Honesty in Regional Cooperative Banks

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Abstract

Corporate scandals are not a phenomenon that is unique to the banking industry. However, the examples of misconduct of individual bank employees or even of entire banks that popped up in recent years have promoted the interest in business culture and business ethics in the banking industry. Honesty is one important cultural and ethical dimension. Based on their results of a survey in a large, international bank *Cohn* et al. (2014a), for example, conclude that the banking industry's business culture favours dishonest behaviour of employees. The present paper applies the design of *Cohn* et al. (2014a) to a small sample of regional cooperative banks in Germany in order to verify their outcome. The results of *Cohn* et al. (2014a) cannot be confirmed. There is no evidence of more dishonesty among employees of the banks in the sample relative to a control group. Business culture in the banking industry differs between banks or group of banks, a fact that needs to be considered e. g. by legislators.

Keywords: banking, business culture, corporate culture, business ethics

JEL Classification: C12, M14, G21, G41

> „Was wir bewundern und nicht besitzen,
> ist die angelsächsische Kultur im Geldgeschäft."
> (*Alfred Herrhausen*, 1930–1989)[1]

I. Introduction

On Monday, 27 November 1989, Deutsche Bank AG announced the takeover of Morgan Grenfell, a UK merchant bank (*Deutsche Bank* 2014). With this transaction Deutsche Bank gained a stronger foothold in the international in-

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[1] "What we admire and do not have is the Anglo-Saxon culture in financial transactions" (as cited in *Büschgen* 1995, p. 851; own translation).

vestment banking business which is dominated by Anglo-Saxon institutions. The introductory quote, made by the speaker of Deutsche Bank's management board in the context of the acquisition (*Büschgen* 1995, p. 851), reflects the relevance of business culture as a driving factor in, and as a goal of, that particular transaction.

This almost 30-year old example underlines that culture in the banking industry has not just become relevant since the financial crisis of 2007–2008. Large corporate scandals are not a phenomenon of just the banking industry, but the misconducts of many banks or particular employees of these banks that have become public after 2007–2008 significantly raised the public and academic interest in culture and business ethics in the banking industry.

Recent academic literature pursues a wide range of questions in the very general area of business culture and ethics in the banking industry. Some authors, for example, discuss whether a code of conduct, i.e. a common understanding of ethical and moral principles, already exists for the banking industry and which principles such a code should contain. This discussion is important because legislators around the globe have taken immediate action after the financial crisis. Such action should have been based on such a common understanding as it intends to correct deficiencies and to promote a specific conduct deemed to be adequate.

In the opinion of *Mass* (2017, p. 258), for example, the banking industry is lacking a specific code of conduct. Consequently, the author proposes a methodology for developing a series of distinct codes for each business area (*Mass* 2017, p. 275).

Based on personal interviews with capital market professionals, *Kummert* (2013, p. 344) also finds no indication for an institutionalized concept of ethics and morality in the industry as such. However, the interviewees individually act in all conscience and disclose a conflict between the goal of moral integrity and economic targets. Thus, the general criticism that capital market professionals lack an understanding of ethics and morality does not seem to be justified as *Kummert* (2013, p. 344) concludes.

With respect to the existence of an institutional code of conduct, *Graafland/ van de Ven* (2011) point out the relevance of business principles as communicated by banks. They analyse the principles of eight banks and identify three main, common virtues (*Graafland/van de Ven* 2011, pp. 610–613): honesty & transparency, due care for customer interests, and accuracy & professional expertise.

The virtue of honesty as one dimension of business culture in the banking industry is the focus of *Cohn* et al. (2014a). More specifically, the authors try to find empirical evidence for deficiencies in honesty norms and, thus, in the business culture of the banking industry. Based on an experimental design and a

questionnaire distributed to employees of a "large, international bank" (*Cohn* et al. 2014a, p. 86), they can confirm the existence of different honesty norms among respondents. The authors suggest that the industry's prevalent business culture supports dishonesty and, thus, contributed to the reputational loss experienced by the industry (*Cohn* et al. 2014a, p. 88).

While the study and its results have received widespread attention, its approach and the interpretation of results have also been criticised (e.g. *Stöckl* 2015; *Vranka/Houdek* 2015). One particular aspect of the interpretation by *Cohn* et al. (2014a) is the point of origin for this paper: The authors transfer their findings obtained for a large bank with an international focus to the banking industry as a whole, a generalisation that fails to take into account that the business culture might differ between individual banks or bank groups. Differences in business models, organization, ownership and/or regional scope of activity, for example, can either result in cultural differences or are themselves the result of a different cultural approach.

This might especially be relevant for the German banking industry which is characterized by three different sectors or pillars of banks. The three sectors mainly differ in the typical legal form of organisation and in the business objectives pursued by the individual banks within these sectors.

Thus, this paper adopts the design of *Cohn* et al. (2014a,b) in order to verify if their results for a large, international bank apply to the banking industry overall, or whether there are indeed cultural differences within the banking industry that lead to different honesty norms. The study uses the example of four cooperative banks. Cooperative banks form one of the three sectors in the German banking industry. This sector is not only interesting for its particular history and cultural values but also because it contains a large number of relatively small banks that operate regionally. The contrast to a large, international bank is ideal.

The remainder of the paper is organized as follows: Chapter II. contains a brief introduction to the German banking industry and the sector of cooperative banks, in particular. Chapter III. summarizes the approach of *Cohn* et al. (2014a,b), provides a brief discussion of its reception and outlines, where this paper deviates from that approach. However, these deviations are not significant. The data is described and analysed in chapter IV. Chapter V. concludes.

