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ABSTRACT

The Equator Principles are a risk management framework, which is voluntarily adopted by banks across the globe, but mostly in developed markets. The scope of the principles is narrowed to project-related finance. This study investigates the financial aspect of the EP, i.e. whether there is an association between financial performance and compliance with corporate social responsibility. After testing for equality of means, it is established that financial institutions, which adopted the principles, tend to be larger and perform significantly better in terms of liquidity and total shareholder return. Also, an event study methodology is used to examine how shareholders reacted to the adoption of the EP. The results show that, on average, the stock market reactions are positive and significant. Furthermore, event studies for several other subsets of the sample, which divided the institutions according to the time of adoption, country development classification and firm size, have shown positive and significant abnormal returns. In fact, only the outcomes for the subset containing the largest financial institutions (>US\$1 Trillion) do not show any significant abnormal returns. In conclusion, the results support the literature stating that positive relationship exists between financial and social performance and that the main benefits of adopting the EP are linked to reputational management.

I dedicate this work to my beloved wife and children: Barbara, Amélie and Noam

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LIST OF ABBREVIATIONS

AP	Action Plan
AR	Abnormal Return
CAR	Cumulative Abnormal Return
CSR	Corporate Social Responsibility
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EP	Equator Principles
EPFI	Equator Principles Financial Institution
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
IFC	International Finance Corporation
MDB	Multilateral Development Banks
MSCI	Morgan Stanley Capital International
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Squares
S&P	Standard & Poor's
SCSS	Sustainability Credit Score System
SPE	Special Purpose Entity
US	United States of America
VIF	Variance Inflation Factor

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I. INTRODUCTION

The Equator Principles (EP) are a voluntary code of conduct and they represent a risk management framework for financial institutions. Their focus is on mitigating environmental and social risks within activities related to project finance. Specifically, these principles are applied to projects larger than US\$10 Million and to project-related corporate loans if they are larger than US\$100 Million. At the initiative of 10 international banks, the EP were created on June 4, 2003. Since their creation, the EP were revised two times and their latest revision was launched exactly on the 10th anniversary of the principles, i.e. on June 4, 2013. As of March 2015, there are 79 institutions that adopted these principles. In fact, the EP have become a financial industry benchmark in the field of project finance and institutions which are part of the EP Association cover over 70 percent of the international project finance debt in emerging markets.¹

Although the EP are limited to project-related finance, overall they pioneered one of the most important social and environmental responsibility commitments in the banking industry. The essence of the EP is that the signatory parties voluntarily choose to provide loans only for projects which are in line with the principles. The literature body on the EP is rather extensive and many qualitative studies have tried to investigate the impact of the EP. The EP present a form of soft-law and even though as such they are not legally binding, Rupp and Williams (2011, p.585) recognizes how such laws may fill the gaps left by traditional law, by engaging “a broader range of human motivations, needs, emotions, and moral reasoning.”

One of the most important potentials of the EP is the effective inclusion of EP requirements into loan covenants between EPFIs and borrowers. This way, the principles have the possibility to become part of a legally binding agreement, in which case any violation of the agreed covenants ascertains the EPFIs the right to exercise remedies. Another important aspect of the EP is their potential to “import rule of law and developed-country business norms into the world’s emerging economies, at least with respect to large development projects” (Williams 2013, p.305).

¹ Equator Principles. “About the Equator Principles.” *equator-principles.com*. <http://www.equator-principles.com/index.php/about-ep> (accessed April 7, 2015)

Unfortunately, the benefits from the aforementioned potentials are often not being utilized. One of the most common criticisms in regard to the EP is the lack of transparency. According to Weber (2014, p.12), only about five percent of the institutions “disclose all the information required by the EP guidelines.” A significant strand of the literature body (e.g. O'Sullivan and O'Dwyer 2009; Goetz 2013; Hennig and Wörsdörfer 2015) stresses the importance of introducing stricter monitoring, reporting and accountability mechanisms, due to the current lack of accountability, the generally vague and voluntary nature of the EP and further imperfections.

Even though there is a comprehensive literature body on the EP, there are only a handful of quantitative studies in this field. Precisely this condition was the main motivation for commencing this research. The focal point of this research is the financial aspect of the EP, i.e. their economic impact on institutions which chose to adopt them. Even though there is an ongoing debate with regard to the principles' promising future potential and their rather less than brilliant present implementation, it is clear that financial institutions recognize real and practical reasons for adopting EP. Therefore, this study examines whether there are any differences, in terms of firm and financial market performance, between institutions that adopted the principles and those that did not. Furthermore, an investigation is conducted into whether shareholders perceive the adoption of the EP as something that maximizes the long run firm value.

The only other known study that compares the financial aspects of adopters and non-adopters of the EP was done by Scholtens and Dam (2007). Having been performed nearly a decade ago, it is assumed that the social and environmental awareness has increased in the meantime. As such, it is imperative to perform a more recent analysis on this matter to validate the assumption behind it. This part of the research will be examined by performing tests for equality of means on all collected firm and financial market indicators. Moreover, a robustness check in form of cross-sectional studies will be performed to investigate the validity of the obtained results.

Shareholder reactions were already measured in the previously mentioned study by Scholtens and Dam (2007) and more recently by Eisenbach, et al. (2014). However, an improved database, i.e. a significantly larger number of observed institutions, is reason enough to carry out this study. Furthermore, it is investigated whether there are any

differences between stock market reactions when it is controlled for time of adoption, country development classification and firm size.

Structurally, the reader will be first introduced to the theoretical background related to the EP. Besides the historical overview and legal implications of the EP, the reader will also be informed about the importance of the relationship between the banking industry and corporate social responsibility (CSR). Furthermore, the benefits of joining the EP are examined within the four general types of business case for CSR as defined by Kurucz, Colbert and Wheeler (2008): *cost and risk reduction, reputation and legitimacy, competitive advantage and synergistic value creation*. The third section of this thesis introduces the methodology used for the empirical analysis. The fourth section describes the data which is employed in the empirical research. The results are presented in section five and finally the concluding remarks are found in section six.

II. THEORETICAL BACKGROUND

The current section serves to provide an overview to the main features of the EP. In this respect, a historical review about the evolution of the EP is outlined and subsequently the legal implications and impact are discussed. Afterwards, the applicable theory of CSR and the cost-benefit analysis of adopting the EP are presented. In the end of this section, a reference is made to previous empirical studies and the tested hypotheses are presented.

A. THE EVOLUTION OF THE EQUATOR PRINCIPLES

The EP are a voluntary code of conduct, representing a “risk management framework, adopted by financial institutions, for determining, assessing and managing environmental and social risk in projects and is primarily intended to provide a minimum standard for due diligence to support responsible risk decision-making.”² These principles were adopted by several leading financial institutions, in response to the social and environmental concerns which are innate to project finance³, especially in developing markets. In fact, the term ‘Equator’ was chosen to represent “the balance between industrialized countries, developing countries and emerging markets and between the northern and the southern hemispheres” (Wörsdörfer 2015, p.6).

The origins of the EP can be traced back to the 1990s, when a major shift in the art of financing project investments occurred. In the past, the main lenders for project finance have been multilateral development banks (MDB), such as the World Bank, European Investment Bank, Asian Development Bank etc. The involvement of MDBs with controversial projects that caused negative environmental externalities led to increased

² Equator Principles. “About the Equator Principles.” *equator-principles.com*.

<http://www.equator-principles.com/index.php/about-ep> (accessed November 24, 2015).

³ Project finance is “a method of funding in which the lender looks primarily to the revenues generated by a single project, both as the source of repayment and as security for the exposure. This type of financing is usually for large, complex and expensive installations that might include, for example, power plants, chemical processing plants, mines, transportation infrastructure, environment, and telecommunications infrastructure. [...] In such transactions, the lender is usually paid solely or almost exclusively out of the money generated by the contracts for the facility’s output, such as the electricity sold by a power plant. The borrower is usually an SPE [Special Purpose Entity] that is not permitted to perform any function other than developing, owning, and operating the installation. The consequence is that repayment depends primarily on the project’s cash flow and on the collateral value of the project’s assets” (Basel Committee on Banking Supervision 2006, p.53).

pressure from Non-Governmental Organizations (NGOs) in the 1980s (BankTrack 2004)⁴. As a result, MDBs generally started avoiding this field of business and during the 1990s “infrastructure projects (water, electricity, natural gas, transportation, and telecommunication) were increasingly privately financed as well” (Scholtens and Dam 2007, p.1309). Suffice to say, NGOs were not overly pleased with this shift as they were aware that the same influence that they are able to exert on publicly funded banks does not extend to private banks. Their main concern was that commercial banks now stepped into financing projects that the World Bank decided not to finance due to environmental and social concerns (Missbach 2004).

Due to the new-born willingness of commercial banks to finance projects with probable negative environmental and social consequences, it was only a matter of time that the public would take notice of their wrongdoings. Many banks involved in project finance became targets of NGO-led public campaigns whose aim was to undermine the reputation of the banks (Amalric 2005).

According to Scholtens and Dam (2007), *ABN Amro* was pivotal in the inception of the EP. It was confronted with reputational concerns after financing a mining project in Papua New Guinea that had contaminated local water supplies. This event triggered *ABN Amro*'s concern that there were no established guiding principles for avoiding environmental and social risks in project lending. Therefore, *ABN Amro* joined by three other major project lenders (*Barclays*, *Citigroup* and *WestLB*) approached the International Finance Corporation (IFC) to discuss their experiences. As a result, these banks came together and prepared draft principles which were later to become the EP.

The EP were adopted on the 4th June 2003 by 10 banks coming from 7 different countries. Those adopters were: *ABN AMRO Bank N.V.*, *Barclays plc*, *Citigroup Inc.*, *Crédit Lyonnais*, *Credit Suisse First Boston*, *HypoVereinsbank*, *Rabobank Group*, *The*

⁴ BankTrack is an important organisation representing NGOs globally, whose main focus are commercial banks and the activities that they finance. BankTrack keeps an eye on the actions of the banks and campaigns against them if necessary. With regard to the EP, BankTrack is following them since the beginning and provides a list of ‘dodgy deals’ which are financed by EP members. For more information, visit their website: <http://www.banktrack.org/>

*Royal Bank of Scotland, WestLB AG, and Westpac Banking Corporation.*⁵ The financial institutions that adopted the EP (EPFIs) promised to provide loans only to projects that fulfil these principles. The basis for the EP was the commitment to the minimum standards of the already existing World Bank and IFC guidelines and policies (Equator Principles 2003).

Procedurally, the EP first require to place projects in one of the three categories (A, B, C), based upon the IFC criteria. Projects are classified as Category A when they are likely to have significant adverse environmental impacts; Category B projects are potentially adverse as well but to a lesser degree than A projects. Finally, projects classified as Category C are considered to have minimal or no adverse environmental impacts. Category A and B projects were required to carry out an Environmental Assessment (EA), i.e. to examine the project's impact and to recommend any "measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance" (Equator Principles 2003, p.5). Furthermore, Category A projects necessitate an Environmental Impact Assessment (EIA), whereas Category C projects do not.

Moreover, for all Category A projects and if the project sponsor considered appropriate also for Category B projects, the borrower or third party expert had to prepare an Environmental Management Plan (EMP). The EMP addressed the mitigation, action plans, monitoring and management of risk, based on the conclusions of the EA. Category A projects were additionally subject to independent expert review.

At the time of announcement, the adopting banks constituted approximately 30% of the project loan syndicate market globally (Amalric 2005). In the preamble to the principles, the banks agreed to finance projects "in a manner that is socially responsible and reflect sound environmental management practices" (Equator Principles 2003, p.1). Therefore, the announcement of the EP was met with public praise. Missbach (2004) states that even the mere recognition of underlying environmental and social issues in banks' financing procedures is a major progress. Even the NGO sector applauded "the efforts of leading banks to grapple with these critical issues" and considered that the "announcement of the

⁵ Equator Principles. "Press Release: New Governance Rules Introduced for the Equator Principles." *equator-principles.com*. July 1, 2010. <http://www.equator-principles.com/index.php/all-ep-association-news/ep-association-news-by-year/63-2010/68-new-governance-rules-introduced-for-the-equator-principles> (accessed November 24, 2015).

EPs marked one step toward sustainability for an influential sector of society that previously had been largely operating in anonymity” (BankTrack 2004, p.6).

However, even though the creation of the EP had to be seen as a positive step, many of the agreement’s flaws were quickly uncovered. Amalric (2005) points out how the EP do not clarify under which circumstances independent monitoring is necessary and who should carry out the independent expert reviews. In addition, he questions whether there is an appropriate recourse for potentially affected persons. Likewise, Missbach (2004) criticizes the narrow scope of the EP, citing forestry projects. They are not included in project finance and therefore the EP have no effect on the world’s forest destruction.

It was rather embarrassing – from the perspective of NGOs even “outrageous” – that shortly after the initiation of the EP a letter to World Bank President Wolfensohn leaked, highlighting how EPFIs acted as a lobby group against the introduction of stricter policies for World Bank extractive industries investments (BankTrack 2004; Missbach 2004). Besides this condemnation, NGOs were also concerned about the participation of EPFIs in the Baku-Tbilisi-Ceyhan pipeline, “despite NGO findings of numerous violations of IFC and Equator standards” (BankTrack 2004, p.8). This provides plentiful evidence that the banks acted in a reckless manner without commitments, due to the vaguely defined principles.

In June 2006 the EP were revised so as to address some of the above mentioned critique and to adapt to the updated IFC policies (Eisenbach, et al. 2014). Before the revision, the EP were intended to be applied only to projects over US\$50 million. This threshold has been lowered to US\$10 million, which means that the EP would increase their outreach. In EP II – the commonly used term for the first revised version – the scope of the principles was further extended by also applying project finance advisory activities (Equator Principles 2006).

Previously, the screening and categorization of projects only took account of environmental risks, but has since come to include social risks as well. The assessment and management system also changed to some extent. Now, sponsors of projects in both Category A and B had to conduct a Social and Environmental Assessment (Assessment). The Assessment had to be appropriate and to the satisfaction of the participating EPFI. The borrower then had to prepare an Action Plan (AP) addressing the relevant findings and drawing on conclusions from the Assessment. Furthermore, the borrower had to establish

or maintain an Environmental and Social Management System (ESMS) “that addresses the management of these impacts, risks, and corrective actions required” to comply with applicable laws, regulations and requirements (Equator Principles 2006, p.3). Probably the most visible change was the addition of principle 10 which required EPFIs to report publicly about their EP implementation processes and experience.

However, principle 10 also states that EPFIs should take into account confidentiality considerations. This meant that the banks’ activities and decisions on financing projects would not necessarily become more transparent. In fact, an assessment of EP reporting done by BankTrack (2007) showed that 40% of EPFIs did not meet the minimum requirements of reporting that were proposed in the official document. The assessment additionally reveals that most EPFIs were not keen on disclosing relatively straightforward information, such as project names or action plans.

In 2010, new governance rules were introduced with the purpose of improving the efficiency of existing practices, procedures and responsibilities. The main innovation was the introduction of an ‘Associate’ category. This meant that financial institutions that do not partake in project finance could join the EP Association “in order to inform Associates’ broader approach to sustainability or potentially use the EPs as a source of good practice and knowledge for other transaction types beyond project finance.”⁶ Another novelty was the process for delisting non-compliant institutions, i.e. institutions which did not meet the public reporting requirements. Additionally, the governance rules imply that a member will be delisted if it does not pay the annual fee that is due (EP Governance Rules 2013).

Although the number of banks joining the EP Association steadily rose, the critique regarding their real impact remained. Therefore, the EP Association initiated an update process in July 2011 that, after lengthy internal and stakeholder consultations, resulted in the second revision of the EP, i.e. the so-called EP III⁷. In parallel to this, the IFC’s Performance Standards were modified and therefore the EP III were adjusted to those

⁶ Equator Principles. “Press Release: New Governance Rules Introduced for the Equator Principles.” *equator-principles.com*. July 1, 2010. <http://www.equator-principles.com/index.php/all-ep-association-news/ep-association-news-by-year/63-2010/68-new-governance-rules-introduced-for-the-equator-principles> (accessed November 24, 2015).

⁷ Equator Principles. “About Equator Principles (EP III) Update Process and Timeline.” *equator-principles.com*. <http://www.equator-principles.com/index.php/ep3/process-and-launch> (accessed November 24, 2015).

changes as well. The final draft was already published in Summer 2012, but the official document was released on 4th June 2013 to emphasize the importance of the 10th anniversary of the original EP.

A significant change in the EP III is that the scope has been broadened. Besides project finance and project finance advisory services, the EP now applies also to project-related corporate loans (if at least US\$100 million) and bridge loans. Even though the threshold for project-related corporate loans is very high, it is at least a step in the right direction. Previously it was rather easy for borrowers to avoid compliance with the EP by applying for a corporate loan and then reinvesting the received funds into project finance.

The following 10 points provide a summary of the Equator Principles (2013):

❖ Principle 1: Review and Categorization

The EPFIs are required to categorize the projects according to IFC's criteria in Category A, B or C.

❖ Principle 2: Environmental and Social Assessment

The Assessment process, as already introduced in the EP II, is mandatory for both Category A and B projects. Besides that, now an Environmental and Social Impact Assessment (ESIA) is necessary for Category A projects, and as appropriate, for Category B projects. For the first time human rights are also mentioned within the EP, but they are only to be considered in limited high risk circumstances or if the client deems it to be appropriate. Furthermore, all projects whose emissions are expected to be over 100,000 tons of CO₂ annually are now required to conduct an alternative analysis.

❖ Principle 3: Applicable Environmental and Social Standards

This principle explains which standards are applicable for the Assessment process of the projects. A difference is made between projects located in Designated⁸ and Non-Designated countries. For the projects located in Non-Designated countries the Assessment process has to comply with the IFC Performance Standards and with the World Bank Environmental, Health and Safety (EHS) Guidelines. For projects located in Designated countries, the host country law is used as the relevant benchmark. The reasoning behind this is that domestic laws in Designated countries

⁸ "Designated countries are those countries deemed to have robust environmental and social governance, legislation systems and institutional capacity designed to protect their people and the natural environment" (Equator Principles 2013, p.15). The list of Designated countries can be found on the official Equator Principles Association website: <http://www.equator-principles.com/index.php/ep3/designated-countries>

are considered to meet higher environmental and social standards than the minimum requirement of the aforementioned IFC and World Bank guidelines.

❖ Principle 4: Environmental and Social Management System and Equator Principles Action Plan

Besides the ESMS which was already introduced in the EP II, the borrower now has to prepare an Environmental and Social Management Plan (ESMP) for all Category A and B projects, in order to find solutions for the issues identified in the Assessment process so that in the end the project complies with the applicable standards. If the EPFI is not satisfied with the borrowers' commitment to applicable standards, then they will agree on an Equator Principles AP. The AP is intended to create commitments for the project sponsor towards the requirements demanded by the EPFI.

❖ Principle 5: Stakeholder Engagement

All Category A and B projects will require the borrower to exercise effective stakeholder engagement. The borrower needs to conduct an informed consultation and participation process for the potentially affected communities and the Assessment documentation should be made available to them. Another novelty in the EP III is the emphasis on the vulnerability of indigenous people and it is stated that projects with adverse impacts on indigenous people will require their Free, Prior and Informed Consent.

❖ Principle 6: Grievance Mechanism

For all Category A and, as appropriate, Category B projects, the borrower is required to establish a grievance mechanism whose primary users are supposed to be the affected communities.

❖ Principle 7: Independent Review

An independent environmental and social expert, which is not directly related to the project sponsor, needs to carry out an independent review of the Assessment documentation for all Category A and, as appropriate, Category B projects. This review should assist the EPFI's due diligence and assess EP compliance.

❖ Principle 8: Covenants

This principle essentially defines all the above mentioned requirements and commitments as covenants to which the borrower has to comply. Otherwise, the EPFI will cooperate with the borrower to bring the project back into compliance. However, if the client fails to do so in an agreed period of time, then the EPFI has the right to exercise remedies.

❖ Principle 9: Independent Monitoring and Reporting

To evaluate project compliance with the EP it is required for all Category A and, as appropriate, Category B projects, to have an independent expert appointed in order

to ensure ongoing monitoring and reporting throughout the whole duration of the loan.

❖ Principle 10: Reporting and Transparency

- The **borrower** has to ensure that for all Category A and, as appropriate, Category B projects, at least a summary of the ESIA is accessible and available online. The client also has to publicly report on greenhouse gas emissions for projects emitting over 100,000 tons of CO₂ annually. These requirements are another addition to strengthen the stakeholder engagement process described in principle 5.
- The **EPFI** has to report publicly and publish at least one annual report on transactions that they have closed and on its EP implementation processes and experience, while not overlooking confidentiality considerations. Moreover, one more interesting novelty in the EP III is the detailed minimum reporting requirement. This will allow simpler monitoring of the EPFI's reporting compliance.

Doubtlessly, after two revisions, there has been progress in the cooperation between EPFIs and NGOs, as well as an increased importance of social and environmental issues in the credit risk management (Eisenbach, et al. 2014). After taking note that in March 2015 there were 79 adopters from 34 countries⁹, “covering over 70 percent of international Project Finance debt in emerging markets,”¹⁰ it is easy to believe that the EP have become “the financial industry standard for environmental and social risk management in projects.”¹¹

The debate on the impact and implications of the EP on environmental and social regulation will be further discussed in the following part. However, what is certain is that the global project volume “more than tripled from 2003 to 2011, from US\$113.4 billion to US\$408.3 billion” (Eisenbach, et al. 2014, p.375) and even though project finance is only “a small part of the overall activities of the banks” (Scholtens and Dam 2007, p.1309) it can be said that the EP are an important tool for institutions to mitigate credit risks in a field which necessarily entails “higher exposure to risk on the part of the lending bank” (Ong 2010, p.39) due to the nature of non-recourse lending in project finance.

⁹ See Appendix A for the full list of EP adopters.

¹⁰ Equator Principles. “About the Equator Principles.” *equator-principles.com*. <http://www.equator-principles.com/index.php/about-ep> (accessed April 7, 2015)

¹¹ Equator Principles. “The Benefits.” *equator-principles.com*. <http://www.equator-principles.com/index.php/adoption/benefits> (accessed November 27, 2015)

B. LEGAL IMPLICATIONS AND IMPACT OF THE EQUATOR PRINCIPLES

The creation of the EP should not be merely seen through the narrow lense of project finance. In fact, it should be seen as a pioneering commitment of commercial banks to tackle environmental and social risks globally through their business operations. Foremost, it should be noted that the EP, as a voluntary code of conduct, represent a form of soft-law. Schepers (2011, p.92) defines a voluntary code as a form of private law where firms agree to cooperate on the basis of shared interests “in resolving conditions that pose a threat to their operations otherwise.”

Soft-law is not legally binding and therefore its major downside is an either weak or non-existent accountability mechanism. As discussed by Scholtens and Dam (2007, p.1311), the EP embody self-regulation which “fills gaps left by traditional law” and even though self-regulation is not legally binding, corporations end up imposing “stricter norms, rules, and policies” on themselves. Conley and Williams (2011, p.543) see the EP as a ‘positive unintended consequence’, as some commercial banks have taken the lead in “attempting to manage the potentially negative social and environmental consequences of infrastructure development.”

King (2015, p.12) states that such approaches to sustainability by some companies can be seen as radically altering their traditional economic role, as they cast themselves in the position of rule makers. In the case of project finance, banks have to cooperate jointly in order to provide the necessary resources for large projects. “Typically, one bank originates the loan and does the due diligence, and other banks join in.” Therefore, such shared principles are helpful in loan syndications, as these ‘syndicate’ banks “must trust that the project sponsors have done their homework and know the potential sources of project risk.”

While recognizing the limits of soft-law, Rupp and Williams (2011, p.585) suggest that soft-law has the potential “to engage a broader range of human motivations, needs, emotions, and moral reasoning” and therefore it could prove more efficient than traditional approaches which are based solely on the self-interest of the entity. By creating self-regulated principles, such as the EP, it is believed that the signing entities are more likely to evolve value-based behaviors and even “go beyond ‘mere’ compliance with law” (p.595).

