, the question remains how is it that once it turned out that the mortgage backed securities were worthless it almost brought down the entire financial system instead of investors absorbing the losses as was the case in the 2000 dotcom bubble burst. The most probable explanation is that although banks were selling their assets to SPVs they have not shared the risks with the investors but retained the credit risk on their books to increase leverage (Acharya & Richardson, 2009). There are two ways how this unfolds. Typically, banks create the special purpose vehicles which consequently buy their loans. However this does not mean that once banks sell these assets to these conduits, their job is done. They play a very important role when SPVs try to secure the necessary funding by providing a guarantee of the underlying risk to the potential investors. This means nothing other than that the credit risk stays with banks. On the other side, there were also banks which after having created the

securitized assets bought back the low-risk AAA rated tranches which carried lower risk weights and as a result enjoyed lower capital charges.

However, the fact that shadow banking systems played such a major role in the 2008 crisis only highlighted the huge failure of both regulators and supervisors who allowed it. Therefore, the argument that increased capital requirements will contribute to the growth of the shadow banking is unfounded because what essentially caused the rise of shadow banking was the insufficient and inadequate enforcement on part of the regulators (Admati, DeMarzo, Hellwig, & Pfleiderer, 2013).

Another example of financial innovation were credit default swaps. Originally introduced as a way to hedge risk and prevent risk concentration, credit default swaps have due to their highly speculative nature contributed to the build-up of the systemic risk in the years leading up to the crisis. Credit default swaps have at the height of the crisis amounted to astonishing $58 trillion (Weistroffer, 2009). The reason why the use of these instruments became so attractive lies in the fact that they were traded in largely unregulated OTC markets. Their reputation has suffered heavily after the collapse of AIG in September which demonstrated that this insurance policy was a fraud (Brown, 2010).

The capital regulation introduced within the framework of Basel II has unintentionally encouraged bankers to shift their main focus from the traditional banking functions and focus on risky business practices instead. New regulation should therefore be designed in a way as to not hamper the financial intermediation to the extent that would prevent the financial system from driving the global economic recovery while at the same time preventing that too much activity is shifted from banks to the less regulated or unregulated shadow banking system as was the case with 2008 crash. Another prerequisite of an effective regulation is enhanced supervision and enforcement of the regulatory measures. This might however prove rather difficult in the light of the regulation being too complex. Also, one should prevent the scenario in which banks become overregulated and as a result struggle to make a profit. This might make the sector look too unattractive for investors who might start looking for other ways to make money and enter sectors which are less regulated and promise higher returns as witnessed by the growth of shadow banking sector in the years prior to the 2008.

2.7.2 Basel III Regulatory Requirements

The financial crisis revealed that contrary to the previous regulatory attempts, regulation needs to address both credit and liquidity risk. Liquidity risk arises when banks face difficulties to convert their assets into cash to meet their short-term financial obligations because there is shortage of market liquidity. Besides increasing the capital requirements and addressing the liquidity problems, Basel III also introduced macroprudential tools which will tackle the issue of procyclicality in times of economic growth.

Nevertheless, despite its recent attempts to strengthen the macroprudential orientation of the regulation, there are still those who claim that the regulation in its present form still focuses predominantly on the risk caused by individual banks. In particular, there are claims that the microprudential focus can once again increase the systemic risk as individual banks in their pursuit to diversify away their risks end up holding the same asset classes and in the end the same aggregate risk (Acharya V. M., 2012).

Additional Capital Requirements

Besides improving the definition of capital, Basel III has also increased the CET 1 capital from 2% under Basel II to the 4.5%. Together with Additional Tier 1 capital of 1.5% and Tier 2 capital of 2%, the total capital ratio will reach 8% which is very close to the level ordered under Basel I. It is, however, not very clear what lies behind the committee's decision to increase the regulatory requirements by exactly this amount, if these new levels are indeed sufficient and if they are a result of political debate. In fact, given the evidence on the amount of capital carried by German, Japanese and the UK banks prior to the Basel I becoming mandatory, the current levels do not seem very ambitious. Already in the early 1990s, the capital ratios ranged between 10% for German and UK banks to 11.5% for Japanese Banks (Zimmer & McCauley, 1991). Their US peers with capital ratio of around 7% were laggards on the movement toward resilient financial system. Against this backdrop, one might believe that the introduction of the universal international regulatory framework for banks was a way for undercapitalized banks to wipe out the competitive advantage of their better-capitalized peers (Gehrig T. , 2013). In fact, the better-capitalized banks soon lost their competitive advantage as policy debate became increasingly focused around the costs rather than benefits of high capital ratios (Kahnemann & Tversky, 2000).

Before getting to the newly introduced macroprudential measures, Basel II introduced also one new microprudential tool, the so called 'capital conservation buffer' which as the name already suggests aims to preserve the capital and thereby avoid minimum capital breaches during the period of economic stress by ordering banks to accumulate additional capital during good times. This ratio will be set at 2.5% of common equity and should be maintained at all times. Should a bank's capital cushion fall below the minimum regulatory requirements plus the conservation buffer, the bank will face several restrictions with respect to distribution of dividends as well as bonus payments. This measure among other things seeks to prevent that banks pay out generous dividends during the times of financial distress just to provide assurance to the market and the shareholders that they are back on track and fit while being severely undercapitalized (PwC, 2011).

A second capital buffer, the so called countercyclical buffer is already a macroprudential measure and its amount might vary from 0 - 2.5% of total risk weighted assets. This capital ratio will become mandatory during the boom period commonly characterized by excessive credit growth to prevent the buildup of systemic risk. The main idea is that banks should build additional buffers during the periods of economic growth so that once the economy enters a recession they have enough capital to absorb the potential losses associated with the unfavorable economic conditions and avoid running into financial difficulties. The higher capital requirements will lead to increase in lending spreads and will therefore help to prevent the excessive use of credit during the boom cycle. Moreover, the buildup of countercyclical buffer should help to ensure that banks can continue to perform their core functions and provide credit to the economy also in times of stress. As already hinted, this buffer does not have a permanent nature since it would be too costly for the banks. Generally, it can be released during periods of economic downturns (Basel Committee on Banking Supervision, 2010). Nevertheless, there is still a lot of uncertainty on how it would exactly work as well as how the appropriate levels will be determined. This decision will be left to national regulators.

All in all, banks will be required to hold 7% CET 1 capital at all times, this includes the minimum regulatory requirement of 4.5% plus 2.5% conservation buffer. In addition, once the economy enters the period of excessive credit growth banks need to increase their capital cushion by additional 0 – 2.5 % depending on which amount the national regulators deem appropriate, meaning that the overall CET 1 capital ratio can under certain circumstances reach 9.5 % (Basel Committee on Banking Supervision, 2010). Moreover, large

systematically important institutions which are believed to threaten the stability of the financial systems because of their size, interconnectedness, complexity, global presence and lack of readily available substitutes that can step in to take over their role, are subject to additional loss absorbency requirements which will range from 1 – 2.5% of RWAs, bringing the CET 1 Capital ratio to 12%. Both countercyclical buffer and the capital surcharge for large banks will come into full effect first in 2019, with first phase scheduled for 2016 (PwC, 2012).

The deposit-based funding structure vis-à-vis wholesale funding structure

Another factor that contributed to the banking system vulnerability was the departure from traditional, more stable sources of funding such as demand deposits toward short-term wholesale funding sources such as certificates of deposits (CDs), commercial papers and repos. There were several reasons behind this shift whereas increased interconnectedness of banks and financial systems, financial globalization and the rise of investment banking are among the most prominent ones (van Rixtel & Gasperini, 2013).

The biggest advantage of deposit-based funding models over wholesale funding structure is that the former are more stable and safer since they are protected by deposit guarantee schemes. Nevertheless, wholesale funding offers also significant benefits and might be used in times when it is hard to attract additional deposits because of unattractive deposit rates. Wholesale funding represents a viable option to satisfy additional funding needs and investment opportunities, and to manage risk. The availability of short-term wholesale funding is however highly susceptible to the overall financial health of the financial institution interested in this type of financing as well as the stability of the whole banking system, once there are signs that the bank might be experiencing financial troubles these short-term markets shut down for them. The providers of short-term liquidity have little motivation to delve deeper into what lies behind banks' sudden financial difficulties. This is essentially what happened once the subprime mortgage crisis erupted in the US which resulted in significant deterioration of liquidity conditions for majority of banks.

In the same vein, a number of scholars have investigated how financial institutions with deposit-based funding models performed during the crisis in comparison with those ones relying rather on wholesale funding. The results clearly show that while the former were still able to provide credit to the economy at the height of the crisis, the second group faced serious funding difficulties (van Rixtel & Gasperini, 2013). Having experienced the crisis,

financial institutions started to adjust their funding structures and refocused once again toward using retail deposits as a main funding source (Merck Martel, 2012).

Liquidity Requirements

Basel III seeks to address the potential liquidity problems and thereby avoid the need to ask for an extensive government support with an introduction of two new regulatory ratios namely: i) Liquidity Coverage Ratio (LCR) and ii) Net Stable Funding Ratio (NSFR). The liquidity coverage ratio should ensure that banks have enough high-quality liquid assets which they can readily convert into cash in case of unfavorable macroeconomic conditions. If compliant they should be able to withstand a 30 days-period without experiencing significant liquidity problems. This is considered as an appropriate amount of time for both banks and supervisory bodies to come up with adequate countermeasures or in the worst case scenario to resolve the troubled bank (Chun, Kim, & Ko, 2012). The ratio was tested under a market stress scenario which assumes among other things a three notch rating downgrade and a consequent shutdown of the unsecured wholesale funding markets while also anticipating a significant deposits outflow (Norton, 2010).

While the liquidity coverage ratio deals with short-term liquidity, the net stable funding ratio, on the other hand should ensure that banks have sufficient long-term liquidity and thereby prevent the scenario that banks run into severe liquidity problems when their short-term whole funding sources suddenly dry out. Taking into account the asset composition of a bank's balance sheet as well as their off-balance sheet activities, this regulatory ratio will determine the minimum amount of stable funding necessary to ascertain that banks will continue operating over the medium term and as such will not pose a threat to the overall financial stability of the system should there by some disruptions in their funding markets. Stable funding is defined as any type of equity or debt that is not susceptible to the adverse economic and market conditions meaning that its providers are not likely to withdraw their funding in the period of market stress for at least a period of 1 year. Deposits with shorter maturities as one year can be also considered as long as they are viewed as a reliable source of funding.

The main goal of NSFR is to promote i) better and more accurate evaluation of potential funding risks, ii) diversification of funding sources and therefore more stable funding structures and iii) to minimize the risk of liquidity crises arising from maturity mismatches. (Basel Committee on Banking Supervision, 2014). To sum up, liquidity

requirements aim to safeguard the stability of the financial systems by ordering banks to restructure their balance sheets and focus more on short-term, higher-quality assets in combination with more stable longer-term liabilities (Oxford Economics, 2013)

There were others who criticized the risk-weighted approach which is why the Basel Committee decided to address this issue by ordering banks to have an equity-to-total (unweighted) asset ratio of minimum 3% (Acharya V. M., 2012), known as leverage ratio to limit the build-up of both on and off balance sheet leverage. The most important motivation is to prevent the excessive deleveraging processes from destabilizing the market the way they did in the 2008 crisis. It is widely believed that having an unweighted or non-risk based framework in place alongside the risk-based measures will further contribute to the banking system stability and strengthen its resilience to the future shocks (Basel Committee on Bank Supervision, 2014).

2.7.3 Basel III Criticism

Despite the influx of new regulatory measures, many people are eyeing the Basel III with distrust and doubts arguing that it fails to address other risks that materialized during the crisis such as for instance the concentration risk or the practice of national policy makers to treat their sovereign bonds as riskless which ultimately contributed to the European sovereign debt crisis.

In particular, Basel III has been criticized for encouraging banks to invest predominantly in government debt at the expense of providing funds to the corporate sector. According to some industry observers, the decision to increase CET 1 capital ratio from original 2% under the Basel II to 7% under Basel III (4,5% CET1 + 2,5% capital conservation buffer mandatory after 2019) clearly favors lending to governments since sovereign debt is perceived risk-free even though the European sovereign debt crisis has proved the opposite.

While the new regulation mandates banks to assign risk weights and build capital buffers also against sovereign debt based on its credit risk using either standardized approach relying on external ratings or internal ratings-based approach, the European regulators allow the Eurozone banks to continue treating their sovereign debt as a risk free asset class which in effect leads to zero capital charges. In addition, together with cash and central bank deposits, sovereign debt falls within the definition of Level 1 assets which should represent at least 60% of high-quality highly-liquid assets under the LCR framework. For the remaining 40% banks can use high grade corporate debt or covered bonds which will be recognized only at

85%. On top of that, sovereign debt is also a preferred form of collateral for obtaining ECB' policy operations. Nevertheless, leverage ratio is expected to offset some of these developments and motivate banks to increase their lending to businesses and higher yielding assets compared to sovereign debt exposure (Smith, 2013).

Other critics argue that Basel III adversely affects the lending to SMEs as retail lending is assigned a risk weight of 75% and under certain circumstances even 100% (Basel Committee on Banking Supervision, 2015), whereas large corporates with solid credit rating are risk-weighted at only 25% (Padgett, 2013).

Moreover, it seems that banks are once again starting to engage in similar practices as prior to the crisis in order to lower their risk weights and the resulting capital requirements. The newest innovation is called a "capital relief trade" and has very similar features as the rather infamously known credit default swaps and collateralized debt obligations. Basically what it does is to allow banks to decrease their capital requirements through buying a credit default protection from hedge funds. Or put differently, it helps them to comply with the regulatory capital ratios without having to raise additional funds. The main problem with this insurance policy is that it tends to mask the hidden risks in the system while at the same time providing biased picture of the banks' financial situation (Kahn & Vaughan, 2013).

Nevertheless, it seems that these new methods are gaining traction as there are quite a few big players in the banking industry who reported using them in their regulatory filings. The common argument as to why CRTs should not be viewed as posing a threat to the stability of the financial system is that even during the crisis the hedge funds fared better then banks and what is even more important none of them needed to be rescued by taxpayer's money. Another thing that should prevent the repeating of AIG collapse is that in case of CRTs, hedge funds need to post collateral, so it is no longer unsecured credit default protection. Moreover, the regulators made sure that the collateral is high enough to cover all possible defaults on the loan portfolio the CRTs are intended to insure, the problems might however arise if hedge funds borrow money to be able to provide the needed collateral. Introduction of leverage ratio could be a way to discourage banks from seeking credit relief trading and help to redirect their attention away from internal risk-weights (Kahn & Vaughan, 2013).

