\*\*\*\*DD\_m analysis: esg\_score\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_score /INSTRUMENTS esg\_score\_1 /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_score /INSTRUMENTS esg\_score\_1 /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_score | predictor |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_117 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .179 |
| R Square | .032 |
| Adjusted R Square | .031 |
| Std. Error of the Estimate | 3.646 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 587.080 | 1 | 587.080 | 44.157 | <.001 |
| Residual | 17789.197 | 1338 | 13.295 |  |  |
| Total | 18376.277 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 8.806 | .295 |  | 29.853 | <.001 |
| esg\_score | -.050 | .008 | -.195 | -6.645 | <.001 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_score lnta /INSTRUMENTS esg\_score\_1 lnta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_score lnta /INSTRUMENTS esg\_score\_1 lnta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_118 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .185 |
| R Square | .034 |
| Adjusted R Square | .033 |
| Std. Error of the Estimate | 3.642 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 630.283 | 2 | 315.142 | 23.754 | <.001 |
| Residual | 17738.126 | 1337 | 13.267 |  |  |
| Total | 18368.409 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 9.605 | .673 |  | 14.263 | <.001 |
| esg\_score | -.040 | .011 | -.156 | -3.600 | <.001 |
| lnta | -.128 | .100 | -.051 | -1.274 | .203 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | esg\_score | lnta |
| Equation 1 | Correlations | esg\_score | 1.000 | -.742 |
| lnta | -.742 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_score lnta tdta /INSTRUMENTS esg\_score\_1 lnta tdta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_score lnta tdta /INSTRUMENTS esg\_score\_1 lnta tdta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| esg\_score\_1 | instrumental |

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| --- | --- | --- |
| MOD\_119 |  |  |

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| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .388 |
| R Square | .150 |
| Adjusted R Square | .148 |
| Std. Error of the Estimate | 3.421 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 2766.147 | 3 | 922.049 | 78.792 | <.001 |
| Residual | 15634.251 | 1336 | 11.702 |  |  |
| Total | 18400.398 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 9.237 | .633 |  | 14.593 | <.001 |
| esg\_score | -.047 | .011 | -.181 | -4.426 | <.001 |
| lnta | .134 | .096 | .054 | 1.396 | .163 |
| tdta | -25.177 | 1.869 | -.352 | -13.470 | <.001 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta |
| Equation 1 | Correlations | esg\_score | 1.000 | -.733 | .034 |
| lnta | -.733 | 1.000 | -.195 |
| tdta | .034 | -.195 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_120 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .420 |
| R Square | .176 |
| Adjusted R Square | .174 |
| Std. Error of the Estimate | 3.368 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3241.903 | 4 | 810.476 | 71.434 | <.001 |
| Residual | 15146.687 | 1335 | 11.346 |  |  |
| Total | 18388.591 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 7.895 | .657 |  | 12.026 | <.001 |
| esg\_score | -.041 | .010 | -.160 | -3.956 | <.001 |
| lnta | .072 | .095 | .029 | .754 | .451 |
| tdta | -24.272 | 1.846 | -.339 | -13.150 | <.001 |
| price\_to\_book\_value\_per\_share | 1.215 | .189 | .161 | 6.433 | <.001 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta | price\_to\_book\_value\_per\_share |
| Equation 1 | Correlations | esg\_score | 1.000 | -.736 | .041 | .090 |
| lnta | -.736 | 1.000 | -.202 | -.109 |
| tdta | .041 | -.202 | 1.000 | .077 |
| price\_to\_book\_value\_per\_share | .090 | -.109 | .077 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_121 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .422 |
| R Square | .178 |
| Adjusted R Square | .175 |
| Std. Error of the Estimate | 3.366 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3274.044 | 5 | 654.809 | 57.784 | <.001 |
| Residual | 15116.858 | 1334 | 11.332 |  |  |
| Total | 18390.903 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 6.852 | .922 |  | 7.428 | <.001 |
| esg\_score | -.041 | .010 | -.159 | -3.929 | <.001 |
| lnta | .084 | .095 | .034 | .881 | .378 |
| tdta | -24.154 | 1.846 | -.337 | -13.083 | <.001 |
| price\_to\_book\_value\_per\_share | 1.212 | .189 | .161 | 6.420 | <.001 |
| capital\_adequacy\_total | .063 | .039 | .040 | 1.597 | .110 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_score | 1.000 | -.731 | .042 | .090 | .039 |
| lnta | -.731 | 1.000 | -.198 | -.109 | .064 |
| tdta | .042 | -.198 | 1.000 | .076 | .041 |
| price\_to\_book\_value\_per\_share | .090 | -.109 | .076 | 1.000 | -.009 |
| capital\_adequacy\_total | .039 | .064 | .041 | -.009 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_122 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .427 |
| R Square | .182 |
| Adjusted R Square | .178 |
| Std. Error of the Estimate | 3.362 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3348.217 | 7 | 478.317 | 42.321 | <.001 |
| Residual | 15054.535 | 1332 | 11.302 |  |  |
| Total | 18402.752 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 8.399 | 1.081 |  | 7.766 | <.001 |
| esg\_score | -.047 | .011 | -.184 | -4.391 | <.001 |
| lnta | -.047 | .105 | -.019 | -.445 | .656 |
| tdta | -24.648 | 1.857 | -.344 | -13.271 | <.001 |
| price\_to\_book\_value\_per\_share | 1.231 | .189 | .163 | 6.525 | <.001 |
| capital\_adequacy\_total | .049 | .040 | .031 | 1.229 | .219 |
| dummylarge | 1.972 | .797 | .081 | 2.473 | .014 |
| dummymid | 1.089 | .555 | .059 | 1.962 | .050 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_score | 1.000 | -.523 | .060 | .077 | .063 |
| lnta | -.523 | 1.000 | -.133 | -.113 | .116 |
| tdta | .060 | -.133 | 1.000 | .073 | .059 |
| price\_to\_book\_value\_per\_share | .077 | -.113 | .073 | 1.000 | -.012 |
| capital\_adequacy\_total | .063 | .116 | .059 | -.012 | 1.000 |
| dummylarge | -.201 | -.404 | -.119 | .028 | -.156 |
| dummymid | -.248 | -.300 | -.026 | .030 | -.033 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | dummylarge | dummymid |
| Equation 1 | Correlations | esg\_score | -.201 | -.248 |
| lnta | -.404 | -.300 |
| tdta | -.119 | -.026 |
| price\_to\_book\_value\_per\_share | .028 | .030 |
| capital\_adequacy\_total | -.156 | -.033 |
| dummylarge | 1.000 | .382 |
| dummymid | .382 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| covid | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_123 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .524 |
| R Square | .274 |
| Adjusted R Square | .270 |
| Std. Error of the Estimate | 3.163 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 5027.775 | 8 | 628.472 | 62.817 | <.001 |
| Residual | 13316.408 | 1331 | 10.005 |  |  |
| Total | 18344.183 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 9.402 | 1.020 |  | 9.214 | <.001 |
| esg\_score | -.026 | .010 | -.101 | -2.526 | .012 |
| lnta | -.038 | .099 | -.015 | -.380 | .704 |
| tdta | -30.827 | 1.811 | -.431 | -17.019 | <.001 |
| price\_to\_book\_value\_per\_share | .579 | .184 | .077 | 3.140 | .002 |
| capital\_adequacy\_total | .110 | .038 | .070 | 2.917 | .004 |
| dummylarge | 1.595 | .750 | .066 | 2.126 | .034 |
| dummymid | .206 | .527 | .011 | .392 | .695 |
| covid | -2.483 | .191 | -.333 | -12.980 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_score | 1.000 | -.515 | .016 | .031 | .081 |
| lnta | -.515 | 1.000 | -.131 | -.111 | .116 |
| tdta | .016 | -.131 | 1.000 | .139 | .024 |
| price\_to\_book\_value\_per\_share | .031 | -.111 | .139 | 1.000 | -.046 |
| capital\_adequacy\_total | .081 | .116 | .024 | -.046 | 1.000 |
| dummylarge | -.204 | -.404 | -.104 | .037 | -.159 |
| dummymid | -.263 | -.299 | .009 | .063 | -.048 |
| covid | -.156 | -.010 | .263 | .273 | -.125 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | dummylarge | dummymid | covid |
| Equation 1 | Correlations | esg\_score | -.204 | -.263 | -.156 |
| lnta | -.404 | -.299 | -.010 |
| tdta | -.104 | .009 | .263 |
| price\_to\_book\_value\_per\_share | .037 | .063 | .273 |
| capital\_adequacy\_total | -.159 | -.048 | -.125 |
| dummylarge | 1.000 | .384 | .038 |
| dummymid | .384 | 1.000 | .128 |
| covid | .038 | .128 | 1.000 |

