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**Article**

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# Confidence in European Retail Banking: Assessing Relationship with Economic Fundamentals

*Teodora Cristina BARBU – Iustina BOITAN**

**Abstract**

*The paper explores the various typologies of confidence indices and barometers that have been developed by audit and consultancy firms, research centres or banking associations with the purpose to assist banks in better understanding customers' needs, perceptions and expectations. The study gravitates around the European banking sector, by relying on the customer experience index developments during 2011 – 2015. We follow a twofold statistical approach, meant to investigate whether the index dynamics may be significantly determined by changes in several broad coverage variables, and respectively the presence of a two-way causality between the index and variables included in the sample. The findings obtained are of interest not only for banks, but also for public authorities and financial regulators, as the customers' confidence index used in the study appears to drive subsequent changes in the level of several macroeconomic, financial and institutional variables.*

**Keywords:** *customer experience index, confidence, banking system, macroeconomic fundamentals, panel data*

**JEL Classification:** C23, G21

## Introduction

Recent developments in the global banking system have generated extensive debate on banks' need to regain reputation and to restore trust in banking institutions. From this perspective, a diverse typology of institutions aims at measuring and monitoring the state of confidence in the banking system, by using specific tools. Among them it can be distinguished the indicators or indices of confidence that help banks get a feedback from customers, identify their specific needs and determine future courses of action, including reconfiguration of the retail banking activities and the design of tailor made products to keep customers' loyalty. However, there is no unitary framework for measuring customers' trust or satisfaction.

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The purpose of the paper is to rely on a confidence index configuration already defined by practitioners in the financial field, that comprehensively addresses the retail banking activities and who's historical levels are publicly available. It has been chosen the Consumer Experience Index (CEI) due to its large coverage of European countries, the transparency and availability of data. By targeting exclusively retail banking products and services and not a general economic and financial background as other indices do, is the most suited composite metric to be employed in our empirical study.

The reasoning underlying our research is that customer confidence in the banking system is a variable with multiple valences, meaning that it lies at the confluence of a series of economic, social, political factors as well as subjective, psychological factors over which it can exert influence, but at the same time can influence the degree of people's confidence.

The novelty and originality of our paper resides from the following: i) the topic of banking confidence is in the spotlight of financial regulatory and supervisory authorities, practitioners and customers; ii) focus on European banking system, most papers addressing the issue of customers' confidence for US; iii) comprehensive empirical approach, by considering two complementary research directions (the two-way causal relationship between CEI and the variables considered, respectively CEI as driven by explanatory variables); iv) to our knowledge, it is the first study that simultaneously investigates the concept of banking consumers' confidence in relationship with various economic, financial and institutional variables.

The paper has the following structure: the first part provides a synthesis of most relevant qualitative surveys, as well as of officially launched indices for measuring consumers' confidence in banking. The second part reviews the quite scarce existing literature in the field of exploring the link between confidence and various indicators. The third part depicts the methodology used, namely a panel Granger causality test followed by a panel regression to assess which variables can determine CEI evolution and discusses the findings. The last part concludes.

## 1. Survey of the Various Conceptual and Official Approaches Used for Measuring Customers' Confidence in Banking

### 1.1. Summary of Qualitative Studies for Assessing Customers' Confidence in Banking Sector

Regulators and financial institutions' concerns regarding the main determinants of the decline in customers' trust have been largely addressed in the past few years by organizations, audit and consultancy companies and academics, which have attempted to quantify the degree of satisfaction or of confidence felt by people in relationship with the banking sector. The result is represented by the emergence of several studies that substantiate and quantify banking confidence from different standpoints and by various methodologies (although the most frequently used is the questionnaire technique), by taking into account issues as credibility, honesty, kindness, competence.

Consequently, these studies position themselves at the confluence between economic, sociological and psychological approaches and analyse the correlation between loyalty, trust and the degree of satisfaction which are further shaping customers' experience with banks. Katzen (2017) enumerates the main reasons for which customers' experience is highly valued in the banking sector, namely: customers use to maintain long-term relationships with banks they trust; customers rely more on positive past experiences with the bank than on banking products' features, because positive experiences create memories; the digital experience is important for the new generation of customers.

