# Table 2: Baseline result

Standard errors clustered at the county level are reported in parentheses under the coefficients. \*\*\*, \*\*, and \* indicate the statical significance at the 1%, 5%, and 10% levels, respectively.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Dependent Variable** | **Rate Spread** | **Rate Spread** | **Rate Spread** | **Interest Rate** | **Interest Rate** | **Interest Rate** |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Carcinogen Exposure | 0.003\*\* | 0.004\*\*\* | 0.001\* | 0.003\*\* | 0.003\*\*\* | 0.002\*\* |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Loan Purpose | 0.018\*\*\* | 0.019\*\*\* | 0.034\*\*\* | 0.014\*\*\* | 0.015\*\*\* | 0.026\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) |
| Bank | 0.011 | 0.012 | -0.013 | 0.007 | 0.007 | -0.139\*\*\* |
|  | (0.011) | (0.011) | (0.022) | (0.008) | (0.008) | (0.022) |
| Loan-to-Value Ratio | 0.434\*\*\* | 0.436\*\*\* | 0.430\*\*\* | 0.102\*\*\* | 0.104\*\*\* | 0.085\*\*\* |
|  | (0.016) | (0.016) | (0.012) | (0.014) | (0.014) | (0.010) |
| Age | 0.048\*\*\* | 0.048\*\*\* | 0.025\*\*\* | 0.057\*\*\* | 0.057\*\*\* | 0.038\*\*\* |
|  | (0.004) | (0.004) | (0.003) | (0.004) | (0.003) | (0.003) |
| Age2 | -0.005\*\*\* | -0.005\*\*\* | -0.001\*\*\* | -0.005\*\*\* | -0.005\*\*\* | -0.003\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Income | -0.336\*\*\* | -0.334\*\*\* | -0.305\*\*\* | -0.337\*\*\* | -0.330\*\*\* | -0.158\*\*\* |
|  | (0.053) | (0.053) | (0.035) | (0.055) | (0.055) | (0.041) |
| Income2 | 0.016\*\*\* | 0.016\*\*\* | 0.016\*\*\* | 0.017\*\*\* | 0.016\*\*\* | 0.010\*\*\* |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) | (0.002) |
| Male | -0.004 | -0.004 | -0.001 | -0.007\*\* | -0.007\*\* | -0.004\*\* |
|  | (0.002) | (0.002) | (0.002) | (0.003) | (0.003) | (0.002) |
| Race: Asian vs. White | -0.061\*\*\* | -0.061\*\*\* | -0.054\*\*\* | -0.065\*\*\* | -0.064\*\*\* | -0.057\*\*\* |
|  | (0.006) | (0.006) | (0.003) | (0.006) | (0.006) | (0.003) |
| Race: Black vs. White | 0.124\*\*\* | 0.123\*\*\* | 0.118\*\*\* | 0.086\*\*\* | 0.085\*\*\* | 0.075\*\*\* |
|  | (0.004) | (0.004) | (0.003) | (0.004) | (0.004) | (0.003) |
| Race: Natives vs. White | 0.056\*\*\* | 0.056\*\*\* | 0.053\*\*\* | 0.040\*\*\* | 0.039\*\*\* | 0.034\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) |
| Property Value | -0.327\*\*\* | -0.326\*\*\* | -0.331\*\*\* | -0.265\*\*\* | -0.264\*\*\* | -0.266\*\*\* |
|  | (0.011) | (0.011) | (0.007) | (0.009) | (0.009) | (0.006) |
| Metropolitan | 0.021\*\*\* | 0.020\*\*\* | 0.019\*\*\* | 0.018\*\*\* | 0.017\*\*\* | 0.011\*\*\* |
|  | (0.006) | (0.006) | (0.004) | (0.005) | (0.005) | (0.004) |
| County Land Area | -0.000 | -0.000 | -0.000 | -0.000\* | -0.000\* | -0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| County Hou. Density | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| County Unemp. Rate | 0.012\*\*\* | 0.016\*\*\* | 0.010\*\*\* | 0.011\*\* | 0.014\*\*\* | 0.009\*\*\* |
|  | (0.005) | (0.003) | (0.002) | (0.005) | (0.003) | (0.002) |
| County Non-carc Waste | -0.002 | -0.003\* | -0.000 | -0.002 | -0.003\*\* | -0.001 |