\*\*\*\*DD\_m analysis: esg\_score\_combined\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_combined\_score /INSTRUMENTS esg\_combined\_score\_1 /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_combined\_score /INSTRUMENTS esg\_combined\_score\_1 /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_combined\_score | predictor |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_124 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .171 |
| R Square | .029 |
| Adjusted R Square | .028 |
| Std. Error of the Estimate | 3.657 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 537.258 | 1 | 537.258 | 40.176 | <.001 |
| Residual | 17892.612 | 1338 | 13.373 |  |  |
| Total | 18429.870 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 8.921 | .325 |  | 27.452 | <.001 |
| esg\_combined\_score | -.054 | .009 | -.192 | -6.338 | <.001 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_combined\_score lnta /INSTRUMENTS esg\_combined\_score\_1 lnta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_combined\_score lnta /INSTRUMENTS esg\_combined\_score\_1 lnta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

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| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_125 |  |  |

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| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .186 |
| R Square | .035 |
| Adjusted R Square | .033 |
| Std. Error of the Estimate | 3.645 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 635.476 | 2 | 317.738 | 23.917 | <.001 |
| Residual | 17761.915 | 1337 | 13.285 |  |  |
| Total | 18397.390 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 10.204 | .627 |  | 16.263 | <.001 |
| esg\_combined\_score | -.040 | .011 | -.141 | -3.652 | <.001 |
| lnta | -.198 | .086 | -.079 | -2.301 | .022 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.625 |
| lnta | -.625 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_combined\_score lnta tdta /INSTRUMENTS esg\_combined\_score\_1 lnta tdta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_combined\_score lnta tdta /INSTRUMENTS esg\_combined\_score\_1 lnta tdta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_126 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .393 |
| R Square | .155 |
| Adjusted R Square | .153 |
| Std. Error of the Estimate | 3.417 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 2852.257 | 3 | 950.752 | 81.446 | <.001 |
| Residual | 15595.616 | 1336 | 11.673 |  |  |
| Total | 18447.873 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 9.858 | .589 |  | 16.745 | <.001 |
| esg\_combined\_score | -.054 | .010 | -.189 | -5.197 | <.001 |
| lnta | .095 | .084 | .038 | 1.133 | .257 |
| tdta | -25.861 | 1.875 | -.361 | -13.793 | <.001 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.627 | .099 |
| lnta | -.627 | 1.000 | -.256 |
| tdta | .099 | -.256 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_127 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .425 |
| R Square | .180 |
| Adjusted R Square | .178 |
| Std. Error of the Estimate | 3.364 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3324.644 | 4 | 831.161 | 73.467 | <.001 |
| Residual | 15103.475 | 1335 | 11.313 |  |  |
| Total | 18428.119 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 8.430 | .620 |  | 13.591 | <.001 |
| esg\_combined\_score | -.049 | .010 | -.172 | -4.797 | <.001 |
| lnta | .044 | .083 | .018 | .538 | .591 |
| tdta | -24.902 | 1.852 | -.348 | -13.448 | <.001 |
| price\_to\_book\_value\_per\_share | 1.215 | .188 | .161 | 6.452 | <.001 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta | price\_to\_book\_value\_per\_share |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.629 | .104 | .074 |
| lnta | -.629 | 1.000 | -.262 | -.095 |
| tdta | .104 | -.262 | 1.000 | .080 |
| price\_to\_book\_value\_per\_share | .074 | -.095 | .080 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_128 |  |  |

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| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .426 |
| R Square | .182 |
| Adjusted R Square | .178 |
| Std. Error of the Estimate | 3.362 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3345.190 | 5 | 669.038 | 59.174 | <.001 |
| Residual | 15082.503 | 1334 | 11.306 |  |  |
| Total | 18427.693 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 7.641 | .900 |  | 8.494 | <.001 |
| esg\_combined\_score | -.048 | .010 | -.168 | -4.665 | <.001 |
| lnta | .050 | .083 | .020 | .602 | .547 |
| tdta | -24.794 | 1.854 | -.346 | -13.376 | <.001 |
| price\_to\_book\_value\_per\_share | 1.214 | .188 | .161 | 6.447 | <.001 |
| capital\_adequacy\_total | .048 | .040 | .031 | 1.207 | .228 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.621 | .109 | .073 | .115 |
| lnta | -.621 | 1.000 | -.260 | -.095 | .035 |
| tdta | .109 | -.260 | 1.000 | .080 | .051 |
| price\_to\_book\_value\_per\_share | .073 | -.095 | .080 | 1.000 | -.004 |
| capital\_adequacy\_total | .115 | .035 | .051 | -.004 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:13 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_129 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .429 |
| R Square | .184 |
| Adjusted R Square | .179 |
| Std. Error of the Estimate | 3.361 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3388.180 | 7 | 484.026 | 42.841 | <.001 |
| Residual | 15049.070 | 1332 | 11.298 |  |  |
| Total | 18437.250 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 8.620 | 1.080 |  | 7.980 | <.001 |
| esg\_combined\_score | -.051 | .011 | -.181 | -4.778 | <.001 |
| lnta | -.043 | .103 | -.017 | -.419 | .675 |
| tdta | -24.981 | 1.862 | -.349 | -13.419 | <.001 |
| price\_to\_book\_value\_per\_share | 1.231 | .189 | .163 | 6.528 | <.001 |
| capital\_adequacy\_total | .043 | .040 | .027 | 1.068 | .285 |
| dummylarge | .816 | .786 | .034 | 1.037 | .300 |
| dummymid | 1.130 | .554 | .062 | 2.039 | .042 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.497 | .093 | .071 | .091 |
| lnta | -.497 | 1.000 | -.149 | -.109 | .106 |
| tdta | .093 | -.149 | 1.000 | .074 | .064 |
| price\_to\_book\_value\_per\_share | .071 | -.109 | .074 | 1.000 | -.011 |
| capital\_adequacy\_total | .091 | .106 | .064 | -.011 | 1.000 |
| dummylarge | .120 | -.585 | -.096 | .053 | -.134 |
| dummymid | -.244 | -.317 | -.034 | .031 | -.039 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | dummylarge | dummymid |
| Equation 1 | Correlations | esg\_combined\_score | .120 | -.244 |
| lnta | -.585 | -.317 |
| tdta | -.096 | -.034 |
| price\_to\_book\_value\_per\_share | .053 | .031 |
| capital\_adequacy\_total | -.134 | -.039 |
| dummylarge | 1.000 | .308 |
| dummymid | .308 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| covid | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_130 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .524 |
| R Square | .275 |
| Adjusted R Square | .270 |
| Std. Error of the Estimate | 3.162 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 5038.227 | 8 | 629.778 | 62.984 | <.001 |
| Residual | 13308.626 | 1331 | 9.999 |  |  |
| Total | 18346.853 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 9.520 | 1.018 |  | 9.347 | <.001 |
| esg\_combined\_score | -.028 | .010 | -.099 | -2.726 | .006 |
| lnta | -.037 | .097 | -.015 | -.382 | .702 |
| tdta | -30.984 | 1.813 | -.433 | -17.094 | <.001 |
| price\_to\_book\_value\_per\_share | .582 | .184 | .077 | 3.155 | .002 |
| capital\_adequacy\_total | .107 | .038 | .068 | 2.815 | .005 |
| dummylarge | .964 | .740 | .040 | 1.303 | .193 |
| dummymid | .228 | .526 | .012 | .434 | .664 |
| covid | -2.475 | .191 | -.332 | -12.931 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.488 | .047 | .024 | .110 |
| lnta | -.488 | 1.000 | -.147 | -.108 | .107 |
| tdta | .047 | -.147 | 1.000 | .140 | .028 |
| price\_to\_book\_value\_per\_share | .024 | -.108 | .140 | 1.000 | -.046 |
| capital\_adequacy\_total | .110 | .107 | .028 | -.046 | 1.000 |
| dummylarge | .121 | -.585 | -.097 | .047 | -.131 |
| dummymid | -.260 | -.316 | .001 | .065 | -.055 |
| covid | -.160 | -.013 | .258 | .273 | -.129 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | dummylarge | dummymid | covid |
| Equation 1 | Correlations | esg\_combined\_score | .121 | -.260 | -.160 |
| lnta | -.585 | -.316 | -.013 |
| tdta | -.097 | .001 | .258 |
| price\_to\_book\_value\_per\_share | .047 | .065 | .273 |
| capital\_adequacy\_total | -.131 | -.055 | -.129 |
| dummylarge | 1.000 | .303 | -.013 |
| dummymid | .303 | 1.000 | .129 |
| covid | -.013 | .129 | 1.000 |