II. The German Banking Industry

1. Overview

As has already been briefly mentioned, the German banking industry consists of three different sectors: (private) commercial banks, savings banks and cooperative banks.[2]

The sector of commercial banks includes Germany's largest banks such as Deutsche Bank AG or Commerzbank AG but also relatively smaller banks such as Bankhaus Lampe KG or Bank Schilling & Co AG as well as branches of foreign banks. Although this sector is rather heterogeneous in its composition, a common characteristic is that the vast majority of its banks operates under a private legal form such as a corporation (Aktiengesellschaft) or a partnership (Personengesellschaft). They typically operate for profit and are owner-focussed. At the end of 2017, this sector was composed of 263 banks with total assets of € 3,129,618m (*Deutsche Bundesbank* 2018). This yields an average of assets of € 11,899.7m per bank with a large dispersion, of course.

Savings banks are mostly institutions governed under public law. The statutory capital is typically provided by local municipalities, cities or counties which, however, are not responsible for the liabilities of a given savings bank. Savings banks are governed by federal state law, which means that details such as the function of these banks differ between federal states. In Hesse (Hessen), for example, the function of a savings bank is to provide banking services under the restriction of serving common welfare and to promote local economic, regional political, social and cultural interests (Article 2(1) SpkG-HE). In their operations savings banks significantly rely on superordinate institutions, the Landesbanken and Dekabank, in order to realize economics of scale and scope. For 2017, *Deutsche Bundesbank* (2018) reports 391 savings banks, seven Landesbanken and Dekabank with total assets of € 2,060,808m (average: € 5,164.9m).

As of the end of 2017, the third sector consisted of 917 credit cooperatives plus its superordinate institution, DZ Bank AG, with total assets of € 1,142,106m (*Deutsche Bundesbank* 2018, *DZ Bank* 2018). Except for DZ Bank, which provides key services to individual credit cooperatives, the banks operate in the legal form of a cooperative which is governed by the German Cooperatives Act (Genossenschaftsgesetz, GenG). According to Article 1(1) GenG a cooperative promotes the economic, social or cultural interests of its owners through a joint business operation. The owners are called members, the number of members must not be not be limited, and – irrespective of the size of the capital contribu-

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[2] This paper adopts the English terminology used by Deutsche Bundesbank in its banking statistics.

tion – each member is entitled to one vote in the cooperative's equivalent of an annual general meeting (Articles 1(1), 43(3) GenG).

Through its articles of association, the individual cooperative bank usually opens its business to non-members, but the regional focus is traditionally limited to its historic business territory. Although consolidation among cooperative banks is ongoing, the sector is still the largest sector in terms of the number of institutions. The average bank is considerably smaller than in the other two sectors with average total assets of €1,244.1m (2017).

2. Relevant Characteristics of Cooperative Banks

The large, international bank studied by *Cohn* et al. (2014a) would belong to the sector of private commercial banks. In contrast, the bank sample used in this study comes from the sector of cooperative banks. From the preceding overview it should be apparent that these two banking sectors are likely to differ in terms of business culture.

For the cooperative sector's particular business culture three characteristics may be of special importance:

1. The business model focuses on members who are also customers. Although a cooperative bank has a high number of non-member customers, a large overlap between the group of owners and the group of customers is a distinctive feature of this sector. The interests between owners and customers should differ to a lower degree than for banks in the other sectors.

2. Cooperative banks do not engage in investment banking activities. At least the smaller banks studied in this paper refrain from market speculation and concentrate on accepting deposits and providing loans while investing surplus funds in capital market instruments. Thus, the banks and their employees should be less exposed to "systemic shortcomings inherent to the Anglo-Saxon model of capitalism" (*Graafland/van de Ven* 2011, p. 616).

3. Because of the smaller size of the average bank, the regional focus of a cooperative bank should be narrower and, thus, more pronounced. Especially in more rural areas employees, owners and customers will live closer to each other and have more social interactions outside the bank, which could support the enforcement of honesty norms.

These characteristics have contributed to the fact that the sector of cooperative banks emerged relatively unscathed from the financial crisis in contrast to the other two sectors, i.e. commercial banks and savings banks. This exceptional position has been repeatedly used by cooperative banks in their external communication (e.g. *Böhnke* 2010, *BVR* 2013, *BVR* 2016). In addition, the sector of cooperative bank communicates a range of values embedded in the particular

form of organisation including being people-focused, offering honest and transparent advice, providing mutual support and adopting local responsibility (*BVR* 2019). Thus, this paper also contributes to the question if employees in cooperative banks honour these values and act in accordance with them.