The introduction of the stricter regulatory framework has led some critics to voice their concern that too much regulation will once again fuel the rise of the shadow banking

system mainly because it still remains largely under-regulated compared to the banking industry. As a matter of fact, the size of the shadow banking system has been growing steadily in the recent years accounting for roughly 25% of the total financial system assets last year while the share of banks decreased by 4% since the height of the crisis in 2008 to 45.6% (Financial Stability Board, 2014). Although the peer-to-peer lending platforms as non-bank institutions involved in credit intermediation also fall within the scope of shadow banking, they weren't considered within the FBS report because of the lack of the quantitative data. Nevertheless the most important message from this report is that the shadow banking system is growing in importance, attracting more and more attention meanwhile banks are still struggling with the legacy of crisis in the form of increased regulatory scrutiny due to which they needed to significantly retrench from certain products and services as well as reduce their lending. The question now remains if the recently adopted regulatory standards fueled the rise of shadow banking sector and if yes, to what extent.

2.7.4 Basel III and Bank Lending

Cosimano & Hakura (2011) were among the ones who investigated the impact Basel III is going to have on the bank lending spreads and loan demand using a sample of the world's 100 largest banks. Although the results varied greatly across the countries with some being more affected by the capital reserve requirements and some less, they proved that for all countries, the higher equity-to-asset ratio translates to higher lending rates as banks need to compensate for the rise in their marginal cost of funding and therefore pass part of their costs on to the customers. Higher interest rates furthermore lead to lower credit growth.

In particular, their findings suggest that banks which need to improve their equity-to-asset ratios by 1.3% to comply with the total CET1 ratio of 7% introduced within Basel III framework will increase the lending rates on their loans by as much as 16bp. This would in the long run lead to a 1.3% drop in the total loan volume. Their results also showed that the effect on loan volumes is more profound in countries with higher elasticity of loan demand with respect to the interest rates charged on loans.

In addition, the authors also analyzed the impact an extra capital charge in the form of countercyclical buffer might have on the interest rates. In particular, they found that those banks which are mandated to increase their capital base by additional 2.5% might be forced to increase their lending rates by as much as 31bp which would once again lead to a significant drop in credit demand of as much as 2.5%. Therefore, in a period of "excessive credit growth"

the decision to impose stricter capital buffers should be aligned with the monetary policy to prevent a sharp slowdown in the economy. Furthermore, the authors argue that regulators should also design measures to prevent the regulatory arbitrage and the consequent growth of shadow banking, something what Basel II failed to do.

Their findings clearly contradict the Modigliani-Miller theorem (1958) according to which changes in the firm's funding structure shouldn't have a broader impact neither on the cost of capital nor on the investment opportunities. The fact that a firm decides to use a higher portion of equity financing does not change the overall risk of the firm and therefore should not result in higher funding costs. However, one has to also consider the setting under which this theorem holds, namely frictionless markets in which there exists no such thing as tax benefits or government subsidies.

In a perfect market, firms that rebalance their funding structure toward using higher portion of equity financing should observe a reduction in shareholders' required return on equity and as a result no change in the total funding costs since better-capitalized banks pose less risk (Admati, DeMarzo, Hellwig, & Pfleiderer, 2013). There are several reasons as to why this theory does not work for banks. To name a few, the real markets are not perfect, in the real world there are bankruptcy costs, asymmetric information and other discrepancies which encourage banks to prefer leverage over equity. Not only does debt financing offer significant tax advantages compared to equity funding, it also enjoys implicit government guarantees to be bailed out in case of distress. Against this background, it does not come as a surprise that equity financing is often perceived to be a costly alternative to raise finance especially since shareholders will ask for more money to compensate them for taking on the risk. Unlike bondholders, shareholders do not have a fixed claim toward the bank in case of insolvency.

Despite the fact that if applied to banks, Modigliani-Miller does not hold, various scholars who were analyzing the impact of Basel III on the bank lending assumed that it works at least to an extent that better capitalized banks are essentially safer and therefore should be able to raise additional funds at more favorable rates (Oxford Economics, 2013).

Similarly, Sutorova & Teply (2013) analyzed the impact of stricter capital rules defined in the Basel III on the overall volume of loans provided by the banks using a sample of 594 banks operating in the European Union and found out that the impact is rather limited as (i) many banks have already build up capital buffers which exceed the regulatory

minimums and therefore do not need to take additional measures, (ii) the elasticity of loan demand with respect to banks' lending rates in the EU is rather low and (iii) a 1% increase of the common equity ratio causes the loan rates to rise by merely 18,8bp. All in all, the total loan volume will decline merely by 2% on average. However as banks have still time until 2019 for the regulation to be fully phased in, the effects of higher lending rates and consequent lower loan demand on the economy are likely to be limited. The authors further conclude that the Basel III in its current form is insufficient and will not eliminate the risk of future crisis although it is a clear improvement compared to the Basel II, nevertheless one can tell that banks' lobbyists once again played their part in its design. Furthermore, the calibration of the regulatory ratios as well as their delayed implementation are also viewed as potential drawbacks.

These are just the two examples of studies aimed at estimating the possible effects of increased capital requirements on the lending rates. However, there are many more. Oxford Economics (2013) published an interesting report where they review 6 different studies dealing with this topic comparing both their strengths and deficits. Interestingly, they prove that one needs to distinguish between reports prepared by the organizations such as IMF, BIS or OECD which they label as "official" reports and the ones written by likes of IFF which have links to the banking industry. The findings of IFF typically indicate more adverse effects on lending activities compared with the "official" reports. This can be explained by using different methodologies and assumptions with respect to the levels of equity held above the regulatory minimums, the effects of Modigliani and Miller theorem or the cost of equity.

With respect to the Basel III and bank lending there have been also claims that the regulation will force banks to cut back their lending activities which will have adverse effects on the economic recovery (Padgett, 2013). Admati, DeMarzo, Hellwig, & Pfleiderer (2013) argue that it is incorrect to assume that higher capital requirements will negatively affect the banks' ability to lend. While it is true that in order to comply with the increased regulatory measures banks might also opt to reduce their balance sheet's size, there are other ways how to achieve this goal without having to curb lending or deposit-taking. One example would be to pay back some of their long-term debt obligations using the proceeds received from new equity issuance. This way the total assets would stay the same. Moreover, they emphasized that essentially every bank which is perceived to be solvent should be able to raise additional equity quickly and effectively, should this not be the case then it is a clear sign that the bank is facing other structural problems. Highly-leveraged banks might also temporarily choose to

reduce lending to customers; however this should be reversed once these banks become better capitalized. Moreover, the authors add that better capitalized banks are in a better position to serve the society and provide the necessary services such as deposit-taking or lending because they are like to make more sound lending and investment decisions and avoid excessive risk taking.

Banks have one more option at their disposal to comply with the increased capital requirements apart from reducing their balance sheet or selling longer-term liabilities, they can raise new equity and use the cash to boost lending. However, the authors admit that not every financial institution has this possibility, to name a few, credit unions as well as banks owned by government might find it difficult to tap the equity markets, moreover they owners many times cannot afford to provide additional funding. Last but not least, it can also happen that managers and shareholders deliberately decide to reduce banks' assets instead of raising new equity because if they would raise additional equity, they would reduce the value of their existing shares and benefit credit holders at their own expense should the bank experience financial difficulties (Admati, DeMarzo, Hellwig, & Pfleiderer, 2013).

Next section will provide an overview about the recent trends in bank lending in the European Union. Moreover, we will also learn how credit standards evolved lately as well as banks' lending margins and to what extent these developments translated into higher credit demand growth.

3 Bank Lending

Banking systems all over the world have underwent a series of changes since the financial crisis started in the 2008. Balance sheet restructuring, shrinkage in banks assets driven mainly by the decrease of RWAs and cutback in lending, retrenchment and withdrawal from non-core assets and services, capital buildup are just a few examples of what was happening in the recent years. And while most banks have weathered the worst of the crisis, the consequences are still present in their daily operations, especially as most banks particularly in the Europe are still struggling to return to the pre-crisis profitability levels.

While having a healthy and stable banking system is equally important for all economies, the consequences of a dysfunctional banking system vary across countries. In Europe, where banks still provide majority of financing the possibility of a systemic collapse of the banking system is especially worrisome as there are not really alternatives to banks. As a result, there would be serious disruption in the credit intermediation further endangering the economic recovery and growth. The US, on the other hand, has been traditionally a market-based economy whereas the last years were also characterized by growing size and importance of shadow banking system. In fact, shadow banking system has in the meantime already become a viable alternative to traditional bank finance. Compared to Europe, in the US, non-bank financial services providers can step in and alleviate the consequences of disruption in bank credit intermediation in case of banking system collapse.

Europe has been traditionally an advocate of bank finance over capital market financing arguing that markets are never going to be able to serve their clients in the way banks do, valuing relationships over transactions. While in the US most companies prefer tapping capital markets to raise additional funds, in Europe majority of non-financial corporations still predominantly rely on traditional debt instruments such as bank loans or bank overdraft/credit line (ECB, 2014). However, the financial crisis has revealed that having a bank-based system too has its limitations and under current circumstances it acts rather as a drag on Europe's growth and much needed recovery. In order to prevent the recurrence of future crises, Europe needs not only overhaul its financial system but also promote non-bank financing options and thereby improving overall access to finance. Although there exist non-bank financial service providers also in Europe, their size is at present negligible compared with the US.

With the benefit of hindsight, SMEs were the ones who suffered the most after the crisis as they most of the time do not have other financing alternatives besides bank loans which essentially means that when banks get into the trouble, the companies which create most jobs and could help to drive the growth and speed up the recovery, go down with them.

In the years after the crisis it became increasingly difficult for households and SMEs alike to obtain necessary funding as banks have become more risk averse and instead of granting new loans concentrated on cleaning up their balance sheets. Although they did not stop providing loans to non-financial corporation altogether, the general conditions have worsened. Banks have tightened their lending standards, increased their collateral requirements not mentioning the high lending rates as they needed to compensate for the higher funding costs. In the same vein, research suggests that undercapitalized banks which are more dependent on market funding are also more prone to reduce lending compared to better-capitalized banks (Gambacorta & Marques-Ibanez, 2011).

The demand for credit has also decreased in the light of unfavorable macroeconomic conditions. Nevertheless, businesses willing to borrow despite the weak economic outlook and high interest rates many times found their credit applications to be rejected or be adjusted in a way that granted only a portion of the finances to be paid out for different reasons, most simple one being that the bank did not see any growth potential in that particular sector. This has only further highlighted the need to decrease the reliance on banks and foster competition in the financial system. The best alternative in this case would be to allow non-bank financial services providers to step in a fill up the void left by the banks whereas peer-to-peer lending platforms discussed later on are just a fraction of the possibilities the non-bank finance offers.

Nevertheless, banks will still play an important part in the European economy. The truth is that the last years were especially tense due to increased regulatory demands. On a more positive note, most banks are now safer than ever before and have adopted all the necessary steps to prevent the financial crisis from repeating. Moreover, it is widely believed that now when the ECB Comprehensive Assessment is over and the threat of alternative financial services providers is higher, banks will look for ways to regain their customers and improve lending conditions thereby supporting the much needed recovery.

3.1 Credit Standards, Credit Demand and Total Lending Volumes

According to the most recent bank lending survey published by ECB for the first quarter of 2015, the percentage of banks reporting an increase in the corporate loan demand remains positive at 6% and while this is good news, these results are slightly disappointing given the previous quarter's high levels (see table 1). Across the different loan categories, demand for house mortgages remains the strongest as also reflected by an increase of 5% compared to previous quarter whereas the demand for consumer loans remains steady at 13%. There are, however, pretty large cross-country variations between major euro area countries.

(net percentages of banks reporting tightening credit standards or positive loan demand)

Country	ENTERPRISES						HOUSE PURCHASE						CONSUMER CREDIT					
	Credit standards			Demand			Credit standards			Demand			Credit standards			Demand		
	14Q4	15Q1	AVG	14Q4	15Q1	AVG	14Q4	15Q1	AVG	14Q4	15Q1	AVG	14Q4	15Q1	AVG	14Q4	15Q1	AVG
EURO AREA	-5	-9	13	18	6	-7	-4	2	9	24	29	-3	-3	-5	6	14	13	-4
Germany	0	-3	5	22	0	2	0	3	2	21	45	6	-10	0	0	23	13	7
Spain	0	0	12	40	30	-5	0	0	21	11	11	-14	0	0	11	30	20	-15
France	-7	-7	9	13	-3	-18	-14	7	4	0	-6	5	0	-14	-1	-5	20	-6
Italy	-25	-25	22	0	0	0	-13	-25	6	38	63	6	0	-13	11	25	25	8
Netherlands	14	-13	19	14	0	-15	0	17	21	67	50	-24	0	0	14	0	-17	-19

Notes: AVG stands for historical averages, which are calculated over the period since the beginning of the survey, excluding the most recent round. For France, Malta and Slovakia net percentages are weighted based on the amounts outstanding of loans of the individual banks in the respective national samples.

Table 1: The most important highlights from the ECB's quarterly bank lending survey. Adapted from (ECB, 2015)

The increase in demand is a result of the continuous efforts on part of banks to further ease the lending standards as well as more favorable terms and conditions as banks continue to narrow their lending margins. According to the third issue of Economic Bulletin published by ECB, both the lending rates for non-financial institutions as well as for households have been decreasing for the better part of 2014 continuing the declining trend also in February this year reaching 2.34% and 2.38% respectively (ECB, 2015).

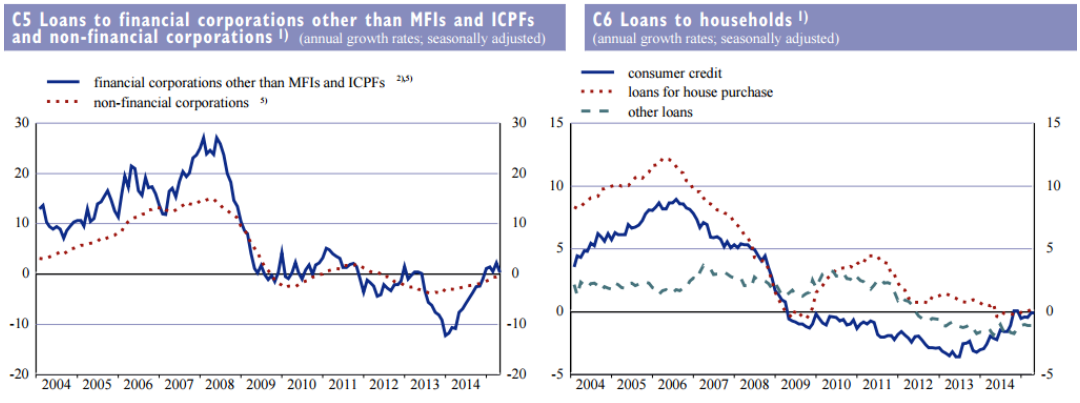
While most banks continued to relax the lending standards for both corporate and consumer credit at -9% and -5% respectively, they tightened the standards for mortgages due to perceived risk. Despite the positive developments recorded since the second half of the 2014, the banks' loan approval standards remain still relatively high compared to historical values. Nevertheless, the fact that we are finally seeing an improved access to finance for non-financial institutions as well as pickup in credit demand is already a big step forward and a sign that economy is recovering.

