

# **Market perception: is corporate governance an important signal for investors? Evidence from the banking sector.**

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## **Abstract**

In this paper we examine how market sees corporate governance in commercial banks. We aim to compare market perception of ‘good’ or ‘bad’ governance in a bank with an actual effect the corporate governance has on bank’s fundamental value. In contrast with the conventional financial theories we saw in the recent years that the capital markets are not so efficient, i.e. the market perception of performance may go far away from the fundamental values. Dropping the classic assumption of efficient markets we analyze whether it is worth to invest money into corporate governance or that’s quite useless from the shareholder’s point of view. The sample consists of around 470 public banks in North America and Europe during the period of 2010-2012.

As a result we demonstrate that board size and independence are non-linearly associated with market perception, implying an existence of an optimal number of board members and outsiders among them. As for economic profit, according to the obtained results, the best alternatives are small efficient boards and large boards rich with knowledge and experience of its members. We show that the percentage of independent or female directors in the board is beneficial for bank’s economic profit. Ownership concentration effect on both market returns and economic profit is close to positive. Evidently, the shareholders with larger stakes at risk are more involved in bank’s business and monitor the management better resulting in improved fundamental performance and favorable investor sentiment. In general, the financial position and results of the studied banks appeared to be no less important for market perception and economic profit than corporate governance as it is more difficult for investor to obtain corporate governance information and incorporate it in her investment decision.

**Keywords:** Corporate Governance; Market Perception; Economic Profit; Commercial Banks; Independent Directors; Ownership Structure; Emerging Markets

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## 1. Introduction

Corporate governance codes and guidelines all over the world are intended to show the best practices or create the “picture-perfect” of corporate governance for companies. It is widely discussed whether following these recommendations benefit bank’s performance or not. In this paper we examine how market sees corporate governance and whether it agrees with the codes and guidelines. At the same time we aim to compare the determinants of market perception with the ones for an intrinsic value.

As a proxy for market perception, we use market prices as they are being formed by trading, i.e. matching supply and demand, and reflect changes in the investors’ mood. Therefore, we examine market perception using share price return and relative price (price-to-book multiple). To estimate the intrinsic value we use a measure of economic profit - residual income spread.

Corporate governance is captured in the model by the characteristics of the board of directors and ownership structure. In addition, we include important indicators of firm’s financial performance (profitability, growth) and financial position (bank’s assets, leverage), which are being constantly monitored by investors and analysts.

Also market prices and investors’ behavior are influenced by the economic and political situation within the industry and the country. To take this influence into account accurately and to examine it along with the firm-level determinants we use the data for the one particular industry as across industries business models and most important indicators for investors may be incomparable, while controlling for the country-level factors. As a result, the dataset consists of around 470 public banking firms from North America and Europe during the period 2010-2012. Once, we develop an understanding of the relationship within a period of relatively stable economic conditions we plan to widen our research to the period of financial turbulence.

Banking sector has been chosen as an object for this study as we believe that the exploring the determinants of investors’ perception for this sector has a special relevance due to a potential effect that market “mood” may have in this industry. If panic occurs in any other sector it may result in decreasing share prices, reducing investments, shrinking business activities, but this process might take weeks and months. In the banking sector panic in the market may lead to depositors’ runs on banks potentially resulting in numerous bankruptcies within few days. In such cases we observe not entirely rational behavior and overreaction to some extent. We believe that the scale of such irrationality and overreaction should be lower for markets that are more efficient.

The results of this study may be useful for banks and regulators to form better understanding of how the investors' perception may be improved (for the former) and what tools are the most powerful for market manipulation (for the latter).

The paper is organized as follows. Section 2 presents an overview of previous research in the area and the hypotheses of our empirical analysis. Section 3 describes the data sources and summarizes the sample's characteristics. Section 4 presents the empirical results. Section 5 provides a conclusion for this paper.