\*\*\*\*DD\_m analysis: environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_131 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .185 |
| R Square | .034 |
| Adjusted R Square | .032 |
| Std. Error of the Estimate | 3.646 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 626.210 | 3 | 208.737 | 15.706 | <.001 |
| Residual | 17755.848 | 1336 | 13.290 |  |  |
| Total | 18382.058 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 8.721 | .349 |  | 24.994 | <.001 |
| environmental\_pillar\_score | -.018 | .011 | -.085 | -1.623 | .105 |
| social\_pillar\_score | -.023 | .013 | -.100 | -1.829 | .068 |
| governance\_pillar\_score | -.009 | .007 | -.047 | -1.280 | .201 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.784 | -.114 |
| social\_pillar\_score | -.784 | 1.000 | -.208 |
| governance\_pillar\_score | -.114 | -.208 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_132 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .187 |
| R Square | .035 |
| Adjusted R Square | .032 |
| Std. Error of the Estimate | 3.645 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 642.371 | 4 | 160.593 | 12.086 | <.001 |
| Residual | 17738.637 | 1335 | 13.287 |  |  |
| Total | 18381.008 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 9.153 | .847 |  | 10.803 | <.001 |
| environmental\_pillar\_score | -.016 | .012 | -.074 | -1.321 | .187 |
| social\_pillar\_score | -.020 | .014 | -.089 | -1.478 | .140 |
| governance\_pillar\_score | -.009 | .007 | -.046 | -1.267 | .205 |
| lnta | -.065 | .118 | -.026 | -.555 | .579 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.522 | -.123 | -.360 |
| social\_pillar\_score | -.522 | 1.000 | -.206 | -.410 |
| governance\_pillar\_score | -.123 | -.206 | 1.000 | .050 |
| lnta | -.360 | -.410 | .050 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_133 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .387 |
| R Square | .150 |
| Adjusted R Square | .146 |
| Std. Error of the Estimate | 3.427 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 2754.286 | 5 | 550.857 | 46.907 | <.001 |
| Residual | 15665.968 | 1334 | 11.744 |  |  |
| Total | 18420.254 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 9.284 | .797 |  | 11.654 | <.001 |
| environmental\_pillar\_score | -.011 | .011 | -.054 | -1.032 | .302 |
| social\_pillar\_score | -.019 | .013 | -.082 | -1.459 | .145 |
| governance\_pillar\_score | -.016 | .007 | -.082 | -2.377 | .018 |
| lnta | .134 | .112 | .054 | 1.205 | .228 |
| tdta | -25.043 | 1.877 | -.350 | -13.342 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.521 | -.127 | -.349 | -.059 |
| social\_pillar\_score | -.521 | 1.000 | -.204 | -.409 | .019 |
| governance\_pillar\_score | -.127 | -.204 | 1.000 | .042 | .059 |
| lnta | -.349 | -.409 | .042 | 1.000 | -.128 |
| tdta | -.059 | .019 | .059 | -.128 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_134 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .419 |
| R Square | .176 |
| Adjusted R Square | .172 |
| Std. Error of the Estimate | 3.374 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3232.660 | 6 | 538.777 | 47.328 | <.001 |
| Residual | 15174.821 | 1333 | 11.384 |  |  |
| Total | 18407.481 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 8.167 | .800 |  | 10.209 | <.001 |
| environmental\_pillar\_score | -.009 | .011 | -.042 | -.814 | .416 |
| social\_pillar\_score | -.012 | .013 | -.054 | -.970 | .332 |
| governance\_pillar\_score | -.017 | .007 | -.087 | -2.561 | .011 |
| lnta | .040 | .111 | .016 | .360 | .719 |
| tdta | -24.192 | 1.853 | -.338 | -13.059 | <.001 |
| price\_to\_book\_value\_per\_share | 1.232 | .191 | .164 | 6.468 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.515 | -.129 | -.350 | -.056 |
| social\_pillar\_score | -.515 | 1.000 | -.208 | -.417 | .026 |
| governance\_pillar\_score | -.129 | -.208 | 1.000 | .049 | .055 |
| lnta | -.350 | -.417 | .049 | 1.000 | -.136 |
| tdta | -.056 | .026 | .055 | -.136 | 1.000 |
| price\_to\_book\_value\_per\_share | .037 | .103 | -.050 | -.149 | .070 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |
|  |  |  | price\_to\_book\_value\_per\_share |
| Equation 1 | Correlations | environmental\_pillar\_score | .037 |
| social\_pillar\_score | .103 |
| governance\_pillar\_score | -.050 |
| lnta | -.149 |
| tdta | .070 |
| price\_to\_book\_value\_per\_share | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_135 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .421 |
| R Square | .177 |
| Adjusted R Square | .173 |
| Std. Error of the Estimate | 3.372 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3264.828 | 7 | 466.404 | 41.018 | <.001 |
| Residual | 15145.893 | 1332 | 11.371 |  |  |
| Total | 18410.721 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 7.144 | 1.018 |  | 7.016 | <.001 |
| environmental\_pillar\_score | -.009 | .011 | -.043 | -.836 | .403 |
| social\_pillar\_score | -.011 | .013 | -.050 | -.895 | .371 |
| governance\_pillar\_score | -.017 | .007 | -.088 | -2.582 | .010 |
| lnta | .049 | .111 | .020 | .442 | .659 |
| tdta | -24.074 | 1.853 | -.336 | -12.993 | <.001 |
| price\_to\_book\_value\_per\_share | 1.230 | .190 | .163 | 6.462 | <.001 |
| capital\_adequacy\_total | .063 | .040 | .040 | 1.585 | .113 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.514 | -.129 | -.350 | -.055 |
| social\_pillar\_score | -.514 | 1.000 | -.208 | -.415 | .028 |
| governance\_pillar\_score | -.129 | -.208 | 1.000 | .049 | .054 |
| lnta | -.350 | -.415 | .049 | 1.000 | -.135 |
| tdta | -.055 | .028 | .054 | -.135 | 1.000 |
| price\_to\_book\_value\_per\_share | .037 | .103 | -.050 | -.149 | .070 |
| capital\_adequacy\_total | .010 | .053 | -.010 | .026 | .039 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | environmental\_pillar\_score | .037 | .010 |
| social\_pillar\_score | .103 | .053 |
| governance\_pillar\_score | -.050 | -.010 |
| lnta | -.149 | .026 |
| tdta | .070 | .039 |
| price\_to\_book\_value\_per\_share | 1.000 | -.002 |
| capital\_adequacy\_total | -.002 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