|  | (0.002) | (0.002) | (0.001) | (0.001) | (0.001) | (0.001) |
| Year Fixed Effect | Yes | No | No | Yes | No | No |
| State Fixed Effect | Yes | No | No | Yes | No | No |
| Year×State Fixed Effect | No | Yes | Yes | No | Yes | Yes |
| Lender Fixed Effect | No | No | Yes | No | No | Yes |
| Number of Obs. | 975,916 | 975,916 | 975,719 | 975,916 | 975,916 | 975,719 |
| Adjusted R­­2 | 0.231 | 0.235 | 0.377 | 0.668 | 0.669 | 0.713 |

# **Table 3:** Robustness test with alternative variables

Standard errors clustered at the county level are reported in parentheses under the coefficients. \*\*\*, \*\*, and \* indicate the statical significance at the 1%, 5%, and 10% levels, respectively.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Dependent Variable** | **US30Y Spread** | **US30Y Spread** | **US30Y**  **Spread** | **Interest Rate** | **Interest Rate** | **Interest Rate** |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Carcinogen Air Exposure | 0.002\*\* | 0.002\*\* | 0.001\*\* | 0.002\*\* | 0.002\*\* | 0.001\*\* |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Loan Purpose | 0.014\*\*\* | 0.015\*\*\* | 0.026\*\*\* | 0.014\*\*\* | 0.015\*\*\* | 0.026\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) |
| Bank | 0.007 | 0.007 | -0.138\*\*\* | 0.007 | 0.007 | -0.138\*\*\* |
|  | (0.008) | (0.008) | (0.021) | (0.008) | (0.008) | (0.021) |
| Loan-to-Value Ratio | 0.101\*\*\* | 0.103\*\*\* | 0.084\*\*\* | 0.101\*\*\* | 0.103\*\*\* | 0.084\*\*\* |
|  | (0.014) | (0.014) | (0.010) | (0.014) | (0.014) | (0.010) |
| Age | 0.057\*\*\* | 0.056\*\*\* | 0.038\*\*\* | 0.057\*\*\* | 0.056\*\*\* | 0.038\*\*\* |
|  | (0.004) | (0.003) | (0.003) | (0.004) | (0.003) | (0.003) |
| Age2 | -0.005\*\*\* | -0.005\*\*\* | -0.003\*\*\* | -0.005\*\*\* | -0.005\*\*\* | -0.003\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Income | -0.341\*\*\* | -0.334\*\*\* | -0.163\*\*\* | -0.341\*\*\* | -0.334\*\*\* | -0.163\*\*\* |
|  | (0.055) | (0.055) | (0.041) | (0.055) | (0.055) | (0.041) |
| Income2 | -0.007\*\* | -0.007\*\* | -0.004\*\* | -0.007\*\* | -0.007\*\* | -0.004\*\* |
|  | (0.003) | (0.003) | (0.002) | (0.003) | (0.003) | (0.002) |
| Male | 0.009\*\*\* | 0.008\*\*\* | 0.015\*\*\* | 0.009\*\*\* | 0.008\*\*\* | 0.015\*\*\* |
|  | (0.003) | (0.003) | (0.002) | (0.003) | (0.003) | (0.002) |
| Race: Asian vs. White | -0.065\*\*\* | -0.064\*\*\* | -0.057\*\*\* | -0.065\*\*\* | -0.064\*\*\* | -0.057\*\*\* |
|  | (0.006) | (0.006) | (0.003) | (0.006) | (0.006) | (0.003) |
| Race: Black vs. White | 0.086\*\*\* | 0.086\*\*\* | 0.075\*\*\* | 0.086\*\*\* | 0.086\*\*\* | 0.075\*\*\* |
|  | (0.004) | (0.004) | (0.003) | (0.004) | (0.004) | (0.003) |
| Race: Natives vs. White | 0.040\*\*\* | 0.039\*\*\* | 0.034\*\*\* | 0.040\*\*\* | 0.039\*\*\* | 0.034\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) | (0.004) |
| Property Value | -0.265\*\*\* | -0.264\*\*\* | -0.266\*\*\* | -0.265\*\*\* | -0.264\*\*\* | -0.266\*\*\* |
|  | (0.009) | (0.009) | (0.006) | (0.009) | (0.009) | (0.006) |
| Metropolitan | 0.017\*\*\* | 0.016\*\*\* | 0.010\*\*\* | 0.017\*\*\* | 0.016\*\*\* | 0.010\*\*\* |
