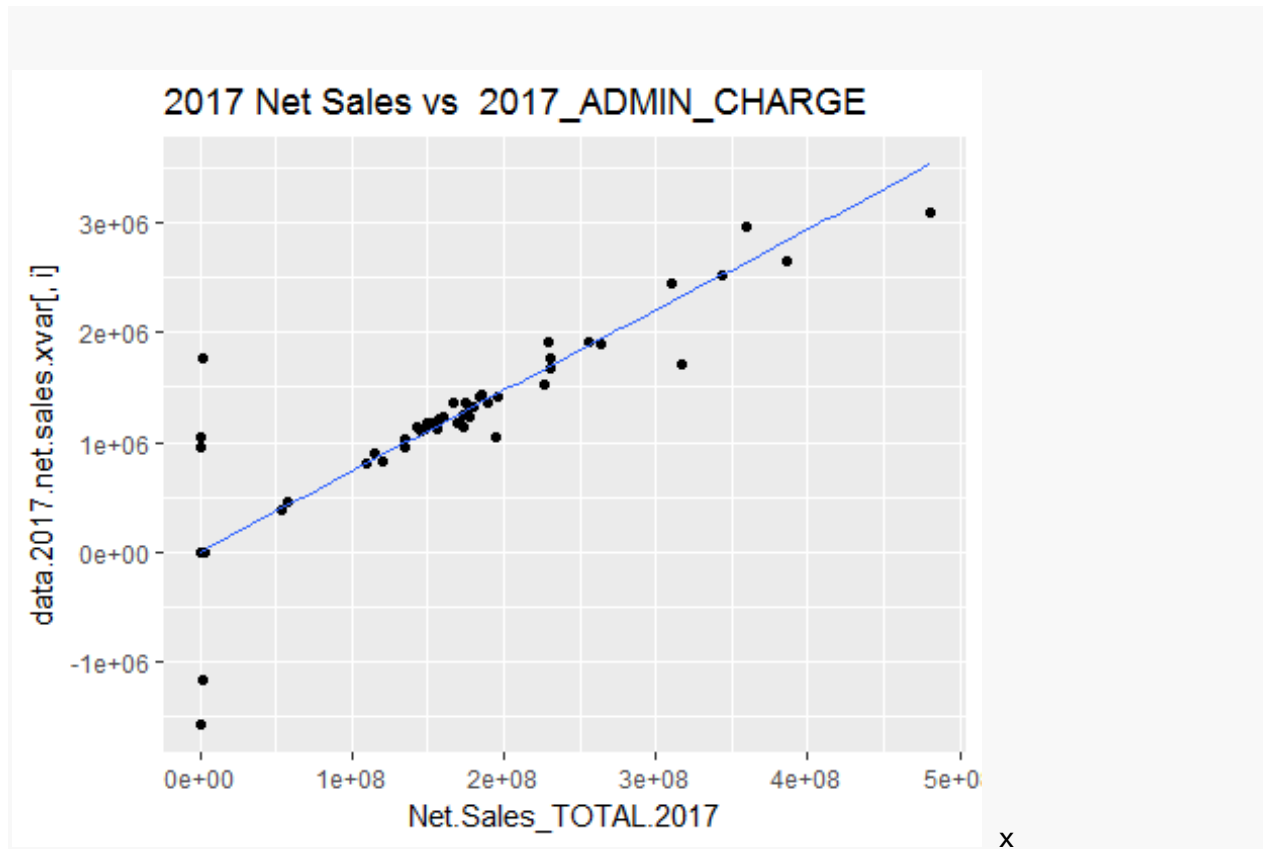
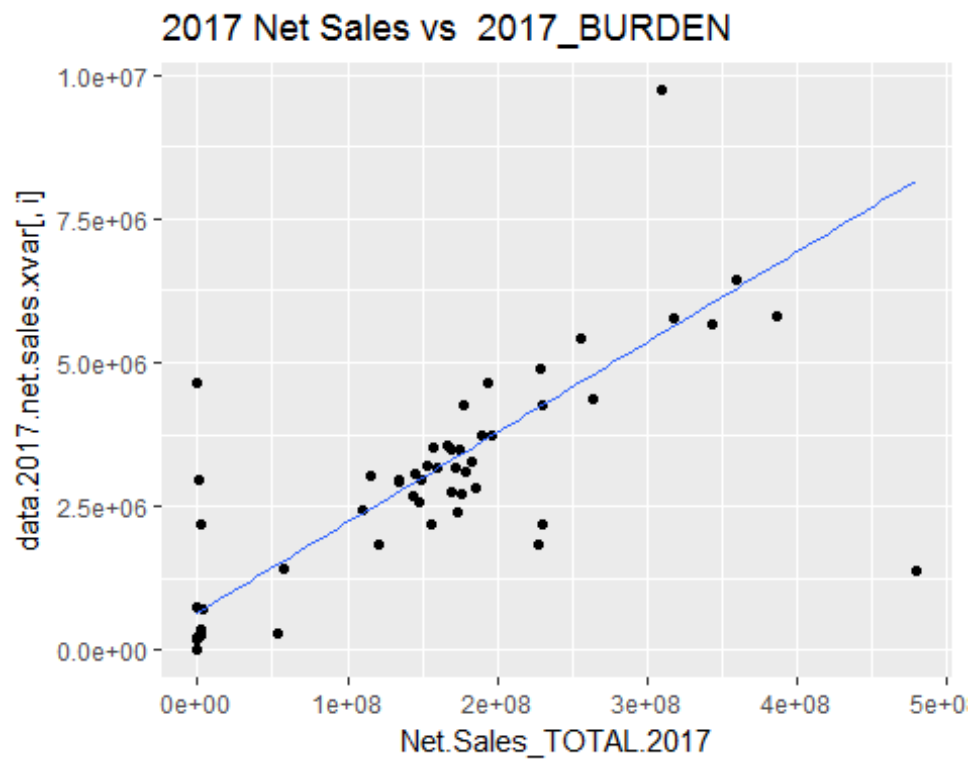
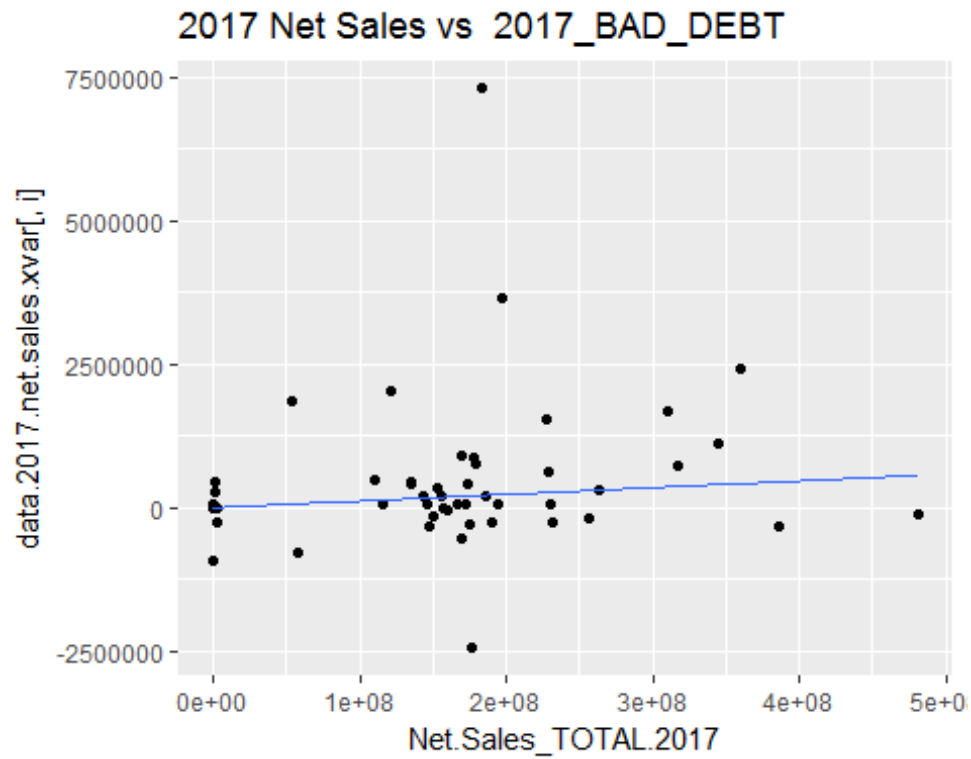