III. Methodology

1. The Original Experiment

In the original study employees of the "large, international bank" were asked to complete an online survey (*Cohn* et al. 2014a, p. 86). The structure of the survey is visualised in figure 1.[3]
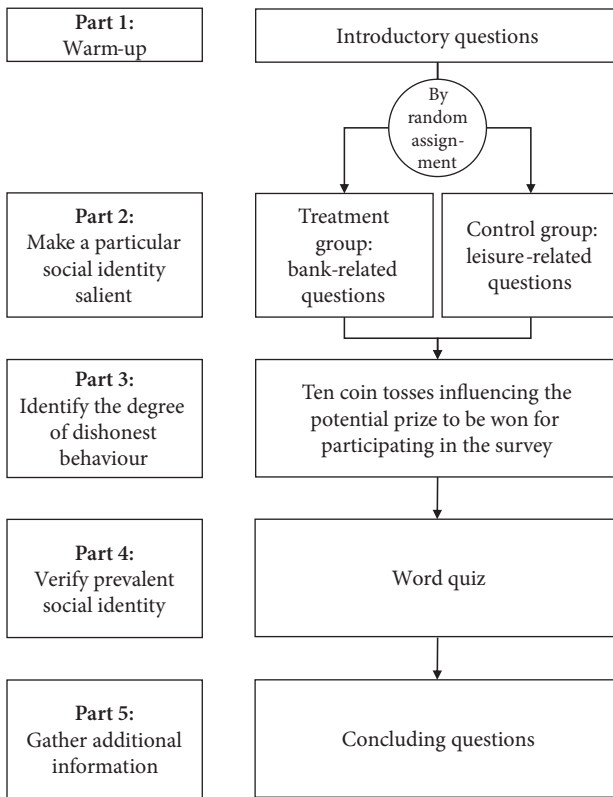
The study uses an experimental design. Participants in the survey are randomly assigned either to a treatment group or a control group. This assignment has an impact on the actual questions shown in part 2 of the survey after a few warm-up questions that represent part 1. Participants in the treatment group ("treatments") are exposed to a series of questions related to their professional context as a bank employee, while members of the control group ("controls") receive questions related to leisure activities. The idea of part 2 of the questionnaire is to make a specific social identity or social category of respondents more salient, e.g. the social identity as a banking employee in the case of the treatment group. This process is called identity priming.

In general, individuals are supposed to have multiple social identities or are affiliated with multiple social categories. Furthermore, social identities are related to specific social norms and a corresponding behaviour; environmental cues can make a given identity more salient, i.e. they can prime a specific identity, with the result, that the individual's behaviour will shift towards the respective norms (*Benjamin* et al. 2010, pp. 1913–1914).

The group of questions in part 2 represents such an environmental cue. If it is successful in priming one or the other social identity, then respondents will act in accordance with the relevant norms.[4] If the business culture in a given bank, a given banking sector or the banking industry overall, for example, enforces (relaxes) honesty norms, the respondents in the treatment group should behave more honestly (dishonestly) than the respondents in the control group after completing that particular group of questions.

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[3] The structure is a simplification, focusing on the elements necessary for this paper. The original study contained additional questions related to a separate project, for example, as discussed in *Cohn* et al. (2014b).

[4] See *Cohn* et al. (2014a, p. 86) for a slightly more detailed explanation and the theoretical background.

Part 1: Warm-up	Introductory questions

By random assign-ment

Part 2: Make a particular social identity salient	Treatment group: bank-related questions	Control group: leisure-related questions

Part 3: Identify the degree of dishonest behaviour	Ten coin tosses influencing the potential prize to be won for participating in the survey

Part 4: Verify prevalent social identity	Word quiz

Part 5: Gather additional information	Concluding questions

Source: Own illustration based on *Cohn* et al. 2014b

Figure 1: Simplified Structure of the Survey Used in Cohn et al. (2014a)

This is tested in part 3 of the survey where respondents are repeatedly asked to toss a coin and to report the outcome of either "heads" or "tails". By reporting the winning outcome respondents can win an amount equivalent to about US$ 20.[5] The actual winning outcome, either "heads" or "tail", varies between individual tosses and is communicated to respondents before they have to report the actual result. Ten tosses are conducted, and prizes summed up, so that respondents could win an amount between US$ 0 and US$ 200.

Prizes were awarded in the form of a gift card of a "well-known department store" (*Cohn* et al. 2014b, p. 2). Because of budget constraints actual winners

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[5] The exact amount is not reported in *Cohn* et al. (2014a,b) in order to protect the bank's identity. Prizes were denominated in the respective local currency and were slightly higher (*Cohn* et al. 2014b, p. 2).

were determined by a random draw after the end of the study (*Cohn* et al. 2014b, pp. 2–3). In order to enforce the competitiveness of the coin tossing task, respondents were informed that they would only have a chance of winning, if their prize was equal or higher than that of a randomly selected participant from a pilot study (*Cohn* et al. 2014a, p. 86).

The particular setting of the coin tossing part of the survey – respondents remain anonymous, are not observed while tossing the coins and reporting the result, and are aware of the beneficial outcome before reporting – incentivises a dishonest behaviour (*Cohn* et al. 2014a, p. 86; *Cohn* et al. 2014b, pp. 2–3). The crucial question is, if treatments and controls show a significantly different level of dishonesty.

To verify if the questions preceding the coin tossing part were successful in making a particular social identity more salient and if that social identity was still prevalent throughout the coin tosses, the coin tossing part is followed by a word quiz (part 4). The word quiz consists of six word fragments which respondents are asked to complete to form meaningful words. Out of the six words four could be completed to form either bank-related or non-bank-related words (*Cohn* et al. 2014b, p. 4). If respondents are acting under the social identity of a bank employee, they should show a higher rate of bank-related completions.

Part 5 concludes the survey and gathers some information on work-related attitudes as well as some personal information.

2. Reception of the Original Study

As already briefly mentioned in the introduction, the methodology and the interpretation of findings by *Cohn* et al. (2014a) have received some criticism. One line of criticism was already addressed well before that particular study and refers to the method of identity priming in general: *Kahneman* (2012) stresses how simple it actually is to undermine priming effects due to insufficiencies in the experimental design or situation. Consequently, he questions the robustness of results and calls for a structured replication of respective studies.

Vranka/Houdeck (2015) provide some examples for the intricacies of priming effects in *Cohn* et al. (2014a). They argue that the study design may have not only been successful in priming the banking identity but may have primed other concepts, such as the concept of money, as well (*Vranka/Houdeck* 2015, p. 2). If that is the case, then the banking identity is not necessarily the actual source of dishonest behaviour.