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| --- | --- | --- |
| MOD\_136 |  |  |

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| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .426 |
| R Square | .182 |
| Adjusted R Square | .176 |
| Std. Error of the Estimate | 3.368 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 3348.246 | 9 | 372.027 | 32.801 | <.001 |
| Residual | 15084.687 | 1330 | 11.342 |  |  |
| Total | 18432.933 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 8.442 | 1.115 |  | 7.569 | <.001 |
| environmental\_pillar\_score | -.021 | .012 | -.100 | -1.771 | .077 |
| social\_pillar\_score | -.012 | .013 | -.052 | -.928 | .354 |
| governance\_pillar\_score | -.016 | .007 | -.082 | -2.405 | .016 |
| lnta | -.045 | .115 | -.018 | -.387 | .699 |
| tdta | -24.463 | 1.861 | -.342 | -13.149 | <.001 |
| price\_to\_book\_value\_per\_share | 1.237 | .190 | .164 | 6.506 | <.001 |
| capital\_adequacy\_total | .046 | .040 | .030 | 1.151 | .250 |
| dummylarge | 2.162 | .846 | .089 | 2.555 | .011 |
| dummymid | 1.246 | .588 | .068 | 2.117 | .034 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.468 | -.142 | -.204 | -.026 |
| social\_pillar\_score | -.468 | 1.000 | -.207 | -.398 | .027 |
| governance\_pillar\_score | -.142 | -.207 | 1.000 | .027 | .046 |
| lnta | -.204 | -.398 | .027 | 1.000 | -.107 |
| tdta | -.026 | .027 | .046 | -.107 | 1.000 |
| price\_to\_book\_value\_per\_share | .030 | .103 | -.049 | -.145 | .069 |
| capital\_adequacy\_total | .062 | .052 | -.023 | .069 | .056 |
| dummylarge | -.336 | -.002 | .075 | -.266 | -.096 |
| dummymid | -.340 | -.014 | .028 | -.177 | -.009 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |
|  |  |  | price\_to\_book\_value\_per\_share | capital\_adequacy\_total | dummylarge | dummymid |
| Equation 1 | Correlations | environmental\_pillar\_score | .030 | .062 | -.336 | -.340 |
| social\_pillar\_score | .103 | .052 | -.002 | -.014 |
| governance\_pillar\_score | -.049 | -.023 | .075 | .028 |
| lnta | -.145 | .069 | -.266 | -.177 |
| tdta | .069 | .056 | -.096 | -.009 |
| price\_to\_book\_value\_per\_share | 1.000 | -.003 | .007 | .010 |
| capital\_adequacy\_total | -.003 | 1.000 | -.172 | -.057 |
| dummylarge | .007 | -.172 | 1.000 | .449 |
| dummymid | .010 | -.057 | .449 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_m WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_m | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| covid | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_137 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .525 |
| R Square | .275 |
| Adjusted R Square | .270 |
| Std. Error of the Estimate | 3.164 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 5053.031 | 10 | 505.303 | 50.468 | <.001 |
| Residual | 13306.438 | 1329 | 10.012 |  |  |
| Total | 18359.469 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 9.562 | 1.052 |  | 9.091 | <.001 |
| environmental\_pillar\_score | -.017 | .011 | -.081 | -1.526 | .127 |
| social\_pillar\_score | .003 | .012 | .011 | .214 | .830 |
| governance\_pillar\_score | -.012 | .006 | -.063 | -1.967 | .049 |
| lnta | -.050 | .108 | -.020 | -.465 | .642 |
| tdta | -30.813 | 1.814 | -.430 | -16.988 | <.001 |
| price\_to\_book\_value\_per\_share | .585 | .185 | .078 | 3.159 | .002 |
| capital\_adequacy\_total | .110 | .038 | .070 | 2.897 | .004 |
| dummylarge | 1.757 | .796 | .073 | 2.208 | .027 |
| dummymid | .335 | .557 | .018 | .601 | .548 |
| covid | -2.516 | .191 | -.337 | -13.156 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.464 | -.143 | -.205 | -.025 |
| social\_pillar\_score | -.464 | 1.000 | -.204 | -.396 | -.007 |
| governance\_pillar\_score | -.143 | -.204 | 1.000 | .027 | .042 |
| lnta | -.205 | -.396 | .027 | 1.000 | -.101 |
| tdta | -.025 | -.007 | .042 | -.101 | 1.000 |
| price\_to\_book\_value\_per\_share | .029 | .065 | -.050 | -.138 | .135 |
| capital\_adequacy\_total | .062 | .067 | -.022 | .067 | .019 |
| dummylarge | -.336 | -.006 | .075 | -.265 | -.084 |
| dummymid | -.338 | -.029 | .027 | -.175 | .022 |
| covid | .000 | -.125 | -.010 | .006 | .267 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | price\_to\_book\_value\_per\_share | capital\_adequacy\_total | dummylarge | dummymid | covid |
| Equation 1 | Correlations | environmental\_pillar\_score | .029 | .062 | -.336 | -.338 | .000 |
| social\_pillar\_score | .065 | .067 | -.006 | -.029 | -.125 |
| governance\_pillar\_score | -.050 | -.022 | .075 | .027 | -.010 |
| lnta | -.138 | .067 | -.265 | -.175 | .006 |
| tdta | .135 | .019 | -.084 | .022 | .267 |
| price\_to\_book\_value\_per\_share | 1.000 | -.037 | .016 | .040 | .265 |
| capital\_adequacy\_total | -.037 | 1.000 | -.175 | -.071 | -.128 |
| dummylarge | .016 | -.175 | 1.000 | .449 | .033 |
| dummymid | .040 | -.071 | .449 | 1.000 | .117 |
| covid | .265 | -.128 | .033 | .117 | 1.000 |

\*\*\*\*DDa analysis: esg\_score\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_score /INSTRUMENTS esg\_score\_1 /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_score /INSTRUMENTS esg\_score\_1 /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_score | predictor |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_138 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .155 |
| R Square | .024 |
| Adjusted R Square | .023 |
| Std. Error of the Estimate | 5.432 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 966.131 | 1 | 966.131 | 32.744 | <.001 |
| Residual | 39478.311 | 1338 | 29.505 |  |  |
| Total | 40444.443 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 14.182 | .439 |  | 32.274 | <.001 |
| esg\_score | -.064 | .011 | -.168 | -5.722 | <.001 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_score lnta /INSTRUMENTS esg\_score\_1 lnta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_score lnta /INSTRUMENTS esg\_score\_1 lnta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_139 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .159 |
| R Square | .025 |
| Adjusted R Square | .024 |
| Std. Error of the Estimate | 5.430 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 1022.120 | 2 | 511.060 | 17.334 | <.001 |
| Residual | 39419.110 | 1337 | 29.483 |  |  |
| Total | 40441.230 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 15.044 | 1.004 |  | 14.985 | <.001 |
| esg\_score | -.054 | .017 | -.140 | -3.218 | .001 |
| lnta | -.138 | .149 | -.037 | -.922 | .357 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | esg\_score | lnta |
| Equation 1 | Correlations | esg\_score | 1.000 | -.742 |
| lnta | -.742 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_score lnta tdta /INSTRUMENTS esg\_score\_1 lnta tdta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_score lnta tdta /INSTRUMENTS esg\_score\_1 lnta tdta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_140 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .417 |
| R Square | .174 |
| Adjusted R Square | .172 |
| Std. Error of the Estimate | 5.004 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 7055.303 | 3 | 2351.768 | 93.923 | <.001 |
| Residual | 33452.501 | 1336 | 25.039 |  |  |
| Total | 40507.804 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 14.425 | .926 |  | 15.579 | <.001 |
| esg\_score | -.064 | .015 | -.168 | -4.174 | <.001 |
| lnta | .302 | .140 | .081 | 2.153 | .032 |
| tdta | -42.340 | 2.734 | -.398 | -15.486 | <.001 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta |
| Equation 1 | Correlations | esg\_score | 1.000 | -.733 | .034 |
| lnta | -.733 | 1.000 | -.195 |
| tdta | .034 | -.195 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_141 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .464 |
| R Square | .215 |
| Adjusted R Square | .213 |
| Std. Error of the Estimate | 4.879 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 8702.811 | 4 | 2175.703 | 91.394 | <.001 |
| Residual | 31780.660 | 1335 | 23.806 |  |  |
| Total | 40483.471 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 11.924 | .951 |  | 12.539 | <.001 |
| esg\_score | -.054 | .015 | -.142 | -3.594 | <.001 |
| lnta | .186 | .138 | .050 | 1.352 | .177 |
| tdta | -40.653 | 2.674 | -.383 | -15.205 | <.001 |
| price\_to\_book\_value\_per\_share | 2.265 | .274 | .203 | 8.279 | <.001 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta | price\_to\_book\_value\_per\_share |
| Equation 1 | Correlations | esg\_score | 1.000 | -.736 | .041 | .090 |
| lnta | -.736 | 1.000 | -.202 | -.109 |
| tdta | .041 | -.202 | 1.000 | .077 |
| price\_to\_book\_value\_per\_share | .090 | -.109 | .077 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| esg\_score\_1 | instrumental |