In addition, for the first time since introduction of bank lending survey, banks were also asked to provide information on the number of rejected loan applications. The results show that the rejection rate decreased by 5% for corporate credit applicants and by 4% for mortgage loans whereas it has worsened for consumer loans.

Banks also observed an improvement in access to retail deposit and wholesale funding meaning that all the regulatory requirements they had to fulfill such as building additional capital buffers, reducing the portion of RWAs as well as ECB's accommodative policy stance are finally showing a positive impact. Lower funding costs together with increased competition from non-banks are perceived to be the major factors driving the banks' decision to relax the credit standards.

Last but not least, it has been found that the ECB's extended asset purchase program meant to fight the threat of deflation and boost the growth in the economy which has been launched in March has so far had a positive impact on banks' financial situation. Majority of banks used the extra liquidity to provide loans and are likely to continue that trend also in coming months. The banks are finally no longer sitting on the liquidity but supporting lending. While majority of the banks say their liquidity situation, financing conditions as well as the regulatory ratios have improved in the recent months, they expect to see their profits shrinking in the following six months (ECB, 2015).

Since banks have started to relax their lending standards just recently, the lending to both non-financial institutions and households has not yet managed to pick up and remains still far away from levels observed before the crisis although there are already signs of recovery (see figure 9).



Source: ECB.
1) Data refer to the changing composition of the euro area. For further information, see the General Notes.
2) Excludes reverse repos to central counterparties as of June 2010; transactions and growth rates are adjusted for this effect.
3) Including non-profit institutions serving households.
4) Adjusted for the derecognition of loans on the MFI balance sheet on account of their sale or securitisation.
5) In accordance with the ESA 2010, in December 2014 holding companies of non-financial groups were reclassified from the non-financial corporations sector to the financial corporations sector. These entities are included in MFI balance sheet statistics with financial corporations other than MFIs and insurance corporations and pension funds (ICPFs).

Figure 9: Growth rates of loans to non-financial corporations and households. Adopted from (ECB, 2015)

While the annual growth rate of bank lending to non-financial corporations (adjusted for sales and securitization) remained negative also in the first quarter of 2015 at -0.3%, it has improved compared to 2014 and 2013 when it reached -1.1% and -2.8%, respectively, suggesting that bank deleveraging process might have finally slowed down (ECB, 2015). According to the figures from ECB Statistical Data Warehouse (2015), the sectors which prior to the crisis received majority of bank financing and nowadays the least are construction/infrastructure and real estate (see figure 10). The bank lending to households has also recovered in the recent months reaching 1.1% in the first quarter of 2015 compared to 0.8% last year whereas consumer loans are leading the trend.

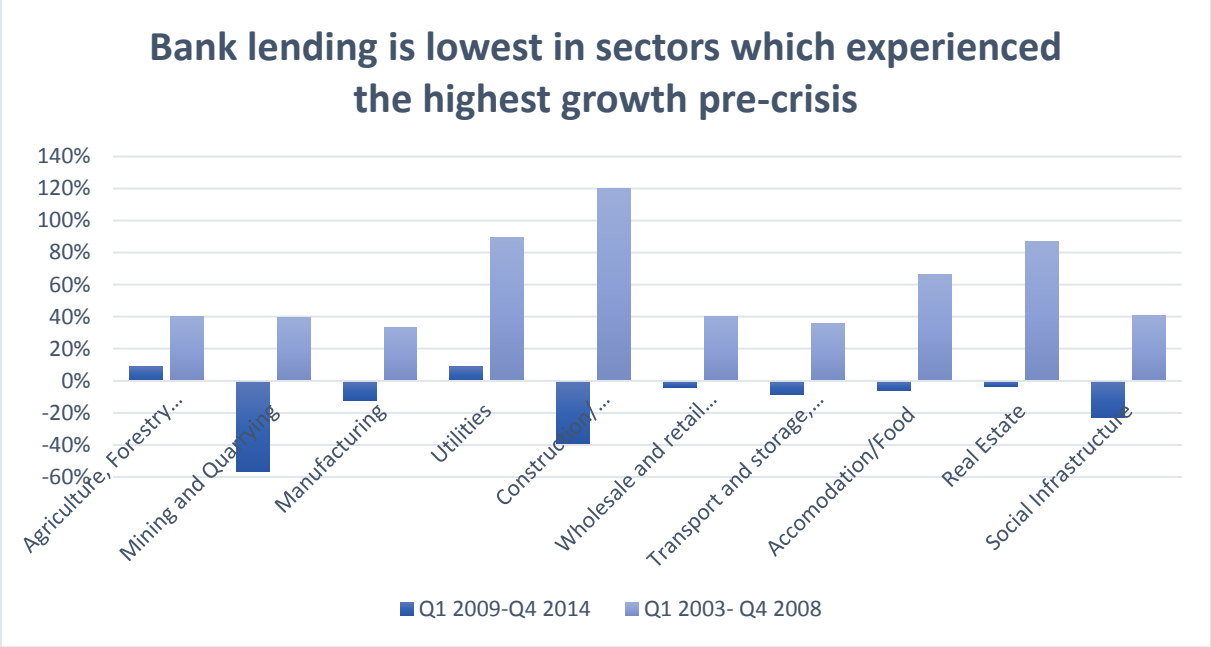


Figure 10: Pre-and post-crisis loan growth to non-financial companies by sectors. Source: ECB Statistical Data Warehouse

Another interesting trend which can be observed after the crisis is the increasing usage of capital market-based financing by the large non-financial corporations compared to bank loans (see figure 11). While the total stock of long-term debt securities issued by non-financial corporations grew by 81% since 2008 until the first quarter of 2015, the use of bank loans during the same period contracted by approximately -11%. Moreover, whereas in 2008 debt financing accounted for 10.6% of total funding received by non-financial enterprises, in the first quarter of 2015 it was almost twice as high at 19.3%.

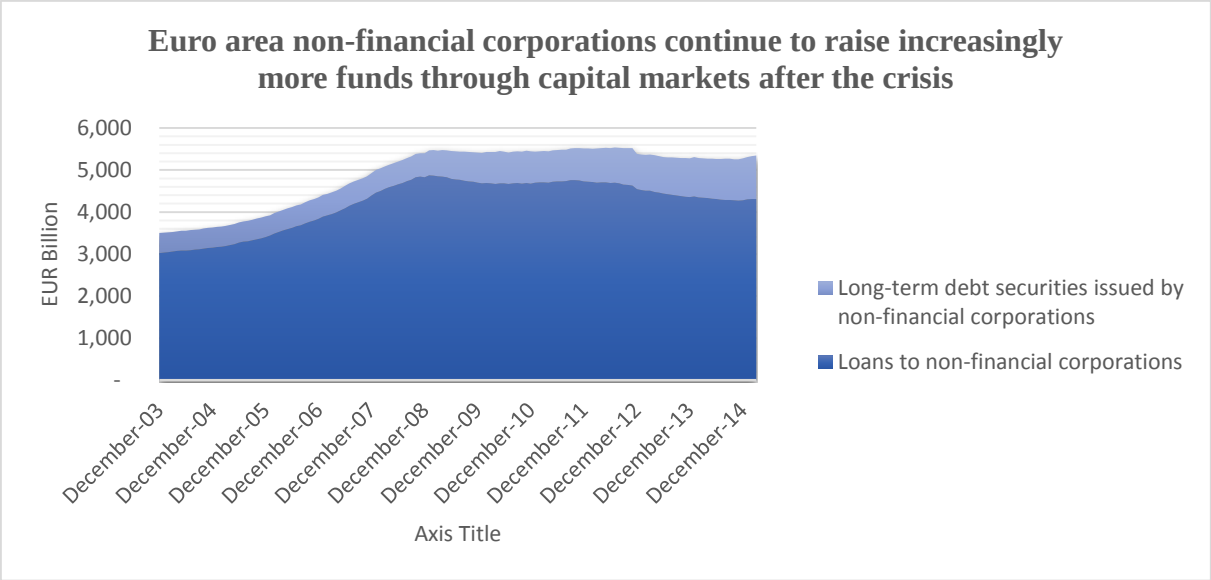


Figure 11: The capital market-based financing in the Europe. Source: ECB Statistical Data Warehouse

3.2 The importance of SMEs for European recovery

SMEs are central to Europe´s economy. The findings of the latest Annual Report on European SMEs published by the European Commission within the scope of the annual SME Performance Review introduced to help gauge the progress made by countries in implementing the Small Business Act (SBA) show that 99.8% of all non-financial enterprises are SMEs and that combined they provide employment for roughly 89 million people or 66.8% compared to only 33.2% which are being employed by large corporations. Nevertheless, in the light of worsening economic conditions as well as falling inflation, SMEs performance suffered in the years after the crisis. Currently, SMEs in 15 EU countries have not yet managed to achieve the pre-crisis levels in terms of job creation and value added. In 2013, the value added generated by SMEs increased only modestly compared to the previous year at 1.1% and altogether was just 1% above the levels recorded in 2008. Moreover, as SMEs are making lower profits they become more reliant on the external funding because of the insufficient internal funds generated through retained earnings (European Commission, 2014). There are however large differences from country to country.

To provide a comparison with other major economies, the SMEs are strategically more important to the Europe and Japan then they are to the US. Although SMEs clearly dominate the non-financial sector in all three countries in terms of number of enterprises (large corporates account for just 1% of all the enterprises), the picture looks quite different in terms job creation or generated value added. While SMEs in both Europe and Japan generate more than half of the overall value added (55%), in the US it is the large corporates who lead the

way. In terms of the job creation, Japan with 86% is the country with the highest percentage of people employed by the SMEs, followed by Europe at 67% and the US at 52% (European Commission, 2014).

3.3 SME's Access to Finance

The results of previous surveys conducted in 2009, 2011 and 2013 show that the access to finance deteriorated in the years following the crisis as it was regularly ranked by SMEs as their second most serious concern. Due to their small size, SMEs are unlike large corporates many times unable to access the capital markets for funding and out of the few which could, most of them cannot afford to carry the costs associated with potential debt issuance. While it is intuitive that during the crisis, the access to finance deteriorates as banks become more risk averse and reluctant to lend, empirical evidence suggest that it is the small, bank-dependent borrowers who are affected the most (Santos, 2011; Iyer, Lopes, Peydro, & Schoar, 2014; Balduzzi, Brancati, & Schiantarelli, 2014). This is also reflected in the widening of bank interest rate spread between loans to SMEs, which are proxied by the category of loans up to €1 million and loans of over €1million to large corporates in the years after the crisis (see figure 12). In 2014, interest rates paid on small-sized loans were on average by 140bp higher than the ones paid by large corporates.

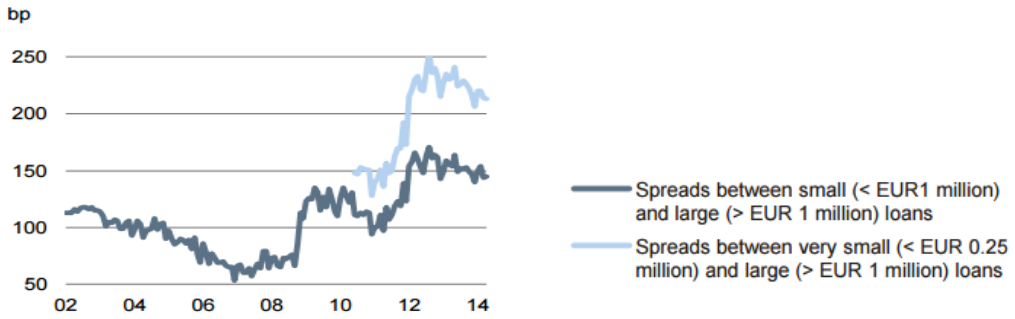


Figure 12: High borrowing costs of micro enterprises and SMEs. Source: (Kaya, 2014)

SMEs based in countries that were hit hardest by the financial crisis, especially Spain and Italy were among the ones experiencing the most difficulties with obtaining the necessary funding suggesting that access to finance is not a universal problem in the EU28 (OECD, 2013). Nevertheless, it remains unclear, to what extent is ongoing bank deleveraging and increased risk aversion on part of banks to blame for the deterioration in SMEs' financing conditions, or if the high lending rates are a result of a deeper structural weaknesses of SMEs in the region (Kaya, 2014). Either way, these developments point at a potential existence of

market failure in the area of SMEs' access to finance because as banks become unwilling to rollover the credit or extend a new one, they further worsen SMEs' financial situation which might as a result become unable to meet their financial obligations or which might not have the necessary resources to grow thereby holding back the much needed economic recovery causing that banks become even more risk averse (ECB, 2014).

Nevertheless, the situation has improved in the recent years as also demonstrated by the most recent results of the SAFE survey from 2014 which took place between April and September 2014 having interviewed around 10,750 SMEs. Nowadays, the major challenge most SMEs are faced with is no longer a difficulty to obtain financing, which was ranked as fifth most serious concern, but rather weak consumer demand. There are, however, significant differences between different EU states. While the access to finance improved for majority of countries, it continued to be an issue for SMEs based in Greece and Slovenia, where 29% and 22% of the SMEs did not even try to apply for a loan because of high probability of being rejected. In terms of size, micro enterprises are traditionally the ones suffering especially hard when it comes to obtaining financing. The access to finance also varied across sectors and remained to be the main barrier for SMEs operating in construction and manufacturing (Doove, Gibcus, Kwaak, Smit, & Span, 2014).

While 20% of the SMEs ranked difficulty to find customers as their number one issue, access to finance has been named as a single biggest concern for 13% of the participating SMEs, right after the lack of skilled staff, regulation and increasing competition. Nevertheless, it is important to note that an overall need for a bank loan was pretty low during the reference period. In particular, for 67% of the SMEs the main reason why they did not consider applying for a bank loan was simply because they did not need one. Furthermore, 11% of the SMEs did not find bank loans to be relevant because of high interest rates, whereas 5% stated that they did not have the necessary collateral. Finally, 6% of the SMEs did not even have such possibility.

Out of the SMEs which considered using bank loans in the future, 8% did not apply for a bank loan because of high probability of being rejected and 38% because of the sufficient amount of internally generated funds (see figure 13). Sweden, Latvia and Cyprus boost the highest percentage of SMEs which did not take out a bank loan because of sufficient amount of internally generated funds. All in all, the access to finance continued to improve during the reference period throughout majority of the countries, with an exception of Italy and Austria. Despite these positive developments, the level of net percentages which in most

cases remained negative hints at the continuing presence of financing constraints (ECB, 2014).