US.Level.Only.Total.OPEX.KDA

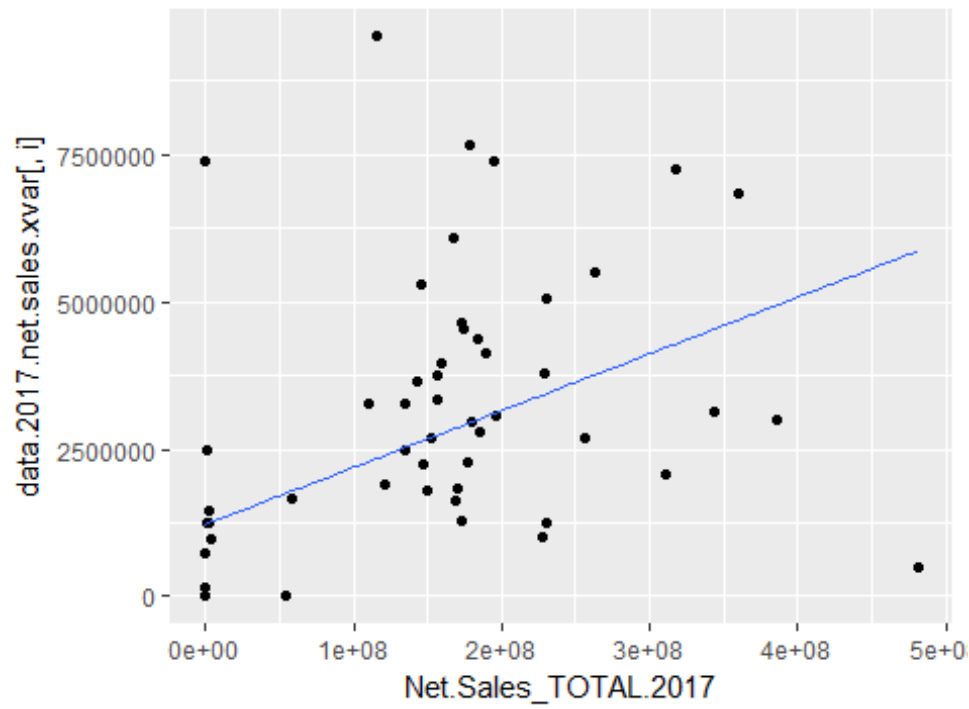
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Quantile Regression: Summary of Linear Relationship between Net Sales and OPEX Spend (Median Response)