## 2. Research Method

An extensive empirical literature documented the relationship between corporate governance and performance of the commercial banks. However, the question of measuring performance is rather complicated. The indicators based on book values (return on equity and assets) are quite popular among researchers, however they may be distorted by the accounting choices regarding recognition of revenues and expenses and potential earnings management. Another popular measure of bank performance is Tobin's Q based on both book and market values. The dynamics of market prices is determined by trading activities of market participants, while their decisions may be not fully rational. Market estimates are distorted by different investor biases and affected by different news streams: macroeconomic news, company announcements, analyst reports, etc. Huang et al. (2011) analyzing a political crisis showed that decline in market prices may be caused solely by the change in the investors' sentiment without corporate profits actually going down. The long list of biases investors may experience includes conservatism, overconfidence, illusion of control, etc., which are largely explained by emotional reactions. Cronqvist and Siegel (2014) find that 45% of individual investors' biases are explained by genetic differences.

In this study we aim to compare the market view formed under the influence of a number of biases with economic profit we consider as a fundamental indicator. We believe that in the efficient market the determinants for bank's intrinsic value and its market perception should resemble. As our sample consists mainly of banks from developed countries, we assume relatively high level of efficiency and formulate following hypothesis.

**[1] Market Efficiency Hypothesis: Determinants of market perception are similar to the ones of the economic profit.**

From a theoretical point of view, larger boards of directors gather more human capital, knowledge and experience providing management with better monitoring and advice. On the other hand, an excess of members in the board can create additional coordination and communication problems in comparison to smaller boards. It also results in lower incentives for

monitoring management and makes the board more dependent on the CEO's opinion, thereby harming efficiency (Yermack, 1996).

However, the empirical studies document various results. As there is a trade-off between advantages (human capital) and disadvantages (coordination problems), some authors show a non-linear relation between board size and bank market and book value based performance (Andres and Vallelado, 2008; Grove et al., 2011). The apparent majority of authors find the relationship between board size and operational performance, as well as market valuation, to be negative, implying a stronger effect of larger boards disadvantages (Staikouras et al. (2007) for ROA, ROE and Tobin's Q; Adusei (2011) for ROE; Pathan et al. (2007) for ROA, ROE and Sharpe ratio).

Others show a positive relationship, arguing that the banking sector differs from other sectors and additional knowledge and experience provided by larger boards contributes to better profitability and market indicators (Adams and Mehran (2008) and Belkhir (2009) for ROA and Tobin's Q; Aebi et al. (2011) for ROA, ROE and buy-and-hold returns).

Despite the mixed empirical evidence, the theoretical argumentation in favor of a trade-off between advantages and disadvantages of larger boards seems rather solid and therefore we formulate following hypothesis about market perception.

**[2] Board Size Hypothesis: The relationship between board size and market perception is non-linear, as well as the relationship between board size and economic profit.**

Both the corporate governance codes and the Basel Committee recommend having a substantial proportion of outsiders in the board implying the positive impact of their independence. However, the existing literature does not provide us with a conclusion regarding the effect of independent directors in the board.

On the one hand, independent directors have fewer conflicts of interests while monitoring managers. By definition they should not depend on the CEO's opinion and they have a reputational incentive to perform their functions in such a way that results in better bank performance: Grove et al. (2011) and Pathan et al. (2007) document such relationship for return on assets and market price (Tobin's Q). On the other hand, an excessive proportion of non-executive directors could damage the advisory role of the board. Some authors report that the majority of affiliated directors on the board is correlated with a better profitability (Kyereboah-Coleman and Biekpe, 2006; Bino and Tomar, 2012). Andres and Vallelado (2008) show a reverse non-linear relationship between independent directors and the performance of US banks implying the existence of an optimal percentage of outsiders on the board. We support the theoretical argumentation about a trade-off between advantages and disadvantages of independent directors and formulate our hypothesis following Andres and Vallelado (2008).

**[3] Board Independence Hypothesis: The relationship between board independence and market perception is non-linear, as well as the relationship between board independence and economic profit.**

During the last decade the opinion that gender diversity in the board of directors and senior management can be beneficial for business has been spreading all over the world. However, women still take over the senior positions relatively slow. Among the largest public companies across Europe women account for just 11% of the board members (European Commission, 2010).