In its comprehensive assessment on the contribution of the EP to the international environmental law, Ong (2010) focuses on the legal definition of the EP and concludes that as an agreement involving non-state actors with global outreach it represents a form of ‘transnational’ soft law. It is claimed that the normative contribution of the agreement is highly dependent on both the nature of entities that have adopted the instrument and the language utilized within the instrument. Here, he highlights the flexibility and ambivalence of the language used in the EP. Whereas in the preamble to the principles it is stated that EPFIs will not finance projects that are not in compliance with the EP, the disclaimer states that these principles “do not create any rights in, or liability to, any person, public or private” (Equator Principles 2013, p.11). Apart from this uncertainty contained within the EP, it must be noted that banks are well aware of their social exposure and according to Ong the “depth of the Banks’ commitment to the Principles is evidenced by their willingness to lose potential profits” by rejecting projects that do not comply with the EP (p.47). Overall, Ong concludes that the EP and their implementation “by relevant private actors within States are now making substantial contributions to the international law-implementation process” (p.68).

Schepers (2011) defines two problems which are endemic to voluntary structures, namely free-riding and adverse selection. These issues arise due to the weak or non-existent formal mechanisms to monitor or screen the banks’ activities (Wright and Rwabizambuga 2006).

According to Scholtens and Dam (2007) and Amalric (2005) there are two types of free-riding that may arise from the EP. The first type arises when some banks refuse to adopt the principles and finance the projects from which EPFIs have to withdraw. This would create a competitive disadvantage for the adopters and therefore the EP initiative would be threatened. The other type arises when banks formally adopt the principles, but they do not implement them. “By doing this, firms that do not comply are able to reap the reputation benefits of being an adopter to the code, without incurring the compliance costs” (Scholtens and Dam 2007, p.1311).

Schepers (2011) states that free-riders might undermine the legitimacy built by the EP. This occurrence falls under the adverse selection issue, which refers to institutions that join the EP and gain from their benefits, but simultaneously lower the standards of the collective

effort and hence affect the EP negatively. Schepers believes that the consequence of adverse selection might be that strong performers will not want to join the group.

The aforementioned theoretical background helps understand the legal implications of voluntary codes such as the EP. The question which remains is, what impact did the EP have on the aspects discussed above?

According to the legal opinion provided by the global law firm Norton Rose Fulbright (2014, p.6), the “primary legal significance of the EP derives from the incorporation of EP obligations into contractual relations through covenants.” Furthermore, it is stated that the EP confer many of its obligations to the borrowers with EPFI oversight. After contractual agreements between the EPFI and borrower, certain rights and remedial avenues are assumed by the EPFI in case that the borrower does not comply with the principles. Missbach (2004, p.83) confirms that one of the “most powerful ways banks can ensure that borrowers meet environmental and social standards is through the effective use of loan covenants”, and that these environmental and social loan covenants should include project specific covenants besides the typical financial side of the loan, such as the duration and interest rate. The possibility for EPFIs to exercise remedies is seen as one of the most important and fundamental characteristics of the EP. Through the inclusion of EP related issues into individual contracts between EPFIs and borrowers, the principles become part of a legally binding agreement.

Another important impact of the EP is displayed in the potential to “import rule of law and developed-country business norms into the world’s emerging economies, at least with respect to large development projects” (Williams 2013, p.305). As already discussed earlier, principle 3 of the EP states that in emerging economies, projects of the EPFI should comply with the IFC Performance Standards and World Bank EHS Guidelines. Whereas the norms and rules in the developed economies are usually set on a higher level than those from the IFC and World Bank, it is advantageous to have a set of minimum standards with a global outreach. Wright (2012, p.59) concludes that in developing economies the EP “call on EPFIs to ‘over-comply’ by following stringent standards despite the absence of a legal requirement to do so.”

Eisenbach, et al. (2014) conclude that the establishment of the EP has introduced a common vocabulary and similar expectations for project sustainability performance. This is not only an advantage for the participating members, but also simplifies communication

with project sponsors and NGOs. Furthermore, Macve and Xiaoli (2010, p.899) state that the EP helped to promote “other good environmental practices in the financial sector”, such as the Carbon Principles in thermal power investments which was implemented by certain US banks.

Although the characteristics mentioned above show the positive side of the EP story, it is crucial to point out the many flaws in the implementation of this ‘green banking’ story. In an interview-based study done by Conley and Williams (2011, p.563), informants discussed the impact of loan covenants. A project finance lawyer states that “the covenants do have ‘teeth’ for the reason that an ‘EP misrepresentation turns [a nonrecourse loan] into full recourse.’” On the other hand, no one “could cite an instance of a loan going into default as a result of an EP’s breach.” This is due to the fact that in situations of non-compliance the EPFIs always met with the borrowers and led “hard-nosed negotiations” until they found some agreement. The examples from this study show how the loan covenants have a real impact on the business activities, but surely not at the desired level as “it was ‘not clear’ whether any projects end up not getting done because of social and environmental issues.”

Disclosure of information within the EP initiative is another commonly criticized issue. Weber (2014, p.12) found out that only about five percent of the EPFIs “disclose all the information required by the EP guidelines.” Usually banks avoid publicizing information under the umbrella of client confidentiality, which is a widely used loophole. The strength of the EP is further undermined in situations when an EP bank representative regards them as ‘basically just one more consulting report at the end of the day’ (Haack, Schoeneborn and Wickert 2012, p.828). In a case study examined by Hennig and Wörsdörfer (2015) no significant differences between EPFIs and non-EPFIs were found and according to them this is due to the narrow scope of the EP. Even though EP III have finally included project-related corporate loans into the scope of the principles, they stress out that “roughly half of the overall transaction value is not covered by the EPs, because it refers to the underwriting or management of shares and bonds” (p.26).

The non-precise nature of the EP is excellently exposed by the example provided by Wright (2012, p.67), where an EPFI (*ING Group*) neglected a project due to its non-compliance with the EP, whereas another EPFI (*Crédit Agricole*) “argued that its debt-

financing could not be strictly regarded as project finance and thereby did not formally require compliance.”

Due to these or similar imperfections, there is a significant strand of literature criticizing the ‘imprecise and voluntary nature’ of the EP and advocating stricter monitoring, reporting and accountability mechanisms (e.g. O’Sullivan and O’Dwyer 2009; Goetz 2013; Hennig and Wörsdörfer 2015). The EP, according to Goetz (2013, pp.201-204), “provide insufficient protection of communities or the environment in weak regulatory settings” and it is upmost concerning that EPFIs have the tendency “to focus on client complaints more than stakeholder or civil society concerns.” Fitting to this, Wright (2012, p.70) determines that the EP “have not altered the imbalance that currently exists in international investment regulation” between legal protections given to clients and the limited legal rights for the affected communities. O’Sullivan and O’Dwyer (2009, p.577) conclude that “unless substantive disclosure and broader accountability mechanisms become central elements of legitimization strategies and processes, then legitimacy may not be attained or, if attained, may be fleeting.” Williams (2013) notices correctly that the same banks (especially *HSBC*, *Barclays* and *Citibank*) which adopted the EP – and hence represent sustainability leaders – were also associated with the recent financial crisis. Therefore, she doubts that the EP “are a fig leaf, allowing the banks to proclaim all that they do socially right (in 5% of their business), in order to draw attention away from all they do socially wrong elsewhere” (p.306).

It would be misleading if the opinion of the NGOs would not be reflected in this section as well. In the assessment done by BankTrack (2012, p.4), the text of the EP III is characterized as a “watered down compromise between parties with a widely divergent view on matters, with those Equator banks aiming for a more ambitious new ‘gold standard’ clearly losing the debate from those who are fine with a little tinkering on the edges.” In another article from 2013¹², BankTrack considers the EP III an improvement over the previous version, especially with regard to their expanded scope and improved transparency requirements. However, it is stated that the EP III “will have a deeply underwhelming impact on safeguarding the rights and interests of communities affected by

¹² BankTrack. “New Equator Principles to have deeply underwhelming impact on people and planet.” *banktrack.org*. June 4, 2013. http://www.banktrack.org/show/news/new_equator_principles_to_have_deeply_underwhelming_impact_on_people_and_planet (accessed November 23, 2015).

‘Equator compliant’ projects, as well as on efforts to stop runaway climate change.” Furthermore, it is stated that despite consistent demands raised by NGOs, the EP III again missed the opportunity to establish an accountability and compliance mechanism, so that affected communities would be able to report non-compliance with the EP.

Regardless of the mentioned criticism, the EP initiative should still be regarded as an important and pioneering case of applying CSR within the banking industry and in agreement with Weber (2014, p.5), the EP still “hold the promise and potential to contribute to social and environmental sustainability in project finance.” In case that the EP improve their governance mechanism, Wörsdörfer (2015, p.6) believes that the principles could “bridge the gap between corporate self-interest and the common good respectively between ethics and economics.” Conley and Williams (2011, p.545) go even further by stating that the “potential future significance of the EPs goes beyond regulation of project finance.” They find support for this argument from evidence that some banks have already “begun to apply the EPs social and environmental standards for sustainable banking across product categories, including underwriting, commercial lending, and retail banking, and across industries” (p.546).

C. CSR AND THE BANKING INDUSTRY

Few subjects in management arouse as much controversy and contestation as CSR. [...] [D]efinitions of the term abound to the extent that even now ‘there is no strong consensus on a definition for CSR’ (McWilliams et al., 2006). [...] Whilst Milton Friedman (1970) contends that ‘the social responsibility of the firm is to increase its profits’, Keith Davis (1973:312) argues that CSR requires ‘consideration of issues beyond the narrow economic, technical, and legal requirements of the firm’. [...] Thus, a comprehensive overview of CSR has to accommodate such difference rather than eschew it in favor of a closely defined term. That said, we might at least suggest that at the core of these debates is the subject of the social obligations and impacts of corporations in society.

(Crane, et al. 2008, pp.5-6)

Banks are not commonly regarded as leaders in applying CSR to their business strategy, particularly since the financial crisis of 2007-08. The assumption that banks generally followed a corporate strategy designed according to Friedman’s above mentioned profit-maximizing approach, also known as the ‘shareholder theory’, is not far from truth. As a reaction to the ‘shareholder theory’, Freeman (1984) developed the ‘stakeholder theory’, which opened up the so-called ‘Friedman-Freeman debate’. The crucial difference between

these two theories is on the focus of firms' interests. Whereas the 'shareholder theory' considers only the interests of the firms' owners (i.e. shareholders) as essential, the 'stakeholder theory' highlights the importance of fairly distributing firm stakeholders' interests, where a stakeholder in an organization is defined as "any group or individual who can affect or is affected by the achievement of the organization's objectives," such as shareholders, employees, customers, suppliers, governments, etc. (Freeman 1984, p.46). According to Melé (2008, p.61), the 'shareholder theory' in practice, "frequently reflects short-term profits, such as reduction in personnel expenses, rather than long-term profitability."

Therefore, the banks' apparent interest for environmental and social issues would seem to fit within the 'stakeholder theory', but here it is argued that in the case of the EP it is more suitable to refer to the 'enlightened stakeholder theory' (e.g. Jensen 2002). Jensen is considered a proponent of the shareholder theory, but for the purpose of firm value maximization he also believes that stakeholders' interests should not be ignored. The 'enlightened stakeholder theory' or as he also calls it the 'enlightened value maximization' "utilizes much of the structure of stakeholder theory but accepts maximization of the long run value of the firm as the criterion for making the requisite tradeoffs among its stakeholders" (p.235). However, in the opinion of Dunfee (2008, p.350), Jensen only appears to endorse the concepts of stakeholder theory, whereas in fact he is only reframing them so that in the end "only the market value of the firm is used as a measure" which means that mostly shareholders' interests are followed.

Jensen's theory is the precedent to another interesting and somewhat broader approach incorporated in the U.K. Companies Act of 2006, where the concept of 'enlightened shareholder value' was introduced. However, the measure of firm value within this approach would "potentially incorporate a broader range of stakeholders than financial claimants of the firm" as proposed by Jensen (Harper Ho 2010, p.99). For example, the Companies Act "requires listed companies to recognize and report on stakeholder matters as part of providing comprehensive disclosures to investors" (p.78).

Instead of using the term 'enlightened shareholder value', Macve and Xiaoli (2010, p.892) call it the 'enlightened shareholder theory' and state that it "is consistent with related approaches to disclosure such as 'legitimacy' and 'reputation management' theories, paying particular regard to public and other external pressures." Therefore, they find the

theory well-founded to examine the effectiveness of the EP, i.e. to examine the real impact of the EP as a bank's risk-management tool and whether it leads to a change of bank's behavior towards the environment. Furthermore, they state that in situations where a conflict of interests arises this theory essentially prioritizes shareholders' interests. However, it also encourages companies to "balance short-term loss against longer-term business success" (p.893).

Before explaining the benefits and costs of banks' CSR behavior, in particular of the EP, it is important to understand the importance and potential of the role that banks have in the sustainability process. According to Scholtens (2006, p.22), financial intermediaries direct the economy and hence "can have an impact on socially responsible behavior of the firm and, on an aggregated basis, on the sustainability of the economic development." Most of the academic literature identified equity markets as a primary driver to change a firm's behavior towards a CSR strategy. However, there is an increasing understanding that shareholders have little impact on CSR and that "changes in credit market behavior could ultimately be a much more powerful mechanism for changing companies' social behavior" (Conley and Williams 2011, p.546), or in other words it is "is via lending and private equity that financiers can affect CSR more directly than via the public stock market as these activities are much closer to the firm's investments and project design" (Scholtens 2009, p.161).

In fact, the affinity of financial institutions to incorporate CSR strategies has increased rapidly, as there is an increased appliance of environmental management systems and "[a]lmost all banks [...] have an explicit environmental policy, whereas <50% did so in 2001" (Scholtens 2009, p.165). According to Jo, Kim and Park (2015, p.258) banks have "strong prudential reasons for trying to avoid lending in ways that expose them to environmental risk" as ultimately "financial institutions can even be held responsible for their clients' environmental impacts."

D. BENEFITS AND COSTS OF JOINING THE EQUATOR PRINCIPLES

A code of conduct such as the EP is definitely an important aspect of the banks' CSR strategy, albeit its scope is narrowed down to project finance only. Obviously, before incorporating such a strategy, it is important to examine the cost-benefit balance. Just like

for any other industrial branch, financial institutions are expected to employ such strategies only if the benefits outweigh the costs. The costs of the EP are easily identifiable, but “the problem resides in identifying the expected benefits” which obviously exist or otherwise banks would not adopt the EP (Amalric 2005, p.1). In line with numerous scientific papers, Scholtens and Dam (2007, p.1309) conclude that “firms engage in profit-maximizing CSR, based on the anticipated benefits” which “might include a better reputation, better market access, the potential to charge a premium price for its product, or enhanced possibilities to recruit and/or retain high quality employees.” They further state that the EP will help the banks to increase their expertise in areas of environmental and social issues and therefore their adoption “will better enable them to advise clients and control risks” (p.1310).

However, there is no consensus on the relationship between CSR and financial performance (Scholtens 2008; Weber, Scholz and Michalik 2010). One major notion along the lines of ‘shareholder theory’ and to a lesser degree ‘enlightened stakeholder theory’ is that there is a trade-off between the financial performance of a firm and its compliance to social and environmental norms. However, there is also the view that social and environmental performance and financial performance correlate positively, which means that a so-called business case for the EP exists (Weber, Fenchel and Scholz 2008; Wörsdörfer 2015). Scholtens (2008) conducted an empirical study, where he used a sample of 289 firms from the US covering the period 1991-2004, and where he arrived at a positive and significant interaction between financial and social performance. Moreover, he also analyzed the causality of these two and concluded that financial performance usually precedes social performance. A study about commercial banks from developing countries by Hu and Scholtens (2014, p.285) supports this view, as it concludes that “banks seem to require at least some financial surplus, as it is the most profitable banks that have the best CSR policies.”

This thesis will examine the benefits of the EP according to the typology defined by Kurucz, Colbert and Wheeler (2008). The four general types of business case for CSR are: *cost and risk reduction, reputation and legitimacy, competitive advantage and synergistic value creation*. According to Macve and Xiaoli (2010) credit risk mitigation and reputation risk management are value-adding aspects consistent with the ‘enlightened shareholder theory’. Hence, here it is assumed that competitive advantage and synergistic value creation are the less represented types of business case for CSR within the EP framework.

The types consistent with ‘enlightened shareholder theory’ are both following risk-mitigating and economic, rather than ethical motives. Indeed, project finance is characterized by higher risk due to the nature of non-recourse loans. This means, using the already mentioned definition by the Basel Committee on Banking Supervision (2006), that lenders are repaid primarily by the revenues generated by the project, i.e. through the project’s cash flow and only through the collateral value of the project’s assets and not of the borrowing company. Several authors perceive precisely this risk-exposure in project finance as an essential factor why EP are a significant risk management policy for banks (Amalric 2005; Ong 2010; Conley and Williams 2011; Rupp and Williams 2011; Eisenbach, et al. 2014).

The description of the four general types of business case for the EP is presented in the following sequence.

COST AND RISK REDUCTION

Understandably, after considering the risky nature of project finance, financial institutions should be particularly careful to include potential environmental or social issues within their credit risk assessment. According to Banhalimi-Zakar and Larsen (2015) there are direct and indirect risks under consideration prior to financing a project. Direct risks refer to situations when the borrower defaults on the loan, and consequently the bank becomes directly accountable, for example in situations where projects lead to water supply contamination the bank assumes associated costs for cleaning up contamination on the project site. Indirect risks occur when the borrower is unable to repay the loan due to some environmental or social issue, for example “when a borrower incurs costs to upgrade existing facilities to meet more stringent environmental standards” (p.69). Other indirect risks, as identified by Banhalimi-Zakar and Larsen, could be the non-approval of projects by relevant authorities or even the delay in project approval. In this type of CSR business case, demands of stakeholders are seen as potential threats to the viability of the corporation, and consequently social and environmental issues should be mitigated in order to serve the economic interests of the company (Kurucz, Colbert and Wheeler 2008). After concluding that banks could become party or directly liable for certain project outcomes, it

should be remarked that it is in their best interest to improve credit risk management by taking account of social and environmental issues (Scholtens and Dam 2007).

Even though banks traditionally stress the trade-off between financial return and corporate sustainability, there is a trend of incorporating environmental risks into the credit risk management. According to Weber (2012), the most successful lenders are the ones best at evaluating and pricing risks. Therefore, it is logical to include all factors that may influence the borrower's ability to repay the loan. Hence he concludes that borrowers with lower environmental performance face higher risks and vice versa. There are several studies showing empirical evidence for correlation between environmental risks and credit risks (e.g. Weber, Fenchel and Scholz 2008; Weber, Scholz and Michalik 2010; Goss and Roberts 2011; Zeidan, Boechat and Fleury 2015).

Goss and Roberts (2011) put idiosyncratic risk in the focus of their study and examined whether banks provide better loan conditions to socially responsible corporations, based on the proposition that investments in CSR lead to lower risk and hence to improved financial performance. They did not find evidence that lenders reward firms for their efforts to be CSR leaders, but they did find that corporations with social responsibility concerns pay between 7 and 18 basis points more than firms that are more responsible. Fittingly, in the interview-based study by Conley and Williams (2011, p.560), an international development official with a Western government stated that in the past it was an advantage 'if you had corporate social responsibility, but now it's a disadvantage if you don't.' However, Goss and Roberts (2011, p.1795) conclude that the modest economic impact shown in their results confirms that "CSR is at most, a second-order determinant of yield spreads." In the research by Weber, Scholz and Michalik (2010), it is concluded that incorporating sustainability criteria into the credit risk assessment improves the predictive validity of the credit rating process. Their results revealed an improvement in correct risk classification from 78.9 to 86.6% or in other words a reduction in wrong predictions of 22.7%.

In line with the aforementioned, increasing evidence shows that there is in fact no negative correlation between socially responsible behavior and financial performance. Scholtens (2009, p.161) concludes that "screening does not have a very significant impact on the risk and return characteristics and socially responsible investors do not forego many opportunities." In the opinion of Weber, Fenchel and Scholz (2008, p.150) "the positive correlation between environmental performance and financial performance is broadly

accepted, even though the strength of the correlation and its genesis are still unclear in most sectors.” As already mentioned previously, both Scholtens (2008) and Hu and Scholtens (2014) find a positive relationship between these two and regarding their causality it is suggested that improved financial performance usually leads to CSR engagement. Zeidan, Boechat and Fleury (2015) developed a Sustainability Credit Score System (SCSS), which is related to the EP, but its application is not focused on project finance. They conclude that developing a SCSS does not only provide value creation for a bank, but also positive externalities to society.

REPUTATION AND LEGITIMACY

According to Kurucz, Colbert and Wheeler (2008) failing to meet stakeholder needs has a negative impact on firm reputation and therefore it is suggested that the costs of CSR behavior are much smaller than the potential benefits. Therefore, this type of business case for CSR puts focus on “building competitive advantage by enhancing the reputation and legitimacy of the organization through firm CSR initiatives” (p.91).

A great amount of academic literature stresses on the importance of reputation building as one of the main incentives for institutions joining the EP initiative (e.g. Amalric 2005; Wright and Rwabizambaga 2006; Macve and Xiaoli 2010). In project finance, there is a great risk that inappropriate behavior by borrowers deteriorates the reputation of the bank. According to Macve and Xiaoli (2010, p.895), the reputation risk “does not directly affect the value of the bank’s current loans, but impacts on its ability to generate future revenues, although the effects are hard to estimate financially.” This view is approved by almost all bankers interviewed by Conley and Williams (2011) and another study by Barthruf (2014) shows that 80% of the interviewees see self-commitment and reputation as the main reason for engagement with sustainability issues. Hence, it follows that the requirements set by the EP prove to be an effective means to reduce reputational risk (Scholtens and Dam 2007).

However, it is important to note that this risk affects primarily banks which are in the spotlight of public attention. Amalric (2005) states that banks with well-established brand names, usually located in developed economies with higher involvement from NGOs with an ‘environmental cause’ are more concerned about reputation risk. Furthermore, he adds that especially banks involved in commercial retail banking should fear consumer boycotts.

Table 1. Regional distribution of EPFIs.

Region	Number of Institutions
Africa	9
Asia	5
Europe	34
Latin America	11
Middle East	2
North America	13
Oceania	5
Total	79

Source: Equator Principles. "Members & Reporting." [equator-principles.com](http://www.equator-principles.com).
<http://www.equator-principles.com/index.php/members-reporting> (accessed April 7, 2015).

Table 1 confirms the aforementioned notion, as it is visible that a large majority of EPFIs are headquartered in developed economies. Conley and Williams (2011) recognize that the role of NGO pressure exceeds all other incentives for joining the EP, as almost every interviewed banker in their study mentioned it. Fittingly, Banhalimi-Zakar and Larsen (2015, p.69) state that "NGOs play a crucial role in increasing the reputational risk exposure of banks" and that this risk "has been identified as the most difficult type of risk to manage that can potentially affect all areas of a banks' business not just the department that was directly involved in a transaction."

According to Amalric (2005, p.6), the banks which are more affected by reputational concerns developed the EP as a strategy to "restore a level playing field with their less exposed competitors", i.e. "to impose the voluntary standards developed by the more exposed banks on all members of the industry." O'Sullivan and O'Dwyer (2009) also highlight the importance of competitive cooperation, as the banks involved in the creation of the initiative were the main targets of public campaigns. Indeed, the 10 initiators of the EP held around 30% of the project finance market and due to its loan syndication structure it seems that it was easier to abide to the principles than to arrange a deal without a bank that is an EP member (Amalric 2005).