A different research direction has been investigated by Belás, Chochoľáková and Gabčová (2015) which have uncovered that the degree of satisfaction and loyalty of bank customers are different between the genders. By using a questionnaire survey on a sample of 459 respondents in the Czech Republic, of which 44% were men and 56% were women, the authors found that women are more loyal to their bank relative to men and the determinant factors for this behaviour are the quality of banking products and services and convenient and friendly service in a branch.

Ernst & Young (2010) found that 45% of respondents agree that the 2008 financial crisis had negatively affected their trust in banking industry. Another interesting finding reveals the presence of a tight interdependence between the diminished trust in banks and the decrease of customers' loyalty, as respondents not any more hold most of their accounts at a single bank.

Owen (2011) has investigated changes in US public's confidence occurred during a 40-year time frame and concluded that significant confidence downfalls in financial institutions are determined more by a combination of major banking scandals and economic insecurity than by economic contractions.

The advisory firm MyCustomer (2016) notices that customers' trust coupled with loyalty are key issues for the success of retail banking. Hasebur (2013) argues that customers' satisfaction and loyalty with a bank have roots in a high quality of the banking services, irrespective these services are provided at bank branch or via online channels, outlining that quality is critical in the retail banking sector.

The study of Titko and Lace (2010) has identified several factors underlying customers' decision to leave their bank, namely fee increases, discourtesy of front-office advisors, errors of bank employees, and the receipt of a more attractive offer from another bank. Customers' previous experiences with the bank have been pointed out by Järvinen (2014) as main triggers of customers' confidence in banks and financial services. By performing a study on bank customers from 29 European countries, the author uncovered that customers' level of trust is ranked the highest as regards banking accounts and the lowest in terms of investments and pensions.

The authors Bee Wah, Ramayah and Wan Shahidan (2012) performed a regression analysis starting from a customer satisfaction index and uncovered that customer's satisfaction with his bank acts as a precursor of trust, which in turn leads to loyalty to the bank. Kantsperger and Kunz (2010) have proposed a conceptual model of consumer trust in financial services industry, composed by two dimensions of trust, namely benevolence and credibility. The empirical results suggest that banks' benevolence exerts a significantly greater influence on customers' loyalty than banks' credibility.

Another approach in identifying the intrinsic components of trust belongs to Halliburton and Poenaru (2010). They identified three complementary dimensions of customers' trust in their relationship with a bank, namely competence (credibility), integrity (honesty) and empathy (benevolence). A similar research has been performed by Haery and Farahmand (2013) which defined five dimensions of customers' experiences with the banks, namely: sensory, affective, cognitive, behavioral and relational experiences. Then they applied an analytic hierarchy process to discriminate between the dimensions which influence most customers' experiences. Their results indicated that behavioural experiences related to clients' interactions with bank employees, speed and quality in processing their requests are placed on the top.

Ennew and Sekhon (2007) developed a broad measure of consumer trust in financial services, called the Trust Index and computed its levels for various segments of the financial sector. According to them, trust can be classified into cognitive trust, which is based on knowledge and affective trust, based on feelings and perceptions. The findings indicated that brokers/advisers position at the top of the hierarchy in terms of trust, followed by banking sector and credit card providers, while investment companies and life insurance companies recorded the lowest levels of the index.

A report issued by Deloitte (2014) complements the above mentioned findings, by stating that customer expectations related to financial services are highly volatile and rapidly changing. They don't use to maintain on longer term a preference for a given financial sector because they make comparisons between financial services. This idea is reinforced by Bansal and Gupta (2001) which claim that customers' loyalty is vulnerable and hard to maintain on longer term, because even if they are satisfied with their relationship with a bank, they will keep searching for better financial products and better returns for their money.

Some studies focused on highlighting how customer loyalty and trust in banking have changed, during the 2008 financial crisis. Gritten (2011) argued that the psychological impact of financial crisis on banking products' consumers has globally generated a paradigm shift in consumers' confidence. As a result, the financial crisis has brought in the spotlight the crucial role of trust in banks and financial institutions. Skowron and Kristensen (2012) found that customers' satisfaction and loyalty for banking systems in less developed countries are lower than in developed countries.