Stöckl (2015) illustrates a potential problem in the experimental design, namely the additional hurdle embedded in the prize draw because respondents were only able to win if their prize was at least equal to that of a randomly drawn

subject in the pilot study. This element may place respondents in a conflict between acting honestly and optimising risky earnings as a function of expected payoff and payoff risk (*Stöckl* 2015, pp. 65–66). Thus, they may not act dishonestly but behave in line with a core competency required in the banking industry (*Stöckl* 2015, p. 66).

A second line of criticism refers to the interpretation, i. e. the linkage between the observed behaviour and culture. Even if the dishonest behaviour is due to the banking identity, the culture in the banking industry is not necessarily responsible for this behaviour. As *Vranka/Houdeck* (2015, p. 2), for example, point out bank employees may well be aware of a bad reputation banks and their employees may have outside of the banking industry. Respondents in the banking identity may then act not in accordance with the culture of the banking industry but with the expectations placed by society. Thus, the identification of causes and explanation of differences in behaviour is difficult because of omitted variables (*van Hoorn* 2018).

3. Adopting the Original Study Design

The point of origin for this paper is the particular interpretation adopted by *Cohn* et al. (2014a), i. e. the generalisation of results to the entire banking industry. Thus, the primary goal of this paper is neither to address the methodological concerns nor to investigate the proposed linkage between behaviour and culture. However, by adopting the study design of *Cohn* et al. (2014a,b) as closely as possible and applying it to a different sample of bank employees, namely those of regional cooperative banks, this paper also implicitly contributes to the methodological discussion which calls for a replication of studies (*Kahneman* 2012; *Vranka/Houdeck* 2015, p. 4).

For that purpose, the questionnaire, which is well documented in *Cohn* et al. (2014b), has been taken over. The adoption is limited to the five parts discussed in section III.1 but otherwise follows the original questionnaire and design as closely as possible to rule out any deviations as sources for potential differences in results. Still, a few deviations were necessary and are explained in this section.

Earnings resulting from coin tosses were again awarded in the form of a gift card, this time as a digital gift card of a well-known online retailer. The amount of US\$ 20 that respondents could win for each coin toss, however, was replaced by € 10. Apart from budget constraints, differences in the pay structure and average pay level of a regional cooperative bank vs. a larger, international bank motivated the decision to lower the amount.[6] The strength of the incentive pro-

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[6] In its annual report for 2017 Deutsche Bank AG, for example, reports a total of wages and salaries of €4.284 billion for 29,052 full time employees which results in an average

vided also depends on further factors such as a difference in purchasing power or the odds to be among actual winners. Differences in purchasing power cannot be assessed, as the location of the bank surveyed in *Cohn* et al. (2014a) is unknown. The actual, exact winning odds cannot be specified ex ante, given that the prize budget is fixed, and the expected distribution of prizes depends on the degree of dishonesty in reporting the results.

Table 1

Word Quiz

Fragments	Possible bank-related completion	Examples for non-bank-related completions
K R E _ _ _	KREDIT (loan)	KREIDE, KRESSE, … (chalk, cress, …)
_ U T T E R	N/A	MUTTER, BUTTER, … (mother, butter, …)
_ _ L D	GELD (money)	HELD, BALD, … (hero, soon, …)
B _ _ S E	BÖRSE (stock exchange)	BUSSE, BINSE, … (busses, cane, …)
T _ S C H _	N/A	TUSCHE, TASCHE, … (ink, bag, …)
S C H _ C K	SCHECK (cheque)	SCHOCK, SCHICK (shock, fancy)

Source: Own design

Since it was expected that, in comparison to the original study, a significantly higher share of bank employees would participate in the study, participants were informed about a less obtrusive electronic alternative to tossing a physical coin.[7]

The entire questionnaire was translated into German. This required a new word quiz which is outlined in table 1. As in the original study two out of the six word fragments only have valid non-bank-related completions in order to distract respondents from the purpose of the quiz.

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of about € 147,500 per full-time employee (*Deutsche Bank* 2018). This was more than 1.5 times higher than what an arbitrarily chosen cooperative bank in the sample reported for the same year.

[7] The suggested alternative was https://www.random.org/coins/?num=1&cur=60-eur.germany-1euro. Electronic random number generation may have certain deficiencies. However, they do not impact the study because it can be safely assumed that there will not be any significant difference in the percentage of participants among treatments and controls using the electronic alternative.

Part 5 deviates from the original survey in a number of ways which, however, are not relevant for the ultimate results of the study (*Cohn* et al. 2014b, p. 29):

- Instead of directly asking for the age and the experience in the banking sector[8] of respondents in years, the answers have been categorized in order to further improve the anonymity of the survey.

- The nationality of respondents was of less relevance because the vast majority of participants were German. The question was replaced by a question on whether the respondent is working full-time or part-time. A different number of working hours might result in a different degree of exposure to the bank's culture.

- The pre-specified answers for the question on the highest completed level of education were amended to match the German education system.

- Respondents were asked to specify if their job belongs to the bank's front-office (Markt) or back-office (Marktfolge) while the original survey distinguished between "private banking and wealth management", "trading and investment functions" and "support services".

As in the original experiment, a pilot study was conducted. The main purpose of the pilot study – apart from testing the questionnaire – was to set a hurdle for winning. As briefly outlined in section III.1, a participant was randomly chosen from the pilot study. Participants of the actual survey were informed that they would only be among potential winners if their total prize was at least as high as the total prize of that participant. The amount was not communicated. It turned out to be equivalent to the expected outcome of the coin tossing task, €50.