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| --- | --- | --- |
| MOD\_142 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .464 |
| R Square | .215 |
| Adjusted R Square | .212 |
| Std. Error of the Estimate | 4.880 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 8719.921 | 5 | 1743.984 | 73.238 | <.001 |
| Residual | 31765.852 | 1334 | 23.812 |  |  |
| Total | 40485.773 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 11.195 | 1.337 |  | 8.372 | <.001 |
| esg\_score | -.054 | .015 | -.141 | -3.578 | <.001 |
| lnta | .195 | .138 | .052 | 1.411 | .159 |
| tdta | -40.571 | 2.676 | -.382 | -15.159 | <.001 |
| price\_to\_book\_value\_per\_share | 2.263 | .274 | .202 | 8.269 | <.001 |
| capital\_adequacy\_total | .044 | .057 | .019 | .769 | .442 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_score | 1.000 | -.731 | .042 | .090 | .039 |
| lnta | -.731 | 1.000 | -.198 | -.109 | .064 |
| tdta | .042 | -.198 | 1.000 | .076 | .041 |
| price\_to\_book\_value\_per\_share | .090 | -.109 | .076 | 1.000 | -.009 |
| capital\_adequacy\_total | .039 | .064 | .041 | -.009 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_143 |  |  |

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| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .470 |
| R Square | .221 |
| Adjusted R Square | .217 |
| Std. Error of the Estimate | 4.868 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 8937.656 | 7 | 1276.808 | 53.874 | <.001 |
| Residual | 31568.043 | 1332 | 23.700 |  |  |
| Total | 40505.699 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 13.812 | 1.566 |  | 8.820 | <.001 |
| esg\_score | -.065 | .016 | -.170 | -4.160 | <.001 |
| lnta | -.027 | .153 | -.007 | -.177 | .860 |
| tdta | -41.398 | 2.690 | -.390 | -15.392 | <.001 |
| price\_to\_book\_value\_per\_share | 2.295 | .273 | .205 | 8.402 | <.001 |
| capital\_adequacy\_total | .021 | .058 | .009 | .357 | .721 |
| dummylarge | 3.316 | 1.154 | .092 | 2.872 | .004 |
| dummymid | 1.873 | .804 | .069 | 2.330 | .020 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_score | 1.000 | -.523 | .060 | .077 | .063 |
| lnta | -.523 | 1.000 | -.133 | -.113 | .116 |
| tdta | .060 | -.133 | 1.000 | .073 | .059 |
| price\_to\_book\_value\_per\_share | .077 | -.113 | .073 | 1.000 | -.012 |
| capital\_adequacy\_total | .063 | .116 | .059 | -.012 | 1.000 |
| dummylarge | -.201 | -.404 | -.119 | .028 | -.156 |
| dummymid | -.248 | -.300 | -.026 | .030 | -.033 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | dummylarge | dummymid |
| Equation 1 | Correlations | esg\_score | -.201 | -.248 |
| lnta | -.404 | -.300 |
| tdta | -.119 | -.026 |
| price\_to\_book\_value\_per\_share | .028 | .030 |
| capital\_adequacy\_total | -.156 | -.033 |
| dummylarge | 1.000 | .382 |
| dummymid | .382 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS esg\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| covid | predictor & instrumental |
| esg\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_144 |  |  |

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| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .535 |
| R Square | .286 |
| Adjusted R Square | .282 |
| Std. Error of the Estimate | 4.656 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 11562.277 | 8 | 1445.285 | 66.663 | <.001 |
| Residual | 28856.498 | 1331 | 21.680 |  |  |
| Total | 40418.775 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 15.067 | 1.502 |  | 10.031 | <.001 |
| esg\_score | -.038 | .015 | -.100 | -2.526 | .012 |
| lnta | -.015 | .146 | -.004 | -.106 | .916 |
| tdta | -49.123 | 2.666 | -.462 | -18.423 | <.001 |
| price\_to\_book\_value\_per\_share | 1.480 | .272 | .132 | 5.452 | <.001 |
| capital\_adequacy\_total | .097 | .056 | .042 | 1.746 | .081 |
| dummylarge | 2.845 | 1.105 | .079 | 2.575 | .010 |
| dummymid | .769 | .775 | .028 | .992 | .321 |
| covid | -3.104 | .282 | -.280 | -11.025 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_score | 1.000 | -.515 | .016 | .031 | .081 |
| lnta | -.515 | 1.000 | -.131 | -.111 | .116 |
| tdta | .016 | -.131 | 1.000 | .139 | .024 |
| price\_to\_book\_value\_per\_share | .031 | -.111 | .139 | 1.000 | -.046 |
| capital\_adequacy\_total | .081 | .116 | .024 | -.046 | 1.000 |
| dummylarge | -.204 | -.404 | -.104 | .037 | -.159 |
| dummymid | -.263 | -.299 | .009 | .063 | -.048 |
| covid | -.156 | -.010 | .263 | .273 | -.125 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | dummylarge | dummymid | covid |
| Equation 1 | Correlations | esg\_score | -.204 | -.263 | -.156 |
| lnta | -.404 | -.299 | -.010 |
| tdta | -.104 | .009 | .263 |
| price\_to\_book\_value\_per\_share | .037 | .063 | .273 |
| capital\_adequacy\_total | -.159 | -.048 | -.125 |
| dummylarge | 1.000 | .384 | .038 |
| dummymid | .384 | 1.000 | .128 |
| covid | .038 | .128 | 1.000 |

\*\*\*\*DDa analysis: esg\_score\_combined\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_combined\_score /INSTRUMENTS esg\_combined\_score\_1 /CONSTANT.