A further interesting insight is provided by Barthruf (2014), where it is stated that almost all questioned credit rating agencies regard the EP as an internationally accepted minimum standard and hence find the adoption of the principles as a positive feature of a bank. Furthermore, it is stated that credit rating agencies evaluate the compliance of the banks

with guidelines and policies such as the EP, and that non-compliance with them can downgrade the bank rating. Hence, it can be concluded that even credit rating agencies recognize the EP as a reputation risk management tool. Moreover, the regression results by Jo, Kim and Park (2015) show that lowering environmental costs increases financial performance in the long term. They associate their results with the reputation-building hypothesis, whereby reducing environmental costs leads to higher company reputation, “enabling firms to hire more qualified employees, improving production efficiency and competitiveness, reducing the costs of capital, and increasing profit opportunities” (p.280).

COMPETITIVE ADVANTAGE

Competitive advantage is another way to build a business case for CSR. It is an adaptive approach where the firm’s goal is to gain competitive advantage “through strategically orienting and directing resources toward the perceived demands of stakeholders” (Kurucz, Colbert and Wheeler 2008, p.89). In this type of business case stakeholder demands are seen as unused opportunities rather than constraints.

Adopting the EP, according to Macve and Xiaoli (2010), creates a first-mover advantage and makes the banks stand out from their competitors in unclaimed ‘reputation space’ in environmental matters. Weber, Fenchel and Scholz (2008, p.157) also state that “the management of environmental risks in the credit business is still in an early stage of development” which means that “[b]anks that improve their performance in this area therefore have a good chance of gaining competitive advantage.”

Amalric (2005) recognizes the EP as a strategy to adapt to circumstances that evolved in the project finance market. He states that MDBs, particularly the World Bank, acted as a delegated monitor for banks to effectively address problems arising from a lack of information about project quality. However, since the World Bank has been under constant pressure from NGOs and other stakeholders, they have reduced their engagement in large and controversial projects. Consequently, such circumstances require commercial banks to undertake the management of environmental and social risk assessments by themselves. Obviously, decentralized screening would be a costly affair, as each bank would screen and monitor risks individually. Therefore, Amalric identifies the EP as “an arrangement to screen the quality of projects (according to environmental and social risks) that shifts the

main costs of the screening process onto project sponsors” (p.11). Sponsors were not really in a position to resist to these conditions as the specific project finance structure reinforced the powers of the EP initiators, which held a considerable market share in this business field.

SYNERGISTIC VALUE CREATION

Approaches advocating synergistic value creation seek out “win-win-win” opportunities by connecting the interests of a diverse set of stakeholders. This concept emphasizes “synergies that can emerge for organizations, environment, societies through integrating efforts across these domains” (Kurucz, Colbert and Wheeler 2008, p.91). However, as these approaches “fall outside of traditional business models” (p.92), this type of business case for CSR is the least represented one.

The EP are primarily driven by economic-pecuniary motives, nevertheless Wörsdörfer (2015) recognizes that ethical motives are also involved, although only in a minor role. Rupp and Williams (2011, p.598) observe a gradual shift in motives within the bank. Some banks seem to internalize environmental and social values and ethical norms “well beyond the ‘minimum’ requirements of the Principles.” They also add that these banks expand their attention to social, environmental and human right issues beyond the scope of project finance. However, it must be concluded that regarding the EP as a synergistic value creation approach remains only a theoretical concept expressed by future desires and potentials of the initiative.

CONCLUDING REMARKS ABOUT THE BUSINESS CASE FOR THE EP

So far only the benefits have been discussed. However, the cost-benefit discussion would be incomplete without introducing the costs incurred by joining the EP. The main costs that banks sustain from joining the EP are the costs of screening possible environmental and social risks, monitoring the compliance of borrowers and opportunity costs of rejecting potential projects due to their non-compliance with the EP. While Scholtens and Dam (2007, p.1310) also recognize opportunity costs as a real risk, they argue that the “cost of

CSR screening and monitoring appears to be limited.” A lawyer interviewed by Conley and Williams (2011, p.561) also saw ‘no material impact’ coming from the EP. He did acknowledge that there is some cost implied in the compliance procedures, but he stated that it is minimal. It is also appropriate to remind that the EP are a tool which shifts many obligations from the lenders to the borrowers. In fact, out of ten EP principles, only principles 1, 8 and 10, i.e. review and categorization, covenants, reporting and transparency, ought to be conducted by the institutions themselves (Barthruf 2014).

From the aforementioned arguments it can be concluded that the costs of joining the EP seem to be less than the benefits arising primarily from reputation and credit risk reduction. Macve and Xiaoli (2010, p.900) conclude that it is difficult to evaluate the success of the EP in protecting the environment, but that this is also consistent with enlightened shareholder theory as “environmental protection is primarily an advantageous outcome rather than the core objective for banks signing up to EP.”

The scope of the EP is aimed at project financing, but their leadership role on environmental and social risk management in the financial industry expands beyond project finance, as they embody the most important standard in regard to sustainability issues of bank lending (Lazarus and Feldbaum 2011; Barthruf 2014). Indeed, some bankers interviewed by Haack, Schoeneborn and Wickert (2012) and Williams (2013) confessed that after recognizing the importance of reviewing social and environmental risks in project finance, their banks considered extending the EP to other lending businesses, such as corporate or retail finance.

E. EMPIRICAL EVIDENCE AND HYPOTHESES

Only a handful of EP studies are quantitative in nature. Amongst them, the two most relevant quantitative studies for the purpose of this thesis are Scholtens and Dam (2007) and Eisenbach, et al. (2014).

Scholtens and Dam (2007) compared EP adopters and non-adopters to see whether there are any differences in their policies regarding social responsibility, their main firm characteristics and their financial market performance. Indeed, they found out that the social responsibility of EPFIs is rated higher than that of non-adopters. They realized that

adopters of the principles tend to be larger firms, which confirmed the notion that especially banks in the spotlight display CSR behavior. There is also some indirect evidence that signing up to the principles increases the costs, as the results show that EPFIs have a significantly lower return on average assets. However, they conclude that most financial and firm characteristics do not show significant differences between EPFIs and non-adopters. Furthermore, an event study was performed by Scholtens and Dam in order to assess the impact of adopting the principles on the financial returns. Their results show that the adoption had no significant effect on shareholder value. They state that a possible reason for this could be that project finance is just a small part of overall banking operations and hence the net economic impact of adopting the principles is likely to be limited.

An event study methodology was also used by Eisenbach, et al. (2014) in their attempt to evaluate EP impact over time. Their results contradict those of Scholtens and Dam (2007), as they examine positive abnormal returns around the adoption date of the EP. They also find differences between early adopters (before the 2006 revision - EP II) and late adopters, as they find significant positive abnormal returns for early adopters and no significant results for late adopters. They also analyzed whether there are any differences between adopters coming from OECD countries and others. In this subsample they find positive but mainly insignificant abnormal returns for EPFIs from OECD countries and for those coming from other countries they find a significantly negative abnormal return on the event day. These results have led the authors to conclude in line with Wright and Rwabizambuga (2006) that reputational management is one of the main incentives to adopt the EP. Moreover, Eisenbach, et al. examine project volume, the number of projects and market share and find that EPFIs tend to outperform the global project finance market. However, when focusing on developing countries they find the opposite, i.e. they “tend to lose ground in exactly the regions where the EP are expected to have the strongest impact” (p.386). They believe that this may be due to the fact that most successful financial institutions are headquartered in OECD countries and also due to the increasing presence of local banks in project finance activities.

These empirical results fit various qualitative EP studies (e.g. Amalric 2005; Wright and Rwabizambuga 2006; Macve and Xiaoli 2010), which state that reputation management was one of the main reasons for adopting these principles. Moreover, Weber (2014) found out that the reporting quality is higher for larger EPFIs and those which have longer membership duration. However, no empirical evidence was found for other concepts

discussed in the preceding theoretical overview, i.e. whether the EP are associated with a reduction of affiliated risk or improved economic performance of the financial institutions. Also, Wright and Rwabizambuga (2006) recognized that some large EPFIs opted out from adopting the EP and hence stated that firm-specific characteristics might matter when deciding to adopt the EP. However, Scholtens and Dam (2007) did not find any remarkable difference between adopters and non-adopters of these principles.

The EP have been revised twice since their introduction and there has been an increased awareness about social and environmental issues in corporate culture. Unfortunately, there is a lack of recent quantitative studies in this field and thus, the motivation for this thesis is to find out whether a study based on a recent and improved database will show differences compared to prior studies. It is of interest to see whether the EP have any impact on the overall performance of the bank. In order to answer this, the thesis will approach this issue from two angles. First it will be tested, from a financial perspective, whether institutions that adopted the EP differ in a significant way from their counterparts. This will be accomplished by comparing firm characteristics (e.g. size, structure, profitability) and financial market performance (stock risk and return) from EPFIs and non-EPFIs. The second angle will be to recognize whether shareholders see any value adding potential from implementing these principles. This will be investigated by carrying out an event study and observing whether the adoption of the EP led to positive stock market reactions.

The hypotheses tested in this thesis are justifiably derived from the preceding theoretical overview. Institutions that adopted the EP are expected to gain better reputation and improve their credit risk management, hence it is anticipated that their overall firm performance increases, which may be observed in relation to their profitability, stock market performance (returns and risks), solvency and liquidity. Therefore, the first hypothesis is the following.

H1: EPFIs are expected to perform, in certain aspects, significantly better than non-adopters.

An innovative approach in this thesis will be to link the relationship between the EP and the overall quality of loans. It is assumed that institutions which have a stricter risk management framework and declare themselves as leaders in sustainable financing in the field of project finance, also internalize their knowledge and experience to their retail

banking sector. This implies that EPFIs should have an improved quality of loans in general. Thus, the second hypothesis is the following.

H2: EPFIs are more risk-averse in lending than non-adopters and therefore have a lower share of problem debt.

In the literature review it is concluded that shareholders' interests are the core objective for adopting the EP and that environmental protection is only an "advantageous outcome". Hence it is expected that shareholders regard the adoption of the EP as something that maximizes their long run value of the firm. Following this logic, shareholders are expected to react positively to the announcement of adopting the EP. This is the basis for the third and last hypothesis.

H3: The announcement of adopting the EP has a positive and significant impact on firms' stock returns.

III. METHODOLOGY

The methodology used in this thesis is inspired by the one used in Scholtens and Dam (2007) and Eisenbach, et al. (2014). First, the methodology used for testing the first two hypotheses is presented, where a test for equality of means is performed. After that the approach used for testing the third hypothesis is explained, i.e. the event study.

A. TESTING THE EQUALITY OF MEANS

The first two hypotheses are focused on comparing the EPFIs with non-adopters and recognizing whether there are any real differences between them. In order to test these hypotheses, it is necessary to collect financial statement data for both EP adopters and non-adopters, such as profitability and liquidity ratios or indicators of financial leverage. As the first hypothesis also considers stock market returns and risks, it is additionally necessary to gather data about the stock market performance for both EPFIs and non-EPFIs.

After collecting and processing the data, these two hypotheses will be tested by performing tests for equality of means on all relevant indicators. Hence, the mean values of all firm and financial market characteristics for adopters and non-adopters will be examined for significant differences. This will be done by using the standard independent two-sample *t*-test and another method called Satterthwaite-Welch *t*-test. The independent *t*-test assumes normal distribution for the two populations being compared and its null hypothesis states that the means of the two groups are equal. It is also assumed that both groups have equal variances. With the aim of overcoming a possible violation of the assumption of variance homogeneity it is suitable to also present the Satterthwaite-Welch *t*-test which assumes unequal variances.

It is possible that the adoption of the EP is not associated with any impact on either firm characteristics or performance. However, this would reject the first hypothesis, as it assumes that the test results will show liquidity, solvency, profitability and stock market performance indicators of EPFIs (or at least any of them) to be positive and significant. In case of the second hypothesis, the null hypothesis would be rejected if the loan quality indicators of EPFIs do not prove to be more risk averse than those of non-adopters, i.e. if the test results for loan quality indicators prove not to be negative and significant.

B. EVENT STUDY

The third hypothesis is interested in the impact of the EP adoption on the stock returns of EPFIs. This will be tested by conducting an event study, using the approach proposed by MacKinlay (1997). Event studies measure the impact of a specific event on the value of a firm and according to MacKinlay “the effects of an event will be reflected immediately in security prices” (p.13). They are mostly applied for measuring the impact of mergers and acquisitions, earnings announcements or issues of new debt or equity. However, it can be applied to a variety of other firm-specific or economy-wide events, and MacKinlay notes that event studies are also used to measure the impact of regulatory environment changes. McWilliams and Siegel (1997) also recognize the use of event studies for measuring the impact of CSR policies. Therefore, measuring the impact of adopting a voluntary code of conduct, such as the EP, is theoretically justified.

The first step is to identify the period of interest, i.e. the event window. The event window is the time period placed around the event date, which in this case is the adoption date. It is usually expanded over multiple days before and after the event date in order to account for any information leakage or postponed market reaction. In this case, the event window is set to 5 days after and prior to the event. Essentially, event studies are used to find out whether the fact that the event happened makes any difference. In order to measure this, it is necessary to identify the “estimation window”. Generally, the “estimation window” represents the time period prior to the event window and in this study the estimation window is ranged from 120 days before the event to 11 days before the event. Consequently, the recorded stock returns from this period are used for modelling and estimating the “expected” or “normal” returns.

After referring to Brown and Warner (1985, p.25), it was decided to use an Ordinary Least Squares (OLS) market model, as it proved to be “well-specified under a variety of conditions.” As MacKinlay (1997, p.15) stated, this model assumes “a stable linear relation between the market return and the security return.”

$$E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt}. \quad (1)$$

In this equation, $E(R_{jt})$ represents the “expected” or “normal” return of an institution j and R_{Mt} shows the return of the corresponding local market index on day t .¹³

Additionally, two more multi-factor models were included, where it is assumed that besides the correlation between market and security return also other relevant factors matter. In Model 2, besides the local market index also a global market index is added. And Model 3 is a three-factor model which additionally to the previous two indices refers to a constant maturity risk-free bond. Model 2 and 3 respectively are shown below.

$$E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \gamma_j R_{MSCIt} + \varepsilon_{jt}. \quad (2)$$

$$E(R_{jt}) = \alpha_j + \beta_j (R_{Mt} - R_{ft}) + \gamma_j (R_{MSCIt} - R_{ft}) + \delta_j R_{ft} + \varepsilon_{jt}. \quad (3)$$

Here, R_{MSCIt} represents the MSCI World Financials Index and R_{ft} embodies the One Month US Treasury Rate. It is assumed that the error term ε_{jt} is equal to zero. Dependent on which model is observed, the OLS estimators α_j , β_j , γ_j and δ_j are used to calculate the difference between the “expected” or “normal” returns and the “actual” returns. The resulting outcome is then called abnormal return (AR) and for every day t it can be defined as:

$$AR_{jt} = R_{jt} - E(R_{jt}) \quad (4)$$

Here, R_{jt} is the “actual” return of the security j on day t . In order to measure the total impact of the event on the period of interest, it is required to add up individual abnormal returns into “cumulative abnormal returns” (CAR) for various event windows.

$$CAR_j(\tau_1, \tau_2) = \sum_{t=\tau_1}^{\tau_2} AR_{jt}. \quad (5)$$

The next and final step is to design the testing framework for the abnormal returns. It is assumed that abnormal returns and CARs have a zero conditional mean and therefore it is consistent that the null hypothesis for all test statistics used in this study states that abnormal returns and CARs around the event date are equal to zero. This study uses simple two-tailed t -tests, as defined by Brown and Warner (1985) and MacKinlay (1997). According to

¹³ A list of all local market indices used in this study can be seen in Appendix G.

MacKinlay, standardizing each abnormal return with an estimator of its standard deviation can lead to more powerful tests. Therefore, a standardized test developed by Patell (1976) will also be conducted.

Due to the fact that some institutions adopted the EP on the same day, “event clustering” is considered to be a possible issue. However, the results from Brown and Warner (1985) show that using market models resolves this issue to a large degree. Nevertheless, in order to minimize the likelihood of such an issue, a nonparametric test developed by Kolari and Pynnonen (2011) will also be applied. The generalized rank test procedure (GRANK-T) accounts for event-induced volatility, returns serial correlation, and most importantly it accounts for cross-sectional correlation of returns due to event day clustering. Also, simulation results showed that this test has “good and often superior empirical power relative to popular parametric tests” (Kolari and Pynnonen 2011, p.966). Moreover, MacKinlay (1997, p.32) suggests that the use of nonparametric tests can be worthwhile, as it “provides a check of the robustness of conclusions based on parametric tests.”

If the mean abnormal returns and CARs prove to be positive and significantly different from zero, then it could be deduced that EPFI shareholders regard their firm’s association with the EP as something that increases their firm’s market valuation, i.e. they believe that future cash flows would increase thanks to the adoption of the EP: Naturally, if abnormal returns prove to be negative or not significant at all, then it could be understood that shareholders either assume the costs of adopting this voluntary policy are greater than the benefits, or that a policy in the field of project finance has perhaps no strong effect on the overall performance of the institution.

IV. DATA AND DESCRIPTIVE STATISTICS

All the data concerning firm characteristics and financial market performance is derived from *SNL Financial*. The database from *SNL Financial* is essentially focused on financial services and thus it was appropriate for this study. After thoroughly reviewing the dataset, it was decided to use data from the accounting year 2013 because it contained more complete information than the data from the year 2014. Due to a lack of financial resources, data about the non-adopters (control group) from Asia, Latin America and Oceania was restricted and therefore it was necessary to exclude these regions from the analysis concerned with testing the equality of means. Furthermore, only the banking sector is included in this analysis. The first reason is to have a more representable control group, as out of 79 EPFIs only one was not in the banking business (*Manulife Financial* - a Canadian insurance company). The other reason is that the second hypothesis is interested in the loan quality of the institutions and this information is not retrievable for insurance companies. Therefore, the initial sample of the control group is 4110.

In regard to the EPFIs, after excluding the insurance company and those coming from the aforementioned regions the sample is reduced to 57 EPFIs. Moreover, from this sample no data was available for three EPFIs.¹⁴ Therefore, the sample used for this study covers data for 54 EPFIs. Despite excluding all these companies, it is recognizable that the overwhelming majority of EPFIs is still represented.

The only data necessary for the event study are historical stock market prices or returns of the EPFIs, which means that data for all regions is available for this part of the research. Subsequently, only companies listed on the stock exchanges are considered for this sample. Out of 79 EP adopters 54 were listed on stock exchanges at the time of their adoption date. Also it was not necessary to exclude the only insurance company from the sample, as there is no control group for this analysis and the market reaction of their shareholders was also of interest for the general hypothesis.

The only EPFI for which no stock information could be retrieved was *Banco de Crédito del Perú*. Furthermore, the German *HypoVereinsbank* adopted the principles together with

¹⁴ The three banks are: Eksport Kredit Fonden (Denmark), Eksportkreditt Norway and UK Green Investment Bank

Table 2. Firm characteristics and Tests for Equality of Means – Initial Sample

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Size ^b									
No. of Employees	N	3,689	1,229	175	306,123	0	7,527	21.40***	18.31***
	E	50	69,711	36,704	264,900	125	78,544		
Total Assets (US\$ billion)	N	4,110	12	1	2,326	0	76	21.43***	18.12***
	E	54	705	491	2,671	0	756		
Total Equity (US\$ billion)	N	4,102	1.1	0.1	964.6	-182.9	16.0	21.02***	20.38***
	E	54	46.7	20.6	232.7	-1.1	59.5		
Total Deposits (US\$ billion)	N	4,095	5	1	883	0	29	20.35***	19.09***
	E	51	343	181	1,419	0	377		
Net Customer Loans (US\$ billion)	N	4,102	6	1	981	0	33	19.06***	18.25***
	E	52	307	212	992	0	308		
Structure									
Total Equity/ Total Assets (%)	N	4,101	11.02	8.75	99.87	-96.88	10.98	-1.85*	-3.29***
	E	54	8.25	6.99	32.06	-5.56	6.07		
Profitability									
Return on Avg. Equity (ROAE, %)	N	4,023	4.63	4.91	550.66	-767.50	23.04	0.94	2.58**
	E	53	7.62	7.06	21.44	-21.37	8.04		
Cost-to-Income (%)	N	4,002	68.31	67.58	383.52	0.00	24.03	-3.13***	-4.67***
	E	51	57.74	58.36	95.97	21.25	15.94		

Note: E = EP adopters, N= EP Non-adopters. Nobs denote the number of banks included in the statistic. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively. All data are for the fiscal year 2013.

^a Assuming unequal variances

^b Natural logarithms of the size variables were used for the t-values to account for the severely non-normal data

other initiators on 4th June 2003. However, as it is now part of the Italian *UniCredit* Group, the official EP website states that *UniCredit* adopted the principles on that day. Therefore, it was decided to exclude the stock information for *UniCredit* from the sample. This means that the final sample is 52 financial institutions. *SNL Financial* provides information for 47 institutions and for the purpose of retrieving information for the remaining 5 institutions, data or more precisely closing prices from *Yahoo! Finance* were also used in the study.

For the sake of introducing the data in a comprehensible manner, Table 2 compares and tests the equality of means of some firm characteristics for 54 EPFIs and the initial sample of 4110 non-adopters.

Only a short glance on Table 2 is sufficient to recognize how all size factors of EPFIs exceed those of non-adopters. Indeed, the test statistics in the last two columns show that all size related variables are significantly different at the 1% level. For example, the mean value of total assets for EPFIs is US\$705 billion compared to US\$12 billion for non-

adopting banks. This certainly seems to underline the importance of reputation management as discussed in the theoretical overview. The radical size difference suggests that primarily large banks, which are in the spotlight, are attracted to adopt the EP, i.e. banks which are more affected by reputational concerns. The profitability ratios show that, on average, EPFIs perform significantly better than their counterparts. This could mean that the EP improve the financial performance of the institutions. However, referring to the theory, it seems more probable that this correlation suggests a higher engagement in CSR initiatives by more profitable firms. On the other hand, the total equity-to-total asset ratio results imply that the financial leverage of EPFIs is significantly higher than that of non-adopters, which does not really indicate that EPFIs are more risk-averse as it was assumed.

However, it was concluded that apart from the size factors, results of other variables using this large sample cannot be used for any appropriate and valid conclusions. Thus it was decided to control the sample for certain variables in order to get a more fitting control group. First, it was investigated how the statistics change when the threshold for total assets is set to US\$5 billion. While this excluded one EPFI, the statistics became more relevant due to the fact that many small and very small banks were excluded from the control group. The sample size of the control group shrank to 800 non-adopters.

Afterwards, the control group was also controlled for the country of origin of the banks, meaning that only banks coming from countries which include EP adopters were considered. This improved the quality of data, as it excluded banks coming from possibly highly different economic markets. The sample size after controlling for size and country of origin is reduced to 559.

Finally, in order to gain the most significant statistics for making any reliable conclusions, the threshold for total assets was increased to US\$100 billion while still controlling for the country of origin. Additionally, it was controlled for project finance, by including only those banks which are listed in the *Project Finance International League Table* in 2014. Hence, the overall sample size is reduced to 65 banks, out of which 37 are EP adopters and 28 non-adopters. Except for *Standard Bank* from South Africa, all other banks from this sample are headquartered in Europe or North America. Even though a lot of information was lost, it is supposed that having similar group sizes of more comparable banks should add up to the representability and general relevance of the obtained results.

V. RESULTS

This section will be divided into two parts: firstly, results comparing EPFIs to Non-EPFIs will be presented, followed up by a discussion on the outcomes of the event study, revealing how the shareholders responded to the adoption of the EP.

A. COMPARING ADOPTERS AND NON-ADOPTERS OF THE PRINCIPLES

The first part of this research is designed to determine whether there are any substantial differences between institutions that adopted the principles and those that did not, i.e. it was assumed that the strength of certain firm characteristics or financial market performance could be associated with the adoption of the principles. Moreover, it was assumed that the adoption of the principles would improve the general loan quality in EPFIs. As previously mentioned, the most significant results are expected from the sample where the threshold for total assets was increased to US\$100 billion and where it was controlled for the country of origin and project finance. Therefore, only these results will be presented in the main text. Results not included in the main text, but which were obtained during this research when comparing different samples of EPFIs with non-EPFIs, can be found in Appendix B.