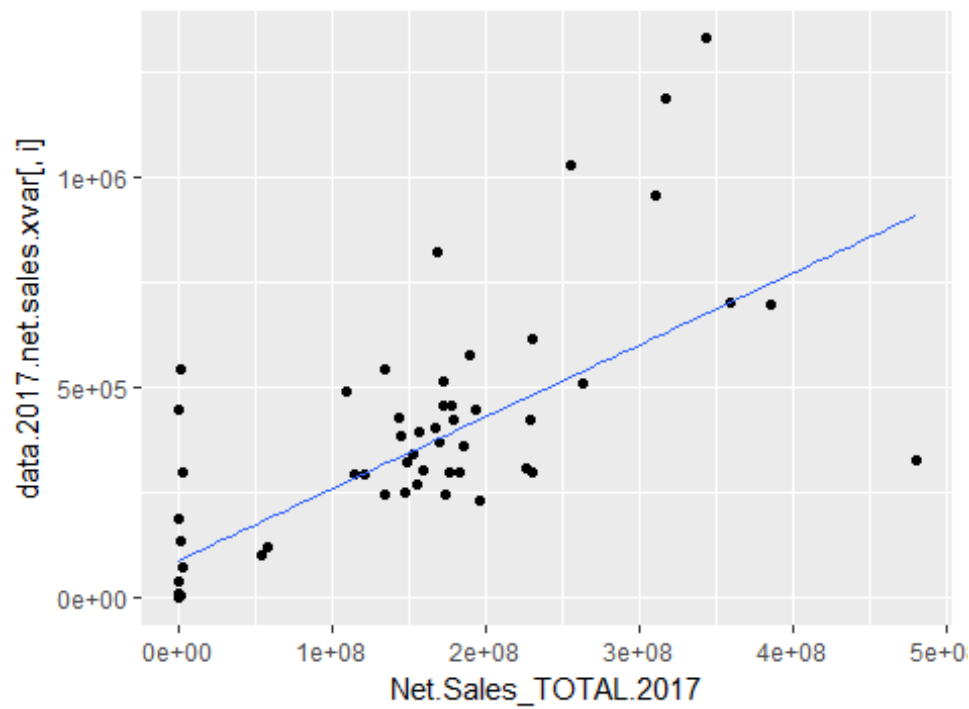


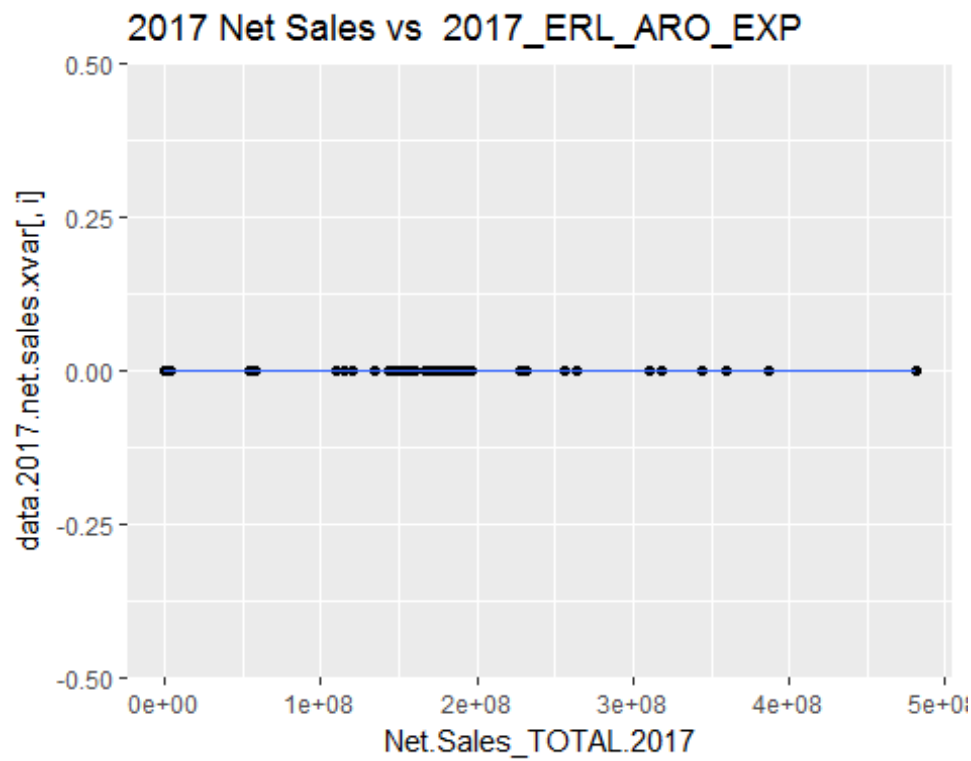
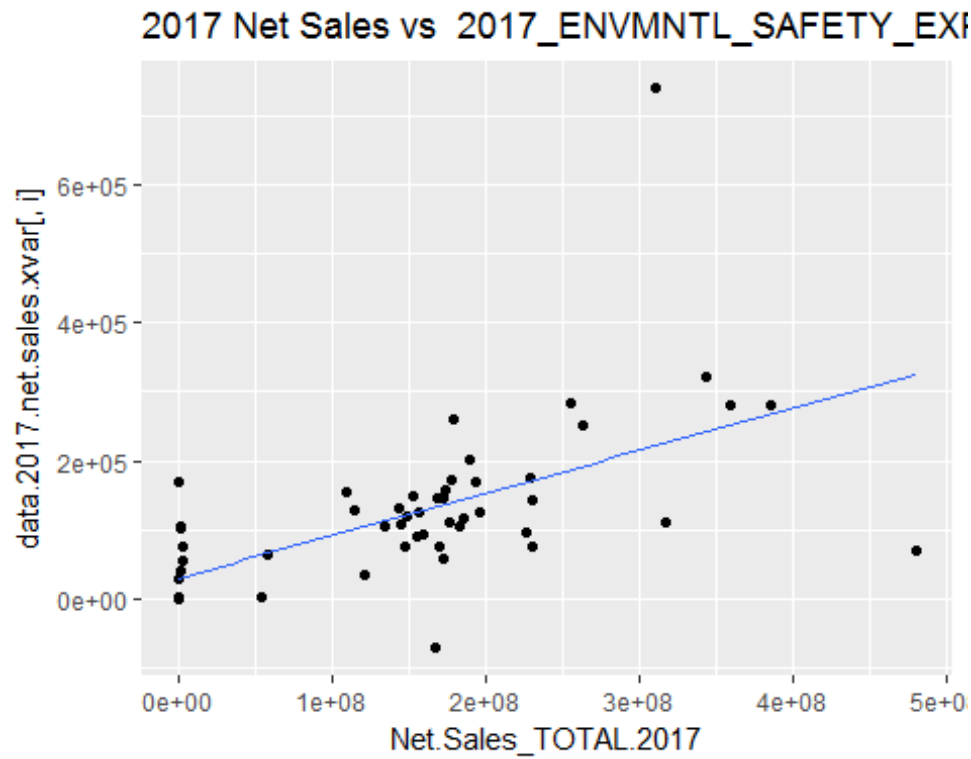


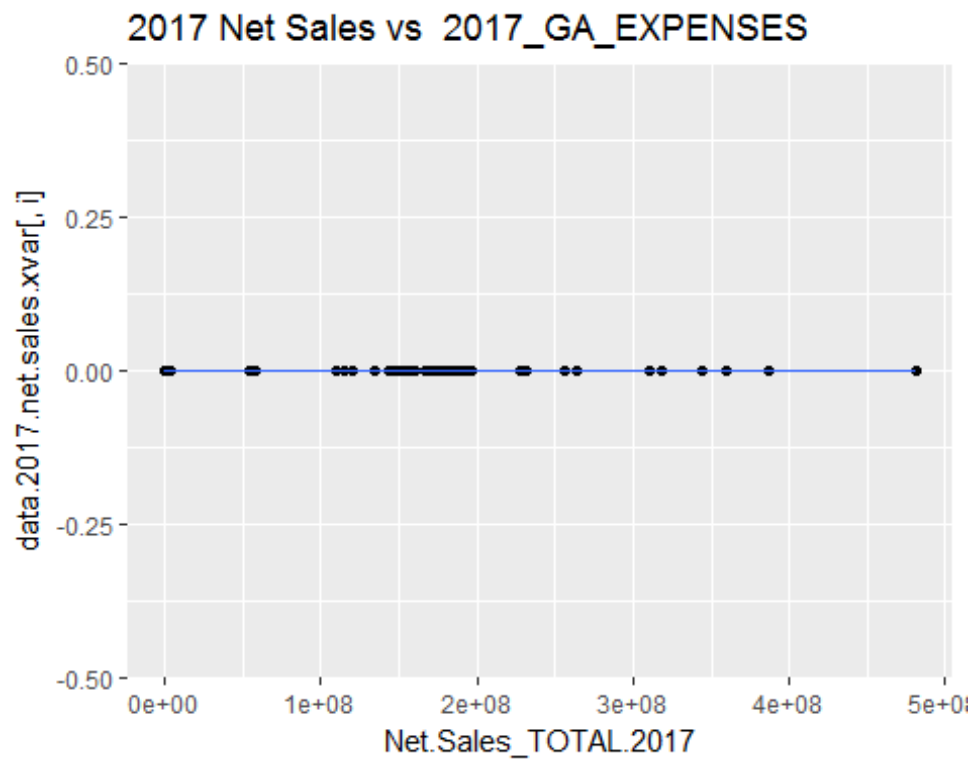
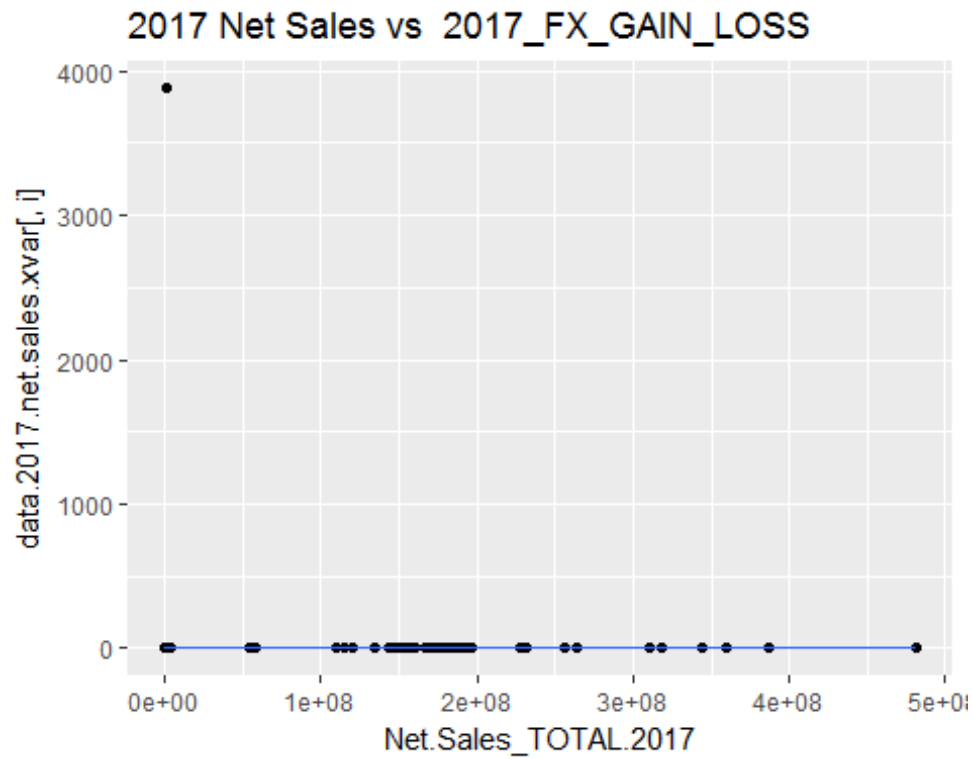
2017 Net Sales vs 2017_DEPR_AMORT