### 1.2. Summary of Official Indices and Barometers Used for Assessing Customers' Confidence in Banking Sector

Given the importance of customers' confidence in determining banks' business strategies, as well as its correlations with a number of micro and macroeconomic variables, we notice substantial concerns at the level of professional bodies and institutions regarding the quantification of banking confidence. In the following we have summarized the most important, known and monitored indices at European level, which have been designed and launched by audit and consultancy companies, banking associations or research centres and are published with annual frequency.

The Extended Performance Satisfaction Index has started measuring customer and employee satisfaction in the banking industry since 1989, by considering Northern Europe countries (Denmark, Finland, Norway and Sweden), and since 2009 it covers also the UK. The overall score is computed by aggregating respondents' answers to several questions covering issues related to customers' preferences and perceived quality of banking products and services, value for money, satisfaction and loyalty.

Since 2010, Ernst & Young performs yearly a survey across the European banking industry, called the European Banking Barometer, to examine the evolution of customers' feelings and perceptions related to banks.

Starting from 2011 Capgemini, in collaboration with the European Financial Market Association, have developed the Customer Experience Index with the purpose of measuring the various dimensions of the interaction between retail customers and banks. This index provides the most in-depth, granular view of customers' experience with retail banking.

The Dutch Banking Association, in cooperation with the market research agency GfK, has launched in 2015 its first Banking Confidence Monitor, with the purpose of providing Dutch banks with a new way to measure customers' confidence in the sector. Edelman, a leading global communications marketing firm releases since 2000 an annual trust and credibility survey known as the Edelman Trust Barometer. The survey comprises mainly respondents from the U.S. and China, as well as respondents in other 28 countries and covers various sectors of the economy.

## 2. Literature Review of Financial and Macroeconomic Determinants for Banking Customers' Confidence

Several studies (Afshar, Arabian and Zomorrodian, 2007; Sergeant, Lugay and Dookie, 2011) have assessed the causation between consumer confidence index and economic growth. Their findings confirmed the persistent pattern in which downturns of consumer confidence in the economic and financial environment were followed by recessions. A more nuanced standpoint belongs to Leduc (2010) which argues that the link between consumers' confidence and business cycles is controversial, as the former doesn't react only when macroeconomic changes occur, but also independently of them. The author recognizes, however, that one of the recent decades' lessons point that people's sentiments may be important determinants of business cycle prospects.

The relationship between customers' sentiment and banking sector developments is straightforward as, according to Ingves (2014), banking is a business built on and highly dependent on confidence. The study of Phiri and Muponda (2016) argues that public confidence is related to a state of financial stability, good banking supervision, financial inclusion, and reliable corporate governance of banks. An important role in maintaining at high levels the public trust is assigned to the central bank, due to its regulatory and supervisory powers.

To highlight the impact of political instability on macroeconomic variables, Salti (2012) studied its correlation with the confidence in the economic climate. The author argues that political instability has adverse effects on economic prosperity, although it is difficult to estimate what would have been the prospects of macroeconomic fundamentals in the absence of events generating political instability. By performing a highly computational econometric study, Roe and Siegel (2011) revealed that political instability is a major determinant of financial development, in the sense of impeding it.

As regards the impact of corruption on banking activity, the study of Anaere (2014) argues that the problem of corruption has endemic proportions in developing and emerging countries, due to the existence of an economic environment devoid of proper legislation, due to inefficient judicial systems, and poor prudential regulations. Thus, the study shows that corruption negatively affects lending, creates uncertainty in the financial markets and is detrimental to banks and to consumers' confidence in banking products and services.

The authors Ayres, Kiser and Sanchez (2004) claim that immigrant population, by contributing to resident population growth and rejuvenation and by setting up of important revenues in the economy, will become a major consumer of financial products and services in the coming years. As the immigrant population will improve its ability to create value and to better integrate into local communities, it will become a growth factor for the financial industry. By providing financial products to the immigrant population, banks will find new sources of revenue, but they must meet the needs of customers with products tailored to their unique needs.