The descriptive statistics and the obtained results are shown in Table 3. Although this sample data included only large banks, almost all size-associated variables are again significantly different at the 1% level. The institutions that joined the EP are, on average, significantly larger than those who chose not to adopt the EP. These results further support the notion that reputation management is probably the most important motivation for adopting this voluntary code of conduct. Another possible interpretation might be that larger banks are involved in the EP, because they are reasonably more involved in large project finance investments. However, in respect to net income it seems that there is not a very strong difference (significance at the 10% level) between EPFIs and non-EPFIs. This might imply that EP adopters do not earn significantly greater profits than non-adopters, but still it should be highlighted that in 2013 the average EPFI had a net income of US\$3.5 billion in comparison to the average non-adopter with US\$1.1 billion.

Table 3. Firm and Financial Market Characteristics and Tests for Equality of Means – Sample Controlled for Country of Origin, Total Assets > US\$100 billion and Project Finance

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Size ^b									
No. of Employees	N	28	27,634	17,173	115,360	273	30,478	3.94***	4.38***
	E	37	91,092	74,247	264,900	4,035	80,863		
Total Assets (US\$ billion)	N	28	480	302	2,220	150	477	3.40***	3.60***
	E	37	1,017	824	2,671	111	724		
Total Equity (US\$ billion)	N	27	24.7	17.1	79.9	4.7	21.1	3.37***	3.83***
	E	37	66.9	47.4	232.7	5.2	62.2		
Mkt Capitalization (US\$ billion)	N	14	27.3	19.6	79.9	0.1	24.6	2.50**	3.36***
	E	31	72.6	56.3	288.6	9.4	65.6		
Net Income (US\$ billion)	N	27	1.1	0.4	5.7	-1.9	1.9	1.64	1.88*
	E	37	3.5	3.0	22.2	-18.0	7.4		
Total Deposits (US\$ billion)	N	27	184	119	631	0	171	4.02***	4.38***
	E	35	492	414	1,419	29	368		
Net Customer Loans (US\$ billion)	N	28	205	156	798	0	166	4.01***	4.24***
	E	35	447	392	992	37	283		
Structure									
Tier 1 Ratio (%)	N	23	15.84	14.51	32.45	8.73	5.45	-2.32**	-2.03*
	E	33	13.43	12.93	19.19	10.39	2.07		
Total Equity/ Total Assets (%)	N	27	5.61	4.90	14.02	1.78	2.97	0.96	0.91
	E	37	6.22	5.90	11.22	2.61	2.12		
Loan Quality									
Problem Loans/ Net Customer Loans (%)	N	23	6.38	2.87	27.59	0.00	8.26	-0.92	-0.92
	E	33	6.18	3.91	21.63	0.38	5.89		
Problem Loans/ Assets (%)	N	24	3.67	1.25	18.16	0.00	5.33	-0.32	-0.30
	E	33	3.29	1.78	14.94	0.17	3.88		
Loan Loss Reserves/ Assets (%)	N	24	1.26	0.81	4.33	0.00	1.44	0.73	0.76
	E	32	1.59	0.75	7.57	0.10	1.88		
Loan Loss Reserves/ Gross Loans (%)	N	23	2.20	1.58	8.24	0.00	2.28	1.03	1.06
	E	32	2.90	1.90	9.88	0.36	2.63		
Liquidity									
Net Customer Loans/ Assets (%)	N	28	51.39	53.86	72.74	0.00	19.27	-0.74	-0.71
	E	35	48.31	52.42	72.36	18.71	13.88		
Loans/ Deposits (%)	N	19	127.48	119.60	205.73	73.60	42.04	-2.42**	-2.18**
	E	30	104.11	111.90	154.11	56.39	25.68		
Liquid Assets/ Liabilities (%)	N	24	32.20	29.33	66.22	8.56	15.59	2.58**	2.56**
	E	34	42.61	39.91	75.49	18.29	14.77		
Profitability									
Return on Avg. Equity (ROAE, %)	N	27	2.41	3.11	17.25	-29.74	10.94	1.50	1.44
	E	37	6.02	6.48	19.66	-21.37	8.29		
Return on Avg. Assets (ROAA, %)	N	27	0.23	0.15	1.63	-0.68	0.55	0.77	0.77
	E	37	0.34	0.37	1.54	-1.55	0.57		

(continued on next page)

Table 3. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Pre-impairment Op. Profit/ Avg. Assets (%)	N	27	0.76	0.55	3.45	-0.33	0.79	1.26	1.22
	E	34	0.98	0.99	2.73	0.05	0.58		
Cost-to-Income (%)	N	25	65.28	65.75	93.15	17.57	16.89	-0.55	-0.53
	E	34	63.22	61.68	95.97	42.94	11.75		
Net Interest Margin (%)	N	24	1.26	0.95	6.80	-0.07	1.45	1.05	0.95
	E	34	1.57	1.43	3.40	0.25	0.75		
Stock Market Performance (Over the period March 2012 – March 2015)									
Total Shareholder Return (%)	N	13	25.35	32.54	138.00	-96.30	76.75	1.84*	1.61
	E	31	63.27	56.89	201.04	-47.05	55.37		
Beta (Industry Market Index)	N	13	1.02	1.08	1.67	0.34	0.45	-0.06	-0.06
	E	30	1.01	1.09	1.62	0.37	0.37		
Beta (Regional Market index)	N	13	1.31	1.32	2.01	0.57	0.44	0.43	0.40
	E	30	1.36	1.35	2.01	0.74	0.37		
Volatility (% St. Dev. of Stock Returns)	N	13	3.47	1.86	14.14	0.83	3.92	-2.47**	-1.61
	E	31	1.71	1.78	2.71	0.72	0.59		
Credit Ratings ^c									
S&P Long-term Credit Rating	N	18	7.56	6.50	13.00	2.00	3.07	-0.77	-0.73
	E	33	6.94	6.00	13.00	4.00	2.51		
Fitch Inc. Long-term Credit Rating	N	24	6.33	6.00	11.00	1.00	2.20	-0.59	-0.58
	E	33	6.00	6.00	11.00	3.00	2.05		

Note: E = EP adopters, N= EP Non-adopters. The list of banks included in this analysis can be seen in Appendix C. Nobs denote the number of banks included in the statistic. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively. All data are for the fiscal year 2013, except for the stock market data.

^a Assuming unequal variances

^b Natural logarithms of the size variables were used for the t-values to account for the severely non-normal data

^c In order to measure descriptive statistics for ordinal rating scales the data had to be transformed so that the best possible rating was defined as being equal to 1 and lower ratings were defined by respectively higher numbers. The full transformation listing is found in Appendix F.

With regards to the financial quality of the institutions, the Tier 1 capital ratio is significantly different at the 5% level, or at the 10% level when equal variances are not assumed. EP adopters have a lower Tier 1 capital ratio, which means that in theory they are less protected against unpredicted losses than non-adopters. This finding should be interpreted with caution as there are regional differences in measuring the Tier 1 capital, in addition to the fact that the measurement is prone to shortcomings due to accounting manipulations. Furthermore, in terms of liquidity, both the loans-to-deposits ratio and liquid assets- to- liabilities ratio are significantly different at the 5% level. Generally, both variables show that EPFIs, have higher liquidity than non-adopters, which means that contrary to the aforementioned results it seems that EP adopters are better prepared for any unforeseen crises.

When comparing the financial market performance among the institutions, differences are found in the stock volatility and in the total shareholder return over the period of three years, as indicated in Table 3. The difference in stock volatility is statistically significant at the 5% level and the difference in total return at the 10% level. However, these results are not very robust as they lose significance when unequal variances are assumed. These results partly support the notion that EPFIs are associated with less risky and more profitable performance.

The remaining aspects which were compared include issuer credit ratings, profitability and loan quality. According to Table 3, EPFIs perform better than non-adopters in all of these aspects, but the results of the tests for equality of means are not statistically significant. Therefore, these results imply that the EP are not associated with improved operational profits and also that credit rating agencies do not see the participation in the EP as very essential. In terms of the loan quality aspect it can be assumed that EPFIs did not incorporate the essence of the principles into their core business.

To summarize, the results of this study show that EPFIs are significantly larger and have significantly higher liquidity than institutions that did not adopt the EP. Some differences were obtained, albeit with weak significance, in relation to the Tier 1 ratio, shareholder returns and stock volatility. These results are partly in line with findings presented by Scholtens and Dam (2007), as they also have shown significant differences in relation to all size variables. Additionally, they concluded that EPFIs performed significantly weaker than non-adopters in terms of profitability ratios. However, the results of this study reject this notion (Table 3) and show that EPFIs perform better according to all profitability indicators, but not in a significant manner.

With regards to the proposed hypotheses, this study comes to the following conclusions. Study outcomes regarding the first hypothesis are mixed. Concerning the aspect of profitability, the EPFIs do not perform significantly better than those who did not adopt. However, it seems that EPFIs have reduced risk, as they perform significantly better in terms of liquidity and to a lesser degree in regard to stock volatility. Therefore, the first hypothesis is not rejected and it can be concluded that EP adopters perform, in certain aspects, significantly better than non-adopters. Nevertheless, the second hypothesis is rejected because the results do not demonstrate any significant difference in loan quality between adopters and non-adopters.

Table 4. Correlation Coefficients for Explanatory Variables

Covariance Analysis: Spearman rank-order								
Included observations: 42								
Balanced sample (listwise missing value deletion)								
Correlation	D_{EP}	D_{EUROPE}	Total Assets	Total Equity/ Total Assets	Tier 1 Ratio	Loans/ Deposits	Problem Loans/ Assets	Cost-to- Income
D_{EP}	1.000							
D_{EUROPE}	-0.062	1.000						
Total Assets	0.461	0.017	1.000					
Total Equity/ Total Assets	0.061	-0.474	-0.065	1.000				
Tier 1 Ratio	-0.146	0.583	0.226	-0.501	1.000			
Loans/ Deposits	-0.332	0.526	-0.599	-0.258	0.202	1.000		
Problem Loans/ Assets	0.057	0.270	-0.186	0.276	-0.298	0.408	1.000	
Cost-to- Income	0.028	0.017	0.459	-0.058	0.009	-0.413	0.031	1.000

ROBUSTNESS CHECK: CROSS-SECTIONAL STUDY

In order to investigate the validity of the statistically significant results from Table 3, cross-sectional regressions with multiple explanatory variables are performed. For the sake of consistency, all OLS regression models contain almost the same explanatory variables. Each model contains two dummy variables. D_{EP} is the dummy variable which is equal to 1 if the financial institution adopted the principles and D_{EUROPE} is the regional dummy variable equal to 1 if the headquarter of the financial institutions is in Europe. Each model also contains further economic variables explaining the size (total assets), financial structure (total equity / total assets), loan quality (problem loans / assets) and profitability (cost-to-income) of the institution. The models additionally include the Tier 1 ratio as an explanatory variable for the case that liquidity indicators represent the dependent variable. In all the remaining cases the Tier 1 ratio is replaced with the loans-to-deposits ratio.

First, it is necessary to inspect whether the explanatory variables are highly correlated between each other since this could lead to misleading conclusions. Table 4 shows the correlations between the explanatory variables. The strongest correlation which is reported is the one between the loans-to-deposits ratio and total assets (-0.599). Such correlation values are not significant enough to be considered as a source for deterioration of the model.

Table 5. OLS Regressions on Different Dependent Variables

a) Dependent Variable: Loans/ Deposits (%) Included observations: 42				b) Dependent Variable: Liquid Assets/ Liabilities (%) Included observations: 45			
Variable	Coefficient	t-Statistic	VIF	Variable	Coefficient	t-Statistic	VIF
C (Intercept)	143.8972	3.498***		C (Intercept)	38.7419	3.082***	
D_{EP}	-17.3961	-2.081**	1.403	D_{EP}	-0.1146	-0.033	1.431
D_{EUROPE}	22.5778	1.857*	2.570	D_{EUROPE}	3.533	0.745	2.378
Total Assets (US\$ billion)	-0.0093	-1.534	1.753	Total Assets (US\$ billion)	0.0091	3.673***	1.660
Total Equity/ Total Assets (%)	-1.1243	-0.624	1.919	Total Equity/ Total Assets (%)	-1.6668	-2.306**	1.770
Tier 1 Ratio (%)	2.2052	1.179	2.118	Tier 1 Ratio (%)	-0.888	-1.862*	1.865
Problem Loans/ Assets (%)	3.4047	2.875***	1.730	Problem Loans/ Assets (%)	-1.2822	-2.603**	1.667
Cost-to-Income (%)	-0.9701	-2.840***	1.405	Cost-to-Income (%)	0.276	2.307**	1.255
R-squared	0.7014			R-squared	0.6472		
Adjusted R-squared	0.6370			Adjusted R-squared	0.5804		
Durbin-Watson stat	1.5975			Durbin-Watson stat	2.3163		
c) Dependent Variable: Tier 1 Ratio (%) Included observations: 42				d) Dependent Variable: Total Shareholder Return (%) (Over the period March 2012 – March 2015) Included observations: 35 after adjustments			
Variable	Coefficient	t-Statistic	VIF	Variable	Coefficient	t-Statistic	VIF
C (Intercept)	12.7454	3.430***		C (Intercept)	-247.2748	-4.287***	
D_{EP}	-1.1044	-1.426	1.492	D_{EP}	51.2906	3.789***	1.483
D_{EUROPE}	2.5889	2.449**	2.406	D_{EUROPE}	-18.5087	-1.065	2.558
Total Assets (US\$ billion)	0.0004	0.758	1.843	Total Assets (US\$ billion)	-0.0045	-0.473	2.116
Total Equity/ Total Assets (%)	-0.1384	-0.859	1.900	Total Equity/ Total Assets (%)	7.5652	2.771**	1.921
Loans/ Deposits (%)	0.0178	1.179	3.218	Loans/ Deposits (%)	1.6576	7.140***	2.491
Problem Loans/ Assets (%)	-0.353	-3.460***	1.591	Problem Loans/ Assets (%)	-9.2885	-5.797***	1.698
Cost-to-Income (%)	-0.0058	-0.169	1.737	Cost-to-Income (%)	1.1924	2.175**	1.683
R-squared	0.5464			R-squared	0.7213		
Adjusted R-squared	0.4530			Adjusted R-squared	0.6490		
Durbin-Watson stat	1.8412			Durbin-Watson stat	1.8884		
e) Dependent Variable: Volatility (% St. Dev. of Stock Ret.) (Over the period March 2012 – March 2015) Included observations: 35 after adjustments							
Variable	Coefficient	t-Statistic	VIF				
C (Intercept)	0.0767	0.155					
D_{EP}	-0.0878	-0.756	1.483				
D_{EUROPE}	0.4117	2.763**	2.558				
Total Assets (US\$ billion)	-0.00003	-0.421	2.116				
Total Equity/ Total Assets (%)	0.0268	1.144	1.921				
Loans/ Deposits (%)	0.0008	0.395	2.491				
Problem Loans/ Assets (%)	0.0789	5.742***	1.698				
Cost-to-Income (%)	0.0115	2.452	1.683				
R-squared	0.8042						
Adjusted R-squared	0.7535						
Durbin-Watson stat	1.5356						

Note: Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively. VIF = Variance Inflation Factor. D_{EP} is the dummy variable for EP adoption and D_{EUROPE} is a regional dummy variable.

Additionally, multicollinearity was further tested with the Durbin-Watson statistic and the variance inflation factors (VIFs). The range for the Durbin-Watson statistic is normally between 0 and 4. A value close to 2 indicates no correlation. On the other hand, VIFs higher than 5 indicate multicollinearity. The results reported in Table 5 suggest that none of the regressed models should be prone to multicollinearity and therefore no result discrepancies are expected.

Table 5 shows the results of the cross-sectional regressions for the following dependent variables: a) loans-to-deposits, b) liquid assets-to-liabilities, c) Tier 1 ratio, d) total shareholder return and e) stock volatility. The cross-sectional studies rejected the association of the EP with the liquid assets-to-liabilities ratio, the Tier 1 ratio and the stock volatility. The outcomes of the regressions suggest that the Tier 1 ratio and the stock volatility were not so much influenced by the association with the EP, but rather by the firm's asset quality (problem loans-to-assets) and region. In terms of the liquid assets-to-liabilities ratio, D_{EP} instantaneously lost its significance once it was controlled for total assets.

However, Table 5a suggests that EPFIs are linked to higher liquidity. Although several other economic indicators explain the loans-to-deposits ratio significantly, D_{EP} kept its explanatory power statistically significant at the 5% level. Thus, this result underpins the statistical significance reported in the previous analysis concerned with the equality of means.

In the previous analysis, total shareholder return showed significance only at the 10% level and the result was not even robust when unequal variances were taken into account. However, the cross-sectional study increased the explanatory power of D_{EP} extensively. According to the regression results, as reported in Table 5d, D_{EP} explains the total shareholder return significantly at the 1% level. As this result was quite unexpected several tests and modifications were made to check for the appropriateness of the regression model. Besides testing for multicollinearity, the dataset was also checked for possible outliers. Several model specifications have been tried out, but still D_{EP} did not lose on explanatory power as long as it was controlled for the problem loans-to-assets ratio and the loans-to-deposits ratio. Additionally, it should be noted that D_{EP} adds a lot of explanatory power to the regression model, because the Adjusted R-squared increases significantly with the inclusion of D_{EP} . Hence, it can be concluded that the EPFIs are associated to systematically

higher total shareholder returns. In order to get a complete picture of the cross-sectional study, it is possible to find the actual, fitted, residual graphs for all regressed models in Appendix E.

OTHER RESULTS: BOX PLOTS

According to Wright (2012), many EPFIs were already complying with the requirements of the principles before adopting them. Even though it is not the primary goal of this research to find the formal causality between the EP and certain firm characteristics, it was decided to present box plots in order to see whether some economic indicators changed around the EP adoption date. Unfortunately, a lot of data for the early adopters was not available in the *SNL Financial* database. Therefore, the number of observed institutions for this demonstration was only 22.

Figure 1. Box Plots; Net Interest Margin

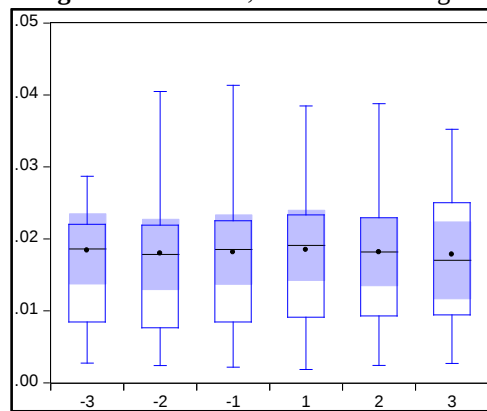


Figure 2. Box Plots: Pre-Impairment Operating Profit / Avg. Assets

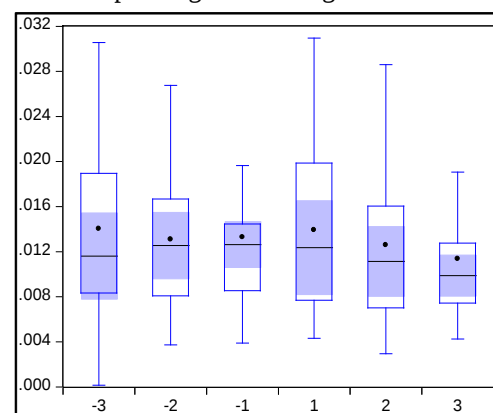


Figure 3. Box Plots: Loan Loss Reserves / Assets

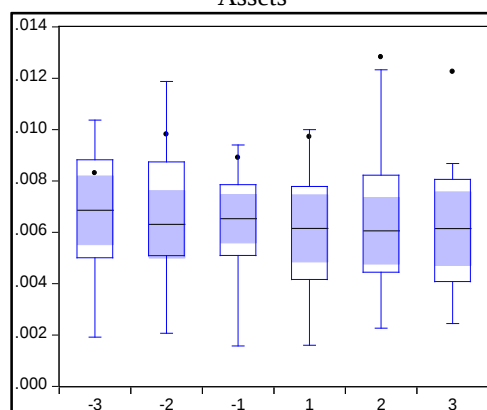
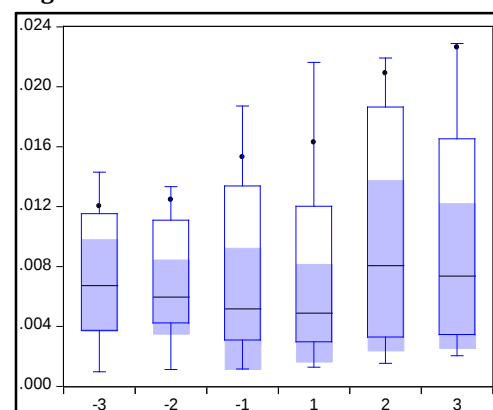


Figure 4. Box Plots: Problem Loans / Assets



Due to better information availability it was decided to use data on the semi-annual basis instead of the quarterly basis. Also, because of data limitation it was necessary to include only observations for three semi-annual periods before and after the adoption of the EP. Here, in the main text, two profitability and two loan quality indicators are presented. Other indicators and the list of included institutions for these statistics can be found in Appendix D.

A glance on the box plots draws a conclusion that there were no positive or significant changes around the EP adoption date. In fact, in terms of loan quality the mean value of the problem loans-to-assets ratio and the loan loss reserves-to-assets ratio increased after adopting the EP. Many observed institutions adopted the EP around the financial crisis 2007-08, and therefore it may be assumed that this is the true reason for the continuous decrease in loan quality. Also, it should be noted that the mean values are more sensitive to statistical outliers. Indeed, this decrease in loan quality does not seem to be statistically significant, as the median values and the median 95% confidence interval (the shaded area) did not change as dramatically as the mean value.

Finally, the outcome of this simple exemplification is in line with statements suggesting that for most institutions the adoption of the EP does not lead to internal behavioral changes. Instead, it is assumed that the adoption of the EP is used as a signal for their determination to continue complying with practices that they already commenced before adopting the principles.

B. SHAREHOLDER REACTIONS – EVENT STUDY

The second part of this research was interested in examining how the shareholders reacted to the adoption of the principles. The results gained from the event study are presented here. As mentioned in the methodological framework, three different models were developed for the purpose of this study. However, as the results of the different models do not alternate significantly from each other, it was decided to present only the findings of the third model in the main text. This enables the reader a clearer overview of the obtained results. All remaining results, relating to the event study methodology, can be found in Appendix H.

Table 6. Event Study Results on the Effect of Adopting the EP

Event Window	Model 3 - $E(R_{jt}) = \alpha_j + \beta_j(R_{Mt} - R_{ft}) + \gamma_j(R_{MSCIt} - R_{ft}) + \delta_j R_{ft} + \varepsilon_{jt}$.					
	Mean CAR	Median CAR	Brown and Warner	Mackinlay	Patell	Kolari and Pynnonen
			(1985)	(1997)	(1976)	(2011)
			t-statistic			
<i>Nobs</i> = 52						
[-5,5]	0.56%	0.97%	0.747	0.809	1.532	1.838*
[-3,3]	0.61%	0.77%	1.014	1.099	1.505	1.772*
[-1,1]	0.56%	0.52%	1.435	1.554	1.397	2.055**
[-2,0]	-0.08%	0.13%	-0.196	-0.213	0.365	0.730
[-1,0]	0.02%	0.04%	0.061	0.066	0.603	0.742
[0,0]	0.35%	0.24%	1.522	1.649	1.809*	1.957*
[0,1]	0.89%	0.52%	2.772***	3.003***	2.387**	2.934***
[0,2]	0.65%	0.42%	1.659*	1.797*	1.538	2.200**
[0,3]	0.90%	0.49%	1.988**	2.153**	2.223**	2.489**
[0,5]	1.05%	1.56%	1.896*	2.054**	2.501**	2.748***

Note: CAR= Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

In order to capture any potential stock price effect around the EP adoption date, several event windows are considered, besides observing the exact event day. Days prior to the adoption date are observed in order to account for anticipatory effects or information leakage. On the other hand, days after the event date are observed to explain reactions which occurred after closing the stock market on the adoption day, i.e. postponed market reactions due to uncertainty about the impact of the event. The mean and median values of CARs are presented and the mean values are also tested for significance for all observed event windows. For example, [-3, 3] denotes an event window considering the period of three days prior to and after the event day.