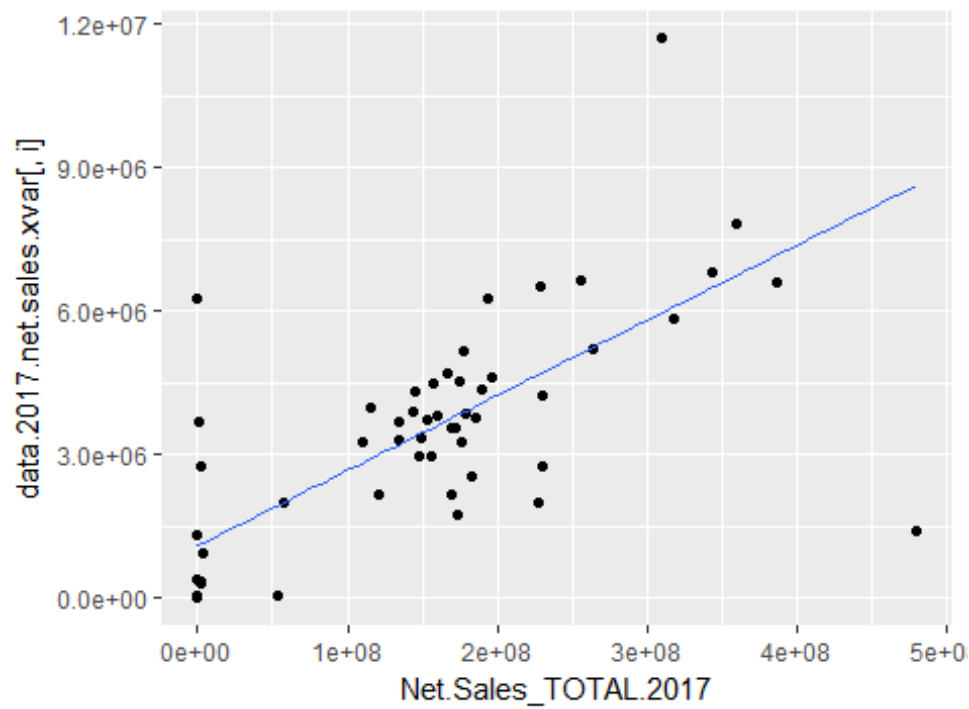
2017 Net Sales vs 2017_EMPLOYEE_EXPENSE



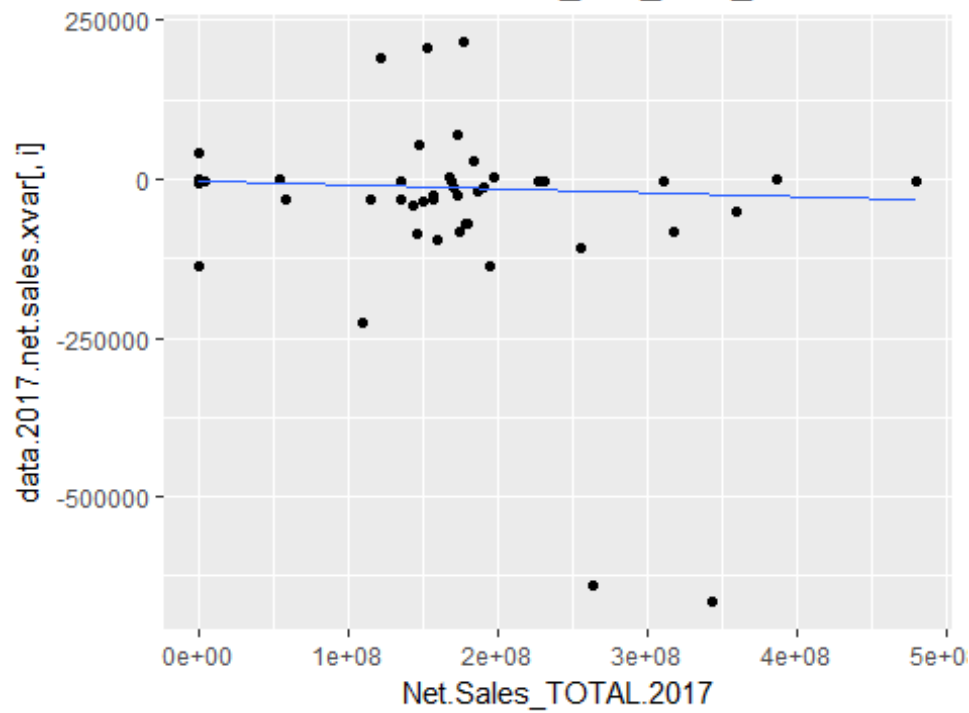




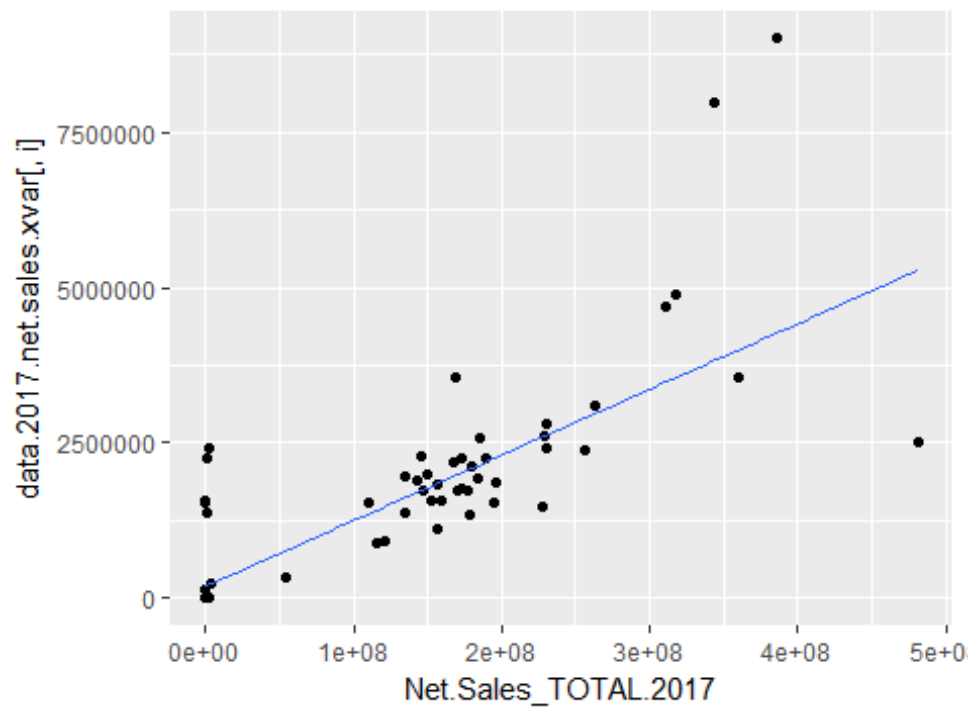
2017 Net Sales vs 2017_HOURLY WAGES