The pilot study was conducted with members of the management boards of the participating banks which, from a testing perspective, had the advantage that the technical infrastructure was identical to that used by later participants. The board members were not informed about the actual purpose of the study and, additionally, had signed a non-disclosure agreement.

IV. Empirical Analysis

1. Description of the Data Basis

The study is based on a sample of four cooperative banks with a regional presence in eastern Hesse and western Thuringia (Thüringen). The region has a large but not perfect overlap with the administrative district of Fulda. Although this district has a rural heritage, its unemployment rate is typically among the

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[8] For members of the treatment group this question was already contained in part 2 of the questionnaire and was changed accordingly.

lowest in entire Hesse and it features more inbound (22,000) than outbound (16,000) commuters due to the presence of many small to medium-sized, mainly family-owned firms; the main industries are automotive supplies and machinery & plant engineering, with an increasing importance of services (*Region Fulda Wirtschaftsförderungsgesellschaft* 2019).

According to total assets at the end of 2017, one of the four banks is among the smallest 25 % of cooperative banks in Germany, two banks belong to the smallest 50 % and one bank to the smallest 75 % (*BVR* 2018). These total assets roughly range from €100m to €1,000m. The average bank in the sample has total assets of €453.0m, the standard deviation of total assets is €398.9m.

The four banks have a similar business model of traditional banking, i. e. they accept deposits and invest these deposits in loans and conservative financial assets. None of the banks engages in any short-term market speculation. One bank still has a small commodity business which focuses on selling commodities like fuel to local farmers and consumers.

The invitation to participate in the survey was sent out to all bank employees of the participating banks except for the largest bank in the sample where 100 bank employees were randomly selected and invited. The following groups were excluded from participation: employees mainly occupied with non-bank-related activities, apprentices and members of the management board.

The online questionnaire was available from 16 October 2018 to 31 October 2018. In the end, 186 respondents participated in the survey. The technical design of the questionnaire included a function to randomly assign respondents either to the treatment group or the control group. This assignment turned out to be perfect as each group contained 93 members.

In a first step, certain quality checks were conducted. Because of the specific nature of the study, all participants were excluded from further analysis who had interrupted answering the questionnaire and completed it later. In these cases, salience of the social identity primed in part 2 of the questionnaire could not be guaranteed in later parts of the questionnaire. For a similar reason, cases were excluded that obviously did not thoroughly answer part 2 of the questionnaire, e.g. by supplying a "." in a mandatory open question. For these cases it was questionable, whether making a specific social identity more salient was successful. Finally, observations were removed with missing answers in other parts of the questionnaire. After these exclusions 136 observations remained for further analysis.

Table 2 provides descriptive statistics for these observations.[9] It can be seen that more control than treatment observations have been lost as a result of the quality correction. The reason is that respondents especially tried to skip the open leisure-related questions.

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[9] The variables are defined in table A.2 in the appendix.

Table 2
Sample Descriptive Statistics (N = 136)

Variable	Mean	Std. dev.
Treatment	0.551	0.499
Age	3.404	1.195
Male	0.471	0.501
University degree	0.140	0.348
Experience	3.485	1.241
Full-time	0.691	0.464
Back-office	0.397	0.491
Relative salary	3.757	1.164
Participation draw	0.838	0.370

Source: Own calculations

The average age is located in the class of 41 to 50 years, which is consistent with the results for experience (20 to less than 30 years) and the relatively small percentage of persons who have a completed university degree.[10] Slightly less than 50 % of respondents are male, slightly more than two thirds of participants work full-time.[11] Almost 40 % have a back-office position.

The answer to the relative salary was given on a scale of 1 (significantly below the perceived bank average) to 7 (significantly above the perceived bank average). A value of 4 corresponds to the average salary which is almost the result obtained. Finally, 84 % provided an email address in order to participate in the prize draw.

Table 3 describes both members of the treatment and of the control group in greater detail. As the last column shows, none of the variables analysed differs significantly between treatments and controls.

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[10] 64 % of respondents have completed an apprenticeship and classified this as the highest level of education obtained so far. This is also consistent with the results of Age and Experience.

[11] Part-time includes early retirement schemes.

Table 3

Comparison of Treatment (N_T = 75) and Control Groups (N_C = 61)

Variable	Treatment group		Control group		p-value
	Mean	Std. dev.	Mean	Std. dev.	
Age†	3.360	1.048	3.459	1.361	0.473
Male	0.467	0.502	0.475	0.504	0.919
University degree	0.133	0.342	0.148	0.358	0.812
Experience†	3.520	1.155	3.443	1.348	0.915
Full-time	0.667	0.475	0.721	0.452	0.493
Back-office	0.427	0.498	0.361	0.484	0.434
Relative salary†	3.800	1.115	3.705	1.229	0.963
Participation draw	0.853	0.356	0.820	0.388	0.596

Source: Own calculations

For variables marked with † p-values report results of rank-sum tests, for all other variables of χ^2-tests.

2. Salience of Social Identities

In order to verify whether part 2 of the questionnaire was successful in making a given social identity more salient and whether that social identity was still more salient throughout coin tosses, it is crucial to consider the way respondents completed the word fragments in part 4 of the questionnaire.

The results of the word quiz are summarized in table 4. In 28.2 % of cases members of the treatment group completed the word fragments in a bank-related manner. Members of the control group did so in only 20.0 % of cases. The difference is significant.[12]

When analysing the word quiz in table 1 from the perspective of a German native speaker it might be argued that there is a relevant ambiguity with respect to the third entry, because "money" is a term that is also widely used in a non-bank context. Moreover, "gold" is an additional ambiguous, valid completion of that word fragment. Therefore, the second row of table 4 contains the results for an adjusted percentage which assumed that the third fragment could not be completed in a bank-related form. However, the significance of the difference between members of the treatment group and members of control groups is un-

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[12] When interpreting the order of magnitude of the completion rate and its difference two things should be noted. First, the maximum percentage amounts to 66.67 % (and not 100 %) as only four out of the six word fragments offered a bank-related completion option (see section III.3). Second, the number of non-bank related completion options was always larger than that of bank-related options. Thus, the difference may understate the priming effect.