More recent studies adhere too to this standpoint. Fry (2014) argues that a significant percentage of migrant, unbanked population provides an opportunity for financial institutions. The reasoning is based on studies indicating that migration is pro-cyclical, meaning that migrants decide to come and stay in a country in relation to economic conditions and favourable anticipations. House prices increase with the degree of confidence in the economy, which in turn may lead the increasing of demand for housing. Thus, housing price increase is a combination of effects, such as confidence in the economic cycle and migration.

## 3. Methodology, Variables' Selection and Results Obtained

The purpose of our empirical study is twofold: i) to investigate whether there is a significant relationship, in terms of causality, between CEI and several variables of interest, and ii) to identify the determinants of the customer experience index (CEI).

For conducting the analysis we decided to rely on panel data regressions due to several reasons. First, we faced data availability constraints for some of the variables considered, therefore the analysis covers only the recent time span of 2011 – 2015 and addresses 13 European countries. Secondly, economic theory draws attention on the issue of endogeneity, apart from unit root testing, seasonality and multicollinearity, which may distort the statistical accuracy of results. According to Roberts and Whited (2012), endogeneity acts as a correlation between the regressors and the error term in a regression, giving rise to biased and inconsistent parameter estimates. One of the sources of endogeneity is present in this study, being related to those measurement errors or inaccuracies arisen when one uses as proxy indexes or other composite indicators meant to measure unobservable or difficult to quantify variables.

T a b l e 1

**Variables Employed and Source of Data**

| Variable type | Variable name | Description | Source |
|---|---|---|---|
| Macroeconomic variables | GDP growth | Measures how fast a country's economy is developing and growing. | <www.tradingeconomics.com> |
| | Inflation rate | Indicates how fast prices for goods and services are rising. | <www.tradingeconomics.com> |
| | House index | Measures the price of residential housing bought and sold over time | <www.tradingeconomics.com> |
| | Inflow of foreign population | It refers to people born abroad and living in a non-resident country (includes naturalized citizens, lawful permanent residents, refugees and asylums, persons on certain temporary visas, and the unauthorized). | International Migration Outlook 2016, OECD |
| Financial sector variables | Household saving rate | It is a measure of banks' financial resources growth over time. | <www.tradingeconomics.com> |
| | Residential loans/GDP | signals whether a bank is expanding its residential loan portfolio (long term loans) | European Mortgage Federation |
| | Bank nonperforming loans / total gross loans | It is a metric related to loan portfolio quality. The higher the ratio, the more impaired the loan portfolio. | World Bank, World Development Indicators |
| | Net interest income (as % of total assets) | An indicator of banks' profitability, computed as difference between the revenues generated by assets and the expenditure arising from paying the liabilities | European Central Bank, Statistical Data Warehouse |
| | ROA | An indicator of bank profitability related to its total assets, the efficiency of using bank assets | European Central Bank, Statistical Data Warehouse |
| | ROE | An indicator of bank profitability which measures how much profit has been obtained by using shareholders' equity | European Central Bank, Statistical Data Warehouse |
| | Bank capital to assets ratio | Is the ratio of bank capital and reserves to total assets | World Bank database |
| | No. of bank branches at 100,000 inhabitants | Is a proxy for the uniform distribution of banks' territorial network, which facilitates customers' access to financial services | World Bank database |
| | STOXX Europe 600 Banks Index | Proxy for investments in European banks' shares | <www.investing.com> |
| Institutional and public perception variables | Customer Experience Index (CEI) | Metric of customers' experiences and satisfactions with banks, computed from the answers of individuals using retail banking products. | Capgemini Consulting, </www.worldretailbankingreport.com> |