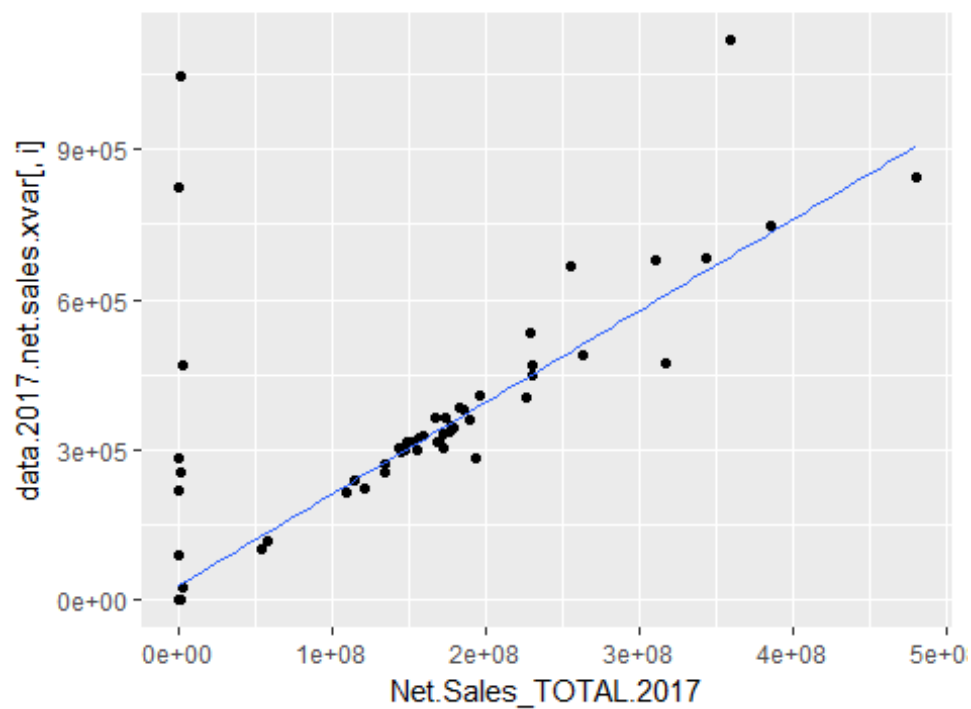
2017 Net Sales vs 2017_INC_EXP_OTHER



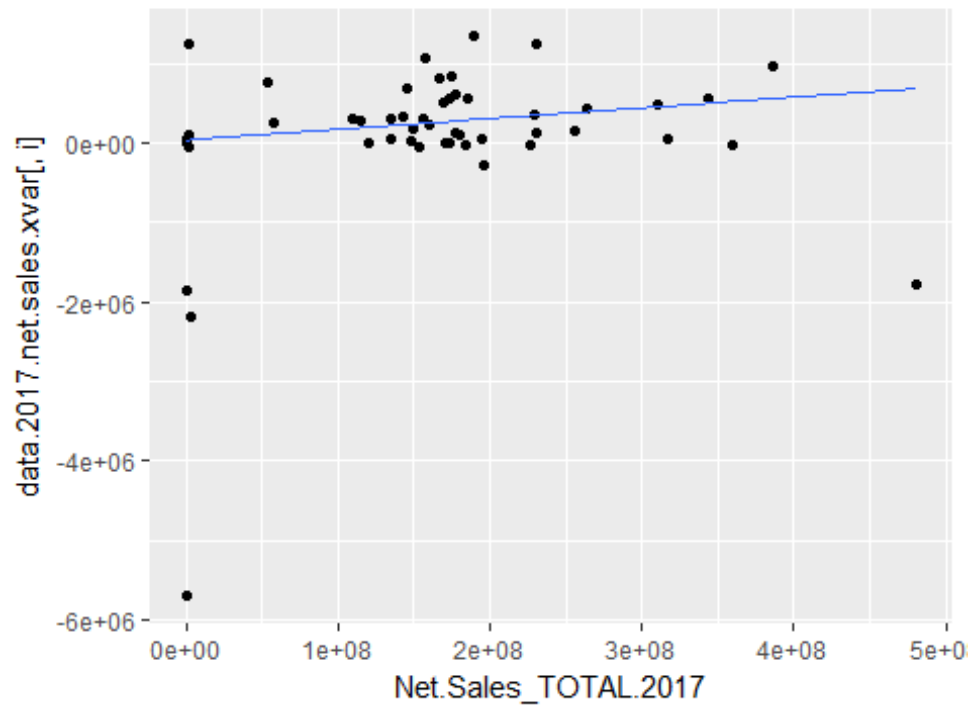
2017 Net Sales vs 2017_INCENTIVE



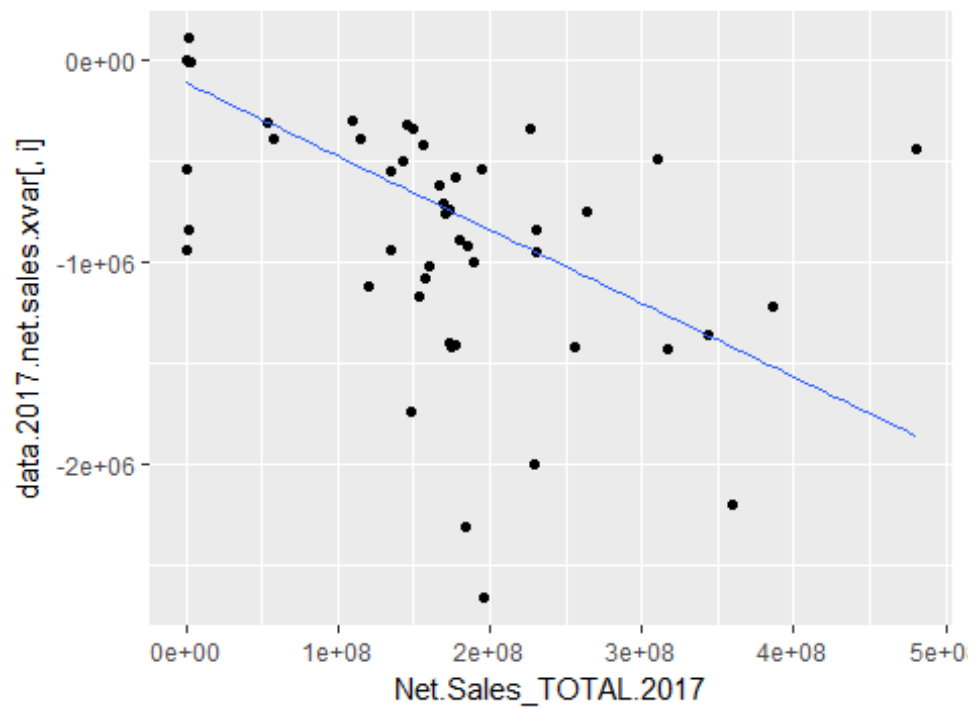
2017 Net Sales vs 2017_INSURANCE_PREMIUMS