Some studies provide an empirical evidence for the companies with the high share of women in executive committees outperforming the companies with no women within the management (McKinsey&Company, 2010; Farrel and Hersh, 2005). One of the possible explanations for the positive effect of the board gender diversity is that it increases creativity and innovation by adding complementary knowledge, skills, and experience. Diverse boards compared to homogenous ones evaluate more alternatives during the decision making process leading to better corporate performance. There is also some evidence that a gender-balanced board is more likely to pay attention to managing and controlling risk (European Commission, 2012).

Still there is empirical evidence that the corporate governance changes leading to a higher share of female executives may increase risk taking (Berger et al., 2012) or that the effect of gender diversity is not significant (Hagendorff and Keasey, 2008).

We support the view that diversity adds value and formulate the following hypothesis.

**[4] Board Diversity Hypothesis: Gender diverse boards are better perceived by the market.**

Taking into account the ownership structure of commercial banks, in this study we focus on ownership concentration. A high ownership concentration has been proven to have a positive effect on a firm's value because large shareholders have more incentives to monitor the bank's management as they have more to lose (Grove et al., 2011). On the other hand, large shareholders may have too much influence on the board and the management and if they have any goals besides the company value maximization then it may not be effective for the firm and as a result lower block ownership is associated with better profitability (Rowe et al. (2011) for ROA and ROE, Riewisathirathorn et al. (2011) for ROA and operating costs).

We believe that shareholders that are more involved would provide bank with better monitoring and decisions while possibly harming the efficiency of its functioning with an excessive control and goals other than value maximization wherefore suggest the following hypothesis.

**[5] Involved Investors Hypothesis: There is a non-linear relationship between ownership concentration and market perception of bank performance, as well as between ownership concentration and economic profit. .**

### 3. Data and model

#### *Data sources*

Our sample consists of the large publicly listed commercial banks and bank holding companies headquartered in USA, Canada and European countries over the period 2010-2012. The empirical analysis requires data on corporate governance, financial indicators and stock prices.

To build our sample up we checked the availability of the structured financial information for the banks from North American and European countries for the studied period in the Bloomberg database and formed the list of the banks that could be potentially included in the sample. At the next step we collected the banks' annual reports from their official websites and analyzed whether they disclosed the necessary information about their board of directors and ownership structure which we hand-collected and supplemented with an additional data from the Bloomberg database and S&P Capital IQ database. Some companies were dropped at this stage due to the lack of publicly available annual reports or due to the poor corporate governance information disclosure in these reports. As a result the sample consists mainly of the largest commercial banks that have sufficient disclosure practices, which means the presence of the selection bias in the sample. At this point we could not find a way to eliminate this bias because the level of information disclosure increases with a level of a country's development and a firm's size. The World Bank database and Aswath Damodaran web-site were the main sources for the country specific indicators.

Finally, we obtain a sample comprising around 470 individual banks and holding companies for the period 2010–2012. Despite the relatively small number of banks, the sample covers a substantial proportion of the total assets of the banking systems in the studied countries.

#### *Model and main variables*

The research model aims to verify whether corporate governance has an impact on investor sentiment and whether market perception and economic profit of the bank have similar determinants. The general equation of the model is as follows:

$$\text{Perception measure/Economic profit}_{it} = \beta_i^0 + \sum_{n=1} \beta^n \overline{BoD}_{it} + \sum_{n=4} \beta^n OS_{it} + \sum_{n=5} \beta^n \overline{Control}_{it} \quad (1)$$

Where:

- $i$  is a bank indicator,

- $t$  is a time period indicator,
- *Perception measure* is one of the two indicators of market perception,
- *BoD* is a vector of characteristics of the board of directors,
- *OS* is a measure of the ownership concentration,
- *Control* is a vector of bank-specific control variables along with the controls for country and period.

We examine market perception using two measures:

- Total Shareholder Return (TSR) as an indicator of the perception of bank's performance,
- Price-to-Book (PB) as an indicator for bank's relative price.

We would like to compare the determinants of the market perception with the ones for bank's intrinsic value. In order to do so we use Residual Income Spread (RIS) as a proxy for economic profit to measure bank's performance (following Ivashkovskaya and Stepanova, 2011):  $Residual\ Income\ Spread_{it} = ROE - Required\ Return\ on\ Equity$  (2). Required return on equity calculation is based on the CAPM model.