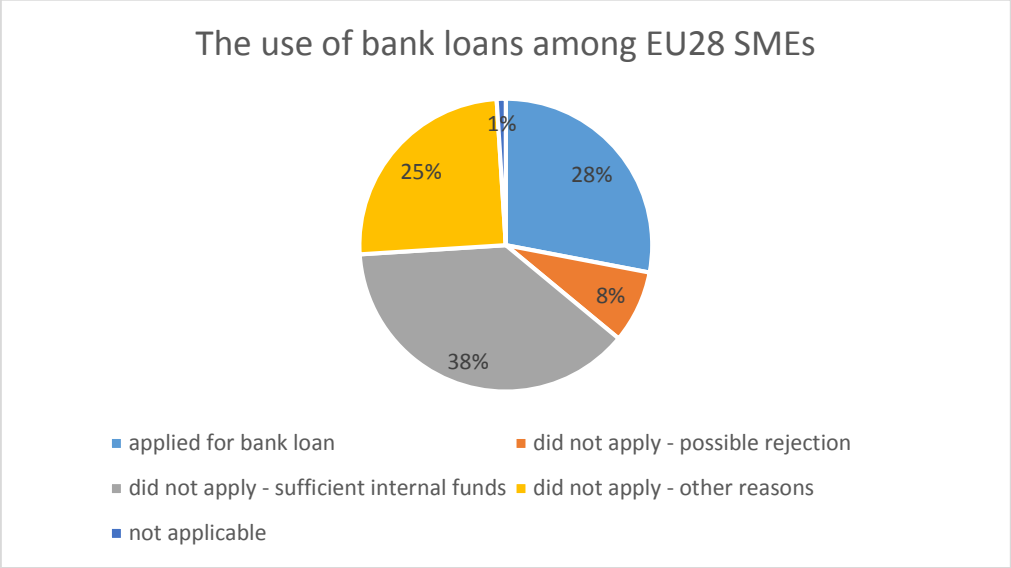


Figure 13: The use of bank loans among EU28 SMEs. Source: Adopted from (Doove, Gibcus, Kwaak, Smit, & Span, 2014)

Finally, out of 28% of the SMEs which reported having applied for a loan during the reference period, only 13% were rejected right away compared to 12% in 2013. The rejection rate was highest in the Netherlands, Lithuania, Latvia and Greece. Moreover, while between 84% - 80 % of the SMEs based in Czech Republic, Belgium and Denmark obtained the full loan amount, the ratio was much lower in countries like Greece, Cyprus or Netherlands, where it stood at 24%, 35% and 38%. On aggregate, loans were granted to 83% of applicants whereas 66% received the full loan amount. 4% of the SMEs rejected the loan because of too high interest rate.

While improved credit history, firm specific outlook as well as positive developments in SME's own capital were the main reasons behind the improvement in the access to credit, the negative economic outlook continues to be a drag on SMEs' financing conditions (Doove, Gibcus, Kwaak, Smit, & Span, 2014). When asked about the banks' willingness to lend, the net percentage of SMEs reporting that it has further deteriorated remained negative at -2%, however it improved compares to the previous period when it stood at -11% (ECB, 2014).

There were also significant cross-country differences in interest rates charged on the loans. While the SMEs in Luxembourg are charged only 2%, which is the lowest in the EU28, lending rates in Greece, Cyprus and Iceland reached almost 8%. All in all, majority of SMEs observed reduction in interest rates but at the same time more stringent collateral

requirements. Bank loans continued to be the SMEs' preferred form of financing during the period from 2009 to 2014 (Doove, Gibcus, Kwaak, Smit, & Span, 2014).

In order to be better able to gauge the immediate challenges faced by the SMEs and to complement the findings obtained from the SAFE survey, the authors of an annual report on European SMEs launched a pan-European survey in which they specifically asked the participants to name at least 3 SBA principles that could prove to be the most challenging in the coming years. Despite the fact that according to the SAFE survey the access to finance has improved in the recent years, access to finance was seen as the most challenging principle set within Small Business Act, nevertheless it was also a principle which saw the highest policy progress (European Commission, 2014)

In their study, Ryan, O'Toole, & McCann (2014) examine to what extent the market power in the banking industry has an effect on the SME's access to finance. The results of their analysis suggest that the claims that market power concentration leads to deteriorating funding conditions for SMEs and consequently lower investment are well-founded. The authors also found that SMEs operating in the bank dominated financial systems are even more adversely affected by the concentration of market power in the hands of just few banks then they are in the market-based system which is why policy makers should concentrate on fostering competition within the banking sector, lower entry barriers to allow new players to provide firms with alternative funding options. Their findings are especially relevant to the current policy debates which aim to improve financing conditions for SMEs and launch new financing solutions.

In the same vein, OECD has already conducted studies than look into alternative, non-bank sources of finance and their role in improving the access to finance for both SMEs and startups. It is widely believed that more financing options would contribute to faster economic recovery. Mezzanine finance, improving the role of SME funding through the bond markets, private placements, special situation funds and reviving the securitization market for SME loans are just a few examples. Other alternative financing options SME could make use of include crowdfunding or peer-to-peer lending, which has been increasingly growing in both size and importance on the recent years, although in the continental Europe the market is still relative small. Nevertheless, the growth might pick up as policymakers intensify their efforts to raise awareness to be able to reach the full potential of this new form of finance. We will find out more about the peer-to-peer lending in the next section.

While there is a clear need to provide SMEs with more financing options, it might take a while until alternative financial service providers achieve the scale that traditional banks do. Besides having more diversified financial system, what is needed to jumpstart the lending is the sound banking sector and economic growth promotion although the various European initiatives to foster SMEs access to obtain finance with most prominent being the loan guarantees over the years have also had a positive impact (OECD, 2015).

4 New Entrants in Banking

The financial crisis and the following sovereign debt crisis in Europe have demonstrated that there is a need for a fundamental overhaul of the Europe's financial system. Despite the plenty of new regulatory initiatives that came to effect lately, Europe has still a long way to go to achieve its ultimate goal of a stronger, stable and resilient financial system. The close links between the governments and their respective financial institutions were often said to be the main cause that the European debt crisis was so severe. One way to break these links and something what policymakers should strive toward is creating a more integrated financial system in Europe, promote cross-border mergers. Prior to the crisis there were improvements made with respect to the interbank market integration, the retail banking as well as capital markets remain however still largely fragmented along the national borders. On the other hand side, Europe also needs to take a more proactive approach when it comes to recognizing alternative sources of financing and their value to the society. National policy makers should adjust the legal rules and design a proper regulatory framework to allow these new financial service providers to thrive. This step would not only help to promote a more diverse, competitive financial sector but also enhance the access to finance for both businesses and households (Sapir & Wolff, 2013).

Today´s banks face very different situation as their 'past selfs' before the crisis. Nowadays they are confronted with new competitors on multiple fronts ranging from loan origination business and deposit taking to facilitating payments, personal finance management, wealth management and many more. What we see now occurring is that the services which were primarily offered by banks can be offered by other non-bank providers as well and what is even more striking is that these alternative providers are more efficient in what they are doing than banks ever were and provide a more seamless customer experience. Getting a loan through peer-to-peer lending platform might take just a few days whereas in case of traditional banks we are talking about weeks. This is definitely something that gives these alternative service providers a competitive edge.

The fact that we are now seeing a growing amount of new companies that leverage technology and innovation to deliver better customer experience, commonly referred to as fintech companies, trying to take away some business from banks and that they even stand a chance to compete with the incumbents is the result of the interplay between various factors. First, the resulting increased regulatory scrutiny faced by banks in the years following the crisis forced banks to scale back their lending business. As a result, many people who prior to

the crisis had no problem obtaining a loan, suddenly found themselves unable to get one in the post-crisis world. In addition, the banks' reputation suffered heavily with many people losing trust in their banks. Last but not least one has to also take into account the technological developments and innovations we have witnessed in the recent decade ranging from the internet becoming an integral part of our everyday lives to the "big data" revolution and the rise of cloud computing as well as the demographic shifts. In the light of increasing ageing world population we observe that consumers are more actively looking for investment opportunities yielding higher returns. On the other hand side, the "Millennials" generation is keen to try out the new alternatives offered by fintech companies which are compared to banks doing much more to make the customers' life simple and uncomplicated and are developing financial solutions while having in mind the things that customers value the most such as innovativeness, simplicity of use, increased transparency, speed, efficiency and convenience. Besides, millennials are also peer-to-peer lending platforms' core target market (PwC, 2015). The combination of all these factors might prove to be deadly for banks failing to adapt to the changing financial services landscape. The global fintech investment hit a new record in 2014, when it almost tripled compared to the year before reaching astonishing $12.21 billion leaving no doubts that digital revolution is a real thing and should be taken seriously (PwC, 2015).

In fact, majority of banks are aware of the threat posed by new entrants and are already actively working on overhauling their systems, adapting their business models, redesigning products with an ultimate goal to improve the overall customer experience. While some banks are partnering up with fintech companies to improve the user experience and provide more innovative banking solutions, there are also cases of banks which bought fintech start-ups. One example is the BBVA's acquisition of Simple (BBVA, 2014). Despite the fact that alternative financial services providers offer a number of advantages compared to the traditional banks, they do not necessarily need to be seen as a threat to banks, but also as an opportunity to improve the way thing were done.

The mail goal of the following chapter is to introduce the concept of peer-to-peer lending, the main reasons behind its recent growth as well as the main players in this newly emerged industry and why they could pose a threat to traditional lenders. In addition, some other areas where banks face competition are being discussed such as foreign exchange as well as the bigger threat that could come if some of the big tech giants such as Google decided to enter banking.

4.1 Peer-to-Peer Lending

While the idea itself is not a new one and this practice has been done in other forms before, peer-to-peer lending, also known as market place lending or crowd-lending is perceived to be a relatively new form of financing/investment that first emerged in 2005 in the United Kingdom but has soon thereafter spread to the US and China (Kirby & Worner, 2014). The pioneer of peer-to-peer lending was Zopa. According to Giles Andrews, one of the founders of Zopa, the main motivation behind this new lending scheme's creation was to provide consumers on both sides of the transaction with better deals than those they got at their banks. Not only did they want to give borrowers a similar choice big corporates have when they can decide whether to raise money in capital markets which is traditionally cheaper or to go to their respective banks and ask for a loan, they also wanted to give ordinary people a chance to become investors and earn more money on their savings (Brett King, 2013, 1-22).

The peer-to-peer lending platforms work as financial matchmakers who link together people/businesses in a need of a credit with people looking for attractive investment opportunities. What is different and 'revolutionary' about the peer-to-peer financing is that it that it does not involve brick and mortar setting, the whole business is conducted online and works without involvement of banks. Thanks to their online presence and the fact that these platforms have no physical branches, peer-to-peer companies have substantially lower operational costs compared to the traditional banks. According to McKinsey's report looking into how successful are banks in implementing cost efficiency measures in the aftermath of crisis, only 30% out of 500 biggest global banks managed to increase their cost-efficiency in the period from 2009 to 2012 (McKinsey & Company, 2013). It is estimated that online peer-to-peer lending platforms experience cost savings of up to 400bp over traditional banks (Moldow, 2014). Due to the realized cost savings and other efficiencies these platforms are generally able to offer much more attractive rates for both savers and borrowers as banks.

4.1.1 How peer-to peer lending works

With respect to the process itself, it usually takes just a few minutes for borrowers to fill out the online loan application. The typical questions one needs to answer include the loan amount, maturity, purpose of the loan, credit score, yearly income and some other information needed to judge the borrower´s ability to repay. While some platforms offer the possibility for borrowers to quote the maximal interest rate they are willing to pay providing a space for investors to place their bids and borrowers to get the most favorable quote, other will generate the lending quote automatically based on the submitted data which the borrower can either

accept or decline when deemed too high. In case the borrower accepts the offered quote, the decision on whether the request was approved or declined might takes from few minutes to 48 hours depending on the platform. Next, each applicant is rated taking into consideration multiple factors such as credit score, credit history, gross income, debt-to-income ratio, information regarding recent bankruptcies, online banking details, education, employment history and other. Once again the procedure might vary depending on the platform. In general, people applying for a loan will receive the funds only when i) their request gets approved by the platform and ii) there is enough interest among the investors who jointly provide the necessary funds. For instance it might happen that a loan request gets approved but doesn't receive enough funds and while some platforms grant also partial loans after reaching a certain threshold there are also the ones which do not. There are also platforms where the loan gets funded almost instantly after it is approved.

The first-time investors who do not have any prior experience with this kind of lending scheme might decide to take it one step at a time and invest first in the "safest" A-rated loans with low default rates. Nevertheless, one will not achieve superior risk-adjusted returns without taking on some risk; in that case a combination of loans with different risk characteristics would be ideal. The good thing about this type of investment is that both risk averse and risk seeking investors have the ability to create their ideal loan portfolios based on their risk appetite and required return.

While in some cases it might take 1-2 days to receive the funds on a bank account, in other cases it might be also a question of 1-2 weeks depending on how the loans are funded. Some platforms offer their lenders a possibility to individually choose the loans they want to provide financing for which is rather time-consuming and results in prolonged waiting times of the applicants. This option is suitable for investors who want to have more control over their loan portfolios or who believe that they have superior loan-picking skills. They might use own algorithms to evaluate the borrower's riskiness. Nevertheless, most investors prefer that they money is automatically spread across multiple borrowers without having to review each one individually. While the majority of p2p lending websites feature all the important information including the FAQ section to make the investing process as simple as possible, it might not be for everyone to individually choose 100 loans. Nevertheless, there exist also platforms that do not offer this possibility and instead mandate its users to invest in all approved loan application. In such cases, the funding for loan occurs immediately after the borrower is approved which leads to significant reduction in waiting times as well as

improved efficiency. Peer-to-peer loans are typically granted for minimum of 3 year up to 5 years (Ott, 2015).

4.1.2 Business models

In their report, Kirby & Worner (2014) mention two most commonly used business models adopted by peer-to-peer lending platforms depending on who originates the loan. The first business model is referred to as 'client segregated account' model. Platforms using this model, instead of relying on banks to originate the loan and consequently buy it from them, originate the loan themselves (see figure 14). The most distinguishing feature of this type of business model is that the funds are held on the segregated client account and are completely isolated from the platform's balance sheet. This has an advantage in an event of platform's closure in case of which the platform is prohibited from using these funds. Moreover, the borrowers will be able to continue making payments to the lender despite the platform being out of the business. In its place there will be another company which will handle the outstanding contractual obligations. Examples of platforms using client segregated account model include all the British major players such as Zopa, Funding Circle and RateSatter.