**Two-stage Least Squares Analysis**

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| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_combined\_score /INSTRUMENTS esg\_combined\_score\_1 /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_combined\_score | predictor |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_145 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .148 |
| R Square | .022 |
| Adjusted R Square | .021 |
| Std. Error of the Estimate | 5.444 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 887.132 | 1 | 887.132 | 29.934 | <.001 |
| Residual | 39653.610 | 1338 | 29.636 |  |  |
| Total | 40540.742 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 14.333 | .484 |  | 29.629 | <.001 |
| esg\_combined\_score | -.070 | .013 | -.166 | -5.471 | <.001 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_combined\_score lnta /INSTRUMENTS esg\_combined\_score\_1 lnta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_combined\_score lnta /INSTRUMENTS esg\_combined\_score\_1 lnta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_146 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .159 |
| R Square | .025 |
| Adjusted R Square | .024 |
| Std. Error of the Estimate | 5.434 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 1027.212 | 2 | 513.606 | 17.397 | <.001 |
| Residual | 39472.562 | 1337 | 29.523 |  |  |
| Total | 40499.774 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 15.845 | .935 |  | 16.941 | <.001 |
| esg\_combined\_score | -.053 | .016 | -.126 | -3.243 | .001 |
| lnta | -.234 | .129 | -.063 | -1.819 | .069 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.625 |
| lnta | -.625 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_combined\_score lnta tdta /INSTRUMENTS esg\_combined\_score\_1 lnta tdta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_combined\_score lnta tdta /INSTRUMENTS esg\_combined\_score\_1 lnta tdta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_147 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .423 |
| R Square | .179 |
| Adjusted R Square | .177 |
| Std. Error of the Estimate | 4.997 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 7248.725 | 3 | 2416.242 | 96.780 | <.001 |
| Residual | 33355.088 | 1336 | 24.966 |  |  |
| Total | 40603.812 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 15.265 | .861 |  | 17.730 | <.001 |
| esg\_combined\_score | -.076 | .015 | -.180 | -5.022 | <.001 |
| lnta | .257 | .122 | .069 | 2.104 | .036 |
| tdta | -43.316 | 2.742 | -.408 | -15.797 | <.001 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.627 | .099 |
| lnta | -.627 | 1.000 | -.256 |
| tdta | .099 | -.256 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_148 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .468 |
| R Square | .219 |
| Adjusted R Square | .217 |
| Std. Error of the Estimate | 4.871 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 8883.524 | 4 | 2220.881 | 93.606 | <.001 |
| Residual | 31673.900 | 1335 | 23.726 |  |  |
| Total | 40557.424 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 12.609 | .898 |  | 14.037 | <.001 |
| esg\_combined\_score | -.067 | .015 | -.159 | -4.536 | <.001 |
| lnta | .164 | .120 | .044 | 1.367 | .172 |
| tdta | -41.532 | 2.682 | -.391 | -15.488 | <.001 |
| price\_to\_book\_value\_per\_share | 2.262 | .273 | .202 | 8.292 | <.001 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta | price\_to\_book\_value\_per\_share |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.629 | .104 | .074 |
| lnta | -.629 | 1.000 | -.262 | -.095 |
| tdta | .104 | -.262 | 1.000 | .080 |
| price\_to\_book\_value\_per\_share | .074 | -.095 | .080 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_149 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .468 |
| R Square | .219 |
| Adjusted R Square | .216 |
| Std. Error of the Estimate | 4.872 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 8890.051 | 5 | 1778.010 | 74.899 | <.001 |
| Residual | 31667.658 | 1334 | 23.739 |  |  |
| Total | 40557.709 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 12.238 | 1.304 |  | 9.388 | <.001 |
| esg\_combined\_score | -.066 | .015 | -.157 | -4.473 | <.001 |
| lnta | .166 | .120 | .045 | 1.387 | .166 |
| tdta | -41.481 | 2.686 | -.390 | -15.444 | <.001 |
| price\_to\_book\_value\_per\_share | 2.261 | .273 | .202 | 8.287 | <.001 |
| capital\_adequacy\_total | .022 | .057 | .010 | .391 | .696 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.621 | .109 | .073 | .115 |
| lnta | -.621 | 1.000 | -.260 | -.095 | .035 |
| tdta | .109 | -.260 | 1.000 | .080 | .051 |
| price\_to\_book\_value\_per\_share | .073 | -.095 | .080 | 1.000 | -.004 |
| capital\_adequacy\_total | .115 | .035 | .051 | -.004 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_150 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .472 |
| R Square | .223 |
| Adjusted R Square | .219 |
| Std. Error of the Estimate | 4.866 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 9032.625 | 7 | 1290.375 | 54.490 | <.001 |
| Residual | 31542.987 | 1332 | 23.681 |  |  |
| Total | 40575.612 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 14.115 | 1.564 |  | 9.027 | <.001 |
| esg\_combined\_score | -.072 | .016 | -.171 | -4.619 | <.001 |
| lnta | -.015 | .150 | -.004 | -.102 | .919 |
| tdta | -41.877 | 2.695 | -.394 | -15.538 | <.001 |
| price\_to\_book\_value\_per\_share | 2.293 | .273 | .205 | 8.402 | <.001 |
| capital\_adequacy\_total | .011 | .058 | .005 | .198 | .843 |
| dummylarge | 1.717 | 1.138 | .048 | 1.508 | .132 |
| dummymid | 1.947 | .803 | .072 | 2.426 | .015 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.497 | .093 | .071 | .091 |
| lnta | -.497 | 1.000 | -.149 | -.109 | .106 |
| tdta | .093 | -.149 | 1.000 | .074 | .064 |
| price\_to\_book\_value\_per\_share | .071 | -.109 | .074 | 1.000 | -.011 |
| capital\_adequacy\_total | .091 | .106 | .064 | -.011 | 1.000 |
| dummylarge | .120 | -.585 | -.096 | .053 | -.134 |
| dummymid | -.244 | -.317 | -.034 | .031 | -.039 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | dummylarge | dummymid |
| Equation 1 | Correlations | esg\_combined\_score | .120 | -.244 |
| lnta | -.585 | -.317 |
| tdta | -.096 | -.034 |
| price\_to\_book\_value\_per\_share | .053 | .031 |
| capital\_adequacy\_total | -.134 | -.039 |
| dummylarge | 1.000 | .308 |
| dummymid | .308 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH esg\_combined\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS esg\_combined\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| esg\_combined\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| covid | predictor & instrumental |
| esg\_combined\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_151 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .536 |
| R Square | .287 |
| Adjusted R Square | .283 |
| Std. Error of the Estimate | 4.654 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 11597.131 | 8 | 1449.641 | 66.921 | <.001 |
| Residual | 28831.885 | 1331 | 21.662 |  |  |
| Total | 40429.016 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 15.239 | 1.499 |  | 10.166 | <.001 |
| esg\_combined\_score | -.043 | .015 | -.101 | -2.828 | .005 |
| lnta | -.008 | .143 | -.002 | -.053 | .958 |
| tdta | -49.367 | 2.668 | -.465 | -18.505 | <.001 |
| price\_to\_book\_value\_per\_share | 1.483 | .271 | .133 | 5.466 | <.001 |
| capital\_adequacy\_total | .091 | .056 | .039 | 1.636 | .102 |
| dummylarge | 1.902 | 1.089 | .053 | 1.747 | .081 |
| dummymid | .822 | .774 | .030 | 1.062 | .289 |
| covid | -3.088 | .282 | -.279 | -10.962 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | esg\_combined\_score | lnta | tdta | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | esg\_combined\_score | 1.000 | -.488 | .047 | .024 | .110 |
| lnta | -.488 | 1.000 | -.147 | -.108 | .107 |
| tdta | .047 | -.147 | 1.000 | .140 | .028 |
| price\_to\_book\_value\_per\_share | .024 | -.108 | .140 | 1.000 | -.046 |
| capital\_adequacy\_total | .110 | .107 | .028 | -.046 | 1.000 |
| dummylarge | .121 | -.585 | -.097 | .047 | -.131 |
| dummymid | -.260 | -.316 | .001 | .065 | -.055 |
| covid | -.160 | -.013 | .258 | .273 | -.129 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | dummylarge | dummymid | covid |
| Equation 1 | Correlations | esg\_combined\_score | .121 | -.260 | -.160 |
| lnta | -.585 | -.316 | -.013 |
| tdta | -.097 | .001 | .258 |
| price\_to\_book\_value\_per\_share | .047 | .065 | .273 |
| capital\_adequacy\_total | -.131 | -.055 | -.129 |
| dummylarge | 1.000 | .303 | -.013 |
| dummymid | .303 | 1.000 | .129 |
| covid | -.013 | .129 | 1.000 |