The vector of board of directors' characteristics includes size (BSIZE), percentage of independent directors in the board (IND) and percentage of female directors in the board (FEM). To measure ownership concentration, we use the sum of the three largest stakes in the bank's equity (MAJ3).

Bank-specific controls include bank's capital structure measured by debt-to-equity ratio (LEV), bank's profitability measured by net income margin (NIM), bank's growth measured by growth in net interest income (GNII), bank's age and size measured by natural logarithms of number of years since foundation (AGE) and bank's total assets (SIZE) respectively. We control for country affiliation with GDP growth (GDP) and for time period with MSCI World Index volatility (SDWORLD). A summary description of all key variables is presented in Table 1.

### *Statistics and trends*

The statistics for the main factors are presented in Table 2. We also showed statistics for the two main regions in our sample – Europe and North America – for indicative purposes. The average size of the board is around 11 members and slightly higher in Europe. The average level of board independence for the sample is around 76%, while for Europe it is only 52%.

An average stake owned by the three largest shareholders, which can be used to indicate ownership concentration level, is 27% for the total sample (54% for Europe). We document that European banks on average are larger in terms of total assets, but have higher leverage, volatility of returns and lower net income margins and growth than the ones in North America.

#### 4. Results

For the sample of around 470 European and North American banks from 27 countries, we estimated fixed effect regressions for the two measures of market perception and one measure of economic profit (Table 3).

For total shareholder return (TSR) we found a significant non-linear relationship with board independence. The nature of this relationship implies that additional independent directors increase shareholder returns until it reaches a level that may be considered as optimal. After reaching this level, board independence is negatively associated with market perception of bank performance. Non-linear effects of concentrated ownership and larger boards of directors are somewhat close to significance. However, the coefficients for ownership concentration imply that its effect on the shareholder returns is positive. Market most likely believes that the shareholders with larger stakes are more involved in bank's business and as a result better monitor the management and make better-informed decisions at general meetings.

We observe that the most significant determinants for total shareholder return are bank specific controls, i.e. its net income margin, net interest income growth, size of total assets and volatility. In addition, countries' GDP growth and volatility of the world index are important factors for TSR. Market rewards with additional return more profitable and risky banks, as well as countries with higher growth. The common volatility of the market has negative effect on banks returns.

As for Price-to-Book ratio (PB), the non-linear relationship with board size is present and significant. After a certain point, banks with larger boards become cheaper than their peers, all else constant. At the same time when the stake of the three largest shareholders exceeds control level, they are valued higher than the peers. Interestingly, market values better monitoring provided by major shareholders more than a risk of minority shareholder rights violation. The banks' share prices are higher for smaller more profitable banks within faster growing countries.

We obtain that a percentage of independent directors is not significant for Price-to-book multiple though we expected market to view independent directors positively. Appointments of outsiders in the board often considered as a sign of improving corporate governance and investor protection. However, we do not see any evidence that this factor affects banks relative pricing. The possible explanation is that it is rather difficult to obtain information about board independence – it is not always explicitly reflected in public reports, therefore market may not promptly react to this factor.

For economic profit, we observe non-linear effects of boards' size and independence. We document that the most efficient forms of boards of directors are either small easily coordinated

boards or large boards with a sufficient amount of human capital outweighing the coordination problems. Appointment of independent directors sends positive signals to the markets, outsiders' lack of company insights may harm bank's profitability. Female directors have a significant positive association with a residual income spread. However, the relationship between ownership concentration and residual income spread is non-linear and close to significance levels. The nature of the relationship implies that after a certain point of shareholdings concentration, an excessive control starts to harm bank's economic profit. Among significant positive factors are growth in net interest income and bank's age (positive), and among negatively associated factors are level of diversification and market volatility.

Interestingly, the effect of diversification is negative for all three measures and significant for relative price of bank's shares and its economic profit. Companies follow the diversification path for various reasons, but it may cause a decline in its profitability and an investor sentiment. This result supports a view about existence of a "diversification or conglomerate discount".