|  | (0.005) | (0.005) | (0.003) | (0.005) | (0.005) | (0.003) |
| County Land Area | -0.000\* | -0.000\* | -0.000 | -0.000\* | -0.000\* | -0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| County Hou. Density | 0.000 | -0.000 | 0.000 | 0.000 | -0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| County Unemp. Rate | 0.012\*\* | 0.015\*\*\* | 0.009\*\*\* | 0.012\*\* | 0.015\*\*\* | 0.009\*\*\* |
|  | (0.005) | (0.003) | (0.002) | (0.005) | (0.003) | (0.002) |
| County Non-carc Waste | -0.002 | -0.002\* | -0.001 | -0.002 | -0.002\* | -0.001 |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Year Fixed Effect | Yes | No | No | Yes | No | No |
| State Fixed Effect | Yes | No | No | Yes | No | No |
| Year×State Fixed Effect | No | Yes | Yes | No | Yes | Yes |
| Lender Fixed Effect | No | No | Yes | No | No | Yes |
| Number of Obs. | 981,220 | 981,220 | 981,024 | 981,220 | 981,220 | 981,024 |
| Adjusted R­­2 | 0.300 | 0.303 | 0.395 | 0.667 | 0.669 | 0.713 |

# **Table 5:** Additional analysis – Bank and Non-bank Lenders

Standard errors clustered at the county level are reported in parentheses under the coefficients. \*\*\*, \*\*, and \* indicate the statical significance at the 1%, 5%, and 10% levels, respectively.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Dependent Variable** | **Rate Spread** | **Rate Spread** | **Interest Rate** | **Interest Rate** |
|  | (1) | (2) | (3) | (4) |
| Carcinogen Exposure | 0.003\*\* | 0.001 | 0.003\*\*\* | 0.002\*\* |
|  | (0.001) | (0.001) | (0.001) | (0.001) |
| Carc.Exposure×Bank | 0.000 | 0.001 | 0.000 | 0.001 |
|  | (0.002) | (0.001) | (0.002) | (0.001) |
| Bank | 0.007 | -0.020 | 0.006 | -0.146\*\*\* |
|  | (0.022) | (0.023) | (0.016) | (0.023) |
| Loan Purpose | 0.019\*\*\* | 0.034\*\*\* | 0.015\*\*\* | 0.026\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) |
| Loan-to-Value Ratio | 0.436\*\*\* | 0.430\*\*\* | 0.104\*\*\* | 0.085\*\*\* |
|  | (0.016) | (0.012) | (0.014) | (0.010) |
| Age | 0.048\*\*\* | 0.025\*\*\* | 0.057\*\*\* | 0.038\*\*\* |
|  | (0.004) | (0.003) | (0.003) | (0.003) |
| Age2 | -0.005\*\*\* | -0.001\*\*\* | -0.005\*\*\* | -0.003\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| Income | -0.334\*\*\* | -0.305\*\*\* | -0.330\*\*\* | -0.158\*\*\* |
|  | (0.053) | (0.035) | (0.055) | (0.041) |
| Income2 | 0.016\*\*\* | 0.016\*\*\* | 0.016\*\*\* | 0.010\*\*\* |
|  | (0.002) | (0.002) | (0.003) | (0.002) |
| Male | -0.004 | -0.001 | -0.007\*\* | -0.004\*\* |
|  | (0.002) | (0.002) | (0.003) | (0.002) |
| Race: Asian vs. White | -0.061\*\*\* | -0.054\*\*\* | -0.064\*\*\* | -0.057\*\*\* |
|  | (0.006) | (0.003) | (0.006) | (0.003) |
| Race: Black vs. White | 0.123\*\*\* | 0.118\*\*\* | 0.085\*\*\* | 0.075\*\*\* |
|  | (0.004) | (0.003) | (0.004) | (0.003) |
| Race: Natives vs. White | 0.056\*\*\* | 0.053\*\*\* | 0.039\*\*\* | 0.034\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) |
| Property Value | -0.326\*\*\* | -0.331\*\*\* | -0.264\*\*\* | -0.266\*\*\* |
|  | (0.011) | (0.007) | (0.009) | (0.006) |