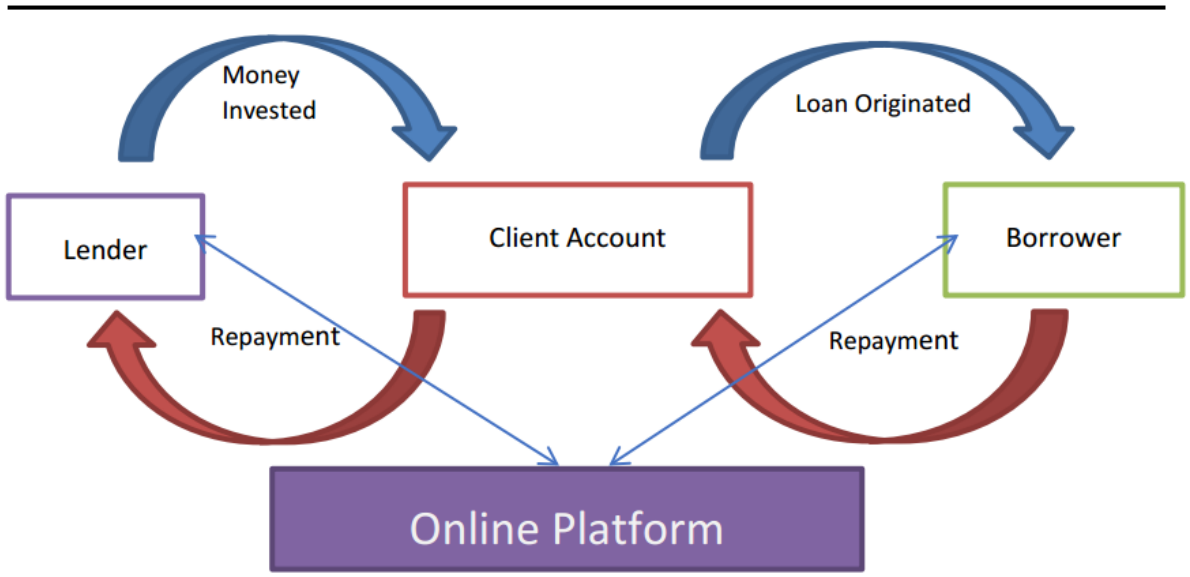


Figure 14: Client segregated account model. Adopted from (Kirby & Worner, 2014)

The second business model is the notary model whereas in this case platforms rely on banks to originate the loan (see figure 15). They merely issue a note for the amount granted by the investor. This model is very common in the US and is used also by their two largest p2p platforms. Nevertheless, even though the bank is involved in this process, the credit risk stays with the lender.

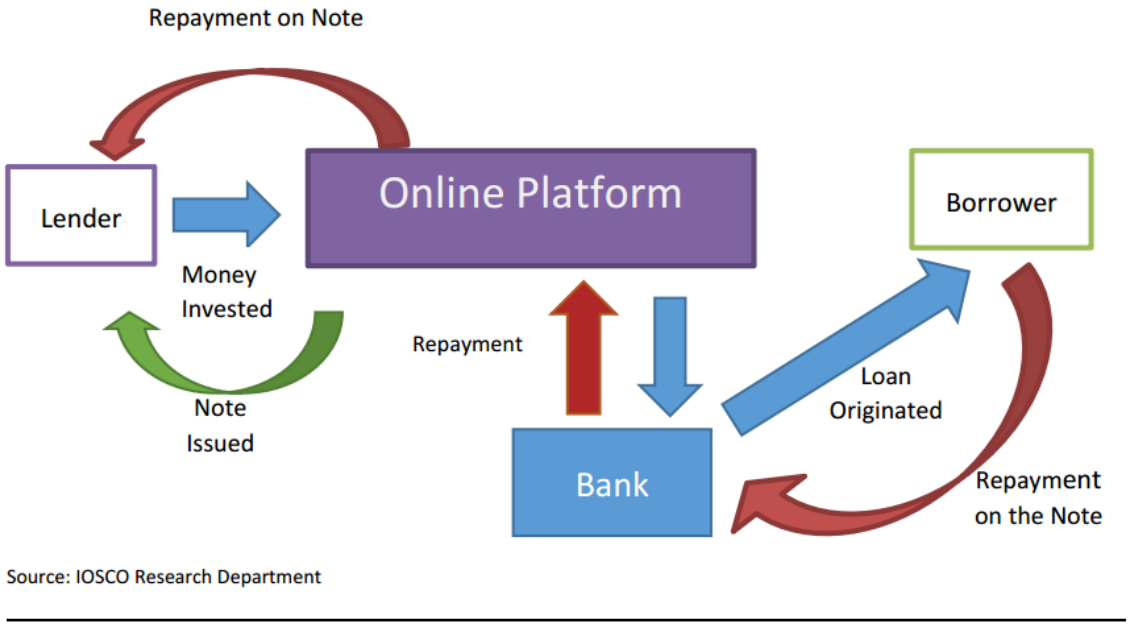


Figure 15: Notary model. Adopted from (Kirby & Worner, 2014)

The authors mention also a third model a so called ‘guaranteed return model‘ which is currently not very common (see figure 16). Platforms using this business model also originate the loan themselves but in contrast to the other models they promise a fixed rate of return.

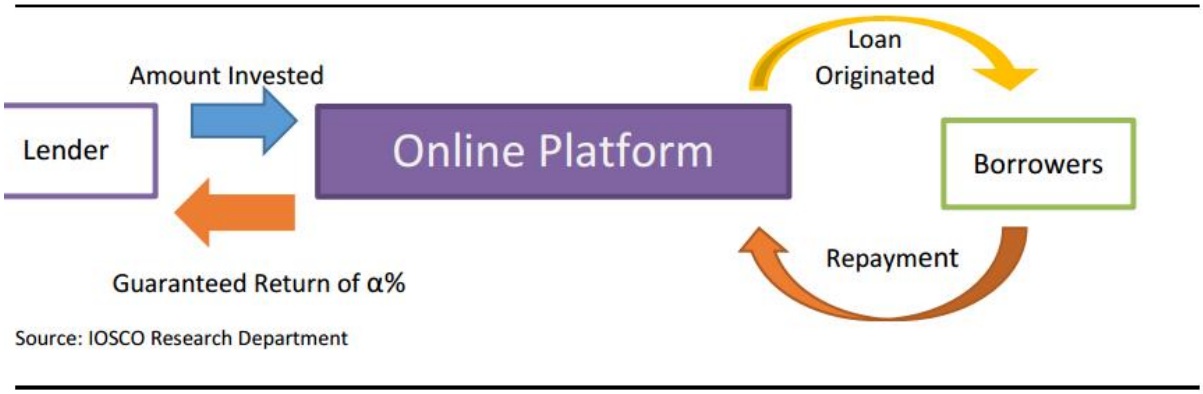


Figure 16: Automated guaranteed return model. Adopted from (Kirby & Worner, 2014)

Apart from conducting all their business online, another distinguishing feature of p2p lending platforms is that they do not use their own funds to originate the loan, they merely provide an opportunity for people looking to borrow capital to connect with those willing to lend and vice versa. Similarly as brokers these platforms earn money from arrangement fees which are collected from both borrowers and investors (PwC, 2015). It is also false to think of a peer-to-peer platform as a lender of last resort in a sense that people who do not qualify for a loan at a bank will definitely get one at the peer-to-peer platform. In fact, majority of the borrowers which are granted loans through these platforms qualify as 'prime' or 'nearly prime' borrowers (Fitch Ratings, 2014; Baeck, Collins, & Zhang, 2014). Zopa, for instance has adopted very strict screening procedures which led to more than 75% loan applications rejections (Simon, 2013). Lending Club with its 90% rejection rate is even stricter (Zeitlin, 2012). Nevertheless, peer-to-peer lending platforms in general tend to have higher approval rates compared to the traditional banks, not only because of their more innovative underwriting approach and use of alternative data when evaluating the borrower's ability to repay the loan, but also because providing small-amount loans in not perceived to be among the core service offerings provided by banks.

Despite the fact that the main goal behind the p2p lenders emergence was to provide an alternative to traditional banks, they still have some things in common. P2p lenders merely try to do things better than banks but they are not reinventing everything banks do, just some parts. For instance many times they use the same data banks do to analyze the borrower's creditworthiness, the main difference lies in their ability to interpret the data. P2p lending businesses adopt analytics which allows them to interpret the data more intelligently (Brett King, 2013, 1-22). Moreover, many p2p lending platforms write their own algorithms to evaluate the borrower's ability to repay the loan which work better than those applied by banks. Last but not least, these new platforms are in addition targeting new sources of data which traditional banks have not even considered yet and might never do such as the number of friends on Facebook, the number of followers on tweeter, amount of time needed to decide on the ideal loan amount ad other(Moldow, 2014).

4.1.3 Types of P2P lending

The two main categories of peer-to-peer lending include the peer-to-peer consumer lending which as the name already suggests involves providing unsecured lending to individuals and the peer-to-peer business lending which helps small businesses to obtain the necessary funds. P2p platforms offering business loans to SMEs help to speed up the economic recovery by improving the SMEs‘ access to funding. The most prominent examples of peer-to-peer platforms operating in the United Kingdom include Zopa, Ratesetter and Funding Circle. While Zopa and Ratesetter specialize in providing personal loans, Funding Circle is a peer-to-peer business platform. In the US, the peer-to-peer market is dominated by Lending Club, the world's largest p2p consumer lender and Prosper. They are both p2p consumer lending platforms. At the moment, there is no European (excl. UK) equivalent of Lending Club or Zopa in terms of transaction volume, although there are some platforms worth mentioning such as German Auxmoney or the Estonian Bondora.

It seems as if every day a new peer-to-peer lending platform came to an existence intended to serve the needs of some un(der)served niche market. Some examples of emerging peer-to-peer platforms include platforms for student loans' refinancing, real estate loans, asset backed leasing and other (Kirby & Worner, 2014). According to the latest figures, the outstanding student loan debt in the US reached enormous $1.2 trillion as of 2014 providing a huge opportunity for peer-to-peer lenders (Banjo, 2015).

4.1.4 Key Benefits and Risks

As already mentioned before, financial crisis forever changed the banking industry as we knew it. Banks became more heavily regulated in order to prevent the recurrence of the crisis. The increasing deleveraging efforts on part of the banks coupled with the need to build capital buffers had an inevitable effect of banks becoming reluctant to lend. It was around this time that new players started to emerge and offer bank-like services mostly to fill up the void left by the banks. Apart from improving the access to finance for both individuals and SMEs and thereby supporting the much needed economic recovery, peer-to-peer lenders also help to foster the competition in the financial sector. Moreover, banks are forced to innovate their product offerings as well if they do not want to risk losing their customer base to these alternative players, become more cost-effective and adjust pricing. While in some cases the main reason why people turned to these alternative financial service providers was because of the inability to obtain credit elsewhere or the high interest rates and hidden fees associated

with the applying for a loan at their banks, others decided to give them a try because they provide better customer service, simplicity and speed.

Better rates are however not the only benefits associated with using peer-to-peer lending platforms. Transparent fees, faster administration, greater convenience as borrowers do not need to go to physical branches and the fact that one no longer needs to deal with banks all prove to be an important motivation for borrowers who decide to use these alternative financial service provides. The last point is however no longer universally applicable as some banks are starting to make inroads into this fast growing industry and use these platforms to make small amount loans (Jenkins & Alloway, 2015). And although borrowers do not need to directly deal with banks, they did not entirely cut them out of the transaction. For investors, peer-to-peer lending also offers a possibility to diversify their investment portfolios by adding a new asset class thereby reducing overall risk of their portfolio (Kirby & Worner, 2014).

Nevertheless, the attractive returns come at the price and peer-to-peer lending is no exception to this rule. Therefore if one decides to invest through peer-to-peer platforms he/she should be aware that as every investment, peer-to-peer lending also entails considerable risks. First of all, there exists no such thing as deposit guarantee scheme, meaning that these platforms are unlike banks not mandated to guarantee their investors' money and do not assume the risk when a loan goes into default. However, this does not necessarily need to be seen as a disadvantage as deposit insurance could provide the lenders with an incentive to take excessive risks and thereby encourage moral hazard (Verstein, 2012). In addition, peer-to-peer loans are not backed up by any collateral that can be recuperated in case of borrower's default. Although, truth to be told there is already a bunch of peer-to-peer platforms which provide also secured loans mainly in real estate with more to come in the near future (Allen, 2014).

As already mentioned peer-to-peer platforms act merely as brokers and despite plenty of precautionary measures aimed at limiting the losses arising to investors if borrowers become unable to pay back their debts, investors still face the risk of losing all of their invested capital. Hence, the number one risk is the credit risk. Nevertheless, most of the well-established platforms claim to have relatively low default rates. Lending Club currently boosts a default rate of 5% for its 3 year loans (Cunningham, 2014). Moreover, peer-to-peer platforms intend to minimize the potential losses to investors by distributing the investors' money across multiple loans not just one (Kirby & Worner, 2014). As a result, an investor

willing to lend out £1000 through Zopa might end up having a portfolio of 100 loans as the minimum amount that can be lent stands at £10. Moreover, investors are prohibited from funding the entire loan, they can always fund only a portion. To calm down the lenders who perceive p2p lending to be too risky, British platforms even introduced the so called 'provision' funds which could be thought of as a weak form of FDIC or FSCS protection. These funds are made of borrowers' contributions and their main purpose is to provide at least partial compensation to lenders in case of borrower's default. On the downside, an existence of such fund could provide lenders with an incentive to take on higher risks or neglect their due diligence to maximize their expected returns (Kirby & Worner, 2014).

Moreover, at present there are not many platforms that offer secondary market trading, While Zopa and Funding Circle allow their borrowers to try to sell their loans to other users under certain conditions and for a certain fee, Lending Club and Prosper are the only ones which have a real secondary trading platform for already originated p2p loans. Nevertheless, most of the time, p2p loans cannot be sold before the maturity and are therefore subject to liquidity risk. Although this might also change as the market matures. There were already instances where platforms offered to buy the loans lenders no longer wished to keep, securitized and repackaged them into bonds and sold them to interested investors (Kirby & Worner, 2014). Also, as the interest of institutional investors for p2p lending rises, we might see more securitizations to follow in the future.

In addition, one needs to take into account also the interest rate risk as peer-to-peer loans are typically offered at fixed interest rate (Moenninghoff & Wieandt, 2013). In general, investors face the risk that interest rate will rise in the meantime and as their money is locked up for fixed term they can forgo some interesting investment opportunities. Similarly, borrowers might also decide to repay their loans sooner in the light of changing interest rate environment and as a result investors might reinvest they money on less favorable terms.

Last but not least, investors face the risk of platform being shut down which could severely disrupt the platform's intermediary role. As a consequence, lenders might all of sudden face a situation in which they might find it difficult to enforce their claims against the borrowers. In worst case scenario, they could lose some principal and interest income with the possibility of payments being completely suspended. Nevertheless, this should not happen all that often as most of the platforms use a segregated business model so if a platform cannot continue its operations other company or manager might step into that role. Moreover,

Britain's FCA mandates p2p platforms to develop resolution plans providing an additional protection to investors.

Due to their online nature, alternative finance providers also face the threat of cyber-attacks and other fraudulent activities with identity theft and money laundering being among the primary concerns. In addition, the investors face substantial information problems and most of the time have to entirely rely on the platforms' innovative underwriting skills as the only information they have at their disposal about the borrower apart from some basic information such as the purpose of the loan is the interest rate.