\*\*\*\*DDa analysis: environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_152 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .162 |
| R Square | .026 |
| Adjusted R Square | .024 |
| Std. Error of the Estimate | 5.431 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 1057.136 | 3 | 352.379 | 11.948 | <.001 |
| Residual | 39403.158 | 1336 | 29.493 |  |  |
| Total | 40460.294 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 14.079 | .520 |  | 27.087 | <.001 |
| environmental\_pillar\_score | -.026 | .016 | -.085 | -1.616 | .106 |
| social\_pillar\_score | -.026 | .019 | -.076 | -1.376 | .169 |
| governance\_pillar\_score | -.012 | .010 | -.043 | -1.169 | .243 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.784 | -.114 |
| social\_pillar\_score | -.784 | 1.000 | -.208 |
| governance\_pillar\_score | -.114 | -.208 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_153 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .163 |
| R Square | .026 |
| Adjusted R Square | .024 |
| Std. Error of the Estimate | 5.432 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 1070.586 | 4 | 267.646 | 9.070 | <.001 |
| Residual | 39394.902 | 1335 | 29.509 |  |  |
| Total | 40465.488 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 14.323 | 1.263 |  | 11.344 | <.001 |
| environmental\_pillar\_score | -.025 | .018 | -.081 | -1.434 | .152 |
| social\_pillar\_score | -.024 | .020 | -.071 | -1.184 | .237 |
| governance\_pillar\_score | -.012 | .010 | -.043 | -1.165 | .244 |
| lnta | -.037 | .175 | -.010 | -.210 | .834 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.522 | -.123 | -.360 |
| social\_pillar\_score | -.522 | 1.000 | -.206 | -.410 |
| governance\_pillar\_score | -.123 | -.206 | 1.000 | .050 |
| lnta | -.360 | -.410 | .050 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta /CONSTANT. |
| Resources | Processor Time | 00:00:00.01 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_154 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .417 |
| R Square | .174 |
| Adjusted R Square | .171 |
| Std. Error of the Estimate | 5.013 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 7053.593 | 5 | 1410.719 | 56.136 | <.001 |
| Residual | 33523.630 | 1334 | 25.130 |  |  |
| Total | 40577.223 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 14.543 | 1.165 |  | 12.480 | <.001 |
| environmental\_pillar\_score | -.018 | .016 | -.058 | -1.125 | .261 |
| social\_pillar\_score | -.022 | .019 | -.064 | -1.153 | .249 |
| governance\_pillar\_score | -.024 | .010 | -.083 | -2.448 | .014 |
| lnta | .300 | .163 | .081 | 1.836 | .067 |
| tdta | -42.163 | 2.746 | -.397 | -15.355 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.521 | -.127 | -.349 | -.059 |
| social\_pillar\_score | -.521 | 1.000 | -.204 | -.409 | .019 |
| governance\_pillar\_score | -.127 | -.204 | 1.000 | .042 | .059 |
| lnta | -.349 | -.409 | .042 | 1.000 | -.128 |
| tdta | -.059 | .019 | .059 | -.128 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_155 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .464 |
| R Square | .215 |
| Adjusted R Square | .211 |
| Std. Error of the Estimate | 4.888 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 8715.342 | 6 | 1452.557 | 60.791 | <.001 |
| Residual | 31851.049 | 1333 | 23.894 |  |  |
| Total | 40566.391 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 12.460 | 1.159 |  | 10.750 | <.001 |
| environmental\_pillar\_score | -.013 | .016 | -.043 | -.852 | .394 |
| social\_pillar\_score | -.010 | .018 | -.029 | -.527 | .598 |
| governance\_pillar\_score | -.026 | .009 | -.090 | -2.700 | .007 |
| lnta | .123 | .161 | .033 | .765 | .444 |
| tdta | -40.573 | 2.684 | -.382 | -15.117 | <.001 |
| price\_to\_book\_value\_per\_share | 2.300 | .276 | .206 | 8.333 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.515 | -.129 | -.350 | -.056 |
| social\_pillar\_score | -.515 | 1.000 | -.208 | -.417 | .026 |
| governance\_pillar\_score | -.129 | -.208 | 1.000 | .049 | .055 |
| lnta | -.350 | -.417 | .049 | 1.000 | -.136 |
| tdta | -.056 | .026 | .055 | -.136 | 1.000 |
| price\_to\_book\_value\_per\_share | .037 | .103 | -.050 | -.149 | .070 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |
|  |  |  | price\_to\_book\_value\_per\_share |
| Equation 1 | Correlations | environmental\_pillar\_score | .037 |
| social\_pillar\_score | .103 |
| governance\_pillar\_score | -.050 |
| lnta | -.149 |
| tdta | .070 |
| price\_to\_book\_value\_per\_share | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_156 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .464 |
| R Square | .215 |
| Adjusted R Square | .211 |
| Std. Error of the Estimate | 4.889 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 8733.155 | 7 | 1247.594 | 52.196 | <.001 |
| Residual | 31837.836 | 1332 | 23.902 |  |  |
| Total | 40570.991 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 11.733 | 1.476 |  | 7.947 | <.001 |
| environmental\_pillar\_score | -.014 | .016 | -.044 | -.863 | .389 |
| social\_pillar\_score | -.009 | .019 | -.027 | -.490 | .624 |
| governance\_pillar\_score | -.026 | .009 | -.090 | -2.708 | .007 |
| lnta | .130 | .161 | .035 | .805 | .421 |
| tdta | -40.490 | 2.686 | -.381 | -15.072 | <.001 |
| price\_to\_book\_value\_per\_share | 2.298 | .276 | .206 | 8.327 | <.001 |
| capital\_adequacy\_total | .045 | .057 | .019 | .776 | .438 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.514 | -.129 | -.350 | -.055 |
| social\_pillar\_score | -.514 | 1.000 | -.208 | -.415 | .028 |
| governance\_pillar\_score | -.129 | -.208 | 1.000 | .049 | .054 |
| lnta | -.350 | -.415 | .049 | 1.000 | -.135 |
| tdta | -.055 | .028 | .054 | -.135 | 1.000 |
| price\_to\_book\_value\_per\_share | .037 | .103 | -.050 | -.149 | .070 |
| capital\_adequacy\_total | .010 | .053 | -.010 | .026 | .039 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |
|  |  |  | price\_to\_book\_value\_per\_share | capital\_adequacy\_total |
| Equation 1 | Correlations | environmental\_pillar\_score | .037 | .010 |
| social\_pillar\_score | .103 | .053 |
| governance\_pillar\_score | -.050 | -.010 |
| lnta | -.149 | .026 |
| tdta | .070 | .039 |
| price\_to\_book\_value\_per\_share | 1.000 | -.002 |
| capital\_adequacy\_total | -.002 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_157 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .470 |
| R Square | .221 |
| Adjusted R Square | .216 |
| Std. Error of the Estimate | 4.878 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 8976.833 | 9 | 997.426 | 41.925 | <.001 |
| Residual | 31641.512 | 1330 | 23.791 |  |  |
| Total | 40618.345 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 13.936 | 1.615 |  | 8.627 | <.001 |
| environmental\_pillar\_score | -.034 | .017 | -.108 | -1.973 | .049 |
| social\_pillar\_score | -.010 | .018 | -.029 | -.528 | .598 |
| governance\_pillar\_score | -.024 | .009 | -.083 | -2.506 | .012 |
| lnta | -.030 | .167 | -.008 | -.177 | .859 |
| tdta | -41.141 | 2.695 | -.387 | -15.268 | <.001 |
| price\_to\_book\_value\_per\_share | 2.310 | .275 | .207 | 8.389 | <.001 |
| capital\_adequacy\_total | .017 | .058 | .007 | .288 | .773 |
| dummylarge | 3.654 | 1.226 | .102 | 2.980 | .003 |
| dummymid | 2.148 | .852 | .079 | 2.521 | .012 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.468 | -.142 | -.204 | -.026 |
| social\_pillar\_score | -.468 | 1.000 | -.207 | -.398 | .027 |
| governance\_pillar\_score | -.142 | -.207 | 1.000 | .027 | .046 |
| lnta | -.204 | -.398 | .027 | 1.000 | -.107 |
| tdta | -.026 | .027 | .046 | -.107 | 1.000 |
| price\_to\_book\_value\_per\_share | .030 | .103 | -.049 | -.145 | .069 |
| capital\_adequacy\_total | .062 | .052 | -.023 | .069 | .056 |
| dummylarge | -.336 | -.002 | .075 | -.266 | -.096 |
| dummymid | -.340 | -.014 | .028 | -.177 | -.009 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |
|  |  |  | price\_to\_book\_value\_per\_share | capital\_adequacy\_total | dummylarge | dummymid |
| Equation 1 | Correlations | environmental\_pillar\_score | .030 | .062 | -.336 | -.340 |
| social\_pillar\_score | .103 | .052 | -.002 | -.014 |
| governance\_pillar\_score | -.049 | -.023 | .075 | .028 |
| lnta | -.145 | .069 | -.266 | -.177 |
| tdta | .069 | .056 | -.096 | -.009 |
| price\_to\_book\_value\_per\_share | 1.000 | -.003 | .007 | .010 |
| capital\_adequacy\_total | -.003 | 1.000 | -.172 | -.057 |
| dummylarge | .007 | -.172 | 1.000 | .449 |
| dummymid | .010 | -.057 | .449 | 1.000 |