Table 6 shows that at the event day [0, 0] the mean value of abnormal returns is 0,35% and that this result is partially statistically significant at the 10% level. However, when observing the [0, 1] event window the mean CAR is 0,89% and it is statistically highly significant across all performed tests. It is significant at the 1% level for all tests, except for the Patell statistic which is significant at the 5% level. Otherwise, CARs which are positive and statistically significant at the 5% and even 1% level are found for the [0, 3] and [0, 5] event windows. Also, positive and partially significant CARs are examined for the [-5, 5], [-3, 3], [-1,1] and [0,2] windows. The lag time between the reaction and the adoption of the principles is within normal range, especially as the [0, 1] window shows the most

significant results. The other event windows, which include more days, are probably influenced by the statistically powerful market reaction in the $[0, 1]$ window.

In the study performed by Scholtens and Dam (2007) no statistical significance could be found. Nevertheless, it is important to note that in their study the same event windows were not observed, particularly their study did not examine the $[0, 1]$, $[0, 3]$ and $[0, 5]$ windows which show the most significant results in this research. On the other hand, Eisenbach, et al. (2014) did find some positive and partially significant CARs for the $[0, 3]$ and $[0, 5]$ windows and therefore it can be concluded that the results obtained in this study strengthen their findings. However, it is interesting to remark that even they did not present the very commonly used event window $[0, 1]$. Besides the decision to include different event windows, the results most probably diverge due to the fact that this study observes stock behavior for 52 institutions, which is a significantly larger sample than those in previous empirical studies.

Finally, in terms of this event study it can be concluded that these results are in line with the third hypothesis, which states that the adoption of the EP leads to a significant and positive impact on the shareholders' returns, implying that shareholders believe that the EP will lead to a positive economic impact on their institutions.

ROBUSTNESS CHECK

This particular study further performs event studies on different subsets of the sample in order to gain a deeper understanding on stock market reactions on the EP adoption. Firstly it examines whether there are any differences in shareholder reactions between those that adopted the EP before the first revision in 2006 and those which adopted the principles after that. Secondly, the sample is also split according to the development of the markets where the institutions are headquartered. Developed markets are considered to be those listed as such in the *FTSE Annual Country Classification Review* in 2015. Finally, the study investigates whether there are any differences between institutions when divided according to their total assets size.

Table 7. Event Study Results on the Effect of Adopting the EP – Early and Late Adopters

Event Window	Model 3 - $E(R_{jt}) = \alpha_j + \beta_j(R_{Mt} - R_{ft}) + \gamma_j(R_{MSCIt} - R_{ft}) + \delta_j R_{ft} + \varepsilon_{jt}$.					
	Mean CAR	Median CAR	Brown and Warner (1985)	Mackinlay (1997)	Patell (1976)	Kolari and Pynnonen (2011)
			t-statistic			
<i>Early Adopters, Nobs = 19</i>						
[-5,5]	1.48%	0.63%	1.708*	1.736*	1.580	1.652
[-3,3]	1.11%	0.87%	1.608	1.634	1.533	2.048**
[-1,1]	0.16%	0.24%	0.352	0.358	0.120	0.387
[-2,0]	-0.01%	0.17%	-0.012	-0.013	0.132	0.316
[-1,0]	-0.09%	0.01%	-0.244	-0.248	-0.322	-0.609
[0,0]	0.30%	0.20%	1.151	1.170	0.833	1.175
[0,1]	0.55%	0.26%	1.490	1.514	1.058	1.483
[0,2]	0.83%	0.35%	1.836*	1.866*	1.576	2.087**
[0,3]	1.49%	0.94%	2.857***	2.903***	2.612**	2.948***
[0,5]	1.67%	0.97%	2.608**	2.650***	2.291**	2.266**
<i>Late Adopters, Nobs = 33</i>						
[-5,5]	0.03%	1.09%	0.033	0.034	0.724	1.349
[-3,3]	0.32%	0.46%	0.402	0.410	0.726	0.964
[-1,1]	0.80%	0.60%	1.530	1.559	1.662*	2.360**
[-2,0]	-0.12%	0.08%	-0.227	-0.232	0.357	0.699
[-1,0]	0.08%	0.20%	0.195	0.199	1.001	1.284
[0,0]	0.37%	0.38%	1.234	1.258	1.639	1.804*
[0,1]	1.09%	0.71%	2.551**	2.600**	2.194**	2.771***
[0,2]	0.55%	0.49%	1.054	1.075	0.735	1.436
[0,3]	0.56%	0.25%	0.934	0.952	0.809	1.408
[0,5]	0.70%	1.74%	0.950	0.968	1.401	2.017**

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table 7 shows that positive and significant CARs are found for both early and late adopters. Early adopters had positive and partially significant CARs for the [-5, 5], [-3, 3] and [0, 2] event windows. Even more interestingly, they had positive as well as highly significant results (partially at the 1% level) for the [0, 3] and [0, 5] windows. The outcomes for the late adopters do not show as many significant results, but still positive and highly significant results (at the 5% and 1% level) across all tests are found for the [0, 1] window. Moreover, positive and partially significant results are seen in the [-1, 1], [0, 0] and [0, 5] event windows. These results imply that, for example, early adopters had on average a 1,49% higher return than usually during the 4 days included in the [0, 3] event window, or that the shareholders' returns for late adopters on average gained a rise of 1,09% during the [0, 1] window.

Therefore, it can be concluded that shareholders of both early and late adopters have reacted positively to the adoption of the EP. The lag time between the reaction and the adoption of the EP differs between them, as it seems that late adopters reacted positively to the adoption more quickly than the early adopters. A possible explanation for this behavior

Table 8. Event Study Results on the Effect of Adopting the EP – Country Classification

Event Window	Model 3 - $E(R_{jt}) = \alpha_j + \beta_j(R_{Mt} - R_{ft}) + \gamma_j(R_{MSCIt} - R_{ft}) + \delta_j R_{ft} + \varepsilon_{jt}$.					
	Mean CAR	Median CAR	Brown and Warner	Mackinlay	Patell	Kolari and Pynnonen
			(1985)	(1997)	(1976)	(2011)
			t-statistic			
Developed Markets, Nobs = 34						
[-5,5]	0.64%	0.97%	0.924	0.960	1.359	1.639
[-3,3]	0.82%	0.77%	1.496	1.556	1.419	1.601
[-1,1]	0.48%	0.51%	1.339	1.392	1.178	1.703*
[-2,0]	0.53%	0.33%	1.476	1.534	1.391	1.968*
[-1,0]	0.36%	0.21%	1.239	1.288	1.344	1.973*
[0,0]	0.40%	0.19%	1.912*	1.988**	1.657	1.782*
[0,1]	0.52%	0.18%	1.753*	1.822*	1.270	1.618
[0,2]	0.30%	0.29%	0.838	0.872	0.797	1.435
[0,3]	0.46%	0.35%	1.111	1.155	1.135	1.611
[0,5]	0.53%	0.86%	1.046	1.087	1.332	1.775*
Other, Nobs = 18						
[-5,5]	0.42%	0.69%	0.257	0.269	0.736	0.787
[-3,3]	0.21%	0.24%	0.157	0.164	0.608	0.860
[-1,1]	0.72%	0.64%	0.840	0.877	0.755	1.363
[-2,0]	-1.23%	-0.46%	-1.433	-1.497	-1.292	-1.130
[-1,0]	-0.63%	-0.64%	-0.903	-0.944	-0.823	-1.311
[0,0]	0.25%	0.51%	0.500	0.523	0.798	1.066
[0,1]	1.60%	1.35%	2.286**	2.388**	2.312**	3.071***
[0,2]	1.31%	1.49%	1.535	1.604	1.519	1.983**
[0,3]	1.73%	1.65%	1.754*	1.833*	2.218**	2.200**
[0,5]	2.04%	2.52%	1.685*	1.760*	2.421**	2.425**

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

might be that shareholders from late adopters are already familiarized with the implications of the EP, whereas shareholders from early adopters were still uncertain about the impact of the principles on their companies. Additionally, assuming that the environmental awareness has risen over the years, it is somewhat unexpected that the adoption of the EP does not seem to be considered more important than previously.

Table 8 shows the results for CARs according to the country classification, i.e. whether the institutions come from developed or other markets. For institutions headquartered in developed markets, the CARs are positive and significant at the 10% level for the [-1, 1], [-2, 0], [-1, 0] and [0, 5] event windows, according to the nonparametric Kolari and Pynnonen test statistic. For the event windows [0, 0] and [0, 1] the results are positive and partially significant with other significance tests as well at the 10% or 5% level. Institutions from other countries experience positive and statistically significant CARs for the [0, 1], [0, 2], [0, 3], [0, 5] windows. Most importantly, the event window [0, 1] captures CARs which are positive and statistically significant across all tests at the 5% or 1% level.

In summary, this suggests that institutions from both developed and other markets had a rise in equity around the adoption date of the EP: Nevertheless, it should be highlighted that the mean CARs are considerably higher for the institutions coming from other markets. For example, for the [0, 1] event window institutions from developed markets had a mean CAR of 0,52% with a statistical significance at the 10% level. On the other hand, for that same event window, institutions from other markets experienced a mean CAR of 1,60% with a statistical significance at the 5% or 1% level.

Due to the fact that most important project finance players come from developed markets, here it is assumed that institutions from less developed markets perceive the adoption of the EP as a positive impact on their competitiveness in the market and therefore their shareholders react more positively to the adoption of these principles. This notion supports the statements made by four independent informants, which can be found in the interview-based study by Conley and Williams (2011, p.561), that “the business case is stronger in emerging markets than in the developed world.” Also, higher returns are expected or at least are more probable in developing markets as they experience higher market volatility.

The results in Table 9 show the differences between institutions according to their total assets size. The analysis of this data indicates that the largest institutions (Total Assets > US\$1 Trillion), hence those with the presumably increased project finance activities and reputational concerns, had no significant stock market reactions at all. On the other hand, institutions which have total assets worth between US\$100 billion and US\$1 Trillion, experience positive and significant CARs across various event windows. The abnormal returns on the event date are, on average, positive and significant at the 10% level according to the only nonparametric test. The obtained CARs for the event windows [-5, 5], [-3, 3], [0, 1], [0, 2], [0, 3] and [0, 5] are positive and highly statistically significant at the 5% and even at the 1% level. In comparison, EPFIs with total assets less than US\$100 billion show less significant results, but still the results report positive and statistically significant (partially at the 5% level) CARs for the [0, 1] event window. Moreover, the CARs for the [0, 3] and [0, 5] windows are also positive and partially significant.

It can be concluded that shareholders from the largest institutions did not react significantly at all to the adoption of the EP, whereas those from ‘smaller’ institutions reacted significantly positive. A reasonable explanation might be that the largest financial

Table 9. Event Study Results on the Effect of Adopting the EP – Size Classification

Event Window	Model 3 - $E(R_{jt}) = \alpha_j + \beta_j(R_{Mt} - R_{ft}) + \gamma_j(R_{MSCIt} - R_{ft}) + \delta_j R_{ft} + \varepsilon_{jt}$.					
	Mean CAR	Median CAR	Brown and Warner (1985)	Mackinlay (1997)	Patell (1976)	Kolari and Pynnonen (2011)
			t-statistic			
Total Assets > US\$1 Trillion, Nobs = 12						
[-5,5]	-1.17%	0.80%	-0.925	-1.004	-0.371	0.399
[-3,3]	-0.53%	0.33%	-0.525	-0.570	-0.121	0.345
[-1,1]	0.19%	0.62%	0.288	0.312	0.456	0.773
[-2,0]	0.69%	0.61%	1.045	1.134	1.106	1.289
[-1,0]	0.23%	0.37%	0.423	0.459	0.630	1.008
[0,0]	0.26%	-0.11%	0.680	0.738	0.362	0.482
[0,1]	0.22%	-0.01%	0.410	0.446	0.184	0.500
[0,2]	-0.64%	0.33%	-0.974	-1.057	-0.453	0.345
[0,3]	-1.05%	0.33%	-1.369	-1.486	-0.698	0.290
[0,5]	-0.76%	1.56%	-0.810	-0.880	-0.286	0.481
Total Assets between US\$100 Billion and US\$1 Trillion, Nobs = 26						
[-5,5]	2.32%	0.97%	2.531**	2.478**	2.532**	2.259**
[-3,3]	1.84%	0.83%	2.519**	2.466**	2.217**	1.992**
[-1,1]	0.65%	0.57%	1.358	1.330	1.242	1.597
[-2,0]	0.15%	0.18%	0.323	0.316	0.431	0.822
[-1,0]	0.18%	0.06%	0.457	0.448	0.791	0.927
[0,0]	0.40%	0.37%	1.460	1.429	1.646	1.689*
[0,1]	0.88%	0.65%	2.238**	2.191**	1.895*	2.170**
[0,2]	1.12%	0.43%	2.340**	2.291**	1.806*	2.110**
[0,3]	1.59%	0.80%	2.872***	2.812***	2.475**	2.175**
[0,5]	1.99%	0.94%	2.942***	2.881***	2.831***	2.474**
Total Assets < US\$100 Billion, Nobs = 14						
[-5,5]	-1.22%	0.27%	-0.773	-0.751	-0.155	0.191
[-3,3]	-0.71%	-0.48%	-0.561	-0.546	-0.007	0.497
[-1,1]	0.72%	0.37%	0.878	0.854	0.578	1.227
[-2,0]	-1.17%	-0.50%	-1.417	-1.378	-0.908	-1.021
[-1,0]	-0.46%	-0.64%	-0.677	-0.658	-0.500	-0.730
[0,0]	0.31%	0.31%	0.653	0.635	0.908	1.194
[0,1]	1.49%	0.61%	2.215**	2.153**	1.849*	2.606**
[0,2]	0.89%	0.57%	1.085	1.055	0.922	1.399
[0,3]	1.30%	1.08%	1.364	1.326	1.558	1.899*
[0,5]	0.86%	2.20%	0.741	0.720	1.227	2.278**

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

institutions are presumably natural leaders in the field of project finance. Therefore, the shareholders perceive the adoption of the principles only as a confirmation of their already existing dominance. On the other hand, it is assumed that shareholders from ‘smaller’ institutions perceive the adoption of the EP to some degree as a tool to level the playing field, i.e. they gain new business opportunities by being able to finance previously restricted projects. The connection to project finance leaders is especially important due to the loan syndicate nature of project finance. Therefore, it can be concluded that relatively smaller financial institutions have more to gain from reputation signals than the already established business leaders.

The results from Table 7 and Table 8 contradict those obtained by Eisenbach, et al. (2014). While their study also finds that early adopters had positive and significant CARs, they did not show any significant results for the late adopters. Similarly, in relation to developed markets (they used the OECD classification) their study demonstrated positive and significant results for the event day, but for institutions coming from other markets they found negative and significant abnormal returns on the event day. It is already mentioned above, that these results differ from each other most probably as a result of different data sampling, but also due to the observation of different event windows.

In general, it can be concluded that the adoption of the EP is most probably considered as ‘news’ on the stock market. Even though the results show statistical significance, the CARs are relatively marginal. A possible reason for this might be that project finance presents only a small share of the total business activity for these institutions or another interpretation might be that environmental and social awareness is still not considered that important in the banking industry. Also, here it is assumed that these relatively marginal CARs imply how shareholders consider that the EP carry reputational benefits rather than operational or strategic improvements.

VI. CONCLUSION

As of March 2015, 79 financial institutions comply with a set of principles known as the EP. They represent a voluntary code of conduct, whose scope is limited to project finance activities. These principles, commonly branded as a risk-mitigating management tool, have become the financial industry benchmark in project finance. Their narrow scope has been a continued source of criticism, but the EP have also received praise. Despite this shortcoming, the fact remains that the EP are a pioneering commitment of commercial banks to tackle environmental and social risks through their business operations.

In the legal implications debate, Ong (2010) concludes that they represent a form of ‘transnational’ soft-law, as the agreement involves non-state actors with global outreach. In practice, the positive impact of the EP is primarily observed through its potential to import stricter rules and laws, at least in the project finance field, into developing countries. Moreover, EPFIs have the right to exercise remedies in case that the agreed loan covenants between them and project sponsors are violated.

However, their potential is obviously not sufficiently exploited as there are continuous complaints regarding the violation of EP recommendations. In particular, widespread criticism is directed towards information disclosure or the lack thereof, as institutions avoid transparency under the excuse of client confidentiality. More importantly, though, the institutions associated with the EP have ignored persistent recommendations to form an independent accountability mechanism. This circumstance implies that the affected communities’ interests are often ignored for the sake of the clients’ satisfaction. Since its inception, adherents of the EP principally originate in the ‘Western’ hemisphere. Therefore, a major shortcoming of the EP is seen in its incapability to attract the main financial institutions headquartered in China, India and Russia, especially now in the wake of their increasing role in project finance.

The empirical study focused on exploring the economic impact of the EP. More specifically, it was examined whether there are any differences, in firm and financial market characteristics, between adopting and non-adopting institutions. This was accomplished through testing the equality of means and subsequently performing a cross-sectional analysis to check for robustness. Additionally, several event studies were performed to investigate how shareholders reacted to the adoption of the EP.

The outcome of the empirical analysis suggests that financial institutions, which adopted the EP, tend to be significantly larger than non-adopters. This result supports the existing literature (e.g. Amalric 2005; Wright and Rwabizambuga 2006; Scholtens and Dam 2007; Macve and Xiaoli 2010) that recognizes reputation management as one of the main incentives to adopt these principles, i.e. primarily large commercial banks with higher reputational concerns are attracted to adopt the EP. Furthermore, the results suggest that EPFIs are associated with improved financial performance in terms of liquidity and total shareholder return and thus support the literature stating that a positive relationship between financial performance and CSR strategies exist. This implies that adopting institutions are more risk-averse than their counterparts, as well as being associated with higher long run firm value, i.e. expected future cash flows. These findings contradict the results of the study by Scholtens and Dam (2007), which did not find any other improved aspect of financial performance associated with the EPFIs aside from the size factor. In fact, their results suggest that EP adopters have significantly lower operational profits, an assumption rejected by this study. Since their study was published nearly a decade ago, this divergence might be attributable to temporal differences. Moreover, the notion that EPFIs improved their general credit risk assessment by integrating the essence of the EP into their core business is rejected. According to the results, there is no significant difference between EP adopters and non-adopters in terms of loan quality.

The results of the event study in the second part of the empirical study indicate that shareholders, on average, reacted positively to the adoption of the EP. This result is in line with Eisenbach, et al. (2014), but contradicts the results of Scholtens and Dam (2007) who could not find any significant market reaction at all. Furthermore, this study examined whether there are any differences between the stock market reactions of adopters according to their time of adoption and country development classification. The results of this study demonstrate positive and significant stock market reactions experiences regardless of institutional subset. There was no big difference between early and late adopters, which is rather unexpected as it was believed that late adopters would perceive the adoption of the EP more significantly due to an overall increase in environmental and social awareness. In terms of country classification, the results of this study show that institutions from developed markets had considerably smaller CARs on average than those based in other markets. This seems reasonable, as institutions from developing markets expect an increase in their competitiveness after adopting the EP. Also, higher returns are more likely in

markets with higher volatility, i.e. developing markets. These results contradict the findings of Eisenbach, et al. (2014), which did not find any positive market reaction for late adopters, and even found negative and significant abnormal returns on the event day for institutions not coming from developed countries. The results differ most probably due to the fact that this study considers stock behavior of 52 institutions, a significantly larger sample than those in previous empirical studies. Additionally, different event windows were observed in this study in comparison to previous empirical studies.

This research also contributes to the existing literature on EP, by exploring whether there are any differences between shareholder reactions based on firm size. It was expected that the largest institutions would have positive reactions on the adoption of the EP, as they presumably have the highest reputational concerns. However, the findings suggest that very large institutions (>US\$1 Trillion) had no abnormal returns around the adoption date. On the other hand, smaller institutions had positive and significant CARs around several event windows. A possible explanation for this outcome might be due to the presumption that the largest institutions are already project finance leaders and therefore they do not gain as much as smaller institutions, which perhaps regard the adoption of the EP as a promising opportunity to enter new businesses.

In summary, the results of this empirical analysis imply that it is beneficial for financial institutions to adopt the EP, i.e. it can be concluded that a business case for the EP exists. However, it should be noted that, due to limited financial resources, the analysis concerned with testing the equality of means excluded data for the Asia, Latin America and Oceania regions. Therefore, further research is needed to observe how the inclusion of these markets would affect the results. Furthermore, the strong explanatory power of the EP on total shareholder return should be investigated in more depth, as this study does not find a precise explanation. Finally, if data would become available it would be interesting to explore whether EPFIs perform better than non-adopters in terms of loan quality in project finance.