The main difference between the peer-to-peer lenders and banks consists in the fact that unlike banks peer-to-peer lenders do not engage in the maturity transformation. They also do not assume any credit risk or use extensive leverage (Moenninghoff & Wieandt, 2013). Kirby & Worner (2014) analyzed the extent to which these online platforms pose a systemic risk. They concluded that due to the above mentioned facts as well as the relatively small size of the market, p2p platforms currently do not endanger the financial system stability. Moreover, in his speech at LendIt USA 2015 conference, Mr. Summers, the former Treasury Secretary, argued that peer-to-peer lending platforms could help to alleviate the negative impacts of economic downturns and step in to provide the necessary credit during recessions when many banks are unable to (Lichtenwald, 2015)

4.1.5 Major players in p2p lending universe

The peer-to-peer market is currently dominated by 3 major players: the United States, China and the UK. While peer-to-peer lending market has recorded an impressive growth in the Continental Europe in the recent years, its market share in global p2p lending market is still rather negligible. The following section will provide an overview of the most important players in the p2p lending market as well as some of the key industry characteristics in these four geographic regions. In the light of the peer-to-peer industry being a rapidly growing industry it is hard to provide exact figures with regards to the total loan origination volume. Therefore, the figures which are provided should be taken as an estimate, as different sources tend to report slightly different figures.

United Kingdom

Last year, Nesta in cooperation with the University of Cambridge published a most comprehensive report on the state of the alternative finance industry in the UK to date. As it is not within the scope of this paper to analyze the whole UK alternative finance industry which

altogether grew to astonishing £1.78 billion in 2014, we will in the following only concentrate on the findings related to the fastest growing segment of this emerging industry, the peer-to-peer lending. At the time of writing the report, p2p business lending was perceived to be at the forefront of the alternative finance movement with average growth between 2012 and 2014 reaching astonishing 250% and total lending volume for 2014 amounting to £749 million. Interestingly, the authors found out that on average more than 60% of companies who obtained funding through these platforms reported higher profits and 50% claimed that they also observed an improvement in employment. Also, almost a quarter of the total p2p business loans went to manufacturing sector, making it the most funded industry sector. Manufacturing is one of the sectors which reported having difficulties with obtaining the necessary financing in the post-crisis world. P2p consumer lending platforms, in comparison recorded a growth of 'just' 108% and issued around £547 million in new loans in 2014 claiming a second place. Once again, the most interesting observation was that around 50% of the borrowers had a possibility to get a bank loan but opted for p2p loan instead mainly attracted by the lower interest rates and improved customer service.

According to the estimates, more than 7.100 SMEs and 80.000 individuals were able to secure funding through p2p lending platforms in 2014. Nevertheless, the awareness of alternative financing options is still at pretty low levels and stands at 58% for individuals and 44% for SMEs with usage levels recording even lower levels below 15% making the authors believe that the alternative finance market is likely to grow even more in the near future. The second decisive factor is the fact that the majority of individuals and SMEs who have an experience with p2p lending are likely to use it again in the future even if the banks offered similar conditions. Last but not least, we might expect p2p lending to become more widespread as its current users recommend it to others needing finance (Baeck, Collins, & Zhang, 2014).

Zopa

Zopa was the first peer-to-peer platform and with £835 million in cumulative lending to over 107,000 borrowers is now perceived to be the biggest peer-to-peer lender in the United Kingdom (Zopa, 2015). While the platform is mostly known for providing unsecured personal loans with car purchase, debt consolidation and home repairs being among the most often quoted reasons for taking out the loan, it is not so long ago that Zopa started to provide also business loans to sole traders who became underserved by banks (Zopa, 2015). Zopa currently boosts a default rate of just 0.3% for the 3 years loans originated between 2010 and

2013 (Wikipedia, 2015), which is among the lowest in the industry. The low default rates are the result of strict credit checks of potential borrowers. Moreover, Zopa has also a rather high share of borrowers who repay their loans before the due date as there are no early repayment penalties.

In order to qualify for a loan at Zopa, one needs to be a current UK resident older than 20, living in the UK for the past 3 years earning at least £12.000 per year and most importantly have a solid loan repayment history (Zopa, 2015). The eligibility criteria for investors are pretty much the same except that they do not need to have a good credit record. Those interested in providing funds through Zopa can invest as little as £10 whereas there is no limit on the maximum amount. To protect its investors, Zopa has also launched a Safeguard fund which can be drawn upon to compensate the losses in case the borrower defaults on his payments. The fund is currently worth £8,165,016 and growing every minute.

In the first quarter of 2015 Zopa originated over £85 million in new loans and is likely to reach the £1 billion threshold in cumulative lending in the upcoming months (Peer2Peer Finance Association , 2015). The ultimate forecast for the whole year in terms of new lending stands at £550 million (Alois, 2015). According to the Zopa's CEO Giles Andrews, they currently do not have plans to expand into other markets but instead focus on increasing their presence in the UK's personal loans market space. Zopa currently holds a market share of 2% whereas they expect to take up to 30% of the market in the next 5 to 10 years (Hobey, 2015). The UK government has created a perfect environment for p2p lenders, not only does it work on allowing p2p loans to be held in ISA which would mean that lenders with interest income up to £15,000 will be exempt from paying income tax, it has also introduced bad debt relief allowing lenders to write off bad debt against gains prior to the income tax calculation (Torney, 2015).

Funding Circle

Funding Circle is the UK's second largest p2p lender targeting the underserved SMEs sector both in the UK and the US. SMEs are central to the economy's well-being and job creation and are a main driver of the economic growth. The UK government, aware of the role of alternative financial providers in improving the access to finance of these companies, has made a lot of progress in creating a thriving environment for these emerging players. Amongst other things, it has just recently passed a new act, the so called 'Small Business, Enterprise and Employment Bill' which will make it compulsory for the banks to direct the

clients whose requests they rejected to the alternative financial service providers (Alois, 2015). This step will also help to increase the awareness amongst SMEs with respect to alternative financing options. Santander and RBS are among the first banks that have entered into referral partnerships with Funding Circle (Scuffham, 2015). The UK Government has also invested around £60 million through Funding Circle since 2012 as part of two different schemes hoping to reduce the SME's financing constraints and support the economic recovery (GOV.UK, 2014).

At the time of writing, Funding Circle praised itself to have lend over £620,313,660 to small companies in business loans since its inception (Funding Circle , 2015). The amount of new loans for the first quarter of 2015 stood at approximately £110 million, which is higher than in case of Zopa. Nevertheless, in terms of new lending, the RateSatter is a clear winner as it has distributed over £120 million in new lending (Peer2Peer Finance Association , 2015). With respect to borrower requirements, any business with operating history of at least 2 years is eligible for a loan whereas the maximum loan amount is £1 million. Funding Circle offers a wide range of loan options ranging from unsecured business loans and secured loans to working capital loans, property loans and other with a minimum maturity term of 6 months to a maximum of 60 months. Investing through Funding Circle works on an auction principle meaning that the one who offers the most favorable rate gets to finance the loan. The estimated return after bad debt and before tax stands currently at 6.8% (Funding Circle, 2015).

Mainland Europe

In their recent report, University of Cambridge and Ernst & Young look at the nature of alternative finance industry also in Continental Europe and are the first to provide a pan-European comprehensive assessment of this fast growing industry using a sample of 255 most notable alternative service providers in the region. Not surprisingly, the UK with almost 79% European alternative finance market share as of 2014 is a clear leader having facilitated over £1.78 billion (€2,465m) [1] in alternative financing with second place going to France and third to Germany who have provided around €154mn and €140mn in 2014, respectively.

Turning attention back to the p2p lending segment, in Continental Europe, Spain currently boosts the highest number of p2p lending platforms (34), with France, Germany and Netherlands following closely behind, adding Sweden to the picture would leave us with the 5 top performing European countries also in terms of total cumulative lending. Nevertheless, if

[1] British Pound – Euro Exchange Rate as of 5/14/2015 is 1.3846 according to the Bloomberg

we took the lending per capita as a proxy for alternative finance sector's performance, Estonia and Finland would be in the top 5.

Contrary to the UK, where p2p business lending represents the largest segment of the alternative finance industry, in Continental Europe it is the p2p consumer lending which dominates the market. Despite claiming the third place in terms of total lending volume, the p2p business lending is still relatively new segment in the Europe ex UK with reward-based funding being more common as also demonstrated by its position as the second largest segment. Nevertheless this might soon change in the light of p2p business lending being the fastest growing segment, having grown by around 270% in the period from 2012 to 2014. The p2p consumer lending has on the other side recorded a growth rate at slightly above 110% placing as the fourth fastest growing segment.

According to estimates, the European alternative finance space excluding the UK could reach as much as €1.3 billion this year in comparison with €620 million in 2014 representing a year-on-year growth of 110%. Together with the UK the alternative finance market could grow from €2.96 billion in 2014 to approximately €7 billion in 2015 (Wardrop, Zhang, Raghavendra, & Gray, 2015). Interestingly, while the UK alternative finance market is dominated by p2p business and consumer lending which combined hold 90% market share, in the mainland Europe p2p lending segment accounted for only 59% of the market in 2014. In total, p2p business lending and p2p consumer lending platforms issued almost €370 million in loans in 2014, at 75% and 25% respectively.

Nevertheless, one needs to first compare the estimated transaction volume of the p2p lending platforms with the relevant market size to be able to say whether it is or is not a significant amount and if p2p lending is indeed gaining in popularity. As of 2014, p2p consumer lending accounted for mere 0,1% of the total addressable market for consumer loans, revolving credit and overdrafts in the EU which is worth approximately €1 trillion proving that despite the impressive growth rates recorded in the recent years, p2p lending has still a long way to go to become mainstream (Kazanins, 2015). Improving awareness of these alternative financing options is one of the main prerequisites for the growth of this market.

Some examples of the most important non-UK p2p lending providers include for example the German Auxmoney which has since its inception in 2007 issued almost € 230mn loans (Auxmoney, 2015) or the Estonian Bondora who was the first p2p lending platform to facilitate cross border lending and whose investors come from all across the Europe. The

platform currently operates in 4 loan markets, its home country, Finland, Slovakia and Spain, taking advantage of the inefficiencies in the local credit markets, however their long term goal is to continue expanding into other Eurozone countries as well, becoming a true pan European platform (Quinn, 2014).

United States

While it is rather difficult to provide the exact figure, we might get an idea about the size of the US p2p lending market by looking at the total loan volume figures of the two largest US platforms, Lending Club and Prosper. Since Lending Club is now a public company, it is obliged to publish the information on the overall amount of issued loans online. According to its homepage, the Lending Club has facilitated around $7.62 billion in loans until 2014 (Lending Club , 2015). Prosper, on the other hand, provided around $ 2.4 billion worth of loans since its inception. This brings us to the total loan issuance reaching a $ 10 billion milestone in 2014 (Renton, 2015). While there exist other players in the US engaging in similar activities, these two are the only ones which could be classified as pure peer-to-peer (Cunningham, 2015).

Having started as a Facebook application, Lending Club is currently the world's largest p2p lending platform having Google amongst its early-investors and the first to go public. In fact, its IPO belongs to the largest tech IPOs of 2014, although nothing compares to the Alibaba's IPO. In the first quarter of 2015 Lending Club issued $ 1.635 billion in new loans representing a year-on-year growth of 107% bringing the total cumulative lending to $ 9.255 billion. Almost three quarters of Lending Club's users take out the p2p loan to refinance their older loans or pay back their credit card debt with average interest rates ranging from 11.38% for a 3 year loan and 15.55% for a 5 year loan. With respect to the eligibility criteria, it is very similar to the other big p2p platforms requirements, once again only US residents older than 18 years with a FICO score of at least 660 and a valid bank account can apply for a loan. In addition one needs to check beforehand if Lending Club operates in the given state. P2p investors can earn up to 9% in annualized adjusted net returns depending on the loan grade, whereas the safest 'A-rated' loans can yield 5%. The main difference between Lending Club and Prosper consists in the fact that Lending Club also makes business loans. A recently formed partnership between the Lending Club and Alibaba to help small US businesses to quickly obtain the necessary financing in order to be able to purchase goods from Chinese suppliers at Alibaba.com is yet another important milestone (Alloway, 2015).

In their recent report, Goldman Sachs take a closer look at the fast growing p2p lending universe in the US and how much of a threat do these alternative financial services providers pose to traditional banks in terms of lost profit. They conclude that banks currently face losing as much as $4.6 billion in annual profit to p2p lenders in unsecured personal loans space alone which is currently worth around $843 billion. Moreover, they predict that peer-to-peer lenders will over the next ten years increase their market share almost eightfold from current 2% to as much as 15%. The next business line where banks face competition from p2p lending platforms are small business loans with the total market size of $186 billion out of which banks currently risk losing $1,6 billion in profits to p2p lenders. To provide some background, small businesses had a particularly hard time attracting the necessary financing after the crisis and while the worst is already behind them, the banks continue to be careful with giving out loans with current approval rate standing at 21%. Peer-to-peer lending platforms in comparison met the needs of 62% loan applicants (Lichtenwald, Lend Academy, 2015). All in all, banks face losing up to $11 billion to these alternative financial providers in multiple segments over the medium term which represents a 7% reduction in total bank profits.

China

According to the latest forecasts, China has already superseded the US as the largest p2p lending market with the total value of loans facilitated through p2p platforms reaching $ 41 billion in 2014 as reported by the p2p portal site Wangdaizhijia (Schaff, 2015). In contrast to the US or UK, the Chinese p2p lending sectors remains, however, still largely unregulated which has led to an emergence of hundreds of new platforms of dubious nature in the recent years, and similarly as many collapses. In 2014 alone, nearly 17.5% of all p2p lending platforms were experiencing problems to repay their investors or went out of the business. There have been also numerous cases of fake platforms or Ponzi schemes.

Chinese p2p lending sector is characterized by high diversity in business models ranging from online and offline platforms to those offering secured or unsecured loans and other. Some Chinese p2p lenders even assume the credit risk by providing investors guarantees which is contrary to the original motivation behind p2p lending concept. While lack of regulation has been one of the driving factors behind p2p market recent growth, another equally important factor has been the increased appetite for liberalized, market-based interest rates for both investors and borrowers in the light of China's financial repression. Nevertheless, as the market grows in popularity and size, we might expect to see the Chinese

policymakers to take some action and come up with regulation that would make an end to the fraudulent business models and help to make p2p lending more secure and transparent.While we might expect to see the second wave of platform's failures as a result, it is a necessary step toward creating a flourishing alternative financial market in China in which p2p can be seen as a real alternative to banks that can help to improve the access to finance. Alibaba and Tencent have also launched their own p2p lending platforms further giving credibility to this new sector (Schaff, 2015).

4.1.6 Regulation

One of the decisive factors behind the peer-to-peer lenders' growth in the recent years and the fact they are even able to compete with the banks is that unlike banks they were not burdened by excessive regulation which has in case of banks resulted in higher costs of doing business as well as reduced competitiveness. This argument is however not universally applicable as there are both countries which promote the growth of these innovative business models such as UK and design the appropriate regulatory framework to allow new players to emerge as well as countries which do exactly the opposite and put the alternative financial services providers at a disadvantage compared to the incumbent banks. Nevertheless, the common understanding is that alternative financial services providers should not be subject to the same regulatory scrutiny as banks. They are after all very different from banks and what is even more important they do not threaten the financial system stability the way banks do as they do not engage in maturity transformation and have still rather negligible market share.