| Metropolitan | 0.020\*\*\* | 0.019\*\*\* | 0.017\*\*\* | 0.011\*\*\* |
|  | (0.006) | (0.004) | (0.005) | (0.004) |
| County Land Area | -0.000 | -0.000 | -0.000\* | -0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| County Housing Density | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| County Unemp. Rate | 0.016\*\*\* | 0.010\*\*\* | 0.014\*\*\* | 0.009\*\*\* |
|  | (0.003) | (0.002) | (0.003) | (0.002) |
| County Non-carc Waste | -0.003\* | -0.000 | -0.003\*\* | -0.001 |
|  | (0.002) | (0.001) | (0.001) | (0.001) |
| Year×State Fixed Effects | Yes | Yes | Yes | Yes |
| Lender Fixed Effects | No | Yes | No | Yes |
| Number of Observations | 975,916 | 975,719 | 975,916 | 975,719 |
| Adjusted R­­2 | 0.235 | 0.377 | 0.669 | 0.713 |

# **Table 6: Additional analysis – Refinancing vs. New purchase Loans**

Standard errors clustered at the county level are reported in parentheses under the coefficients. \*\*\*, \*\*, and \* indicate the statical significance at the 1%, 5%, and 10% levels, respectively.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Dependent Variable** | **Rate Spread** | **Rate Spread** | **Interest Rate** | **Interest Rate** |
|  | (1) | (2) | (3) | (4) |
| Carcinogen Exposure | 0.004\*\*\* | 0.002\*\* | 0.003\*\* | 0.001 |
|  | (0.002) | (0.001) | (0.001) | (0.001) |
| Carc.Exposure×Purpose | -0.002\* | -0.002\* | 0.001 | 0.001 |
|  | (0.001) | (0.001) | (0.001) | (0.001) |
| Loan Purpose | 0.042\*\*\* | 0.056\*\*\* | 0.003 | 0.014 |
|  | (0.014) | (0.012) | (0.012) | (0.011) |
| Bank | 0.012 | -0.013 | 0.007 | -0.139\*\*\* |
|  | (0.011) | (0.022) | (0.008) | (0.022) |
| Loan-to-Value Ratio | 0.436\*\*\* | 0.430\*\*\* | 0.104\*\*\* | 0.085\*\*\* |
|  | (0.016) | (0.012) | (0.014) | (0.010) |
| Age | 0.048\*\*\* | 0.025\*\*\* | 0.057\*\*\* | 0.038\*\*\* |
|  | (0.004) | (0.003) | (0.003) | (0.003) |
| Age2 | -0.005\*\*\* | -0.001\*\*\* | -0.005\*\*\* | -0.003\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| Income | -0.334\*\*\* | -0.304\*\*\* | -0.330\*\*\* | -0.158\*\*\* |
|  | (0.053) | (0.035) | (0.055) | (0.041) |
| Income2 | 0.016\*\*\* | 0.016\*\*\* | 0.016\*\*\* | 0.010\*\*\* |
|  | (0.002) | (0.002) | (0.003) | (0.002) |
| Male | -0.004 | -0.001 | -0.007\*\* | -0.004\*\* |
|  | (0.002) | (0.002) | (0.003) | (0.002) |
| Race: Asian vs. White | -0.061\*\*\* | -0.054\*\*\* | -0.064\*\*\* | -0.057\*\*\* |
|  | (0.006) | (0.003) | (0.006) | (0.003) |
| Race: Black vs. White | 0.123\*\*\* | 0.118\*\*\* | 0.085\*\*\* | 0.075\*\*\* |
|  | (0.004) | (0.003) | (0.004) | (0.003) |
| Race: Natives vs. White | 0.056\*\*\* | 0.053\*\*\* | 0.039\*\*\* | 0.034\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) |
| Property Value | -0.326\*\*\* | -0.331\*\*\* | -0.264\*\*\* | -0.266\*\*\* |
|  | (0.011) | (0.007) | (0.009) | (0.006) |
| Metropolitan | 0.020\*\*\* | 0.019\*\*\* | 0.017\*\*\* | 0.011\*\*\* |
|  | (0.006) | (0.004) | (0.005) | (0.004) |
| County Land Area | -0.000 | -0.000 | -0.000\* | -0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| County Housing Density | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| County Unemp. Rate | 0.016\*\*\* | 0.010\*\*\* | 0.014\*\*\* | 0.009\*\*\* |