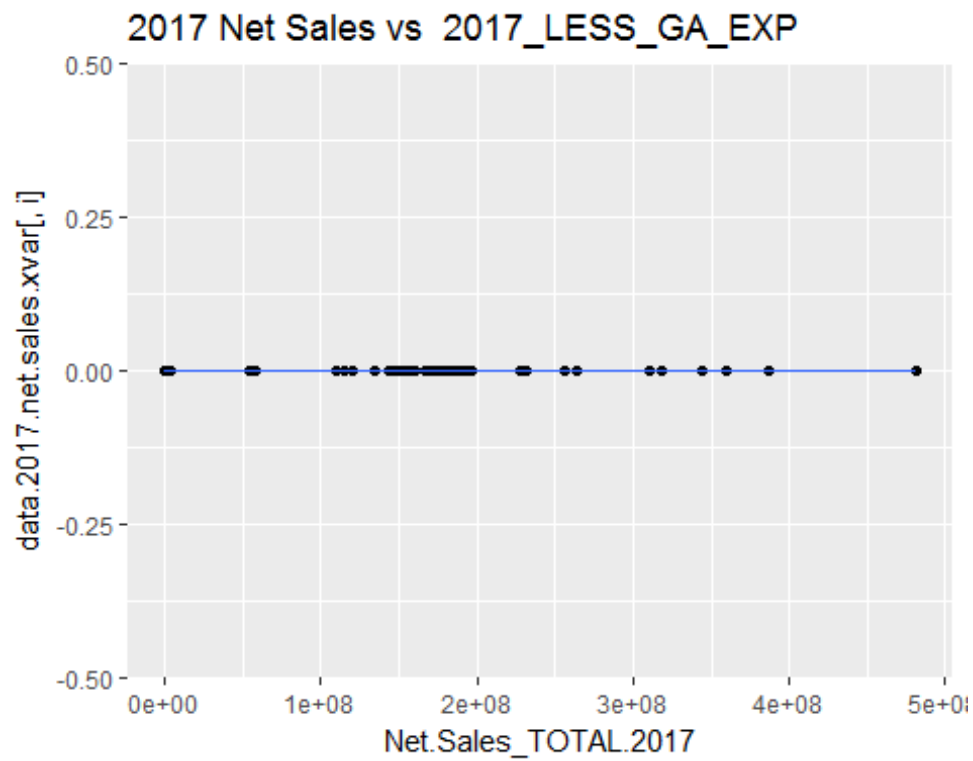
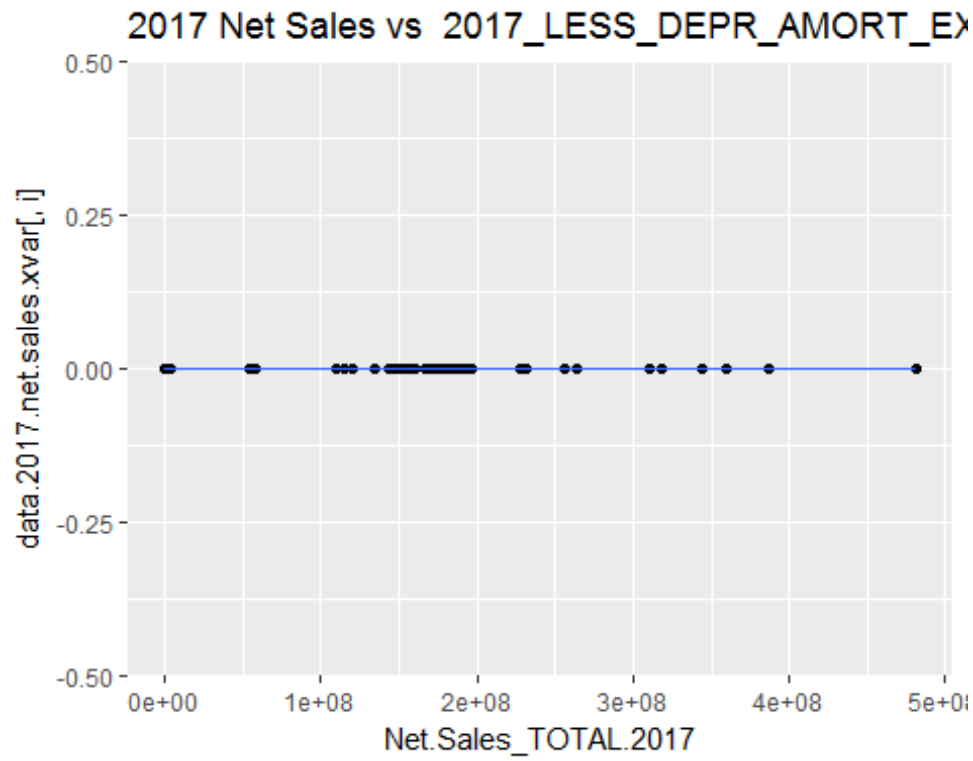