| | | | |
|---|---|---|---|
| | Confidence consumer indicator | Broad measure of consumer sentiment, quantifying consumers' perceptions towards their past and future financial conditions, as well as their feel of the economic prospects | European Commission, Business and Consumer Surveys, EUROSTAT |
| | Business freedom index | Measures regulatory efficiency, from the standpoint of individuals' ability to start, operate, and close a business without undue interference from the state | <www.heritage.org> |
| | Economic freedom index | Provides a comprehensive view on economic freedom, with focus on policies within a country | <www.heritage.org> |
| | Monetary freedom index | Combines a measure of price stability with an assessment of price controls | <www.heritage.org> |
| | Corruption index | It measures how corrupt a country's public sector is | <www.tradingeconomics.com> |
| | Political stability index | Is a composite measure computed from several underlying indexes meant to reflect the likelihood of a disorderly transfer of government power, armed conflict, violent demonstrations, social unrest, international tensions, terrorism, as well as ethnic, religious or regional conflicts. | <www.theglobaleconomy.com> |
| | Social globalization index | The index comprises three dimensions: personal contacts, information flows, and cultural proximity. | <www.theglobaleconomy.com> |

*Source:* Authors, based on descriptions retrieved by the international databases mentioned in the table.

The main feature of panel data regression, compared to classic regression analyses, is represented by gathering data with both a spatial and a temporal dimension. The spatial dimension is represented by the observations belonging to each country in the sample, while the temporal dimension consists of several time periods. We performed univariate panel data regressions using the Ordinary Least Squares – OLS method, in order to simultaneously analyse all European countries in the sample, during 2011 – 2015. While testing for the presence of cross-section fixed effects we noticed that the null hypothesis of a common intercept for all countries in the sample can be accepted, thus there is no need to keep fixed effects in the model (no country-specific constant).

The general configuration of the panel regression model is as follows:

$$A_{it} = \sum \beta B_{it} + \varepsilon_{it}$$

where

$i = 1, 2, \ldots. N$ – represents the number of countries in the sample,
$t = 1, 2, \ldots. T$ – the time period considered,
$A_{it}$ – the dependent variable, for country $i$ at time $t$,
$B_{it}$ – the independent variable, for country $i$ at time $t$,
$\varepsilon_{it}$ – the error term.

We have employed time series with annual frequency, consequently the dataset is not affected by the seasonal component. Further, it has been tested the presence of unit root (of non-stationary features) by applying the Philips-Peron--Fisher panel unit root test, the findings indicating that most variables are stationary in first difference, while few of them (e.g. GDP growth, house index, inflow of foreign population, saving rate, and corruption index) are stationary in levels.

Table 1 synthesizes the variables that have been used in the study and the databases from which they have been extracted, by classifying them in three main categories, namely: i) macroeconomic variables, ii) financial sector variables, and iii) institutional and public perception variables.

From a methodological standpoint, CEI is compiled yearly, since 2011, as a result of a global survey which gathers retail banking customers in 32 countries, from which 13 are European countries. The index is based on a questionnaire made in the same year in which the index is published. The index is computed individually, for each country considered, based on customers' responses at 80 questions. The questions cover topics such as: general satisfaction with the bank interaction, preferences/expectations related to specific banking products, channels used for performing banking transactions, the likelihood to stay with the bank, to refer it to a friend or to change the bank. The final score of the index shows customers' perception of their financial relationship with the bank, in terms of trust and quality of services.

As the study gravitates around the Customer Experience Index, it is of interest to analyse several descriptive statistics, computed for each EU country in the sample, to obtain a first insight on time series features during the time frame 2011 – 2015 (see Table 2). The computational method employed for obtaining the descriptive statistics is cross-section specific, meaning that the statistics have been computed for each cross-section (in this case for each country in the sample), across all periods.