\* 2-Stage Least Squares.TSET NEWVAR=NONE.2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT.

**Two-stage Least Squares Analysis**

|  |  |  |
| --- | --- | --- |
| **Notes** |  |  |
| Output Created |  | 14-OCT-2025 03:43:14 |
| Comments |  |  |
| Input | Data | /Users/guillaumebld/Documents/Graduate\_Research/Professor Abol Jalilvand/fall2025/risk\_bank/risk\_bank/data/outputs/datasheet/esg\_dd\_pd\_20251014\_022322.csv |
| Active Dataset | DataSet2 |
| Filter | <none> |
| Weight | <none> |
| Split File | <none> |
| N of Rows in Working Data File | 1424 |
| Date | <none> |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| Cases Used | Statistics are based on all cases with valid data for all variables across all equations. |
| Syntax |  | 2SLS DD\_a WITH environmental\_pillar\_score social\_pillar\_score governance\_pillar\_score lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /INSTRUMENTS environmental\_pillar\_score\_1 social\_pillar\_score\_1 governance\_pillar\_score\_1 lnta tdta price\_to\_book\_value\_per\_share capital\_adequacy\_total dummylarge dummymid covid /CONSTANT. |
| Resources | Processor Time | 00:00:00.02 |
| Elapsed Time | 00:00:00.00 |
| Time Series Settings (TSET) | Amount of Output | PRINT = DEFAULT |
| Saving New Variables | NEWVAR = NONE |
| Treatment of User-Missing Values | MISSING = EXCLUDE |
| Equations Include | CONSTANT |

|  |  |  |
| --- | --- | --- |
| **Model Description** |  |  |
|  |  | Type of Variable |
| Equation 1 | DD\_a | dependent |
| environmental\_pillar\_score | predictor |
| social\_pillar\_score | predictor |
| governance\_pillar\_score | predictor |
| lnta | predictor & instrumental |
| tdta | predictor & instrumental |
| price\_to\_book\_value\_per\_share | predictor & instrumental |
| capital\_adequacy\_total | predictor & instrumental |
| dummylarge | predictor & instrumental |
| dummymid | predictor & instrumental |
| covid | predictor & instrumental |
| environmental\_pillar\_score\_1 | instrumental |
| social\_pillar\_score\_1 | instrumental |
| governance\_pillar\_score\_1 | instrumental |

|  |  |  |
| --- | --- | --- |
| MOD\_158 |  |  |

|  |  |  |
| --- | --- | --- |
| **Model Summary** |  |  |
| Equation 1 | Multiple R | .536 |
| R Square | .287 |
| Adjusted R Square | .282 |
| Std. Error of the Estimate | 4.660 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVA** |  |  |  |  |  |  |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Equation 1 | Regression | 11646.319 | 10 | 1164.632 | 53.624 | <.001 |
| Residual | 28864.053 | 1329 | 21.719 |  |  |
| Total | 40510.372 | 1339 |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Coefficients** |  |  |  |  |  |  |
|  |  | Unstandardized Coefficients |  | Beta | t | Sig. |
|  | B | Std. Error |
| Equation 1 | (Constant) | 15.342 | 1.549 |  | 9.903 | <.001 |
| environmental\_pillar\_score | -.029 | .016 | -.092 | -1.760 | .079 |
| social\_pillar\_score | .008 | .018 | .025 | .469 | .639 |
| governance\_pillar\_score | -.019 | .009 | -.067 | -2.118 | .034 |
| lnta | -.037 | .159 | -.010 | -.231 | .817 |
| tdta | -49.109 | 2.671 | -.462 | -18.384 | <.001 |
| price\_to\_book\_value\_per\_share | 1.492 | .273 | .133 | 5.469 | <.001 |
| capital\_adequacy\_total | .097 | .056 | .042 | 1.732 | .083 |
| dummylarge | 3.145 | 1.172 | .087 | 2.684 | .007 |
| dummymid | 1.005 | .820 | .037 | 1.226 | .220 |
| covid | -3.157 | .282 | -.285 | -11.209 | <.001 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | environmental\_pillar\_score | social\_pillar\_score | governance\_pillar\_score | lnta | tdta |
| Equation 1 | Correlations | environmental\_pillar\_score | 1.000 | -.464 | -.143 | -.205 | -.025 |
| social\_pillar\_score | -.464 | 1.000 | -.204 | -.396 | -.007 |
| governance\_pillar\_score | -.143 | -.204 | 1.000 | .027 | .042 |
| lnta | -.205 | -.396 | .027 | 1.000 | -.101 |
| tdta | -.025 | -.007 | .042 | -.101 | 1.000 |
| price\_to\_book\_value\_per\_share | .029 | .065 | -.050 | -.138 | .135 |
| capital\_adequacy\_total | .062 | .067 | -.022 | .067 | .019 |
| dummylarge | -.336 | -.006 | .075 | -.265 | -.084 |
| dummymid | -.338 | -.029 | .027 | -.175 | .022 |
| covid | .000 | -.125 | -.010 | .006 | .267 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficient Correlations** |  |  |  |  |  |  |  |
|  |  |  | price\_to\_book\_value\_per\_share | capital\_adequacy\_total | dummylarge | dummymid | covid |
| Equation 1 | Correlations | environmental\_pillar\_score | .029 | .062 | -.336 | -.338 | .000 |
| social\_pillar\_score | .065 | .067 | -.006 | -.029 | -.125 |
| governance\_pillar\_score | -.050 | -.022 | .075 | .027 | -.010 |
| lnta | -.138 | .067 | -.265 | -.175 | .006 |
| tdta | .135 | .019 | -.084 | .022 | .267 |
| price\_to\_book\_value\_per\_share | 1.000 | -.037 | .016 | .040 | .265 |
| capital\_adequacy\_total | -.037 | 1.000 | -.175 | -.071 | -.128 |
| dummylarge | .016 | -.175 | 1.000 | .449 | .033 |
| dummymid | .040 | -.071 | .449 | 1.000 | .117 |
| covid | .265 | -.128 | .033 | .117 | 1.000 |