Percentage of Words Completed in a Bank-Related Manner

	Treatment group		Control group		p-value
	Mean	Std. dev.	Mean	Std. dev.	
All word fragments	0.282	0.214	0.200	0.190	0.020
Excl. third fragment	0.229	0.179	0.161	0.155	0.020

Source: Own calculations

The percentage is based on all six word fragments; p-values report results of t-tests.

affected by the adjustment. An additional rank-sum test results in a p-value of 0.025 (all fragments) and 0.028 (excluding the third fragment).

Thus, members of the treatment group were significantly more likely than members of the control group to complete the word fragments in a bank-related manner. Part 2 of the questionnaire was successful in making the social identity as bank employee more salient among members of the treatment group. The effect was still present upon completion of coin tosses.

3. Honesty in Coin Tosses

As already outlined in section III.1, the idea of the ten coin tosses is to verify if the social identity of bank employees is associated with different social norms, namely a different honesty norm. A certain degree of dishonesty has to be expected as a result of the specific context. It can safely be assumed that winning a gift card of a well-known online retailer with a value of up to €100 represents a material incentive to report wrong outcomes of coin tosses since the questionnaire was anonymous, coin tosses were not monitored, and respondents were aware of the winning outcome when reporting their own outcome for a given toss.

The top panel of figure 2 shows the actual distribution of earnings for members of the control group in relation to the theoretical distribution. Dishonesty seems to be observable among members of the control unit because larger earnings of €60, €80, €90 and €100 have been obtained more often than predicted by the binomial distribution. The difference is significant (rank-sum test, p-value 0.002). On average, respondents in the control group reported 58.0 % successful tosses instead of the expected 50 %. The 95 % confidence interval is [0.535, 0.626].

Dishonesty is also present in the treatment group as the middle panel demonstrates. Here, a higher number of respondents reported earnings of €70, €80, €90 and €100 than predicted by the binomial distribution. Again, the difference
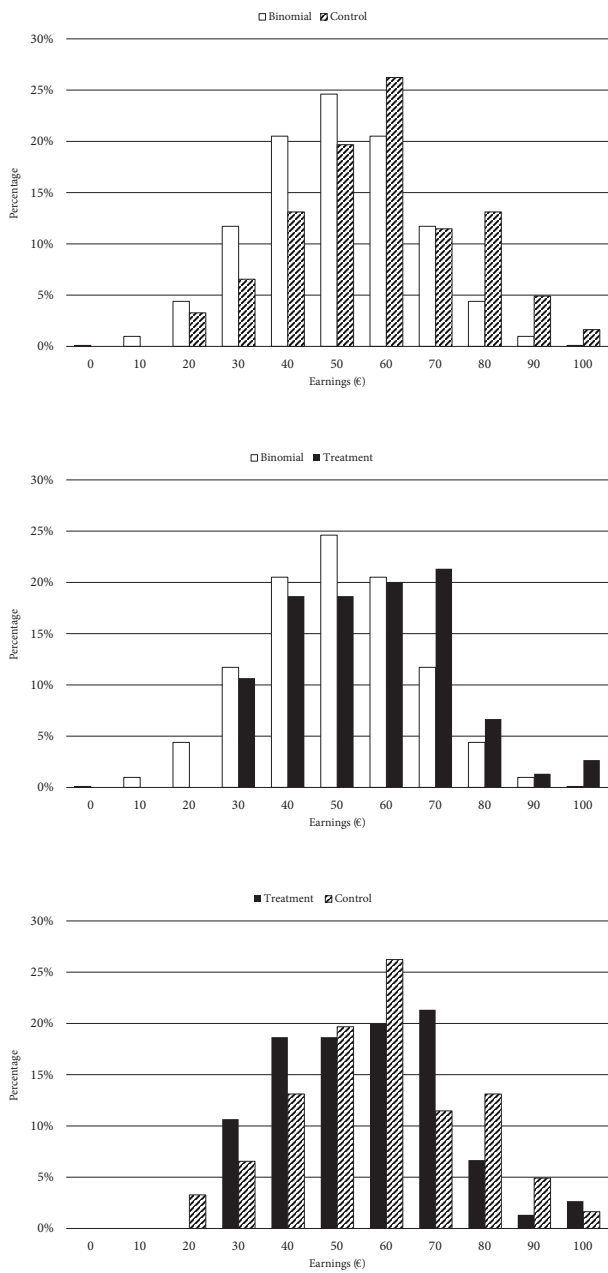
Source: Own calculations

Figure 2: Distribution of Earnings

is significant (rank-rum test, p-value 0.0134). The average success rate amounts to 56.1 % with a 95 % confidence interval of [0.523, 0.600].

The key result, however, lies in the comparison between members of both groups which is visualized in the bottom panel of figure 2. It is interesting to note that at the right tail of the distribution – compared to members of the treatment group – a higher share of members of the control group reported earnings of € 50, € 60, € 80 and € 90 while the reversal is true for earnings of € 70 and € 100. The difference in distributions of earnings between both groups is not significant (rank-sum test, p-value 0.497). Thus, respondents in the treatment group do not act significantly more honestly or dishonestly compared to members of the control group.