Table 2

**Main Descriptive Statistics for CEI**

| | Mean | Maximum | Minimum | Std. Dev. | Skewness | Kurtosis | Jarque-Bera Probability |
|---|---|---|---|---|---|---|---|
| Austria | 74.52 | 76.2 | 71.9 | 1.68 | –0.73 | 2.19 | 0.75 |
| Belgium | 71.42 | 74.2 | 69.2 | 1.92 | 0.33 | 2.02 | 0.86 |
| Czech Rep. | 75.22 | 77.5 | 73.3 | 1.77 | 0.27 | 1.48 | 0.76 |
| France | 70.24 | 71.8 | 69.2 | 1.14 | 0.50 | 1.49 | 0.71 |
| Germany | 73.98 | 75.8 | 70.8 | 1.88 | –1.08 | 2.84 | 0.61 |
| Italy | 70.7. | 72.9 | 68.6 | 2.03 | 0.05 | 1.27 | 0.73 |
| Netherlands | 71.54 | 75.7 | 68.0 | 3.07 | 0.25 | 1.71 | 0.82 |
| Norway | 71.96 | 76.2 | 67.6 | 3.87 | –0.23 | 1.31 | 0.73 |
| Poland | 73.44 | 74.7 | 72.2 | 0.89 | 0.04 | 2.43 | 0.97 |
| Spain | 70.18 | 73.7 | 68.5 | 2.11 | 1.08 | 2.62 | 0.60 |
| Sweden | 71.88 | 73.5 | 69.3 | 1.55 | –0.95 | 2.75 | 0.68 |
| Switzerland | 74.66 | 76.0 | 73.7 | 1.08 | 0.32 | 1.32 | 0.72 |
| UK | 75.18 | 76.3 | 73.9 | 1.00 | –0.13 | 1.52 | 0.79 |

*Source*: Authors, by using Eviews.

Time series central tendency can be depicted by computing the mean value of the 5 years considered. The lowest 5 years-mean belongs to Spain (70.18), followed by France and Italy with around 70.3 – 70.7, meaning that these countries witnessed the smallest levels of retail customers' satisfaction. At the opposite are Czech Republic and UK, both with a mean of 75.2 (the highest mean value), suggesting improved satisfaction regarding retail customers' relationship with banks. It is important to mention that the 5 years included in this analysis represent the longest time record related to CEI that we've found by searching the World Retail Banking Reports.

Other two summary statistics are represented by the minimum and maximum values recorded by CEI. The biggest the difference between them, the broadest the fluctuations recorded by the variable. Czech Republic depicts the maximum level of the index (77.5), followed by Austria, Norway, UK and Switzerland (with an index value of around 76). In terms of the minimum values, the smallest level of CEI is 67.6 and belongs to Norway.

Standard deviation is an important metric as it provides supplementary information on the dispersion of the observations in the sample around their mean.

A small value indicates a pattern of homogeneity, as the time series' values are closely related to their mean. It is the case of Poland with the smallest standard deviation (0.89), but also of several other European countries (Switzerland, UK) which witnessed a relatively slow variation of the CEI level during the entire time period considered. By looking at the highest values of standard deviation we obtained a snapshot of countries that have registered ample fluctuations one year from another in terms of retail customers' satisfaction, namely Norway (3.87), and the Netherlands (3.07). The reason of the high variability depicted by the index for Norway and the Netherlands banking systems resides in the investments performed in the last years by banks to enhance their digital capabilities, so as to provide an alternative to traditional branch banking. Confidence in banks, coupled with an increase of internet usage for performing regular financial operations, is main driver of CEI improvements.

To describe the shape of time series distribution one can rely on other two statistics, namely skewness (coefficient of asymmetry) and kurtosis. An almost perfect symmetric distribution of CEI values has been recorded for Poland and Italy (0.04 – 0.05). The most asymmetric distributions are those in Spain (1.08), Germany (–1.08) and Sweden (–0.95). The two countries depicting negative skewness (longer tail towards left) feature preponderantly smaller values of CEI, while in Spain are most frequent the upper values. Economic literature states that kurtosis levels below a threshold of 3 indicate that the time series' distribution is flatter than a normal one. In our sample all the countries exhibit a platykurtic distribution whose main feature is that the likelihood for the occurrence of extreme values (either minimum or maximum values) for CEI is smaller than in the case of a normal distribution. According to the statistical theory, a skewness equal to zero and a kurtosis of 3 indicate a normally distributed time series. This rule is reinforced by the Jarque-Bera normality test, which assesses whether the empirical distribution can be approximated by a normal one. The higher the probability assigned to Jarque-Bera statistic, the more pronounced is the resemblance to the normal distribution. With a probability of 97%, Poland's time series follows a normal distribution. All remaining countries' CEI time series can be assumed to depict a normal distribution, although it doesn't necessarily mean that it is the best approximation.