As a result, we show that the important factors for market perception and economic profit may differ, which rejects our first hypothesis.

#### *Policy implications*

The results we obtained raise a question: What would be a better form of corporate governance? And if we see a negative effect in some factors (for example, ownership concentration or board size), should this be regulated by legislation?

The independence of boards gets a lot of attention within corporate governance codes and recommendations. Corporate governance codes in some countries advise companies to have at least 25% or 33% of outsiders in the board, while the most advanced stock exchanges require the share of independent directors to be higher than 50%. We suggest that these requirements should not go to the extremes and that fully independent boards may suffer from incomplete information about the company. Therefore, introducing the minimal requirements for the share of inside directors may be reasonable as it will ensure the board's better access to the information about the bank.

Board size is not often addressed in corporate governance codes, as there is no unified opinion regarding its effects. As for the market perception, the obtained results may imply that there should be some reasonable restrictions on the size of a board of directors for better bank share performance .

## 5. Conclusion

The financial crisis of 2008 demonstrated the fragility of the banking sector and the great exposure the global economic system has to it. We analyzed the relationship between corporate governance mechanisms and market perception and economic profit in banking sector using a sample of nearly 470 commercial banks from 27 European and North American countries over the period from 2010 to 2012.

We observe that in most cases the studied corporate governance indicators are non-linearly related to market perception and economic profit. We find that, that there should be a relatively optimal board size that provides the best investors' perception. The same holds true for the board independence. As for economic profit, according to the obtained results, the best alternatives are small efficient boards and large boards rich with knowledge and experience of its members. In between the two alternatives the coordination problems seem to outweigh the advantages of bringing in additional directors. We show that the percentage of independent or female directors in the board is beneficial for bank's economic profit.

However an ownership concentration effect on both market returns and economic profit is close to positive though insignificant in most cases. This shows that the shareholders with larger stakes at risk are more involved in bank's business and monitor the management better resulting in improved fundamental performance and favorable investor sentiment.

The obtained results suggest that there are some important differences in how market reacts to corporate governance and its effects on bank's fundamental performance. In addition, financial position and results of studied firms appeared to no less important for market perception and economic profit than corporate governance. In general, corporate governance structure generates news flow less than financial results, it is more difficult for investor to obtain information about it and incorporate it in her investing decisions.

This empirical study may be interesting for top managers of commercial banks, as well as for shareholders and board members. Our findings can provide them with some evidence regarding possible reaction or lack of reaction on the changes in corporate governance system. This study may be also useful for regulators as part of empirical evidence for future regulatory recommendations regarding corporate governance structures.

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## Tables

**Table 1.**

**Description of the main variables used in the regression analysis.**

Some of the variables defined below are not included in the regression analysis but used for the statistical purposes.

| <i>Board of Directors</i>                      |  |
|--|--|
| <i>BSIZE</i>                                   | Size of the board of directors, i.e. number of directors in the bank's board of directors.   |
| <i>IND</i>                                     | Percentage of independent directors in the board of directors of the bank.   |
| <i>FEM</i>                                     | Percentage of female directors in the board of directors of the bank.  |
| <i>Ownership Structure</i>                     |  |
| <i>MAJ1</i>                                    | Equity share of the majority shareholder of the bank, %  |
| <i>MAJ3</i>                                    | Equity share of the three largest shareholders of the bank, %  |
| <i>Bank specific controls</i>                  |  |
| <i>AGE</i>                                     | Bank's age, i.e. natural logarithm of number of years since the bank has been founded.   |
| <i>SIZE</i>                                    | Bank's size, i.e. natural logarithm of total assets of the bank.   |
| <i>DIVERS</i>                                  | A percentage of non-interest income in the total income, that controls for bank's diversification.                                     |
| <i>GNII</i>                                    | Annual growth of net interest income of the bank (%) that controls for the bank's growth and development in its core business segment. |
| <i>NIM</i>                                     | Net Income margin, Net Income divided by the bank's revenue.   |
| <i>LEV</i>                                     | Leverage, i.e. total debt to common equity that controls for the bank's capital structure.   |
| <i>NPATL</i>                                   | Ratio of non-performing assets to total loans, a measure of risk.  |
| <i>SD1Y</i>                                    | 1-Year volatility (standard deviation)   |
| <i>SD5Y</i>                                    | 5-Year volatility (standard deviation)   |
| <i>Country specific controls</i>               |  |
| <i>GDP</i>                                     | Annual GDP growth (%) that controls for country's development.   |
| <i>Market perception &amp; Economic profit</i> |  |
| <i>TSR</i>                                     | Total shareholder return, based on a change of market share price over the year and a dividend yield.                                  |
| <i>PB</i>                                      | Price-to-Book multiple, i.e. market price divided by book value of equity capital.   |
| <i>RIS</i>                                     | Residual Income Spread, i.e. measure of economic profit  |