|  | (0.003) | (0.002) | (0.003) | (0.002) |
| County Non-carc Waste | -0.003\* | -0.000 | -0.003\*\* | -0.001 |
|  | (0.002) | (0.001) | (0.001) | (0.001) |
| Year×State Fixed Effects | Yes | Yes | Yes | Yes |
| Lender Fixed Effects | No | Yes | No | Yes |
| Number of Observations | 975,916 | 975,719 | 975,916 | 975,719 |
| Adjusted R­­2 | 0.235 | 0.377 | 0.669 | 0.713 |

# **Table 7:** Additional Analysis – Black vs. Non-black Borrowers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Dependent Variable** | **Rate Spread** | **Rate Spread** | **Interest Rate** | **Interest Rate** |
|  | (1) | (2) | (3) | (4) |
| Carcinogen Exposure | 0.003\*\* | 0.003\*\* | 0.003\*\* | 0.003\*\* |
|  | (0.001) | (0.001) | (0.001) | (0.001) |
| Carc.Exposure×Black | 0.002\*\* | 0.002\*\* | 0.000 | 0.000 |
|  | (0.001) | (0.001) | (0.001) | (0.001) |
| Black | 0.102\*\*\* | 0.101\*\*\* | 0.082\*\*\* | 0.081\*\*\* |
|  | (0.011) | (0.011) | (0.011) | (0.011) |
| Loan Purpose | 0.018\*\*\* | 0.019\*\*\* | 0.014\*\*\* | 0.015\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) |
| Bank | 0.011 | 0.011 | 0.007 | 0.007 |
|  | (0.011) | (0.011) | (0.008) | (0.008) |
| Loan-to-Value Ratio | 0.434\*\*\* | 0.436\*\*\* | 0.102\*\*\* | 0.104\*\*\* |
|  | (0.016) | (0.016) | (0.014) | (0.014) |
| Age | 0.048\*\*\* | 0.048\*\*\* | 0.057\*\*\* | 0.057\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.003) |
| Age2 | -0.005\*\*\* | -0.005\*\*\* | -0.005\*\*\* | -0.005\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| Income | -0.335\*\*\* | -0.333\*\*\* | -0.337\*\*\* | -0.330\*\*\* |
|  | (0.053) | (0.053) | (0.055) | (0.055) |
| Income2 | 0.016\*\*\* | 0.016\*\*\* | 0.017\*\*\* | 0.016\*\*\* |
|  | (0.002) | (0.002) | (0.002) | (0.003) |
| Male | -0.004 | -0.004 | -0.007\*\* | -0.007\*\* |
|  | (0.002) | (0.002) | (0.003) | (0.003) |
| Race: Asian vs. White | -0.062\*\*\* | -0.061\*\*\* | -0.065\*\*\* | -0.064\*\*\* |
|  | (0.006) | (0.006) | (0.006) | (0.006) |
| Race: Natives vs. White | 0.056\*\*\* | 0.056\*\*\* | 0.040\*\*\* | 0.039\*\*\* |
|  | (0.004) | (0.004) | (0.004) | (0.004) |
| Property Value | -0.327\*\*\* | -0.326\*\*\* | -0.265\*\*\* | -0.264\*\*\* |
|  | (0.011) | (0.011) | (0.009) | (0.009) |
| Metropolitan | 0.021\*\*\* | 0.020\*\*\* | 0.018\*\*\* | 0.017\*\*\* |
|  | (0.006) | (0.006) | (0.005) | (0.005) |
| County Land Area | -0.000 | -0.000 | -0.000\* | -0.000\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| County Housing Density | 0.000 | 0.000 | 0.000 | 0.000 |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| County Unemp. Rate | 0.012\*\*\* | 0.016\*\*\* | 0.011\*\* | 0.014\*\*\* |
|  | (0.005) | (0.003) | (0.005) | (0.003) |
| Other Non-carc Waste | -0.002 | -0.003 | -0.002 | -0.003\* |
|  | (0.002) | (0.002) | (0.001) | (0.001) |
| Year Fixed Effects | Yes | No | Yes | No |
| State Fixed Effects | Yes | No | Yes | No |
| Year×State Fixed Effects | No | Yes | No | Yes |
| Number of Observations | 975,916 | 975,916 | 975,916 | 975,916 |
| Adjusted R­­2 | 0.232 | 0.235 | 0.668 | 0.669 |