The first research direction explores, by means of a pairwise panel Granger causality test, the bi-univocal relationship between changes in retail banking customers' satisfaction and the level of various macroeconomic, financial sector and institutional variables. Granger causality doesn't assess instantaneous causality, but relies on applying lags on the historical time series. For instance, CEI is said to Granger cause a variable if lagged values of CEI are useful in predicting the evolution of that variable, apart the information already contained in variable's own lagged values. The statistically significant results obtained have been synthesized in Table 3 below.

Table 3

**Pairwise Granger Causality Test**

| Null Hypothesis | F-Statistic | Prob. |
|---|---|---|
| Business freedom index does not Granger Cause CEI | 3.8699 | 0.055 |
| CEI does not Granger Cause Corruption index | 3.5937 | 0.064 |
| CEI does not Granger Cause Economic freedom | 5.2107 | 0.027 |
| CEI does not Granger Cause real GDP growth | 5.6541 | 0.021 |
| CEI does not Granger Cause House index | 8.9164 | 0.006 |
| Residential loans/GDP does not Granger Cause CEI | 2.9042 | 0.096 |
| Household saving rate does not Granger Cause CEI | 4.5858 | 0.037 |

*Source*: Authors, by using Eviews.

The findings indicate unidirectional causality between CEI and seven variables in the sample (3 out of 7 are public perception variables). The causality test revealed that CEI Granger causes corruption index, economic freedom, real GDP growth and house index (this last result being statistically significant at 1% probability level). In other words, changes in CEI precede changes in the levels recorded by the above mentioned variables. As regards business freedom, residential loans/GDP and household saving rate, their change precedes the one of CEI. The direction of this relationship is intuitive and natural, as customers have first to use retail banking products such as loans or deposit accounts in order to exhibit further prospects of satisfaction and positive experiences with banks. The latter will further improve CEI levels.

The second research direction aims at investigating which variables exert a statistical significant influence on the level of satisfaction felt by retail banking customers. Thus, the dependent variable is represented by the customers' experience index (CEI) while the regressors comprise the macroeconomic, financial sector and institutional variables. The results obtained have been synthesized in Table 4 (it has been depicted only the statistically significant results).

Monetary freedom index and economic freedom index exert a negative influence on the level recorded by CEI. The lack of fair and reliable market-determined prices as well as mistrust in economic policies hinder people's willingness to make long-term financial plans, in terms of investments and saving, due to the erosion of their purchasing power and uncertainty related to economic prospects. Consequently, the consolidation of retail banking customers' satisfaction is compatible with an environment characterized by prices stability (low inflation rate, no price controls imposed on by the state) and economic predictability.

T a b l e 4

**Summary of Panel Regressions**

| Dependent variable: D(CEI) | | | | |
|---|---|---|---|---|
| Method: Panel least squares | | | | |
| Cross-sections included: 13 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| D(consumer confidence indicator) | 0.071443 | 0.027172 | 2.629293 | 0.0113 |
| R-squared | 0.121469 | | | |
| F-statistic | 6.913182 | | | |
| Prob(F-statistic) | 0.011339 | | | |
| | | | | |
| D(economic freedom(–1)) | –1.144420 | 0.335709 | –3.40898 | 0.0017 |
| R-squared | 0.254731 | | | |
| F-statistic | 11.621110 | | | |
| Prob(F-statistic) | 0.001695 | | | |
| | | | | |
| D(monetary freedom) | –0.365850 | 0.18386 | –1.98984 | 0.0521 |
| R-squared | 0.073378 | | | |
| F-statistic | 3.959456 | | | |
| Prob(F-statistic) | 0.052092 | | | |
| | | | | |
| D (STOXX index(–1)) | –0.035660 | 0.013933 | –2.55938 | 0.0147 |
| R-squared | 0.150410 | | | |
| F-statistic | 6.550419 | | | |
| Prob(F-statistic) | 0.014707 | | | |
| | | | | |
| Corruption index(–1) | –0.041170 | 0.020876 | –1.97224 | 0.0541 |
| R-squared | 0.072179 | | | |
| F-statistic | 3.889732 | | | |
| Prob(F-statistic) | 0.054126 | | | |
| | | | | |
| GDP(–1) | –0.424350 | 0.165362 | –2.56618 | 0.0133 |
| R-squared | 0.116378 | | | |
| F-statistic | 6.585291 | | | |
| Prob(F-statistic) | 0.013325 | | | |
| | | | | |
| House index(–1) | –0.033460 | 0.016692 | –2.00469 | 0.0512 |
| R-squared | 0.083692 | | | |
| F-statistic | 4.018785 | | | |
| Prob(F-statistic) | 0.051174 | | | |