Not surprisingly, this rather new sector is approached differently by different country's regulators. In their report, Kirby & Worner (2014) differentiate between five regulatory regimes. The first one is the unregulated regime in case of which policy makers did not feel that there is a need to regulate the industry due to its small size and in some cases also the lack of definition. Examples include China (Schaff, 2015), South Korea, Brazil, Egypt and Tunisia.

Second regime treats peer-to-peer lending platforms as intermediaries ordering them to register in order to be able to conduct its business and could be found in Australia or Canada. In other countries peer-to-peer lenders are due to their credit provision function classified as banks from which follows that they need to apply for a banking license and are in consequence subject to the same regulation. This regulatory regime is currently present in

Germany, France, Norway and Italy. Restrictive regulation might be one reason why p2p lending sector in these countries remains relative small (Kirby & Worner, 2014).

Last but not least, the US-based p2p lending platforms are subject to a unique regulatory regime, commonly referred to as 'US model' which treats p2p lending platforms as sellers of securities and thereby mandates them to register themselves as well as all their p2p loans with SEC. They are also obliged to make publicly available all the relevant information related to their business such as total volume, performance statistics, finances as well as information on every note they sell. In the US, p2p lenders are in addition to the federal regulation also subject to the individual states' regulations from which follows that they need to individually apply for an access in each state in which they wish to operate. At present, there are 19 US States that do not allow investing through neither Lending Club nor Prosper whereas applying for a loan through at least one of the two platforms is permitted in almost all states with the exception of just three states (Cunningham, 2015).

Nevertheless, some scholars heavily criticized the SEC's decision to regulate p2p lending industry and argue that by including p2p lending within their securities regulation they have not only increased the borrower risk but also weakened lender protection as lenders face the risk of both borrower's and platform's default and put unnecessary constraints on this sector's future growth when what was needed was a more nuanced approach (Verstein, 2012).

Finally, the last regulatory regime can be found in countries like Japan and Iran which prohibit p2p lending altogether (Moore & Alloway, 2014). While in their report authors classify the UK as having currently no regulatory regime, this is no longer true as the report was published before the 1st April 2014 which marked the day FCA started to regulate peer-to-peer lending, commonly referred to as loan-based crowdfunding (FCA, 2014). In fact, we could conclude that there are at the moment six regulatory regimes referring to the last one as "the UK model".

The UK is at present a clear leader in terms of creating a regulatory framework which enables the alternative financial service providers to grow and become a sustainable alternative to banks thereby enhancing the competition in the banking sector. The main difference to the US model consists in the fact that the UK did not just combine the existing regulatory rules and then tried to adapt them to the needs of peer-to-peer lending but rather developed a completely new set of regulations having in mind the peculiarities of this emerging market as well as the potential threats and benefits and as a result created an

industry specific guidance. To name a few regulatory measures, the Financial Conduct Authority, which is the UK's financial regulatory body, mandated the peer-to-peer platforms to retain certain level of capital which might be used to cover the losses arising due to unfavorable macroeconomic and business conditions. Amongst other things, peer-to-peer platforms also need to make sure that they a have an adequate mechanism in place which will handle the outstanding loans in the event of the platform's closure. Last but not least they also face certain reporting obligations and disclosure requirements to ensure that investors can make well-informed choices (Quinn, UK & US Peer-to-Peer Regulation: Enlightened Touch vs. Square Peg Round Hole, 2014).

Nevertheless, peer-to-peer lending's cost advantage at least when it comes to lacking regulations might erode as peer-to-peer lending platforms become more regulated (Lichtenwald, Profits for Banks at Risk as Peer to Peer Lenders Achieve Scale, 2015) and this will certainly be the case in the light of increased interest from institutional investors.

4.1.7 Threats

Banks start lending again

In the aftermath of the crisis, many banks had to severely cut back their lending activities as a result of increased regulatory scrutiny. Alternative financial service providers saw this as a perfect opportunity for a market entry and stepped in to provide the much needed funds. Nevertheless, times are different now. In the past few years banks have been actively working on improving their capital positions and are now better capitalized than ever before. Moreover, as they are slowly returning to the pre-crisis profitability levels, we might see them trying to win back the market share they lost to the alternative financial service providers and start lending again, especially when it comes to SME lending which suffered the most as a result of the crisis.

Nevertheless, there is a huge difference between the US and the European banks in terms of financial performance. While the US banks have long returned to the pre-crisis profitability levels and even managed to earn record high earning in the first quarter of 2013 and again in the first quarter of 2014, surpassing the previous record reached in the fourth quarter of 2006, (Tor & Khan, 2014), the European banks (excluding British banks) are showing a very different picture. Most of the banks are still struggling to cover their cost of capital and to generate stable revenue streams as also reflected in their low ROE and are therefore forced to engage in further restructurings and focus on cost reduction and increasing

efficiency (Slater, 2015). Hence, we might expect a more radical answer to alternative financial services providers coming from the US banks then their European counterparts. This is a good news for the European peer-to-peer lenders as they might be allowed to grow some more without having to fear the competition from banks.

Either way, the question remains if banks will be able to beat the peer-to-peer lenders in terms of lending rates as the banks´ costs are like to be higher as a result of increased capital requirements and financial intermediation costs. According to some industry observers, banks might also decide to sacrifice the profits in the short-term and offer more favorable rates in an attempt to protect their customer base (Olinga, 2015).

Increased regulation

Lack of adequate regulation was one of the driving forces behind the peer-to-peer lending platforms' growth in the recent years. Nevertheless, this might soon change as peer-to-peer lending is becoming mainstream and attracting more and more institutional capital which had led to calls for increased regulation of the booming sector. If the sector becomes more regulated, we might observe a temporary slowdown in their growth.

Although it is true that leaving the system unregulated could pose a threat to the financial system's stability, there are mixed opinions as to what extent should regulators get involved as too much regulation could severely impede the industry's growth as was also the case in the US when SEC started to regulate Lending Club and Prosper. Policy makers should therefore design the regulatory measures while having in mind the benefits of this new form of financing.

Changing macroeconomic environment

It remains yet to be seen whether the peer-to-peer lending will become a real alternative to banks as majority of the platforms came into an existence just a few years ago and have not yet gone through the whole business cycle. In particular, the performance of p2p loans during the recession will be a key to its future growth. Nevertheless, the chances are pretty good as also evidenced by the performance of some of the largest p2p lenders like Zopa or Lending Club which emerged before the crisis started and weathered the financial crisis pretty well although they did record higher default rates as previously forecasted (Wikipedia, 2015). On the other hand, one needs to take into account that p2p lending market is no longer in its early stages and has in comparison to the early years already a stable base of return borrowers. As a result, some industry observers are concerned about what will happen once

the p2p sector experience a slight contraction and the p2p loans which were taken out to pay back the old ones start to default. A natural consequence would be that institutional investors might become reluctant to provide new financing turning to other alternatives causing the second wave of defaults. This is the reason why it is of high importance to strike a balance between retail and institutional capital.

Another test will come during the rising interest rate environment as one of the most appealing things about the peer-to-peer lending were the superior rates it promised in times when the interest rates earned on the standard savings accounts were at their historical lows. The main reason behind the ultra-low interest rates in the recent years were the expansionary monetary policies adopted by the central banks in the light of the slow recovery after the crisis as well as the ongoing recession. In such an environment, both yield hungry investors and savers who wanted to achieve inflation-beating returns found p2p lending especially attractive (Kirby & Worner, 2014). Nevertheless as interest rates start to rise, we might see the small investors to turn away from these alternative financial services providers because they might perceive the perceived risks to outweigh the benefits. In the end, why should they risk losing their money if they can obtain similar risk free returns on their savings account? Similarly, institutional investors might also start chasing higher-yielding investment opportunities. In their fight for survival, p2p lending platform will have to increase their rates to retain their customers. However with this step, they will no longer be able to capitalize on the mispricing by banks.

4.1.8 Future of p2p lending: Competition or Collaboration

Moenninghoff & Wieandt (2013) enrich the existing literature on alternative finance by providing additional insights into the determinants of the peer-to-peer lending platform's long term success. Unlike other studies, they introduce the concept of risk preferences into their analysis and argue that the future growth of alternative players will depend on three factors. First, as people are commonly risk averse, one has to ask what were the main drivers behind these platforms' growth so far. If the main reason why people turned to these alternative financial services providers lies in the improved user experience, convenience and the better rates we might expect to see their current rate of growth to slow down over the medium term as banks start to innovate their product and service offerings and adopt more customer centric approach. The reason is simple, if banks manage to deliver similar customer experience as alternative financial service providers there is not much reason left to stick with

the former as banks in addition perform the risk management function and assume the credit risk.

Second factor which will determine whether the peer-to-peer platforms represent a viable alternative to banks is the extent to which the people who use alternative financial services providers are aware of the associated risks and if it is indeed in line with their risk preferences. It might namely be the case that some users have incorrectly priced the risks as they have not yet suffered larger losses. Due to its short history, there is not enough data available to be able to say that peer-to-peer loans will keep up their recent performance and relatively low default rates also during a downturn. Should this not be the case and the investor suffer large losses resulting from the peer-to-peer borrowers failing to meet their obligations, it could well serve as a wakeup call for some of them proving them that this new investment opportunity is not so safe after all. As a result, they might start to look for less risky investment opportunities. This is likely to be the category of investors who viewed peer-to-peer lending as an alternative to retail deposits.

The current rate of growth of peer-to-peer lending is sustainable only in case that its users are well aware of all the risks and deem it rather as an alternative to high-yield bonds which typically carry higher risk of default. In this case, peer-to-peer lending could be indeed seen as a way for investors to diversify their portfolio by adding a new asset class. However, alternative financial services providers will not be allowed to grow any further if regulators decide that they might threaten the economic stability a result of which would be increased regulatory scrutiny. The authors conclude that the alternative financial services providers could endanger the current position of banks and further disintermediate the banking services only if their users are aware of all the risks and policy makers adopt measures which would allow them to grow. (Moenninghoff & Wieandt, 2013).

In case that the peer-to-peer platform's recent success was driven mainly by its focus on improved customer experience or the fact that its users mispriced the associated risks, these platforms might be allowed to grow only to an extent that they perform also risk management function which is not possible if they do not partner up with financial institutions first. This scenario is also plausible in case in which policy makers decide to limit the extent to which these alternative financial services can grow by adopting stricter regulation. Reintroduction of risk management can happen in two ways: the financial institutions will either start providing loans through peer-to-peer lending platforms and perform so called "funded risk management" whereas there are several ways how this cooperation could look

from setting an own platform to an acquisition or they will instead perform the so called "unfunded risk management" which would take form of financial institutions issuing guarantees to p2p loans thereby managing the credit risk (Moenninghoff & Wieandt, 2013).

While the original motivation behind the peer-to-peer lending emergence was primarily to improve individuals' and SME' access to finance, it was also supposed to help ordinary people to grow their savings by more than what was offered on a standard savings account, that is where the whole 'peer-to-peer' concept comes from. What we are now observing is, however, that institutional investors took notice of this growing trend and in a hunt for higher yields started to purchase loans through these platforms. Hence, that is the reason why peer-to-peer lending has started to be called marketplace lending or institution-to-peer lending instead. In their study, Moenninghoff & Wieandt (2013) refer to this trend as re-intermediation as banks take over the risk management function and engage in what they call 'funded risk management'.

In the US, for instance, institutional investors such as hedge funds or wealth managers now provide majority of the financing crowding out the small investors who are many times left to choose from a very limited loan pool of rather poor quality as institutional clients have already jumped on the best offers (Moore & Alloway, 2014). Proponents of the increased dominance of the market by institutional lenders argue that thanks to the institutional capital, platforms are able to serve a larger amount of borrowers, offer better rates and achieve better scale. This is without doubt true. Moreover, borrowers will also benefit from this shift as they are likely to observe their lending requests to be handled with much higher speed and efficiency which could never have been achieved by banks. Nevertheless, too much institutional capital entails also some risks. While some critics fear that too much interest from institutional lenders might lead to platforms lowering their lending standards in order to be able to supply more loans, others worry what will happen once interest rate start to rise and institutional capital will start eyeing other, more attractive investment opportunities. Peer-to-peer platforms should therefore try to find a right balance between the institutional and retail capital as retail capital is from its very nature stickier than institutional capital and brings the much needed stability.

Nevertheless, the increased involvement of institutional investors in the peer-to-peer lending points to the fact that while the peer-to-peer lending platforms were originally meant as a way to circumvent the banks, it is no longer the case. What we see also happening is that

the same people who were responsible for the global credit crunch are heading some of these platforms (Cortese, 2014).

No matter what the future of peer-to-peer lending will be it is clear that institutional investors will play an important role in their future growth which is why it is no longer accurate to refer to this type of investment as 'peer-to-peer'. Even though small investors might as a result of these developments be left with fewer investment opportunities, peer-to-peer lending still lowers the costs to borrowers and offers streamlined lending process which is one of the things they based their whole concept on. Nevertheless, there still exist platforms which are dominated by the retail investors and therefore preserve the original idea behind these platforms emergence. One example is the British Zopa (Athwal, 2014; Hobey, 2015). Although in this case we might also see some changes in the coming years as UK regulators start to recognize the role played by the institutional investors and the benefits this additional capital brings about and are already making plans to reduce the obstacles faced by the institutional investors with the goal to boost up the institutional capital participation.

Forms of Collaboration between banks and peer-to-peer lending platforms

Financial institutions could react to the growing popularity of peer-to-peer lenders in two ways. They can either decide to compete with these emerging financial service providers or collaborate. Competition could take form of banks setting up their own peer-to-peer platforms which is perceived to be a rather expensive option or buying an existing platform. There are also two ways of how the potential collaboration could look like, banks can either decide to enter into a partnership with p2p platforms or assume the role of investors and buy p2p loans (PwC, 2015). Until now there is no instance of bank launching their own peer-to-peer platform or acquiring an existing one suggesting that as of now collaboration is seen as the most appropriate reaction.

There were already multiple cases in which institutional clients decided to use p2p platforms as a way to make small amount loans at low cost. The main advantage for banks using this type of collaboration is that they save money as they do not need to carry the costs associated with underwriting or servicing the given loan. Lending Club and Citi have just recently formed a partnership according to which Citi will provide the platform with $150m in funds which should be used to make loans to people living in remote areas which are underserved by the traditional banks due to underdeveloped branch network (McLannahan, 2015). Nevertheless, as banks start making loans through these platforms the question arises

as to how these loans or investments are recorded in their books and whether this trend does not represent a new form of regulatory arbitrage allowing the banks to reduce their capital requirements (Kirby & Worner, 2014).