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VIII. APPENDIX

APPENDIX A – LIST OF EP ADOPTERS (AS OF MARCH 20, 2015)

Financial Institution	Country	Adoption Date	Financial Institution	Country	Adoption Date
ABN AMRO ^a	Netherlands	03/08/2009	Efic	Australia	03/03/2009
Access Bank Plc ^{a, b}	Nigeria	04/06/2009	Eksport Kredit Fonden	Denmark	14/05/2004
Ahli United Bank B.S.C. ^{a, b}	Bahrain	01/05/2011	Eksportkredit Norway S/A	Norway	27/06/2014
ANZ ^b	Australia	15/12/2006	Ex-Im Bank ^a	USA	31/03/2011
Arab African International Bank ^a	Egypt	25/01/2009	Export Development Canada ^a	Canada	25/10/2007
ASN Bank N.V. ^a	Netherlands	25/11/2009	Fidelity Bank Plc ^{a, b}	Nigeria	01/11/2012
Banco Bradesco, S.A. ^b	Brazil	08/09/2004	FirstRand Ltd. ^{a, b}	South Africa	13/07/2009
Banco de Crédito	Peru	22/01/2013	FMO ^a	Netherlands	19/10/2005
Banco de Galicia y Buenos Aires S.A. ^b	Argentina	19/03/2007	HSBC Holdings Plc ^{a, b}	United Kingdom	04/09/2003
Banco de la República Oriental del Uruguay	Uruguay	03/01/2008	IDFC Bank Ltd. ^b	India	03/06/2013
Banco do Brasil ^b	Brazil	06/07/2006	Industrial Bank Co., Ltd. ^b	China	31/10/2008
Banco Espírito Santo S.A. ^{a, b}	Portugal	16/08/2005	ING Bank N.V. ^{a, b}	Netherlands	23/06/2003
Banco Mercantil del Norte ^b	Mexico	12/03/2012	Intesa Sanpaolo SpA ^{a, b}	Italy	04/08/2006
Banco Popular Español ^{a, b}	Spain	20/05/2013	Itaú Unibanco S.A. ^b	Brazil	12/08/2004
Banco Sabadell ^{a, b}	Spain	29/09/2011	JPMorgan Chase Bank. ^{a, b}	USA	04/12/2006
Banco Santander S.A. ^{a, b}	Spain	30/04/2009	KBC Group N.V. ^{a, b}	Belgium	27/01/2004
Bancolombia, S.A. ^b	Colombia	11/12/2008	KfW IPEX-Bank GmbH ^a	Germany	03/03/2008
Bank Muscat S.A.O.G. ^{a, b}	Oman	18/08/2007	Lloyds Banking Group Plc ^{a, b}	United Kingdom	31/01/2008
Bank of America Corporation ^{a, b}	USA	28/07/2006	Manulife Financial ^b	Canada	11/05/2005
Bank of Montreal ^{a, b}	Canada	15/09/2005	Mauritius Commercial Bank Ltd. ^a	Mauritius	15/05/2012
Bank of Nova Scotia ^{a, b}	Canada	25/09/2006	Mizuho Bank, Ltd.	Japan	27/10/2003
Bank of Tokyo-Mitsubishi UFJ, Ltd.	Japan	22/12/2005	National Australia Bank Limited ^b	Australia	25/10/2007
Barclays Plc ^{a, b}	United Kingdom	04/06/2003	Natixis ^{a, b}	France	30/12/2010
BBVA, S.A. ^{a, b}	Spain	18/05/2004	Nedbank Ltd. ^{a, b}	South Africa	10/11/2005
BMCE Bank ^{a, b}	Morocco	10/05/2010	NIBC Bank N.V. ^a	Netherlands	09/11/2010
BNP Paribas ^{a, b}	France	24/10/2008	Nordea Bank AB ^{a, b}	Sweden	21/02/2007
CAIXA Econômica Federal	Brazil	18/09/2009	Rabobank Group ^a	Netherlands	04/06/2003
CaixaBank, ^a	Spain	19/03/2007	Royal Bank of Canada ^{a, b}	Canada	21/07/2003
CIBC ^{a, b}	Canada	03/12/2003	Royal Bank of Scotland ^{a, b}	United Kingdom	04/06/2003
CIBanco, S.A.	Mexico	07/03/20012	Skandinaviska Enskilda Banken AB ^{a, b}	Sweden	03/04/2007
CIFI ^a	USA	06/04/2007	Société Générale ^{a, b}	France	03/09/2007
Citigroup Inc. ^{a, b}	USA	04/06/2003	Standard Bank Group Ltd. ^{a, b}	South Africa	02/02/2009
Commonwealth Bank of Australia ^b	Australia	26/05/2014	Standard Chartered Plc ^{a, b}	United Kingdom	08/10/2003
CorpBanca ^b	Chile	29/07/2007	Sumitomo Mitsui Banking Corporation	Japan	03/09/2007
Crédit Agricole CIB ^a	France	04/06/2003	TD Bank Financial Group ^{a, b}	Canada	12/04/2007
Credit Suisse Group ^{a, b}	Switzerland	04/06/2003	UK Green Investment Bank Plc	United Kingdom	02/12/2013
DekaBank Deutsche Girozentrale ^a	Germany	01/03/2011	UniCredit SpA ^a	Italy	04/06/2003
DNB ^{a, b}	Norway	29/05/2008	Wells Fargo Bank ^{a, b}	USA	12/07/2005
DZ Bank AG ^a	Germany	01/01/2013	Westpac Banking Corporation ^b	Australia	04/06/2003
Ecobank Transnational Incorporated ^{a, b}	Togo	01/01/2012			

^a The data for these institutions was used for the analysis concerned with testing the equality of means

^b The data for these institutions was used for the event study methodology

APPENDIX B – TESTS FOR EQUALITY OF MEANS

Table A.1. Firm and Financial Market Characteristics and Tests for Equality of Means – Sample Controlled for Country of Origin, Total Assets > US\$100 billion and Project Finance

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Size ^b									
No. of Employees	N	28	27,634	17,173	115,360	273	30,478	3.94***	4.38***
	E	37	91,092	74,247	264,900	4,035	80,863		
Total Assets (US\$ billion)	N	28	480	302	2,220	150	477	3.40***	3.60***
	E	37	1,017	824	2,671	111	724		
Total Equity (US\$ billion)	N	27	24.7	17.1	79.9	4.7	21.1	3.37***	3.83***
	E	37	66.9	47.4	232.7	5.2	62.2		
Mkt Capitalization (US\$ billion)	N	14	27.3	19.6	79.9	0.1	24.6	2.50**	3.36***
	E	31	72.6	56.3	288.6	9.4	65.6		
Net Income (US\$ billion)	N	27	1.1	0.4	5.7	-1.9	1.9	1.64	1.88*
	E	37	3.5	3.0	22.2	-18.0	7.4		
Total Deposits (US\$ billion)	N	27	184	119	631	0	171	4.02***	4.38***
	E	35	492	414	1,419	29	368		
Net Customer Loans (US\$ billion)	N	28	205	156	798	0	166	4.01***	4.24***
	E	35	447	392	992	37	283		
Structure									
Tier 1 Ratio (%)	N	23	15.84	14.51	32.45	8.73	5.45	-2.32**	-2.03*
	E	33	13.43	12.93	19.19	10.39	2.07		
Risk-based Capital Ratio (%)	N	23	18.94	18.91	40.01	11.59	5.98	-2.49**	-2.18**
	E	33	16.07	15.15	20.75	11.76	2.38		
Total Equity/ Total Assets (%)	N	27	5.61	4.90	14.02	1.78	2.97	0.96	0.91
	E	37	6.22	5.90	11.22	2.61	2.12		
Loan Quality									
Problem Loans/ Net Customer Loans (%)	N	23	6.38	2.87	27.59	0.00	8.26	-0.92	-0.92
	E	33	6.18	3.91	21.63	0.38	5.89		
Problem Loans/ Assets (%)	N	24	3.67	1.25	18.16	0.00	5.33	-0.32	-0.30
	E	33	3.29	1.78	14.94	0.17	3.88		
Problem Loans/ Risk-weighted Assets (%)	N	20	9.86	3.16	45.96	0.03	14.50	-0.95	-0.85
	E	30	6.86	3.53	33.63	0.54	7.75		
Problem Loans Growth (%)	N	22	-4.17	-0.42	22.14	-46.45	18.23	1.04	1.04
	E	33	1.08	2.17	51.26	-38.08	18.51		
Loan Provision/ Avg. Risk-weighted Assets (%)	N	21	0.63	0.39	3.14	0.00	0.76	0.81	0.79
	E	31	0.79	0.59	2.69	0.01	0.67		
Loan Loss Provision/ Avg. Gross Customer Loans (%)	N	23	0.53	0.44	1.78	0.00	0.54	0.95	0.95
	E	31	0.67	0.53	1.99	0.03	0.56		
Loan Loss Reserves/ Assets (%)	N	24	1.26	0.81	4.33	0.00	1.44	0.73	0.76
	E	32	1.59	0.75	7.57	0.10	1.88		

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Table A.1. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Loan Loss Reserves/ Gross Loans (%)	N	23	2.20	1.58	8.24	0.00	2.28	1.03	1.06
	E	32	2.90	1.90	9.88	0.36	2.63		
Liquidity									
Net Customer Loans/ Assets (%)	N	28	51.39	53.86	72.74	0.00	19.27	-0.74	-0.71
	E	35	48.31	52.42	72.36	18.71	13.88		
Loans/ Deposits (%)	N	19	127.48	119.60	205.73	73.60	42.04	-2.42**	-2.18**
	E	30	104.11	111.90	154.11	56.39	25.68		
Liquid Assets/ Liabilities (%)	N	24	32.20	29.33	66.22	8.56	15.59	2.58**	2.56**
	E	34	42.61	39.91	75.49	18.29	14.77		
Profitability									
Return on Avg. Equity (ROAE, %)	N	27	2.41	3.11	17.25	-29.74	10.94	1.50	1.44
	E	37	6.02	6.48	19.66	-21.37	8.29		
Return on Avg. Assets (ROAA, %)	N	27	0.23	0.15	1.63	-0.68	0.55	0.77	0.77
	E	37	0.34	0.37	1.54	-1.55	0.57		
Return on Avg. Risk- weighted Assets (%)	N	21	0.65	0.41	3.00	-2.14	1.49	0.80	0.78
	E	33	0.97	1.07	2.71	-3.31	1.36		
Pre-impairment Op. Profit/ Avg. Assets (%)	N	27	0.76	0.55	3.45	-0.33	0.79	1.26	1.22
	E	34	0.98	0.99	2.73	0.05	0.58		
Cost-to-Income (%)	N	25	65.28	65.75	93.15	17.57	16.89	-0.55	-0.53
	E	34	63.22	61.68	95.97	42.94	11.75		
Net Interest Margin (%)	N	24	1.26	0.95	6.80	-0.07	1.45	1.05	0.95
	E	34	1.57	1.43	3.40	0.25	0.75		
Stock Market Performance (Over the period March 2014 – March 2015)									
Total Shareholder Return (%)	N	13	6.30	8.32	36.00	-60.36	23.99	0.66	0.55
	E	31	10.28	8.28	39.59	-23.54	15.12		
Beta (Industry Market Index)	N	13	1.03	1.03	1.79	0.18	0.52	-0.47	-0.40
	E	30	0.96	1.05	1.60	0.38	0.34		
Beta (Regional Market index)	N	13	1.20	1.22	1.97	0.08	0.54	0.08	0.06
	E	30	1.21	1.24	1.90	0.69	0.33		
Volatility (% St. Dev. of Stock Returns)	N	13	2.37	1.52	7.93	0.95	2.04	-2.30**	-1.53
	E	31	1.49	1.53	2.24	0.77	0.44		
Stock Market Performance (Over the period March 2012 – March 2015)									
Total Shareholder Return (%)	N	13	25.35	32.54	138.00	-96.30	76.75	1.84*	1.61
	E	31	63.27	56.89	201.04	-47.05	55.37		
Beta (Industry Market Index)	N	13	1.02	1.08	1.67	0.34	0.45	-0.06	-0.06
	E	30	1.01	1.09	1.62	0.37	0.37		
Beta (Regional Market index)	N	13	1.31	1.32	2.01	0.57	0.44	0.43	0.40
	E	30	1.36	1.35	2.01	0.74	0.37		
Volatility (% St. Dev. of Stock Returns)	N	13	3.47	1.86	14.14	0.83	3.92	-2.47**	-1.61
	E	31	1.71	1.78	2.71	0.72	0.59		

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Table A.1. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
<i>Credit Ratings</i> ^c									
S&P Long-term Credit Rating	N	18	7.56	6.50	13.00	2.00	3.07	-0.77	-0.73
	E	33	6.94	6.00	13.00	4.00	2.51		
Fitch Inc. Long-term Credit Rating	N	24	6.33	6.00	11.00	1.00	2.20	-0.59	-0.58
	E	33	6.00	6.00	11.00	3.00	2.05		

Note: E = EP adopters, N= EP Non-adopters. The list of banks included in this analysis can be seen in Appendix C. Nobs denote the number of banks included in the statistic. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively. All data are for the fiscal year 2013, except for the stock market data.

^a Assuming unequal variances

^b Natural logarithms of the size variables were used for the t-values to account for the severely non-normal data

^c In order to measure descriptive statistics for ordinal rating scales the data had to be transformed so that the best possible rating was defined as being equal to 1 and lower ratings were defined by respectively higher numbers. The full transformation listing is found in Appendix F.

Table A.2. Firm and Financial Market Characteristics and Tests for Equality of Means – Sample Controlled for Country of Origin and Total Assets > US\$5 billion

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Size ^b									
No. of Employees	N	514	4,402	1,224	149,717	0	12,379	13.13***	10.97***
	E	50	69,711	36,704	264,900	125	78,544		
Total Assets (US\$ billion)	N	559	61	14	2,326	5	185	13.69***	9.78***
	E	53	718	513	2,671	6	757		
Total Equity (US\$ billion)	N	555	3.8	1.2	143.5	-182.9	13.8	13.77***	11.27***
	E	53	47.6	21.2	232.7	-1.1	59.7		
Market Capitalization (US\$ billion)	N	185	5.4	2.1	79.9	0.0	10.9	10.98***	9.49***
	E	39	59.0	39.5	288.6	0.2	64.4		
Net Income (US\$ billion)	N	556	0.2	0.1	16.5	-10.5	1.1	11.24***	11.34***
	E	53	2.6	1.4	22.2	-18.0	6.3		
Total Deposits (US\$ billion)	N	552	25	7	883	0	70	12.13***	10.06***
	E	50	350	212	1,419	0	377		
Net Customer Loans (US\$ billion)	N	555	29	8	981	0	76	12.20***	9.76***
	E	51	313	221	992	3	308		
Structure									
Tier 1 Ratio (%)	N	456	15.55	13.48	110.03	5.83	9.18	-0.95	-1.89*
	E	47	14.27	13.14	25.84	9.07	3.59		
Risk-based Capital Ratio (%)	N	467	18.24	15.56	166.52	8.41	12.01	-0.79	-1.87*
	E	47	16.85	16.16	27.67	11.45	3.41		
Total Equity/ Total Assets (%)	N	554	8.50	7.08	86.52	-96.88	9.09	-0.55	-0.87
	E	53	7.80	6.95	31.74	-5.56	5.14		

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Table A.2. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Loan Quality									
Problem Loans/ Net Customer Loans (%)	N	453	4.82	2.42	98.80	0.00	8.23	0.57	0.84
	E	48	5.52	3.84	21.63	0.38	5.05		
Problem Loans/ Assets (%)	N	468	2.56	1.30	32.08	0.00	3.91	0.83	0.95
	E	48	3.04	1.98	14.94	0.17	3.31		
Problem Loans/ Risk-weighted Assets (%)	N	414	4.76	2.48	45.96	0.00	6.97	1.08	1.13
	E	44	5.95	3.53	33.63	0.54	6.61		
Problem Loans Growth (%)	N	429	0.67	-5.20	757.81	-	51.44	0.56	0.72
	E	48	4.96	-0.58	214.29	-48.36	37.59		
Loan Provision/ Avg. Risk-weighted Assets (%)	N	426	0.49	0.24	20.38	-5.69	1.32	1.28	2.10**
	E	45	0.75	0.59	2.69	-0.67	0.70		
Loan Loss Provision/ Avg. Gross Customer Loans (%)	N	367	0.62	0.27	8.68	-0.67	1.00	1.33	1.2
	E	45	0.83	0.55	6.73	-0.99	1.15		
Loan Loss Reserves/ Assets (%)	N	387	1.48	0.82	29.49	0.00	2.45	1.15	1.33
	E	46	1.92	1.36	9.58	0.10	2.04		
Loan Loss Reserves/ Gross Loans (%)	N	432	3.39	1.86	33.99	0.00	4.10	-0.2	-0.28
	E	46	3.27	2.39	10.49	0.36	2.69		
Liquidity									
Net Customer Loans/ Assets (%)	N	555	58.00	63.83	98.66	0.00	23.34	-1.57	-2.16**
	E	51	52.75	54.09	86.94	18.71	15.80		
Loans/ Deposits (%)	N	313	99.95	96.42	271.19	0.00	42.20	-0.34	-0.48
	E	41	97.65	94.77	154.11	52.41	26.31		
Liquid Assets/ Liabilities (%)	N	369	30.81	25.67	271.98	0.01	24.96	2.45**	3.48****
	E	47	39.95	37.76	75.49	11.31	15.62		
Profitability									
Return on Avg. Equity (ROAE, %)	N	547	5.29	5.53	151.74	-	15.09	1.12	1.83*
	E	52	7.66	7.59	21.44	-21.37	8.11		
Return on Avg. Assets (ROAA, %)	N	553	0.42	0.33	113.51	-	7.00	0.15	0.45
	E	53	0.57	0.53	2.27	-3.20	0.93		
Return on Avg. Risk-weighted Assets (%)	N	429	0.88	0.86	11.63	-26.25	2.24	1.73*	1.93*
	E	47	1.47	1.30	10.95	-3.31	1.95		
Pre-impairment Op. Profit/ Avg. Assets (%)	N	549	1.06	0.92	113.65	-	7.03	0.29	0.9
	E	50	1.35	1.15	3.21	0.05	0.85		
Cost-to-Income (%)	N	543	64.38	64.55	275.95	0.02	25.03	-1.73*	-2.51**
	E	50	58.13	58.81	95.97	21.25	15.85		
Net Interest Margin (%)	N	545	1.87	1.77	15.88	-42.28	3.18	0.18	0.39
	E	50	1.96	1.75	5.57	0.25	1.16		
Stock Market Performance (Over the period March 2014 – March 2015)									
Total Shareholder Return (%)	N	181	3.64	3.76	56.44	-96.79	19.88	1.49	1.55
	E	39	8.83	5.58	62.15	-31.33	18.73		
Beta (Industry Market Index)	N	157	0.91	0.98	1.93	-0.23	0.40	0.73	0.81
	E	30	0.96	1.05	1.60	0.38	0.34		

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Table A.2. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Beta (Regional Market index)	N	157	1.00	1.07	2.16	-0.28	0.40	2.64***	3.03***
	E	30	1.21	1.24	1.90	0.69	0.33		
Stock Market Performance (Over the period March 2012 – March 2015)									
Total Shareholder Return (%)	N	176	52.39	47.28	364.21	-98.84	58.41	0.66	0.69
	E	39	59.11	47.89	201.04	-47.05	54.28		
Beta (Industry Market Index)	N	155	0.80	0.87	1.83	-0.07	0.37	2.78***	2.78***
	E	30	1.01	1.09	1.62	0.37	0.37		
Beta (Regional Market index)	N	155	1.00	1.06	2.25	-0.10	0.41	4.51***	4.87***
	E	30	1.36	1.35	2.01	0.74	0.37		
Credit Ratings ^c									
S&P Long-term Credit Rating	N	194	6.66	6.00	17.00	1.00	3.80	1.06	1.21
	E	42	7.33	7.00	15.00	1.00	3.10		
Fitch Inc. Long-term Credit Rating	N	204	7.15	6.50	16.00	1.00	3.24	-0.35	0.36
	E	40	6.95	6.00	16.00	3.00	3.16		

Note: E = EP adopters, N= EP Non-adopters. Nobs denote the number of banks included in the statistic. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively. All data are for the fiscal year 2013, except for the stock market data.

^a Assuming unequal variances

^b Natural logarithms of the size variables were used for the t-values to account for the severely non-normal data

^c In order to measure descriptive statistics for ordinal rating scales the data had to be transformed so that the best possible rating was defined as being equal to 1 and lower ratings were defined by respectively higher numbers. The full transformation listing is found in Appendix F..

Table A.3. Firm and Financial Market Characteristics and Tests for Equality of Means – Sample Controlled for Total Assets > US\$5 billion

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
<i>Size ^b</i>									
No. of Employees	N	694	5,299	1,388	306,123	0	16,716	12.35***	10.60***
	E	50	69,711	36,704	264,900	125	78,544		
Total Assets (US\$ billion)	N	800	56	14	2,326	5	165	14.55***	9.93***
	E	53	718	513	2,671	6	757		
Total Equity (US\$ billion)	N	796	5.0	1.3	964.6	-182.9	36.2	13.21***	11.09***
	E	53	47.6	21.2	232.7	-1.1	59.7		
Market Capitalization (US\$ billion)	N	291	5.6	2.3	79.9	0.0	10.1	10.44***	9.61***
	E	39	59.0	39.5	288.6	0.2	64.4		
Net Income (US\$ billion)	N	797	0.2	0.1	16.5	-10.5	1.1	10.63***	10.68***
	E	53	2.6	1.4	22.2	-18.0	6.3		
Total Deposits (US\$ billion)	N	792	23	7	883	0	62	12.11***	10.12***
	E	50	350	212	1,419	0	377		
Net Customer Loans (US\$ billion)	N	795	27	8	981	0	70	12.82***	9.82***
	E	51	313	221	992	3	308		

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Table A.3. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Structure									
Tier 1 Ratio (%)	N	659	15.51	13.54	137.22	5.44	9.72	-0.87	-1.91*
	E	47	14.27	13.14	25.84	9.07	3.59		
Risk-based Capital Ratio (%)	N	678	18.19	15.85	166.52	3.41	11.67	-0.78	-2.00**
	E	47	16.85	16.16	27.67	11.45	3.41		
Total Equity/ Total Assets (%)	N	795	9.50	8.03	95.02	-96.88	9.78	-1.26	-2.17**
	E	53	7.80	6.95	31.74	-5.56	5.14		
Loan Quality									
Problem Loans/ Net Customer Loans (%)	N	635	6.37	2.76	98.80	0.00	10.31	-0.57	-1.02
	E	48	5.52	3.84	21.63	0.38	5.05		
Problem Loans/ Assets (%)	N	651	3.53	1.59	45.05	0.00	5.67	-0.59	-0.92
	E	48	3.04	1.98	14.94	0.17	3.31		
Problem Loans/ Risk-weighted Assets (%)	N	585	6.17	2.86	70.21	0.00	9.36	-0.15	-0.2
	E	44	5.95	3.53	33.63	0.54	6.61		
Problem Loans Growth (%)	N	604	6.03	-2.91	757.81	-100.00	61.64	-0.12	-0.18
	E	48	4.96	-0.58	214.29	-48.36	37.59		
Loan Provision/ Avg. Risk-weighted Assets (%)	N	628	0.86	0.35	20.38	-5.69	1.89	-0.37	-0.82
	E	45	0.75	0.59	2.69	-0.67	0.70		
Loan Loss Provision/ Avg. Gross Customer Loans (%)	N	571	0.93	0.39	9.59	-2.79	1.40	-0.44	-0.52
	E	45	0.83	0.55	6.73	-0.99	1.15		
Loan Loss Reserves/ Assets (%)	N	604	2.43	1.14	53.90	0.00	4.18	-0.82	-1.47
	E	46	1.92	1.36	9.58	0.10	2.04		
Loan Loss Reserves/ Gross Loans (%)	N	589	3.83	2.00	58.46	0.00	5.09	-0.74	-1.26
	E	46	3.27	2.39	10.49	0.36	2.69		
Liquidity									
Net Customer Loans/ Assets (%)	N	795	58.04	62.68	98.66	0.00	21.73	-1.71*	-2.26**
	E	51	52.75	54.09	86.94	18.71	15.80		
Loans/ Deposits (%)	N	508	101.02	98.14	271.19	0.00	40.84	-0.52	-0.75
	E	41	97.65	94.77	154.11	52.41	26.31		
Liquid Assets/ Liabilities (%)	N	577	32.77	27.51	894.96	0.01	42.22	1.16	2.49**
	E	47	39.95	37.76	75.49	11.31	15.62		
Profitability									
Return on Avg. Equity (ROAE, %)	N	788	5.13	6.16	151.74	-300.22	21.16	0.86	1.87*
	E	52	7.66	7.59	21.44	-21.37	8.11		
Return on Avg. Assets (ROAA, %)	N	794	0.53	0.48	113.51	-116.01	5.94	0.05	0.16
	E	53	0.57	0.53	2.27	-3.20	0.93		
Return on Avg. Risk-weighted Assets (%)	N	631	0.98	0.99	11.63	-26.25	2.52	1.31	1.64
	E	47	1.47	1.30	10.95	-3.31	1.95		
Pre-impairment Op. Profit/ Avg. Assets (%)	N	788	1.36	1.08	113.65	-116.01	5.98	-0.01	-0.03
	E	50	1.35	1.15	3.21	0.05	0.85		
Cost-to-Income (%)	N	779	60.17	61.09	275.95	0.02	24.97	-0.57	-0.84
	E	50	58.13	58.81	95.97	21.25	15.85		

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Table A.3. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Net Interest Margin (%)	N	783	2.14	1.94	17.83	-42.28	2.98	-0.43	-0.93
	E	50	1.96	1.75	5.57	0.25	1.16		
Stock Market Performance (Over the period March 2014 – March 2015)									
Total Shareholder Return (%)	N	284	1.66	2.04	86.79	-96.79	23.45	1.83*	2.17**
	E	39	8.83	5.58	62.15	-31.33	18.73		
Beta (Industry Market Index)	N	203	0.81	0.91	1.93	-0.23	0.45	1.76*	2.13**
	E	30	0.96	1.05	1.60	0.38	0.34		
Beta (Regional Market index)	N	203	0.93	1.02	2.16	-0.28	0.45	3.31***	4.187***
	E	30	1.21	1.24	1.90	0.69	0.33		
Stock Market Performance (Over the period March 2012 – March 2015)									
Total Shareholder Return (%)	N	269	46.84	41.19	364.21	-99.10	64.66	1.13	1.29
	E	39	59.11	47.89	201.04	-47.05	54.28		
Beta (Industry Market Index)	N	200	0.72	0.79	1.83	-0.07	0.39	3.72***	3.88***
	E	30	1.01	1.09	1.62	0.37	0.37		
Beta (Regional Market index)	N	200	0.93	1.02	2.25	-0.10	0.45	5.06***	5.83***
	E	30	1.36	1.35	2.01	0.74	0.37		
Credit Ratings ^c									
S&P Long-term Credit Rating	N	271	7.58	7.00	18.00	1.00	4.27	-0.36	-0.45
	E	42	7.33	7.00	15.00	1.00	3.10		
Fitch Inc. Long-term Credit Rating	N	307	7.84	7.00	22.00	1.00	3.73	-1.44	-1.64
	E	40	6.95	6.00	16.00	3.00	3.16		

Note: E = EP adopters, N= EP Non-adopters. Nobs denote the number of banks included in the statistic. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively. All data are for the fiscal year 2013, except for the stock market data.