**Table 2.****Comparison of the key statistics for the main variables.**

The table reports averages for the main variables for the complete sample (27 countries) for the period 2010-2012.

| Region   |                        | Complete sample | North America | Europe |
|--|------------------------|-----------------|---------------|--------|
|  | <i>Number of Banks</i> | 486             | 394           | 92     |
|  | <i>Variable</i>        |                 |               |        |
| <i>BoD</i>                                     | <i>BFSIZE</i>          | 10.99           | 10.81         | 11.86  |
|  | <i>FEM</i>             | 0.12            | 0.11          | 0.15   |
|  | <i>IND</i>             | 0.76            | 0.80          | 0.52   |
| <i>OS</i>                                      | <i>MAJ1</i>            | 0.17            | 0.11          | 0.42   |
|  | <i>MAJ3</i>            | 0.27            | 0.21          | 0.54   |
| <i>Bank &amp; country specific controls</i>    | <i>AGE</i>             | 4.10            | 4.10          | 4.08   |
|  | <i>NPATL</i>           | 0.04            | 0.03          | 0.06   |
|  | <i>NIM</i>             | 0.13            | 0.13          | 0.12   |
|  | <i>SIZE</i>            | 8.26            | 7.79          | 10.30  |
|  | <i>LEV</i>             | 1.57            | 1.06          | 3.81   |
|  | <i>GNII</i>            | 0.07            | 0.08          | 0.04   |
|  | <i>DIVERS</i>          | 0.76            | 0.78          | 0.71   |
|  | <i>SDIY</i>            | 0.29            | 0.27          | 0.37   |
|  | <i>SD5Y</i>            | 0.37            | 0.35          | 0.44   |
|  | <i>GDP</i>             | 0.02            | 0.03          | 0.02   |
| <i>Market perception &amp; Economic profit</i> | <i>TSR</i>             | 0.11            | 0.15          | -0.05  |
|  | <i>PB</i>              | 0.95            | 0.97          | 0.85   |
|  | <i>RIS</i>             | 0.01            | 0.02          | -0.02  |

**Table 3.****Bank corporate governance and market perception.**

The table presents regression results of bank market perception and economic profit on indicators of corporate governance with controlling for bank and country specifics for the period 2010-2012. Robust standard errors were used. \*, \*\*, \*\*\* indicate significance at the 10%, 5% and 1% levels respectively. (Some variables were excluded from the regression because they were used to calculate the dependent variable).