2017 Net Sales vs 2017_INTERBRANCH_CHRG

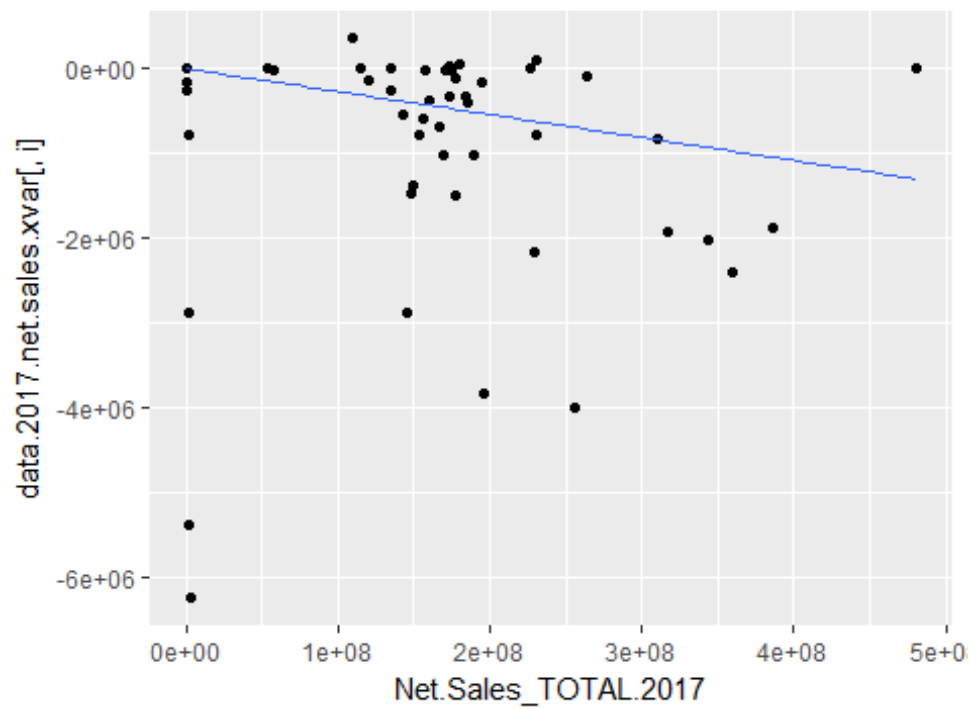


2017 Net Sales vs 2017_INTEREST_INCOME

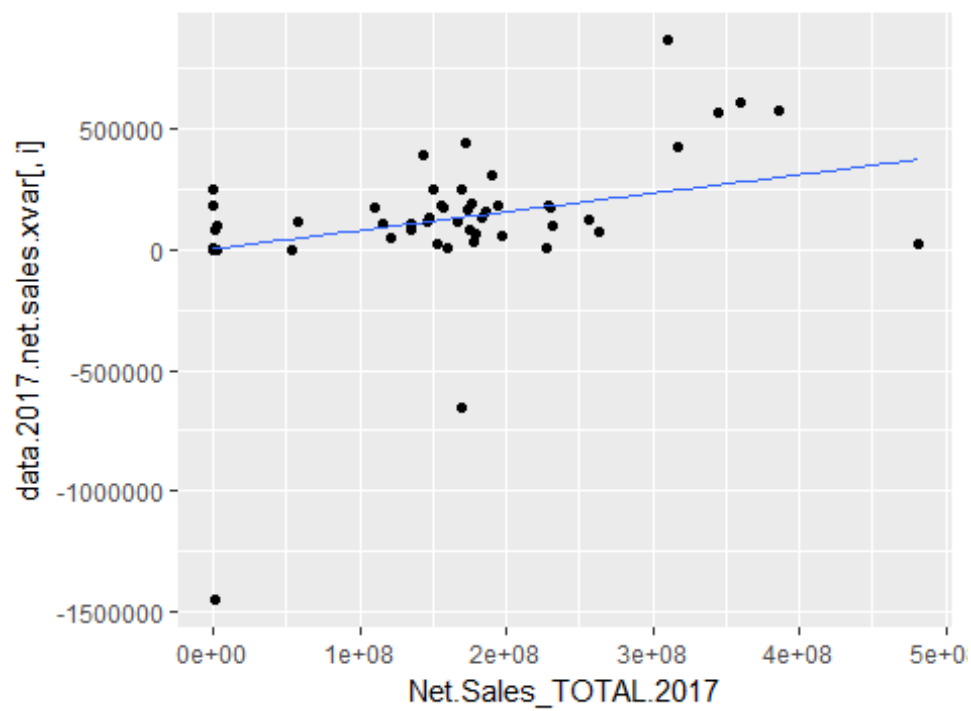


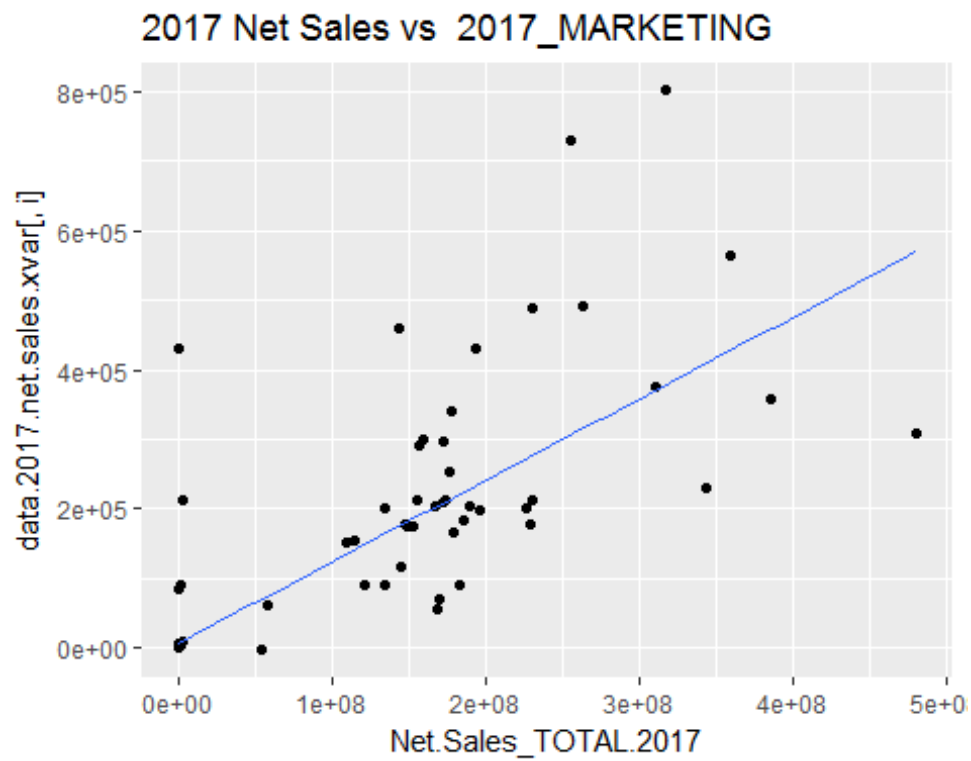
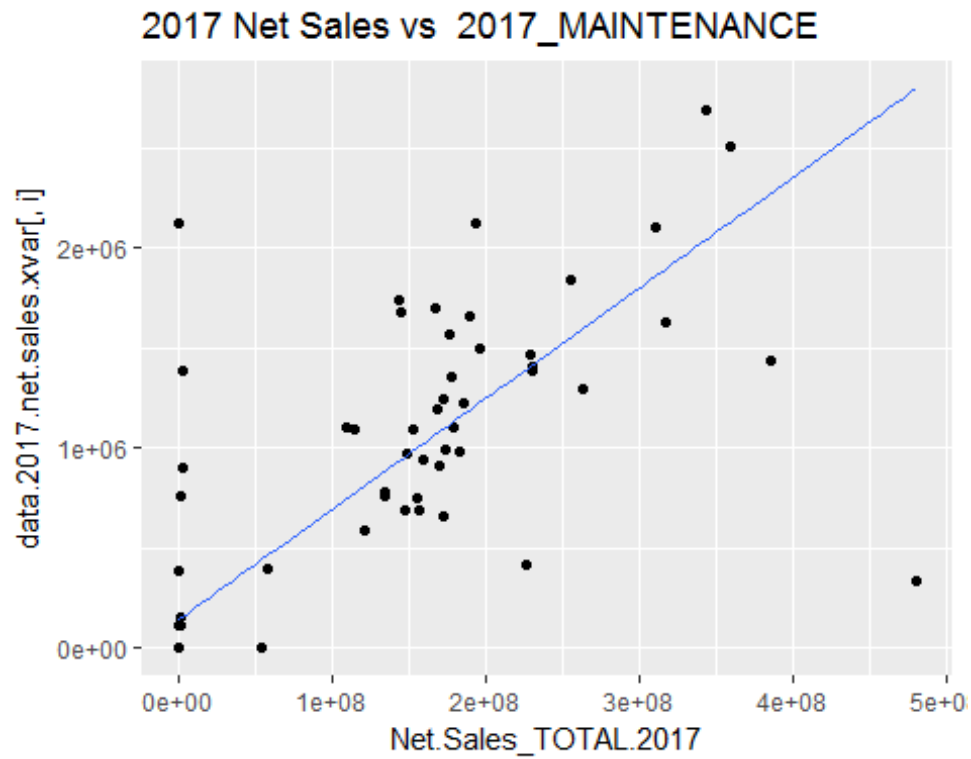