^a Assuming unequal variances

^b Natural logarithms of the size variables were used for the t-values to account for the severely non-normal data

^c In order to measure descriptive statistics for ordinal rating scales the data had to be transformed so that the best possible rating was defined as being equal to 1 and lower ratings were defined by respectively higher numbers. The full transformation listing is found in Appendix F.

Table A.4. Firm and Financial Market Characteristics and Tests for Equality of Means (Initial Sample)

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Size ^b									
No. of Employees	N	3,689	1,229	175	306,123	0	7,527	21.40***	18.31***
	E	50	69,711	36,704	264,900	125	78,544		
Total Assets (US\$ billion)	N	4,110	12	1	2,326	0	76	21.43***	18.12***
	E	54	705	491	2,671	0	756		
Total Equity (US\$ billion)	N	4,102	1.1	0.1	964.6	-182.9	16.0	21.02***	20.38***
	E	54	46.7	20.6	232.7	-1.1	59.5		

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Table A.4. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Market Capitalization (US\$ billion)	N	1,412	1.3	0.1	79.9	0.0	5.1	16.18***	21.31***
	E	39	59.0	39.5	288.6	0.2	64.4		
Net Income (US\$ billion)	N	4,058	0.05	0.004	16.53	-10.55	0.48	18.08***	19.38***
	E	54	2.51	1.270	22.22	-18.04	6.25		
Total Deposits (US\$ billion)	N	4,095	5	1	883	0	29	20.35***	19.09***
	E	51	343	181	1,419	0	377		
Net Customer Loans (US\$ billion)	N	4,102	6	1	981	0	33	19.06***	18.25***
	E	52	307	212	992	0	308		
Structure									
Tier 1 Ratio (%)	N	3,262	16.53	14.00	320.47	-3.19	13.85	-0.93	-2.67***
	E	48	14.68	13.14	33.75	9.07	4.53		
Risk-based Capital Ratio (%)	N	3,427	19.06	16.29	320.47	-4.18	14.71	-0.88	-2.89***
	E	48	17.19	16.23	33.28	11.45	4.12		
Total Equity/ Total Assets (%)	N	4,101	11.02	8.75	99.87	-96.88	10.98	-1.85*	-3.29***
	E	54	8.25	6.99	32.06	-5.56	6.07		
Loan Quality									
Problem Loans/ Net Customer Loans (%)	N	3,427	6.71	3.05	98.80	0.00	10.98	-0.83	-1.75*
	E	49	5.40	3.81	21.63	0.00	5.06		
Problem Loans/ Assets (%)	N	3,458	3.59	1.77	110.94	0.00	5.93	-0.71	-1.26
	E	49	2.98	1.97	14.94	0.00	3.30		
Problem Loans/ Risk-weighted Assets (%)	N	3,010	5.83	3.03	149.61	0.00	8.98	-0.01	-0.01
	E	45	5.82	3.48	33.63	0.00	6.60		
Problem Loans Growth (%)	N	3,029	7.13	-4.60	992.88	-100.00	75.31	-0.2	-0.39
	E	48	4.96	-0.58	214.29	-48.36	37.59		
Loan Provision/ Avg. Risk-weighted Assets (%)	N	3,074	0.69	0.26	51.64	-30.31	2.18	0.08	0.22
	E	46	0.72	0.58	2.69	-0.77	0.73		
Loan Loss Provision/ Avg. Gross Customer Loans (%)	N	2,656	0.82	0.33	9.99	-6.06	1.35	-0.13	-0.15
	E	46	0.79	0.54	6.73	-0.99	1.17		
Loan Loss Reserves/ Assets (%)	N	2,832	2.53	1.12	452.28	0.00	9.80	-0.43	-1.77*
	E	47	1.91	1.38	9.58	0.10	2.02		
Loan Loss Reserves/ Gross Loans (%)	N	2,786	3.97	1.84	94.25	0.00	6.62	-0.76	-1.79*
	E	47	3.24	2.27	10.49	0.36	2.67		
Liquidity									
Net Customer Loans/ Assets (%)	N	4,102	59.54	62.70	99.00	0.00	20.33	-2.21**	-2.78***
	E	52	53.27	54.11	86.94	18.71	16.09		
Loans/ Deposits (%)	N	2,588	93.32	88.55	299.15	0.00	38.25	0.72	1.04
	E	41	97.65	94.77	154.11	52.41	26.31		
Liquid Assets/ Liabilities (%)	N	2,681	35.14	29.07	894.96	0.00	40.84	0.77	1.91*
	E	48	39.69	37.72	75.49	11.31	15.56		
Profitability									
Return on Avg. Equity (ROAE, %)	N	4,023	4.63	4.91	550.66	-767.50	23.04	0.94	2.58**
	E	53	7.62	7.06	21.44	-21.37	8.04		

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Table A.4. – continued

Variable		Nobs	Mean	Median	Max.	Min.	St. Dev.	t-test for equality of means	
								t-value	Welch t-value ^a
Return on Avg. Assets (ROAA, %)	N	4,041	0.50	0.39	113.51	-116.01	3.61	0.17	0.6
	E	54	0.59	0.55	2.27	-3.20	0.93		
Return on Avg. Risk-weighted Assets (%)	N	3,094	0.98	0.72	515.22	-100.99	9.82	0.34	1.49
	E	48	1.47	1.32	10.95	-3.31	1.93		
Pre-impairment Op. Profit/ Avg. Assets (%)	N	4,021	1.35	1.07	113.65	-116.01	3.74	0.04	0.17
	E	51	1.38	1.17	3.21	0.05	0.86		
Cost-to-Income (%)	N	4,002	68.31	67.58	383.52	0.00	24.03	-3.13***	-4.67***
	E	51	57.74	58.36	95.97	21.25	15.94		
Net Interest Margin (%)	N	4,001	2.95	2.55	91.80	-42.28	3.06	-2.26**	-5.70***
	E	51	1.98	1.76	5.57	0.25	1.16		
Stock Market Performance (Over the period March 2014 – March 2015)									
Total Shareholder Return (%)	N	1,370	9.03	6.75	528.17	-97.46	31.49	-0.04	-0.06
	E	39	8.83	5.58	62.15	-31.33	18.73		
Beta (Industry Market Index)	N	1,185	0.28	0.10	1.93	-1.29	0.44	8.51***	10.63***
	E	30	0.96	1.05	1.60	0.38	0.34		
Beta (Regional Market index)	N	1,184	0.32	0.13	2.16	-1.51	0.48	10.15***	14.52***
	E	30	1.21	1.24	1.90	0.69	0.33		
Stock Market Performance (Over the period March 2012 – March 2015)									
Total Shareholder Return (%)	N	1,303	69.74	47.50	8,712.50	-99.82	274.93	-0.24	-0.92
	E	39	59.11	47.89	201.04	-47.05	54.28		
Beta (Industry Market Index)	N	1,153	0.26	0.09	1.83	-2.35	0.40	10.19***	10.92***
	E	30	1.01	1.09	1.62	0.37	0.37		
Beta (Regional Market index)	N	1,152	0.33	0.13	2.25	-2.94	0.49	11.50***	14.99***
	E	30	1.36	1.35	2.01	0.74	0.37		
Credit Ratings ^c									
S&P Long-term Credit Rating	N	792	5.66	4.00	18.00	1.00	3.39	3.13***	3.40***
	E	42	7.33	7.00	15.00	1.00	3.10		
Fitch Inc. Long-term Credit Rating	N	406	7.96	7.00	22.00	1.00	3.83	-1.62	-1.89*
	E	40	6.95	6.00	16.00	3.00	3.16		

Note: E = EP adopters, N= EP Non-adopters. Nobs denote the number of banks included in the statistic. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively. All data are for the fiscal year 2013, except for the stock market data.

^a Assuming unequal variances

^b Natural logarithms of the size variables were used for the t-values to account for the severely non-normal data

^c In order to measure descriptive statistics for ordinal rating scales the data had to be transformed so that the best possible rating was defined as being equal to 1 and lower ratings were defined by respectively higher numbers. The full transformation listing is found in Appendix F.

APPENDIX C – LIST OF BANKS INCLUDED IN THE FINAL SAMPLE

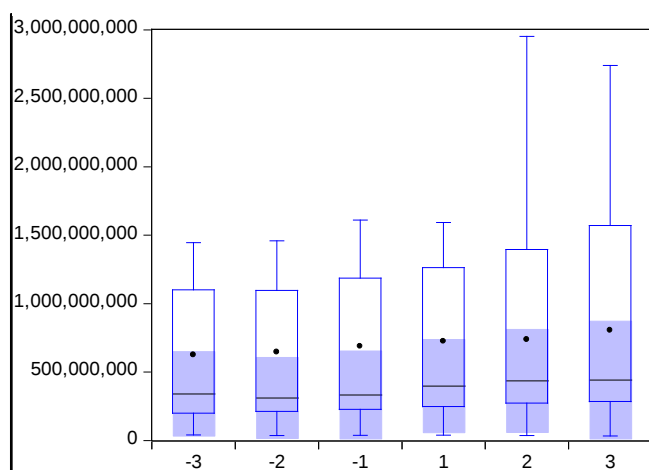
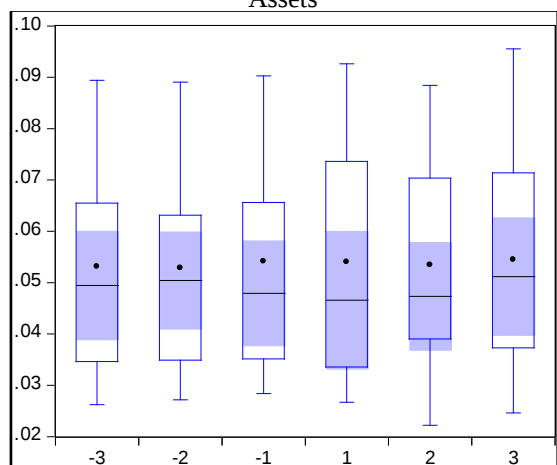
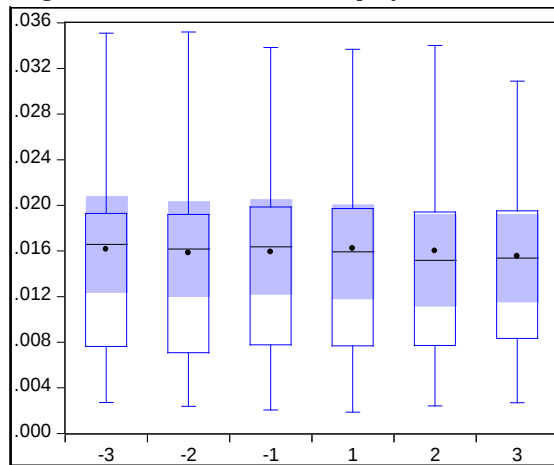
Sample Controlled for Country of Origin, Total Assets > US\$100 billion and Project Finance

Financial Institution	Country	Financial Institution	Country
ABN AMRO Group NV	Netherlands	HSH Nordbank AG	Germany
Banca Monte dei Paschi di Siena SpA	Italy	Hypo Real Estate Holding AG	Germany
Banco Bilbao Vizcaya Argentaria, SA	Spain	ING Groep N.V.	Netherlands
Banco de Sabadell, SA	Spain	Intesa Sanpaolo SpA	Italy
Banco Espírito Santo SA	Portugal	JPMorgan Chase & Co.	USA
Banco Popolare Società Cooperativa	Italy	KBC Group NV	Belgium
Banco Popular Español SA	Spain	La Banque Postale	France
Banco Santander SA	Spain	Landesbank Baden-Württemberg	Germany
Bank of America Corporation	USA	Lloyds Banking Group Plc	United Kingdom
Bank of Montreal	Canada	Morgan Stanley & Co. International Plc	United Kingdom
Bank of Nova Scotia	Canada	National Bank of Canada	Canada
Bankia, SA	Spain	Natixis	France
Barclays Plc	United Kingdom	Norddeutsche Landesbank	Germany
Bayerische Landesbank	Germany	Nordea Bank AB	Sweden
BNP Paribas SA	France	NV Bank Nederlandse Gemeenten	Netherlands
Caixa Geral de Depósitos SA	Portugal	Rabobank Group	Netherlands
CaixaBank, SA	Spain	Royal Bank of Canada	Canada
Canadian Imperial Bank of Commerce	Canada	Royal Bank of Scotland Group Plc	United Kingdom
Capital One Financial Corporation	USA	Skandinaviska Enskilda Banken AB	Sweden
Cassa di Risparmio di Padova e Rovigo	Italy	Société Générale SA	France
Citigroup Inc.	USA	Landesbank Hessen-Thüringen	Germany
Commerzbank AG	Germany	Standard Bank Group Ltd.	South Africa
Crédit Agricole CIB	France	Standard Chartered Plc	United Kingdom
Crédit Mutuel Group	France	SunTrust Banks, Inc.	USA
Credit Suisse Group AG	Switzerland	Svenska Handelsbanken AB	Sweden
DekaBank Deutsche Girozentrale	Germany	Swedbank AB	Sweden
Deutsche Bank AG	Germany	Toronto-Dominion Bank	Canada
DZ Bank AG	Germany	U.S. Bancorp	USA
Dexia SA	Belgium	UBS Group AG	Switzerland
DNB ASA	Norway	UniCredit SpA	Italy
Goldman Sachs International	United Kingdom	Unione di Banche Italiane SCpA	Italy
Groupe BPCE	France	Wells Fargo & Company	USA
HSBC Holdings Plc	United Kingdom		

APPENDIX D – BOX PLOTS

List of Included Institutions in the Box Plots Analysis

Banco de Sabadell, SA	DNB ASA
Banco Popular Español SA	JPMorgan Chase & Co.
Banco Santander SA	Lloyds Banking Group Plc
Bank of America Corporation	Manulife Financial Corporation
Bank of Montreal	Natixis
Bank of Nova Scotia	NIBC Bank NV
BNP Paribas SA	Royal Bank of Canada
Canadian Imperial Bank of Commerce	Skandinaviska Enskilda Banken AB
Citigroup Inc.	Société Générale SA
DekaBank Deutsche Girozentrale	Toronto-Dominion Bank
Deutsche Zentral-Genossenschaftsbank AG	Wells Fargo & Company

Figure A.1. Box Plots: Total Assets (US\$000)**Figure A.2. Box Plots: Net Interest Income / Avg. Assets****Figure A.3. Box Plots: Total Equity / Total Assets**

APPENDIX E – ACTUAL, FITTED, RESIDUAL GRAPHS

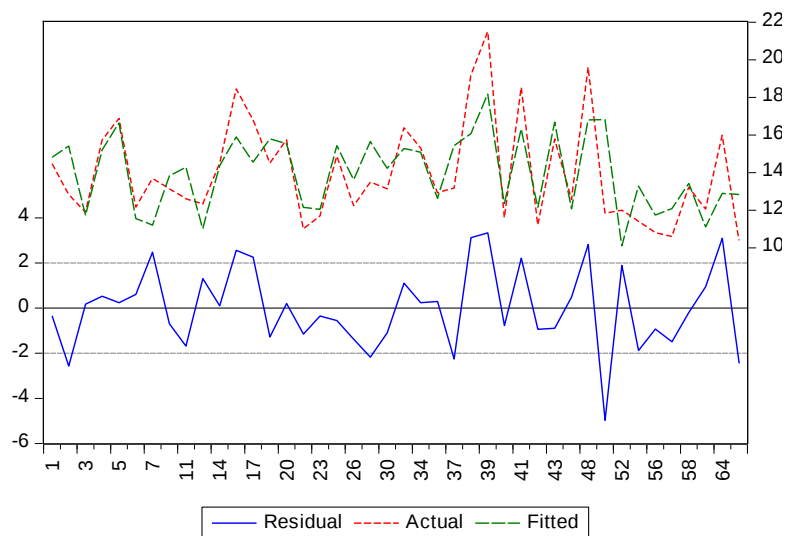
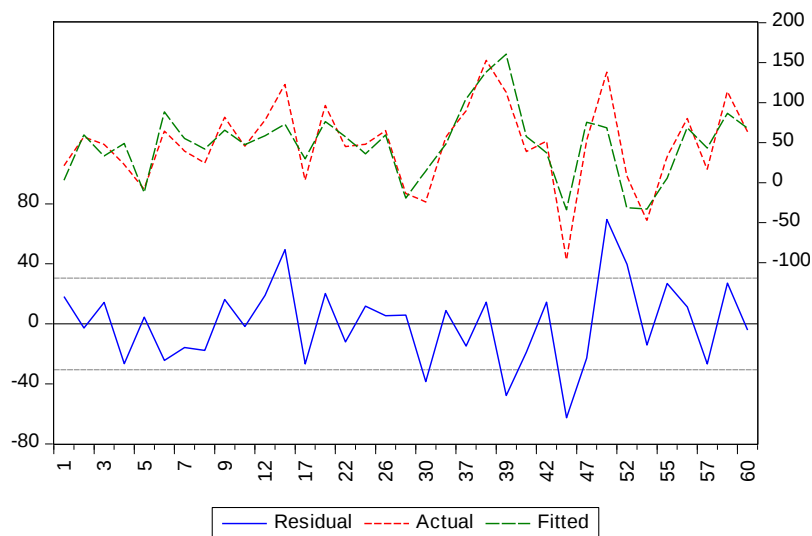
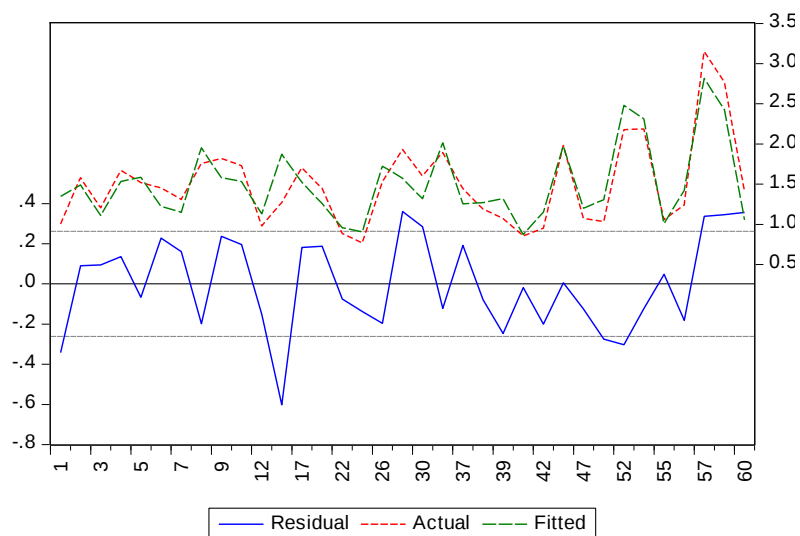
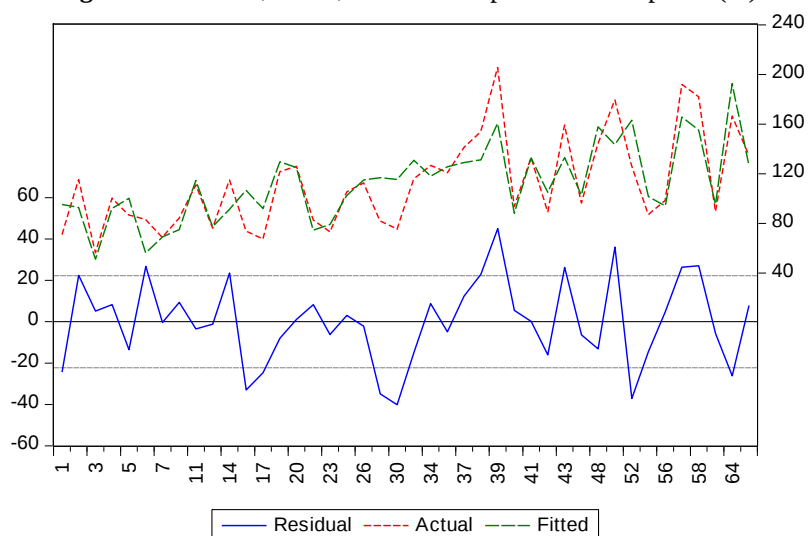
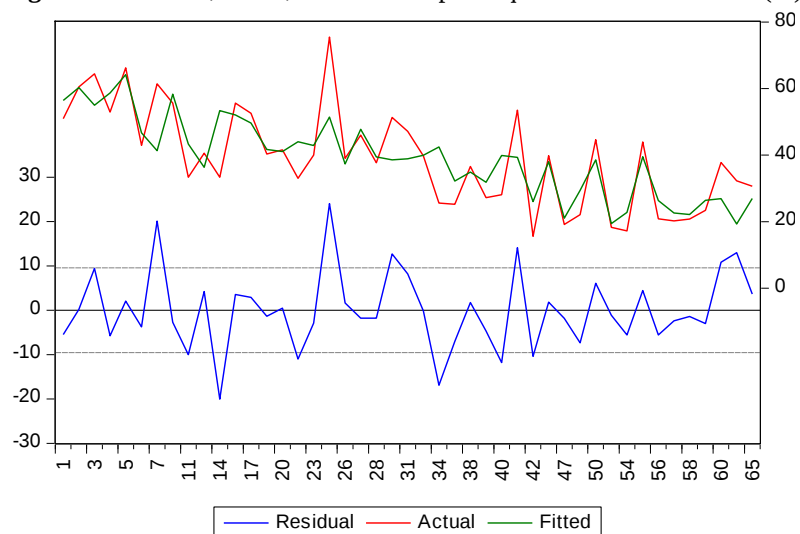
Figure A.4. Actual, Fitted, Residual Graph: Tier 1 Ratio (%)**Figure A.5.** Actual, Fitted, Residual Graph: Total Shareholder Return (%)

Figure A.6. Actual, Fitted, Residual Graph: Volatility (%)**Figure A.7.** Actual, Fitted, Residual Graph: Loans / Deposits (%)**Figure A.8.** Actual, Fitted, Residual Graph: Liquid Assets / Liabilities (%)

APPENDIX F – TRANSFORMATION OF CREDIT RATINGS DATA

Long-term Issuer Credit Ratings			
Fitch Rating	Corresponding number	S&P Rating	Corresponding number
AAA	1	AAA	1
AA+	2	AA+	2
AA	3	AA	3
AA-	4	AA-	4
A+	5	A+	5
A	6	A	6
A-	7	A-	7
BBB+	8	BBB+	8
BBB	9	BBB	9
BBB-	10	BBB-	10
BB+	11	BB+	11
BB	12	BB	12
BB-	13	BB-	13
B+	14	B+	14
B	15	B	15
B-	16	B-	16
CCC	17	CCC+	17
CC	18	CCC	18
C	19	CCC-	19
RD	20	CC	20
D	21	R	21
		SD	22
		D	23