| Variable                      | <i>Total Shareholder Return</i> |                |               | <i>Price-to-Book</i> |                |               | <i>RIS</i>        |                |               |
|-------------------------------|---------------------------------|----------------|---------------|----------------------|----------------|---------------|-------------------|----------------|---------------|
|                               | <i>coef.</i>                    | <i>t-stat.</i> | <i>p-val.</i> | <i>coef.</i>         | <i>t-stat.</i> | <i>p-val.</i> | <i>coef.</i>      | <i>t-stat.</i> | <i>p-val.</i> |
| <i>BSIZE</i>                  | <b>0.054</b>                    | 1.09           | 0.278         | <b>0.070</b> ***     | 2.74           | 0.006         | <b>-0.011</b> **  | -2.01          | 0.045         |
| <i>BSIZESQ</i>                | <b>-0.002</b>                   | -0.93          | 0.352         | <b>-0.002</b> ***    | -2.61          | 0.009         | <b>0.000</b> *    | 1.74           | 0.082         |
| <i>FEM</i>                    | <b>-0.265</b>                   | -0.82          | 0.412         | <b>0.043</b>         | 0.23           | 0.814         | <b>0.061</b> *    | 1.88           | 0.061         |
| <i>IND</i>                    | <b>1.243</b> *                  | 1.71           | 0.089         | <b>-0.399</b>        | -0.94          | 0.349         | <b>0.121</b> *    | 1.80           | 0.072         |
| <i>INDSQ</i>                  | <b>-0.978</b> *                 | -1.91          | 0.056         | <b>0.204</b>         | 0.67           | 0.504         | <b>-0.072</b>     | -1.52          | 0.128         |
| <i>MAJ3</i>                   | <b>1.030</b>                    | 1.55           | 0.121         | <b>-0.718</b> *      | -1.85          | 0.064         | <b>0.100</b>      | 1.36           | 0.175         |
| <i>MAJ3SQ</i>                 | <b>-0.516</b>                   | -0.68          | 0.495         | <b>0.639</b>         | 1.61           | 0.107         | <b>-0.097</b>     | -1.60          | 0.111         |
| <i>AGE</i>                    | <b>0.473</b>                    | 1.49           | 0.138         | <b>0.351</b> *       | 1.75           | 0.081         | <b>0.172</b> ***  | 3.02           | 0.003         |
| <i>NIM</i>                    | <b>0.482</b> **                 | 2.20           | 0.028         | <b>0.351</b> **      | 2.54           | 0.011         |                   |                |               |
| <i>SIZE</i>                   | <b>-0.398</b> ***               | -3.10          | 0.002         | <b>-0.222</b> **     | -2.55          | 0.011         | <b>0.008</b>      | 0.47           | 0.635         |
| <i>LEV</i>                    | <b>-0.047</b>                   | -1.58          | 0.115         | <b>0.022</b>         | 1.19           | 0.234         | <b>0.000</b>      | 0.13           | 0.897         |
| <i>GNII</i>                   | <b>0.118</b> *                  | 1.73           | 0.083         | <b>-0.073</b>        | -1.36          | 0.174         | <b>0.045</b> ***  | 4.61           | 0.000         |
| <i>DIVERS</i>                 | <b>-0.318</b>                   | -1.21          | 0.226         | <b>-0.414</b> ***    | -2.79          | 0.005         | <b>-0.086</b> *** | -2.66          | 0.008         |
| <i>GDP</i>                    | <b>11.878</b> ***               | 6.87           | 0.000         | <b>7.909</b> ***     | 8.54           | 0.000         | <b>-0.189</b>     | -1.13          | 0.257         |
| <i>SD5Y</i>                   | <b>1.039</b> *                  | 1.90           | 0.058         | <b>0.607</b> *       | 1.67           | 0.096         |                   |                |               |
| <i>SDIY</i>                   | <b>0.649</b> ***                | 4.83           | 0.000         | <b>-0.024</b>        | -0.36          | 0.720         |                   |                |               |
| <i>SDWORLD</i>                | <b>-1.697</b> ***               | -3.80          | 0.000         | <b>0.604</b> **      | 2.21           | 0.027         | <b>-0.161</b> *** | -2.90          | 0.004         |
| <i>_CONS</i>                  | <b>0.238</b>                    | 0.14           | 0.889         | <b>0.900</b>         | 0.87           | 0.384         | <b>-0.658</b> **  | -2.37          | 0.018         |
| <i>Adjusted R<sup>2</sup></i> | <b>0.205</b>                    |                |               | <b>0.846</b>         |                |               | <b>0.736</b>      |                |               |
| <i>Prob. F-stat</i>           | <b>0.000</b>                    |                |               | <b>0.000</b>         |                |               | <b>0.000</b>      |                |               |
| <i>Number of observations</i> | <b>1249</b>                     |                |               | <b>1249</b>          |                |               | <b>1261</b>       |                |               |