*Source*: Authors, by using Eviews.

Consumer confidence indicator is a barometer of households' perceptions of their past and future financial situation, in terms of spending and saving, as well as their feel on several general topics, such as the economy's prospects, price trends, or unemployment outlook in their country of residence. An increase in households' confidence in the overall economic background has a positive impact on retail banking customers' expectations and satisfaction.

A slightly decrease of the corruption index one year before positively determines the current level of CEI. People's perception of lower corruption in the public, administrative sector might create incentives for strengthening the relationship with the private sector, from which banking sector belongs to. The tight financial regulation of the latter, imposed on after the onset of the financial crisis, is a reliable reason for increased public confidence and positive expectations.

A decrease of investments in banks' shares determines a slight increase in the level of retail banking customers' satisfaction. In other words, investors are susceptible to migrate (due to various economic, financial or subjective reasons) from capital market investments to financial relations with banking institutions.

An interesting, negative correlation is established between the house index and CEI. A decrease of residential house prices triggers a small increase of retail banking customers' preferences and behaviour, with a time gap of one year. One possible explanation might rely on a psychological reason: the perception of houses affordability overlaps on retail customers' satisfaction with their historical financial relationship with a given bank, by further fuelling the desire to continue this relationship (by means of housing loans).

To sum up the above regressions' output, it seems that the dynamics of the dependent variable CEI is determined mainly by institutional and public perceptions variables (4 out of seven), by two macroeconomic variables (GDP growth and house index) and by one financial sector variable (STOXX bank index).

## Conclusions

The general perception is that a low level of customers' confidence indicates serious problems or distress in the banking market and should act as an early warning signal for banks' top management. They have to increase transparency of their business, strengthen risk management procedures, improve customer-centricity and design simpler, tailor-made banking products and services. In the post financial crisis stage, banks have started a process of regaining clients' lost confidence and have become more sensitive to their customers' financial needs and expectations. Satisfied customers means good prospects for a long-term relationship with the bank, loyalty and confidence. On the other hand, several studies point out that any bank should be aware on the volatile nature of customers' loyalty. Consequently, banks should actively monitor the changes implemented by their competitors in terms of financial services' design, features and costs, use of new digital technologies for providing financial services, as well as to perform internal surveys in order to obtain feedback on customer experience. Third, banks should develop a customized, tailor-made strategy for each representative segment of their customers, roughly divided into retail and corporate customers.

This variable has to be monitored also by financial supervisory and regulatory authorities and by governments and public institutions because it might indicate low credibility on the whole banking system. Restoring public trust after the 2007 financial turmoil has been a main concern of regulators. That's why at present the European banking system is subject to a broad harmonization of regulatory frameworks (single supervision mechanism, resolution mechanism for problem banks, deposits' protection) and of supervisory analytical tools, as well as of increased cooperation between national and European-level supervisory authorities. The purpose is to strengthen public confidence in banking system's resilience and soundness, in its proper functioning and compliance with best practices and regulatory requirements, especially in the field of risk management and capitalization. This confidence will be further translated at a bank-level, due to customers' awareness that each bank and the banking system in general are safeguarded by prudential authorities.

To reconcile the informational content of our empirical analysis, it can be argued that a change in the level of CEI, as dependent variable, triggers changes in all the three typologies of variables considered in the study, with more emphasis on institutional and public perception variables, followed by macroeconomic variables.

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