APPENDIX G – LIST OF LOCAL STOCK MARKET INDICES USED IN THE EVENT STUDIES

Country	Corresponding Index
Argentina	Argentina Burcap Index
Australia	S&P/ASX 200 Index
Bahrain	Bahrain All Share Index
Belgium	BEL20 Index
Brazil	IBrX Index
Canada	S&P/TSX Composite Index
Chile	IPSA Index
China	CSI 300 Index
Colombia	IGBC General Index
France	CAC 40 Index
India	BSE India Sensex 30 Index
Italy	FTSE MIB Index
Mexico	INMEX Index
Morocco	MASI Index
Netherlands	AEX Index
Nigeria & Togo	NSE - All Share Index
Norway	OBX Index
Oman	Oman MSM 30 Index
Portugal	PSI-20 Index
South Africa	FTSE/JSE Africa All Share Index
Spain	IBEX 35 Index
Sweden	OMX Stockholm 30 Index
Switzerland	Swiss Market Index
UK	FTSE 100 Index
USA	S&P 500 Index

APPENDIX H – EVENT STUDIES

Table A.5. Single Day Event Study Results on the Effect of Adopting the EP

Day	Model 1 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt}$			
	Mean AR	Median AR	Brown and Warner (1985)	Mackinlay (1997)
			t-statistic	
<i>Nobs</i> = 52				
-5	-0.09%	0.04%	-0.394	-0.422
-4	-0.13%	-0.15%	-0.585	-0.626
-3	0.14%	0.01%	0.634	0.679
-2	-0.06%	0.01%	-0.245	-0.263
-1	-0.34%	-0.23%	-1.496	-1.603
0	0.31%	0.30%	1.361	1.459
1	0.55%	0.20%	2.437**	2.612**
2	-0.26%	-0.04%	-1.131	-1.212
3	0.29%	0.21%	1.282	1.374
4	-0.08%	-0.06%	-0.336	-0.360
5	0.29%	0.19%	1.281	1.373

Note: AR = Abnormal Return. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.6. Single Day Event Study Results on the Effect of Adopting the EP

Day	Model 2 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \gamma_j R_{MSCIt} + \varepsilon_{jt}$			
	Mean AR	Median AR	Brown and Warner (1985)	Mackinlay (1997)
			t-statistic	
<i>Nobs = 52</i>				
-5	-0.08%	0.08%	-0.370	-0.398
-4	-0.09%	0.01%	-0.407	-0.438
-3	0.10%	-0.01%	0.448	0.483
-2	-0.13%	-0.02%	-0.566	-0.610
-1	-0.36%	-0.22%	-1.565	-1.684*
0	0.27%	0.33%	1.204	1.296
1	0.50%	0.16%	2.205**	2.373**
2	-0.22%	0.03%	-0.982	-1.057
3	0.27%	0.20%	1.184	1.275
4	-0.05%	-0.15%	-0.215	-0.232
5	0.26%	0.31%	1.157	1.245

Note: AR = Abnormal Return. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.7. Single Day Event Study Results on the Effect of Adopting the EP

Day	Model 3 - $E(R_{it}) = \alpha_j + \beta_j(R_{Mt} - R_{ft}) + \gamma_j(R_{MSCIt} - R_{ft}) + \delta_j R_{ft} + \varepsilon_{jt}$			
	Mean AR	Median AR	Brown and Warner (1985)	Mackinlay (1997)
			<i>t</i> -statistic	
<i>Nobs</i> = 52				
-5	-0.09%	0.15%	-0.418	-0.453
-4	-0.10%	0.07%	-0.458	-0.496
-3	0.13%	0.11%	0.571	0.619
-2	-0.10%	0.11%	-0.426	-0.462
-1	-0.33%	-0.13%	-1.436	-1.555
0	0.35%	0.24%	1.522	1.649
1	0.54%	0.14%	2.399**	2.598**
2	-0.24%	0.04%	-1.047	-1.134
3	0.25%	0.23%	1.101	1.193
4	-0.08%	-0.07%	-0.367	-0.398
5	0.24%	0.34%	1.037	1.123

Note: AR = Abnormal Return. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.8. Event Study Results on the Effect of Adopting the EP

Event Window	Model 1 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt}$.					
	Mean CAR	Median CAR	Brown and Warner (1985)	Mackinlay (1997)	Patell (1976)	Kolari and Pynnonen (2011)
			t-statistic			
<i>Nobs = 52</i>						
[-5,5]	0.64%	0.42%	0.847	0.907	1.314	1.619
[-3,3]	0.65%	0.54%	1.074	1.151	1.298	1.537
[-1,1]	0.52%	0.33%	1.330	1.425	1.138	1.472
[-2,0]	-0.09%	-0.14%	-0.219	-0.235	0.160	0.108
[-1,0]	-0.03%	-0.04%	-0.095	-0.102	0.322	0.117
[0,0]	0.31%	0.30%	1.361	1.459	1.576	1.736*
[0,1]	0.86%	0.51%	2.686***	2.878***	2.186**	2.624***
[0,2]	0.61%	0.36%	1.540	1.650	1.335	1.887*
[0,3]	0.90%	0.48%	1.975*	2.116**	2.066**	2.452**
[0,5]	1.11%	0.96%	1.998**	2.141**	2.325**	2.922***

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.9. Event Study Results on the Effect of Adopting the EP

Event Window	Model 2 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \gamma_j R_{MSCIt} + \varepsilon_{jt}$					
	Mean CAR	Median CAR	Brown and Warner	Mackinlay	Patell	Kolari and Pynnonen
			(1985)	(1997)	(1976)	(2011)
t-statistic						
<i>Nobs = 52</i>						
[-5,5]	0.48%	0.19%	0.631	0.679	1.090	1.319
[-3,3]	0.44%	0.44%	0.729	0.785	0.973	1.237
[-1,1]	0.42%	0.26%	1.065	1.146	0.903	1.326
[-2,0]	-0.21%	-0.27%	-0.535	-0.576	-0.113	-0.200
[-1,0]	-0.08%	-0.09%	-0.255	-0.274	0.205	-0.021
[0,0]	0.27%	0.33%	1.204	1.296	1.452	1.601
[0,1]	0.77%	0.52%	2.411**	2.595**	1.927*	2.448**
[0,2]	0.55%	0.30%	1.401	1.509	1.161	1.720*
[0,3]	0.82%	0.35%	1.806*	1.944*	1.873*	2.222**
[0,5]	1.03%	0.93%	1.859*	2.001**	2.204**	2.766***

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.10. Event Study Results on the Effect of Adopting the EP – Early and Late Adopters

Event Window	Model 1 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt}$					
	Mean CAR	Median CAR	Brown and Warner	Mackinlay	Patell	Kolari and Pynnonen
			(1985)	(1997)	(1976)	(2011)
<i>t</i> -statistic						
Early Adopters, Nobs = 19						
[-5,5]	0.88%	-0.18%	1.009	1.022	1.021	1.042
[-3,3]	0.69%	0.91%	0.997	1.010	1.021	1.505
[-1,1]	-0.04%	-0.38%	-0.087	-0.088	-0.284	-0.534
[-2,0]	-0.22%	-0.14%	-0.484	-0.490	-0.302	-0.656
[-1,0]	-0.23%	-0.23%	-0.621	-0.628	-0.688	-1.630
[0,0]	0.24%	0.23%	0.911	0.922	0.601	0.780
[0,1]	0.43%	0.30%	1.158	1.172	0.765	1.167
[0,2]	0.65%	0.39%	1.435	1.453	1.218	1.515
[0,3]	1.28%	0.77%	2.433**	2.463**	2.248**	2.452**
[0,5]	1.35%	0.96%	2.102**	2.128**	1.853*	2.126**
Late Adopters, Nobs = 33						
[-5,5]	0.50%	0.45%	0.497	0.505	0.875	1.348
[-3,3]	0.62%	0.50%	0.771	0.784	0.854	0.898
[-1,1]	0.85%	0.52%	1.610	1.635	1.644	2.279**
[-2,0]	-0.01%	-0.14%	-0.018	-0.019	0.429	0.509
[-1,0]	0.08%	0.10%	0.196	0.199	0.926	1.121
[0,0]	0.35%	0.41%	1.152	1.171	1.522	1.686*
[0,1]	1.12%	0.80%	2.590**	2.632***	2.163**	2.598**
[0,2]	0.58%	0.33%	1.103	1.121	0.752	1.408
[0,3]	0.68%	0.32%	1.120	1.138	0.888	1.524
[0,5]	0.98%	0.75%	1.312	1.333	1.512	2.303**

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.11. Event Study Results on the Effect of Adopting the EP – Early and Late Adopters

Event Window	Model 2 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \gamma_j R_{MSCIt} + \varepsilon_{jt}$					
	Mean CAR	Median CAR	Brown and Warner	Mackinlay	Patell	Kolari and Pynnonen
			(1985)	(1997)	(1976)	(2011)
<i>t</i> -statistic						
Early Adopters, Nobs = 19						
[-5,5]	0.85%	0.00%	0.976	0.991	1.044	1.034
[-3,3]	0.68%	0.86%	0.983	0.998	1.078	1.558
[-1,1]	-0.04%	-0.38%	-0.080	-0.081	-0.198	-0.247
[-2,0]	-0.20%	-0.19%	-0.447	-0.454	-0.171	-0.332
[-1,0]	-0.22%	-0.30%	-0.596	-0.605	-0.572	-1.251
[0,0]	0.24%	0.22%	0.917	0.931	0.663	0.904
[0,1]	0.42%	0.34%	1.147	1.165	0.798	1.374
[0,2]	0.65%	0.40%	1.434	1.456	1.272	1.801*
[0,3]	1.26%	0.74%	2.401**	2.438**	2.265**	2.506**
[0,5]	1.33%	1.00%	2.070**	2.102**	1.865*	2.048**
Late Adopters, Nobs = 33						
[-5,5]	0.26%	0.39%	0.260	0.265	0.575	1.002
[-3,3]	0.30%	-0.05%	0.373	0.379	0.404	0.423
[-1,1]	0.68%	0.49%	1.301	1.321	1.284	1.890*
[-2,0]	-0.22%	-0.52%	-0.411	-0.417	-0.013	-0.022
[-1,0]	0.00%	-0.04%	-0.004	-0.005	0.692	0.790
[0,0]	0.29%	0.38%	0.968	0.984	1.319	1.425
[0,1]	0.98%	0.70%	2.282**	2.319**	1.814*	2.265**
[0,2]	0.49%	0.29%	0.944	0.959	0.492	1.056
[0,3]	0.57%	0.26%	0.940	0.956	0.632	1.257
[0,5]	0.87%	0.76%	1.169	1.187	1.352	2.156**

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.12. Event Study Results on the Effect of Adopting the EP – Country Classification

Event Window	Model 1 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt}$					
	Mean CAR	Median CAR	Brown and Warner (1985)	Mackinlay (1997)	Patell (1976)	Kolari and Pynnonen (2011)
			t-statistic			
Developed Markets, Nobs = 34						
[-5,5]	0.50%	0.11%	0.746	0.741	1.111	1.328
[-3,3]	0.69%	0.70%	1.297	1.288	1.142	1.396
[-1,1]	0.43%	0.37%	1.232	1.223	0.969	1.385
[-2,0]	0.43%	0.00%	1.241	1.232	1.075	0.899
[-1,0]	0.30%	0.12%	1.051	1.044	1.090	1.463
[0,0]	0.37%	0.28%	1.819*	1.806*	1.470	1.591
[0,1]	0.50%	0.19%	1.743*	1.731*	1.136	1.283
[0,2]	0.24%	0.19%	0.684	0.679	0.641	1.090
[0,3]	0.41%	0.20%	1.017	1.010	1.001	1.373
[0,5]	0.49%	0.66%	0.986	0.979	1.151	1.769*
Other, Nobs = 18						
[-5,5]	0.90%	0.46%	0.539	0.569	0.706	0.985
[-3,3]	0.56%	0.36%	0.419	0.443	0.636	0.866
[-1,1]	0.70%	0.08%	0.801	0.846	0.602	0.701
[-2,0]	-1.07%	-0.58%	-1.220	-1.289	-1.206	-0.938
[-1,0]	-0.65%	-0.69%	-0.916	-0.967	-0.951	-1.713*
[0,0]	0.20%	0.34%	0.400	0.422	0.657	0.947
[0,1]	1.56%	1.37%	2.179**	2.301**	2.153**	2.810***
[0,2]	1.30%	1.41%	1.487	1.570	1.388	1.807*
[0,3]	1.82%	1.83%	1.802*	1.903*	2.136**	2.464**
[0,5]	2.30%	3.07%	1.855*	1.959*	2.370**	2.716***

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.13. Event Study Results on the Effect of Adopting the EP – Country Classification

Event Window	Model 2 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \gamma_j R_{MSCIt} + \varepsilon_{jt}$					
	Mean CAR	Median CAR	Brown and Warner	Mackinlay	Patell	Kolari and Pynnonen
			(1985)	(1997)	(1976)	(2011)
<i>t</i> -statistic						
Developed Markets, Nobs = 34						
[-5,5]	0.39%	0.22%	0.576	0.589	1.001	1.220
[-3,3]	0.57%	0.61%	1.038	1.062	0.989	1.266
[-1,1]	0.33%	0.26%	0.916	0.937	0.815	1.221
[-2,0]	0.35%	0.14%	0.971	0.993	0.971	0.944
[-1,0]	0.26%	0.10%	0.887	0.907	1.056	1.394
[0,0]	0.33%	0.27%	1.616	1.653	1.408	1.561
[0,1]	0.40%	0.19%	1.378	1.409	0.938	1.164
[0,2]	0.23%	0.22%	0.641	0.656	0.600	1.141
[0,3]	0.39%	0.18%	0.945	0.967	0.945	1.339
[0,5]	0.49%	0.77%	0.974	0.996	1.162	1.553
Other, Nobs = 18						
[-5,5]	0.63%	0.17%	0.380	0.399	0.476	0.509
[-3,3]	0.20%	-0.41%	0.147	0.155	0.294	0.470
[-1,1]	0.59%	0.22%	0.683	0.718	0.414	0.589
[-2,0]	-1.26%	-0.74%	-1.459	-1.533	-1.527	-1.427
[-1,0]	-0.73%	-0.70%	-1.026	-1.078	-1.103	-1.808*
[0,0]	0.16%	0.34%	0.321	0.337	0.532	0.708
[0,1]	1.48%	1.13%	2.090**	2.196**	1.987**	2.644***
[0,2]	1.16%	1.21%	1.339	1.407	1.149	1.447
[0,3]	1.63%	1.23%	1.633	1.716*	1.885*	2.137**
[0,5]	2.06%	2.55%	1.680*	1.766*	2.149**	2.644***

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

Table A.14. Event Study Results on the Effect of Adopting the EP – Regional Classification

Model 1 - $E(R_{jt}) = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt}$					
Event Window	Mean CAR	Brown and Warner (1985)	Mackinlay (1997)	Patell (1976)	Kolari and Pynnonen (2011)
		t-statistic			
<i>Africa, Nobs = 7</i>					
[-5,5]	-1.82%	-0.581	-0.610	-0.588	-0.883
[-3,3]	-1.91%	-0.765	-0.803	-0.672	-0.862
[-1,1]	0.73%	0.449	0.471	0.081	-0.044
[-2,0]	-3.37%	-2.060**	-2.163**	-1.960*	-1.569
[-1,0]	-1.71%	-1.283	-1.347	-1.376	-2.556**
[0,0]	-0.20%	-0.215	-0.226	0.158	0.142
[0,1]	2.25%	1.680*	1.764*	1.587	2.005**
[0,2]	2.12%	1.294	1.359	1.317	1.626
[0,3]	2.14%	1.130	1.187	1.381	1.349
[0,5]	1.38%	0.596	0.626	0.724	1.167
<i>Asia, Nobs = 2</i>					
[-5,5]	5.02%	1.144	1.158	1.011	0.619
[-3,3]	6.23%	1.780*	1.802*	1.676*	1.085
[-1,1]	2.72%	1.190	1.204	1.197	2.454**
[-2,0]	-0.01%	-0.004	-0.004	-0.035	-0.022
[-1,0]	0.87%	0.468	0.473	0.481	2.318**
[0,0]	1.12%	0.845	0.855	0.930	1.017
[0,1]	2.97%	1.587	1.606	1.643	2.159**
[0,2]	4.30%	1.877*	1.900*	1.876*	2.454**
[0,3]	5.89%	2.227**	2.254**	2.231**	2.454**
[0,5]	6.85%	2.116**	2.141**	2.058**	2.000**
<i>Europe, Nobs = 20</i>					
[-5,5]	0.62%	0.598	0.594	1.055	1.659
[-3,3]	1.15%	1.390	1.380	1.370	1.631
[-1,1]	0.63%	1.170	1.162	0.893	1.887*
[-2,0]	0.51%	0.935	0.929	0.788	0.628
[-1,0]	0.28%	0.634	0.630	0.470	0.881
[0,0]	0.42%	1.343	1.334	0.970	1.280
[0,1]	0.77%	1.748*	1.737*	1.310	2.039**
[0,2]	0.33%	0.605	0.601	0.602	1.290
[0,3]	0.60%	0.953	0.946	0.989	1.456
[0,5]	0.71%	0.927	0.920	1.191	1.895*
<i>Latin America, Nobs = 7</i>					
[-5,5]	2.30%	0.977	0.972	0.959	2.033**
[-3,3]	1.21%	0.646	0.643	0.561	1.876*
[-1,1]	0.38%	0.310	0.308	0.402	0.417
[-2,0]	0.72%	0.586	0.583	0.237	0.349
[-1,0]	-0.13%	-0.129	-0.128	-0.208	-0.800
[0,0]	0.46%	0.653	0.649	0.578	1.173
[0,1]	0.97%	0.970	0.965	1.108	1.862*
[0,2]	0.17%	0.137	0.136	0.129	0.767
[0,3]	0.52%	0.368	0.367	0.509	0.994
[0,5]	2.02%	1.160	1.155	1.508	1.638
<i>Middle East, Nobs = 2</i>					
[-5,5]	1.44%	0.494	0.513	0.414	0.605
[-3,3]	1.27%	0.547	0.568	0.439	0.497
[-1,1]	-0.31%	-0.206	-0.214	-0.294	-0.497
[-2,0]	-0.33%	-0.214	-0.222	-0.359	-0.346
[-1,0]	-0.31%	-0.253	-0.263	-0.370	-0.454
[0,0]	-0.21%	-0.234	-0.243	-0.333	-0.497
[0,1]	-0.21%	-0.165	-0.172	-0.226	-0.606
[0,2]	-0.58%	-0.379	-0.394	-0.417	-2.176**
[0,3]	1.20%	0.686	0.712	0.642	1.452
[0,5]	1.94%	0.904	0.939	0.874	1.737*

(continued on next page)

Table A.14. – continued

Model 1 - $E(R_{it}) = \alpha_j + \beta_j R_{Mt} + \varepsilon_{it}$.					
Event Window	Mean CAR	Brown and Warner	Mackinlay (1997)	Patell (1976)	Kolari and Pynnonen
		(1985)			(2011)
t-statistic					
North America, Nobs = 10					
[-5,5]	-0.07%	-0.090	-0.094	-0.334	-0.675
[-3,3]	-0.41%	-0.622	-0.650	-0.660	-0.475
[-1,1]	-0.03%	-0.067	-0.070	-0.202	-0.190
[-5,0]	0.00%	-0.005	-0.006	-0.293	-0.351
[-3,0]	-0.33%	-0.656	-0.686	-0.806	-0.987
[-2,0]	0.04%	0.082	0.086	-0.074	-0.161
[-1,0]	0.24%	0.675	0.705	0.563	0.959
[0,0]	0.15%	0.597	0.624	0.401	0.361
[0,1]	-0.12%	-0.334	-0.350	-0.527	-0.959
[0,2]	-0.05%	-0.122	-0.127	-0.195	-0.123
[0,3]	0.07%	0.132	0.138	0.133	0.285
[0,5]	0.08%	0.127	0.133	0.004	-0.086
Oceania, Nobs = 4					
[-5,5]	1.33%	0.996	1.062	1.408	1.046
[-3,3]	1.16%	1.091	1.163	1.310	0.912
[-1,1]	0.56%	0.804	0.858	1.147	0.628
[-5,0]	1.58%	1.600	1.707*	1.826*	1.480
[-3,0]	1.46%	1.817*	1.938*	1.978*	1.436
[-2,0]	1.06%	1.525	1.627	1.488	1.122
[-1,0]	0.55%	0.963	1.028	1.237	0.762
[0,0]	0.64%	1.595	1.702*	1.484	0.762
[0,1]	0.65%	1.149	1.226	1.217	0.598
[0,2]	0.52%	0.750	0.800	0.829	0.538
[0,3]	0.34%	0.423	0.451	0.497	0.403
[0,5]	0.39%	0.399	0.426	0.686	0.404

Note: CAR = Cumulative Abnormal Returns. Nobs denote the number of institutions included in the statistics. Statistical significance at the 1,5 and 10% level is denoted by ***, **, * respectively.

ABSTRACT IN GERMAN / ZUSAMMENFASSUNG IN DEUTSCH

Die Äquator Prinzipien (engl. Equator Principles) stellen einen Gesetzesrahmen auf freiwilliger Basis im Bereich des Risikomanagements dar, welcher von vielen Banken weltweit, jedoch überwiegend in entwickelten Märkten, unterzeichnet wird. Der Anwendungsbereich der Prinzipien beschränkt sich auf den Sektor der Projektfinanzierung. Diese Arbeit untersucht den finanziellen Aspekt dieser Prinzipien, d.h. ob eine Verbindung zwischen der finanziellen Leistung der Banken und deren Tätigkeiten im Rahmen der sozialen Unternehmensverantwortung besteht. Anhand eines t-Test auf Gleichheit der Mittelwerte wurde nachgewiesen, dass Geldinstitute welche die Äquator Prinzipien anwenden, nicht nur dazu neigen größer zu sein, sondern auch in Bezug auf Liquidität und die Aktienrendite (Total Shareholder Return) deutlich besser abschneiden. Ferner wird das finanzstatistische Verfahren einer Ereignisstudie angewendet, um die Reaktionen der Aktieninhaber auf die Einführung der Äquator Prinzipien zu untersuchen. Die Ergebnisse zeigen, dass die Reaktion der Aktienmärkte im Durchschnitt sowohl positiv als auch signifikant ist. Darüber hinaus wurden Ereignisstudien für verschiedene Untergruppen durchgeführt, in denen Unternehmen je nach Zeitpunkt der Einführung der Prinzipien, Entwicklung des Landes und Größe unterteilt wurden. Die abnormalen Renditen sind positiv und statistisch signifikant für fast alle untersuchten Untergruppen und tatsächlich zeigen nur die Resultate der Untergruppe mit den größten finanziellen Institutionen (> US\$1 Trillion) keine signifikanten abnormalen Renditen auf. Daraus lässt sich schließen, dass die Ergebnisse jene herrschende Lehrmeinung bekräftigt, welche darlegt, dass sowohl positive Wechselwirkungen zwischen den finanziellen und sozialen Leistungen vorhanden sind, als auch, dass die Hauptvorteile einer Umsetzung der Prinzipien in direktem Zusammenhang mit Reputationsmanagement stehen.

CURRICULUM VITAE

Emir Bašić was born in Mostar, Bosnia and Herzegovina, on 11th June 1990.

His secondary education was completed in the Druga gimnazija Sarajevo from 2004 to 2008. He continued to study International Business Administration at the University of Vienna. After having obtained his Bachelor's Degree he commenced a Master's degree in International Business Administration at the University of Vienna, with a special focus on Corporate Finance and International Management.

Parallel to this he enrolled for a Master's Degree in Advanced International Studies (17th year of MAIS) at the Diplomatic Academy of Vienna, where he has had the opportunity to focus in greater detail on History, International Law and Political Science.