This result deviates from the key result of *Cohn* et al. (2014a) who found that members in the treatment group cheated to a significantly higher degree which ultimately led to the conclusion that "the prevailing business culture in the bank industry favours dishonest behaviour" (*Cohn* et al. 2014a, p. 88). The results in this paper cannot confirm this conclusion. The culture in the sample of banks seems to be different from the culture in the large, international bank examined in the original study.

The results of the rank-sum test are confirmed by a probit model with the success of the individual coin toss as dependent variable (see table A.2 in the appendix). Treatment remains to be insignificant as most of the other variables as well; especially there are no significant differences between the sample banks. However, a materialistic attitude (Materialism) is a significant factor: a stronger materialistic attitude raises the likelihood for a successful coin toss.

V. Summary and Conclusion

Cohn et al. (2014a) use an experimental survey among employees of a large bank with an international business focus to assess the business culture in the overall banking industry. The main focus is on honesty norms as one dimension of business culture. The central result is that the business culture in the banking industry seems to favour dishonest behaviour (*Cohn* et al. 2014a, p. 88).

In this paper it has been argued that the conclusion of *Cohn* et al. (2014a) might fail to acknowledge that the banking industry is not homogeneous. Differences in business models and business objectives, in ownership structures and regional scope of business activities are existent and may influence the business culture of the individual bank. This may be true already at the level of the three sectors that form the German banking industry. Thus, this paper contrasts the original study of a large, international bank with a replication of the original survey among employees of four regional cooperative banks operating in the centre of Germany.

In the survey respondents behaved significantly differently from the ones in the original study. While the questionnaire was again successful in rendering the professional identity of a bank employee salient in the treatment group, members of that group failed to show a significantly more dishonest behaviour than those in the control group. Thus, we cannot confirm that the business culture in the four cooperative banks promotes dishonesty.

Although the study has a different origin as it does not question the methodological background and design of *Cohn* et al. (2014a), it still contributes to the methodological discussion. First, it represents a replication of *Cohn* et al. (2014a), using a different sample of bank employees as proposed by *Vranka/Houdeck* (2015, p.4). Second, it argues that cultural differences may result from the regional focus of the sample banks. Private social interactions between employees and customers are more likely and may contribute to an enforcement of honesty norms. This represents an interesting variation of the impact of societal expectations outlined by *Vranka/Houdeck* (2015).

The reasons of cultural differences in the banking industry discussed in this paper are only hypotheses. The design does not allow to verify these hypotheses, and further research is needed to identify the specific causes of cultural differences. However, even without knowing the specific causes, the results are an important signal for legislators who perceived ethical and moral deficiencies in the banking industry and sought to address them by tightening and enforcing banking regulation. The new rules have created significant burdens for the banking industry. These burdens especially affect smaller banks as *Hackethal/Inderst* (2015) show.

The single regulatory approach for the entire banking industry endangers survival of these smaller banks and, potentially, survival of a valuable business culture.

Appendix

Table A.1

Maximum Likelihood Estimates for Reporting a Successful Coin Toss

Variable	(1) Coefficient (Std. dev.)	(2) Coefficient (Std. dev.)	(3) Coefficient (Std. dev.)
Treatment	−0.046 (0.069)	−0.038 (0.070)	−0.037 (0.070)
Age	−0.007 (0.036)	−0.010 (0.036)	−0.017 (0.037)
Male	0.073 (0.075)	0.064 (0.076)	0.059 (0.077)
University degree	−0.025 (0.105)	−0.013 (0.108)	−0.011 (0.109)
Back-office	−0.074 (0.076)	−0.092 (0.077)	−0.104 (0.078)
Relative salary	0.021 (0.036)	0.024 (0.037)	0.044 (0.039)
Bank 2		−0.100 (0.119)	−0.121 (0.120)
Bank 3		−0.136 (0.123)	−0.191 (0.127)
Bank 4		−0.133 (0.118)	−0.167 (0.120)
Competitiveness			−0.021 (0.031)
Materialism			0.058** (0.029)
Participation draw			0.044 (0.102)
Constant	0.142 (0.132)	0.256 (0.165)	0.080 (0.284)
Observations (N)	1,360	1,360	1,360
Log Likelihood	−927.816	−927.070	−924.927

Source: pooled probit model; own calculations

Notes: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$; Experience (Full-time) has not been included because of high correlation with Age (Male)

Table A.2

Definition of Variables

Variable	Description
Age	Age of the respondent in years: 1 20 years or less 2 21–30 years 3 31–40 years 4 41–50 years 5 51–60 years 6 more than 60 years
Back-office	1 if the respondent is working in the back-office (Marktfolge) 0 else
Bank X	Dummy variable identifying the different sample banks
Competitiveness*	"How important is it to you what other people think about you?" 1 Not at all important … 7 Very important
Experience	Number of years the respondent has already been working in the banking industry: 1 less than 5 years 2 5 years to less than 10 years 3 10 years to less than 20 years 4 20 years to less than 30 years 5 30 years or longer
Full-time	1 if the respondent has a full-time position 0 else
Male	1 if the respondent is male 0 else
Materialism*	"To what extent do you agree with the statement that social status is primarily determined by financial success?" 1 I do not agree at all … 7 I fully agree
Participation draw	1 if the respondent provided an email address in order to participate in the prize draw 0 else

Variable	Description
*Relative salary**	"How high is your salary in comparison to that of other employees in the same firm?"
	1 significantly lower than average
	…
	7 significantly higher than average
Treatment	1 if the respondent is part of the treatment group (salient professional identity as bank employee)
	0 else
University degree	1 if the highest educational degree of the respondent is a bachelor or master degree of a university (or equivalent)
	0 else

*: The questions are "re-translated" back into English using the exact wording of the original questionnaire as specified in *Cohn* et al. (2014b).