Another way how the partnership could look like is to close the so called referral deal according to which bank will refer clients who are interested in small amount loans or do not qualify for a bank loan to online platform in exchange for the platform doing the same with customers who are looking for more traditional banking services (Fitch Ratings, 2014). Banks are rather reluctant to lend out small sums as the expected return doesn't justify the arising administrative costs making it rather uneconomical. By closing referral partnerships, banks will improve the access to finance for both individuals and small companies as they present them other financing options and thereby also improve the public awareness of alternative financial service providers. This step confirms that alternative financial service providers are increasingly becoming recognized as an alternative to banking. Funding Circle has for instance already struck up referral partnerships with both Santander and the Royal Bank of Scotland improving the access to funding for thousands of SMEs (Hurst, 2015). According to the Fitch, we can expect to see more partnerships in the future as banks recognize the value of these alternative lenders.

Regardless of whether peer-to-peer lending platforms prove to be a success or not, together with other alternative financial service providers they have started a new era in financial services in which banks no longer represent the only option people have when they need 'banking' services. Due to the emergence of alternative players banks are forced to rethink their business models and improve their product and service offerings to better serve the needs of customers. The ones that neglect it risk losing them to more agile, innovative fintech companies. Customers can only benefit from this movement as they will likely end up having more options and what is even more important at better terms which all in all results in improved customer experience.

While there are also people who claim that it will not take long before banks cease to exist, these are very bold pronouncements. One needs to keep in mind that peer-to-peer lending entails some risks that one does not need to worry about when dealing with a bank. Moreover, there are still people who would like to get a mortgage for 25 years and unless peer-to-peer lending platforms engage in maturity transformation they will not be able to satisfy the needs of such borrowers because there are not many people willing to lend their money for such a long period of time. Apart from mortgages, current accounts represent yet

another important banking product where there are no suitable competitors yet. Nevertheless, there exist already some p2p platforms specializing in property finance, with most notable example being the UK-based LendInvest whose main focus lies in providing short to medium term bridging loans and who at the moment belongs to the top 4 p2p lending platforms in the UK in terms of total loan volume (Alois, 2015). At the current rate of growth of p2p lending sector, we might except to see new players to dive into the area of long term residential mortgages rather sooner than later.

In the early years of peer-to-peer lending banks did not consider their profits to be at risk as peer-to-peer platforms were mainly eyeing small consumer loans which were not seen as their core business line. Nevertheless, as these platforms grow in both popularity and size, banks are unlikely to wait for them to take away their market share or disintermediate them completely. It is very likely that we will see increasing number of partnerships forming between institutional clients and peer-to-peer lending platforms in the coming years as well as banks putting more emphasis on improving customer experience and redesigning their business models to meet the challenge posed by alternative finance. Most importantly we are likely to observe a number of new competitors to come and try to take some business away from banks in other segments as part of a larger technology-driven shift which is currently underway in the financial service sector.

Nevertheless if the current rate of growth is a reliable indicator of the peer-to-peer lending market's potential to become a real alternative to banks, it might also become a source of risk in the coming years which is why policymakers should take this threat/opportunity seriously and adopt all the necessary measures to tackle the potential risks. To name a few, securitization of peer-to-peer loans might prove to be one source of systemic risks and should be closely monitored. There have been already few instances of hedge funds which engaged in securitization transactions (Moore & Alloway, 2014). And what is even more groundbreaking is that there were already instances of rating agencies assigning a credit rating to p2p loans as part of securitization deal suggesting that p2p loans are on its way to become a new asset class (Alloway, P2P consumer loans given landmark rating, 2015).

4.2 Foreign Exchange

Foreign exchange is yet another area where banks face competition. Thanks to advances in technology, people who need to change cash no longer need to go to their banks and pay high FX fees just to get a poor exchange rate, there is an easier and less costly alternative: peer-to-peer currency exchange platforms. Amid recent allegations that traders colluded to rig some of the foreign-exchange benchmarks, WM/Reuters being the most prominent one, p2p exchange platforms are spurring even more interest. Some examples of the biggest p2p FX platforms include Kantox, TransferWise and CurrencyFair whereas the former unlike the other two deals with SMEs and not retail investors. Similarly as in case of p2p lenders, FX platforms act only as middlemen brokering a deal between people or businesses looking to buy currency and the ones willing to sell, there is no market maker and while it might look like people sending money from one country to the other, it is rather rare for money to ever leave a country. What happens instead is that someone who wants to send money from the UK to France is matched with someone looking to do the exact opposite transaction which essentially means that there is no international transfer taking place. Either way, in order to be able to use their service one needs to have a bank account.

Once again the biggest advantages associated with using online p2p FX platforms are lower rates (majority of the platforms claim to provide cost savings of up to 90% compared to banks), increased transparency, convenience and speed. It usually takes 1-2 days to receive the funds. With respect to the exchange rates, most platforms offer their users a possibility to quote their own FX rate or choose from the existing offers. In case there is no suitable currency match, some platforms are willing to put up their own funds for an extra charge. At present, the biggest challenges facing the industry is the ability to succeed in countries with unstable economies, volatile currencies or low Internet penetration as well as to maintain adequate liquidity in each country. As the market is still evolving it is expected that in future it will be possible to also trade more exotic currencies as well as higher amounts. At present majority of platforms support a transfer of up to 25 currencies. According to Aite estimates the whole cross-border money transfer industry is expected to grow to approximately $586 billion this year (Aite Group, 2014). As a consequence, we might expect more new entrants to come and compete with the banks.

Most prominent foreign exchange platforms

Kantox, founded just in 2011, has during its short history already managed to surpass a $1 billion benchmark in transaction volume. Having grown by 250% in 2014, Kantox enables its users to exchange money in more than 25 currencies in 50 markets (Hobey, 2915). While the bank charges 0.5% to 2.5% for changing money, people who sign up for Kantox get to pay just 0.09% to 0.29% depending on the total amount exchanged (Khalique, 2014). Even after paying an annual fee to the platform, the cost savings resulting from using Kantox are substantial. Another advantage of using Kantox over banks consists in the ability of SMEs to post their requests months in advance and then when the time is right choose the most attractive deal offer. **TransferWise** is yet another London-based p2p platform which has grown substantially over the recent years. Since its inception in 2010, it has facilitated a transfer of more than 20 currencies worth $3 billion which resulted in cost savings of about $135million in bank fees for their clients (Lunden, 2015). **CurrencyFair,** on the other hand has been around from 2010 and until now processed $ 2 billion in currency transfers and around $ 100 million cost savings from fees.

4.3 Outsiders

There are multiple examples of emerging fintech players that threaten to take away some revenues from banks besides the p2p lending and foreign exchange platforms mentioned before. Other areas such as wealth management or payments have also spurred interest among the „outsiders‘. While the general consensus is that these new players are not big enough to revolutionize the banking to an extent that we will no longer need banks, they should not be so easily disregarded. At present, most of them are niche players, nevertheless, as they grow in numbers and expand into other areas of banking, banks risks losing an important share of their fee income. While making small amount loans never belonged to the core banking services, banks were used to make quite a decent amount in fees on credit card overdrafts which they could use to compensate losses from less profitable services offerings, p2p lending might change that. The same goes for currency exchange. Nevertheless, banks are unlikely to sit and watch as these fintech startups take away their profits, instead we might expect banks to try to imitate or license some of the new products these new competitors came up with after they have proven to be successful. One example is the BBVA’s acquisition of Simple. And even though many startups might fail over time or turn up to be unprofitable or unstainable as the market conditions change, the mere fact that we see an increasing amount of new

companies entering into bank's territory is a sign that times are changing and customers can only benefit from this shift.

Until now, we have discussed mainly the niche players, nevertheless the competition although not direct could come also from some established players from other industries like for example Apple, Google or Facebook. There are several reasons as to why these tech giants could seriously shake up the banking landscape. First of all, similarly as banks they all possess a huge amount of data about their users, however in contrast to banks these companies are much better at interpreting the data and this is something they could turn into their major competitive advantage. Banks were never the ones to care about customer experience or customer needs in general, these companies on the other hand are known to value customer satisfaction very highly and there is no reason to think it would be different if they took over some bank-like services.

Just take an example of Google and the data they have about their users. Not only do they see things people are searching for online, all the other services like Gmail, YouTube, AdWords, Android are owned by Google as well. Google possesses valuable insights about their customers which would enable them to design more targeted solutions and products for their customers. Similarly, Apple possesses the credit card information of more than 800,000 iTunes users. Facebook on the other hand has about its 1.44 billion active users according to the latest data from Statista (Statista, 2015). It has been rumored that Facebook will form a partnership with p2p exchange platform TransferWise which could mean that it would enable its users to make money transfers (Lunden, 2015).

Moreover neither of these companies are newcomers to the financial sector industry. Both Facebook and Google possess e-money license in Ireland and the UK, respectively. Google is even rumored to have a banking license since 2007. Google has also been making inroads into mobile payment industry with its Google Wallet, which has however failed to meet the expectations. Apple's Apple Pay launched in October 2014 has on the other hand until now been viewed as a success although it has still a long way to go. Either way, it will be interesting to observe if these tech giants also make inroads into other banking services. Google for example has been already cooperating with Lending Club and has been also among its early investors. Although it is highly unlikely that Google or Apple would create its own bank, due to all the regulatory scrutiny, they might target some other add-on services banks offer.

5 Conclusion

In the years following the crisis it became increasingly difficult to obtain the necessary financing for both retail and corporate customers alike whereas the SMEs seem to be the ones affected the most. The influx of new regulation, with most prominent being the higher capital requirements, has forced banks to deleverage their balance sheets and concentrate on building up capital buffers. As a result banks significantly reduced their assets and became more reluctant to provide new lending, although some banks were in fact rather unable to do so. Despite the numerous European initiatives aimed to jumpstart the lending the real economy, majority of them had only limited success. The recent experience has clearly demonstrated that bank-based systems too have their limitations and that there is a need for more market-based financing solutions. A more diversified and competitive financial sector, in which non-bank lenders complement the traditional banks could help to channel credit to those who need it also in times of banks distress. Although one needs to ensure that an appropriate regulatory framework is put in place. The US is one example where shadow banking has been steadily growing in importance and has contributed to the economic recovery.

Nevertheless, there seem to be a change underway as new, technologically more agile non-bank financial services providers such as peer-to-peer lending step in to fill up the lending void left by banks. The current environment has in fact provided a perfect opportunity for a market entry. Not only has the digital revolution significantly decreased the barriers to entry into the banking world, the customers' expectations on their banks changed as well, they now demand more. Convenience, speed, transparency, innovative solutions and improved customer experience are, however, not attributes which banks can currently offer. Alternative financial services providers, on the other hand, have built their whole concept on these value propositions. Banks are due to their legacy issues unable to react to the changing customer needs with the speed new startups can. Moreover, burdened by the regulation, it was not feasible to adapt to the changing reality of the increasingly more interconnected and digital world fast enough. Once the crisis erupted, investing in R&D has not been on the top of their priority list. While it is very unlikely that banks will be completely replaced by these new players, they should not so easily disregard the threat posed by these new competitors. The times are changing and the banks which ignore the recent trends are destined for failure. On the other hand these new developments promise also interesting cooperation opportunities from which both sides could benefit. These are exciting times for finance and it will be interesting to observe how the situation evolves in the coming years.

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Zusammenfassung

Das Umfeld der Banken hat sich seit dem Ausbruch der Finanzkrise im 2008 wesentlich verändert. Um eine Wiederholung der Finanzkrise zu vermeiden, wurde eine Vielzahl von neuen regulatorischen Anforderungen für die Finanzinstitutionen eingeführt. Diese haben zum Ziel die Widerstandskraft des globalen Bankensystems zu erhöhen und zum stabilen und funktionsfähigem Finanzmarkt beizutragen. Im Fokus des ersten Kapitels steht die umfassende Analyse des europäischen Bankensystems sowie die aktuellen Entwicklungen und Herausforderungen im Bankenmarkt. Darauf aufbauend werden im zweiten Teil die sowohl positiven als auch negativen Auswirkungen von Basel III diskutiert wobei die Auswirkungen auf Bereitschaft der Banken zur Kreditvergabe, die Kreditvolumina und damit verbundene Wirtschaftserholung im Vordergrund stehen. Die vorliegende Arbeit geht die Frage nach, inwieweit die zunehmende Risikoaversion der Banken und fallende Kreditvergabe für einen gelungenen Markteintritt von innovativen Jungunternehmen gesorgt haben. Die FinTech Unternehmen bieten nicht nur eine Alternative für diejenigen die unzufrieden mit ihrer Bank sind aber auch diejenigen die sich für die innovativen Lösungen interessieren. Die digitale Revolution, die niedrigen Markteintrittshürden, der demografischer Wandel, das sinkende Vertrauen der Bankkunden in die Bankenbranche, die hohen Bankgebühren und schlechte Kundenbetreung sind alle Faktoren die die FinTech-Unternehmen zum ihren Vorteil nutzen können. Zusammenfassend lässt sich sagen dass obwohl die Banken nicht komplett durch die Jungunternehmen ersetzt werden, die Neueinsteiger greifen in verschieden Bereichen die Monopolstellung von Banken an und bieten immer mehrere Finanzservices an, die traditionell nur von den Banken angeboten wurden was letztendlich dazu führen wird, dass die Banken mit der Zeit immer mehr an Bedeutung verlieren. All diese Entwicklungen werden neben der effizienter Kapitalallokation und Steigerung der Wettbewerbsfähigkeit des europäischen Finanzsystems auch den Zugang zu Finanzmitteln während der Bankenkrise deutlich verbessern und somit zum Wachstum in Europa beitragen. Höher Kundennutzen und signifikante Kostenersparnisse für die Kreditnehmer sind weitere Vorteile.

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Curriculum Vitae

WORK EXPERIENCE

09/2014 -

Freelancer at Financial Institutions & Sovereigns West

Institutional Clients, Raiffeisen Bank International AG, Am Stadpark 9, Wien

- Preparation of risk limit applications
- Data quality maintenance
- Preparation of corporate presentations for client meetings & other materials for business trips

09/2012 – 08/2014

Working Student at Group ALM Operations

Group Asset & Liability Management, Erste Group Bank AG, Börsegasse 14, Wien

- Coordination of a group-wide project aimed at improving data quality
- Assisted in organizing different internal events (off-sites, conferences)
- Optimization of internal collaboration and information platforms

07/2012 – 08/2012

Summer Internship at Group ALM Analytics

Group Asset & Liability Management, Erste Group Bank AG, Börsegasse 14, Wien

- Group Balance Sheet Structure Analysis
- Assisting in Group Reports Preparation

08/2010, 08/2011

Summer Internship

Group Asset & Liability Management, Erste Group Bank AG, Börsegasse 14, Wien

- Office assistant

EDUCATION AND TRAINING

09/2012 -

Master of Science in International Business Administration

Faculty of Business, Economics and Statistics, University of Vienna, Austria
Specialization: Financial Markets, International Management

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Faculty of Economics and Business, University of Barcelona, Spain

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