References

Benjamin, D. J./*Choi*, J. J./*Strickland*, A. J. (2010): Social identity and preferences, American Economic Review, 100, 1913–1928.

Böhnke, W. (2010): Genossenschaftsbanken im Lichte der Finanzkrise – warum Bank nicht gleich Bank ist, Zeitschrift für das gesamte Genossenschaftswesen, 60, 2, 104–112.

Büschgen, H. E. (1995): Die Deutsche Bank von 1957 bis zur Gegenwart – Aufstieg zum internationalen Finanzdienstleistungskonzern. In: Gall, L./Feldman, G. D./James, H./Holtfrerich, C.-L./Büschgen, H. E. (Eds.): Die Deutsche Bank 1870–1995, Verlag C. H. Beck, München, 579–877.

BVR – Bundesverband der Deutschen Volksbanken und Raiffeisenbanken (2013): Informationen und Argumente des Bundesverbandes der Deutschen Volksbanken und Raiffeisenbanken für die 18. Legislaturperiode 2013–2017. Berlin, available from: https://www.bvr.de/p.nsf/0/E001F504C9855332C1257DAB005315BB/$file/Brosch18Legislaturperiode.pdf (10 January 2019).

BVR – Bundesverband der Deutschen Volksbanken und Raiffeisenbanken (2016): Qualität der Bankenregulierung verbessern – Kollateralschäden vermeiden, available from: https://www.bvr.de/p.nsf/0/090935C20EBDEAD5C125806F002E3D79/$file/BVRPositionspapierStudiePaul_112016.pdf (10 January 2019).

BVR – Bundesverband der Deutschen Volksbanken und Raiffeisenbanken (2018): Liste aller Genossenschaftsbanken, Stand Ende 2017, available from: https://www.bvr.de/Presse/Zahlen_Daten_Fakten (15 November 2018).

BVR – Bundesverband der Deutschen Volksbanken und Raiffeisenbanken (2019): Was wir anders machen – was uns auszeichnet, https://www.vr.de/privatkunden/was-wir-anders-machen.html (10 January 2019).

Cohn, A./*Fehr*, E./*Maréchal*, M. A. (2014a): Business culture and dishonesty in the banking industry, Nature, 516, 86–89.

Cohn, A./*Fehr*, E./*Maréchal*, M. A. (2014b) – Supplementary information, available from: https://media.nature.com/original/nature-assets/nature/journal/v516/n7529/extref/nature13977-s1.pdf (12 November 2018).

Deutsche Bank (2014): 25 years ago: Deutsche Bank announces Morgan Grenfell acquisition, https://www.db.com/unitedkingdom/content/en/2964.html (12 November 2018).

Deutsche Bank (2018): Jahresabschluss und Lagebericht 2017, Frankfurt am Main, available from: https://www.bundesanzeiger.de/(07 June 2018).

Deutsche Bundesbank (2018): Bankenstatistik November 2018, Statistisches Beiheft 1 zum Monatsbericht, Frankfurt am Main.

DZ Bank (2018): Jahresabschluss zum Geschäftsjahr 01.01.2017 bis zum 31.12.2017 und Lagebericht der DZ Bank AG, Frankfurt am Main, available from: https://www.bundesanzeiger.de/(07 June 2018).

GenG – Genossenschaftsgesetz, last amendment on 17 July 2017, available from: http://www.gesetze-im-internet.de/geng (03 May 2019).

Graafland, J. J./*van de Ven*, B. W. (2011): The credit crisis and the moral responsibility of professionals in finance, Journal of Business Ethics, 103, 605–619.

Hackethal, A./*Inderst*, R. (2015): Auswirkungen der Regulatorik auf kleinere und mittlere Banken am Beispiel der deutschen Genossenschaftsbanken. Gutachten im Auftrag des Bundesverbandes der Deutschen Volksbanken und Raiffeisenbanken – BVR, Frankfurt am Main, available from: https://www.bvr.de/p.nsf/0/EA57402CCD1BAC9FC1257ECF00349466/$file/GUTACHTEN-BVR2015.pdf (03 May 2019).

Kahneman, D. (2012): A proposal to deal with questions about priming effects, available from: https://www.nature.com/polopoly_fs/7.6716.1349271308!/suppinfoFile/Kahneman%20Letter.pdf (30 April 2019).

Kummert, I. (2013): Strategien der Moral am Kapitalmarkt, Springer Gabler, Wiesbaden.

Mass, R. (2017): A banker's code of ethics, Oxford Review of Economic Policy, 33, 2, 257–277.

Region Fulda Wirtschaftsförderungsgesellschaft (2019): Standort, https://www.region-fulda.de/standort_7221.html (10 May 2019).

SpkG-HE – Hessisches Sparkassengesetz, last amendment on 29 September 2008, available from: https://www.rv.hessenrecht.hessen.de/(11 January 2019).

Stöckl, T. (2015): Dishonest or professional behavior? Can we tell? A comment on: Cohn et al. 2014, Nature 516, 86–89, "Business culture and dishonesty in the banking industry", Journal of Behavioral and Experimental Finance, 8, 64–67.

Van Hoorn, A. (2018): The use of identity primes to explain behavioral differences between groups: A methodological note, Journal of Behavioral and Experimental Economics, 74, 146–150.

Vranka, M. A./*Houdek*, P. (2015): Many faces of bankers' identity: how (not) to study dishonesty, Frontiers in Psychology, 6, Article 302, 1–4.