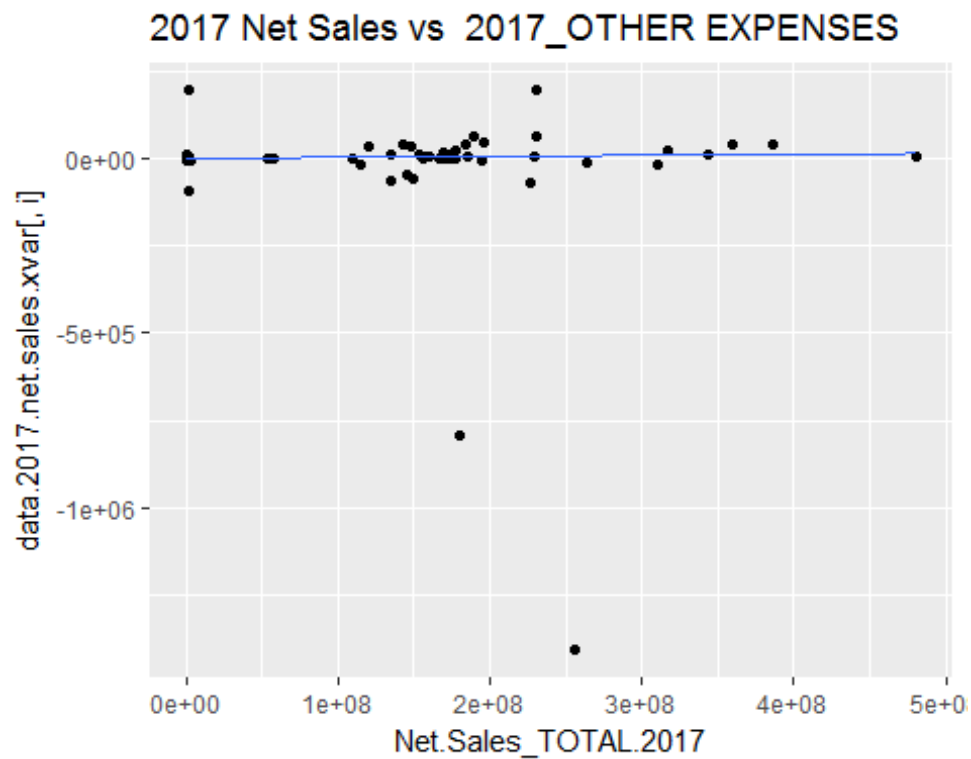
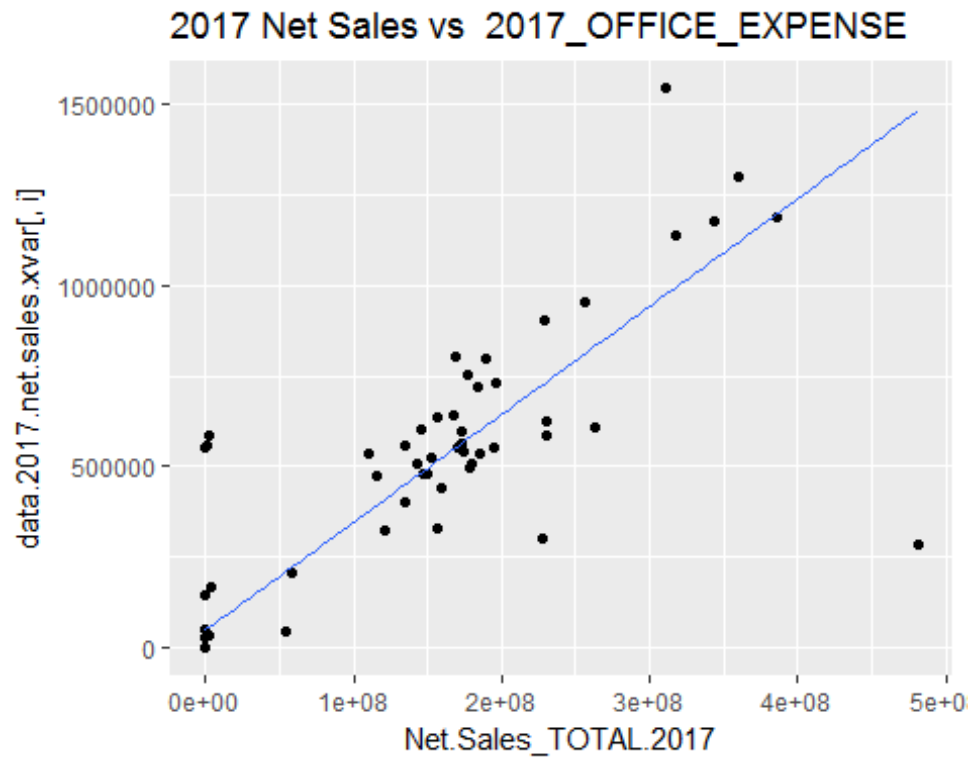
2017 Net Sales vs 2017_LESS_OTHER_EXP

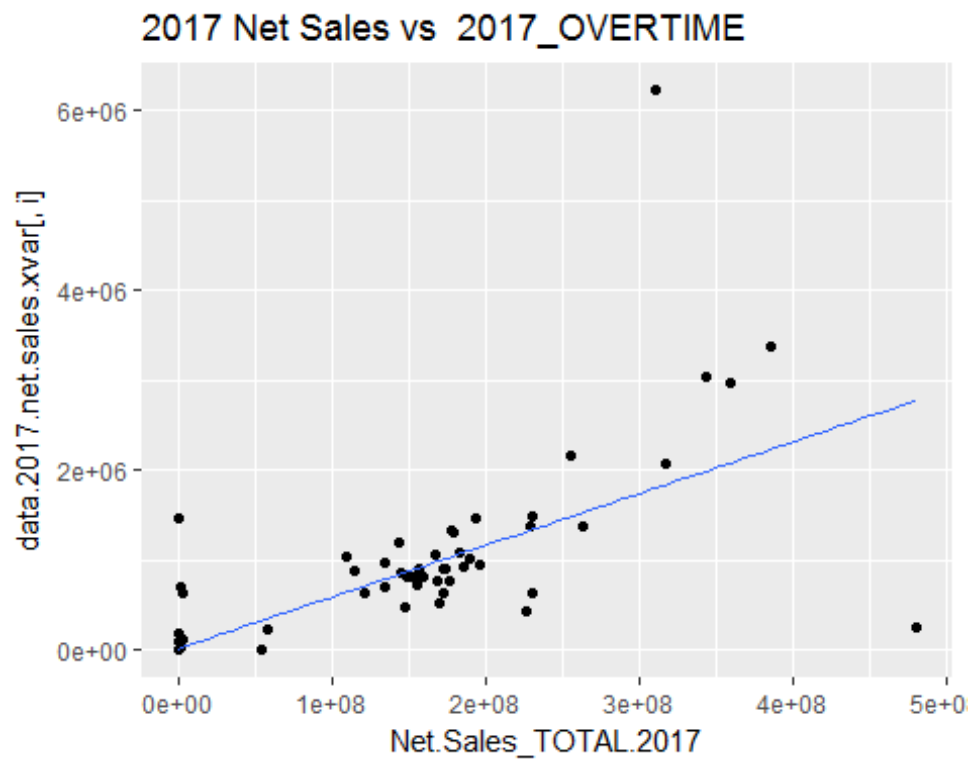
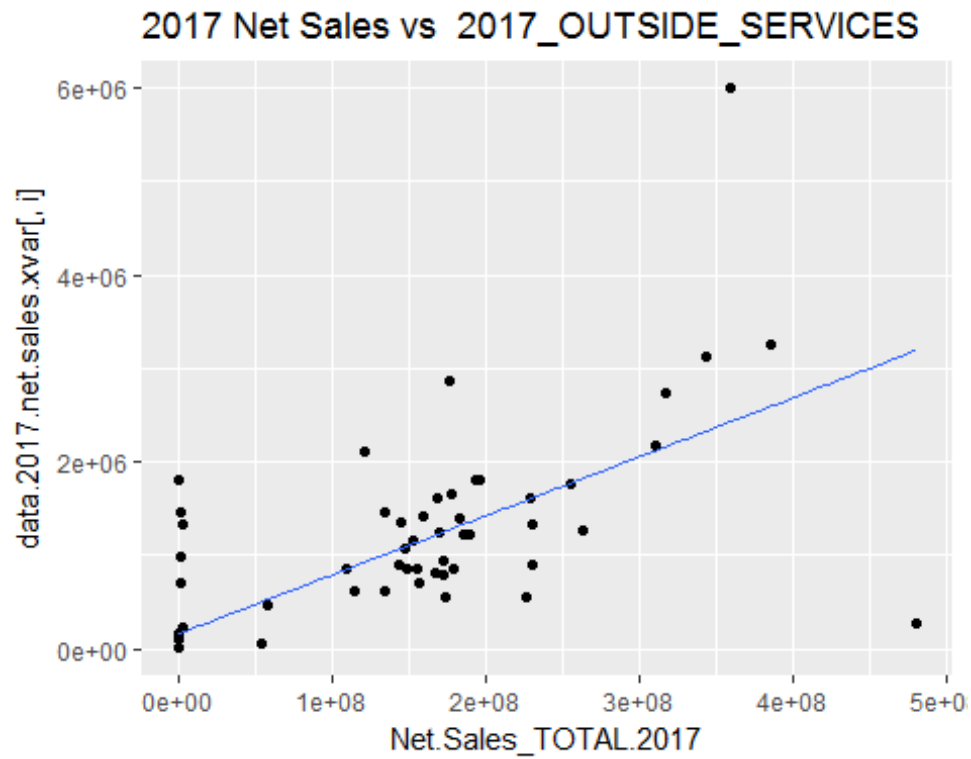


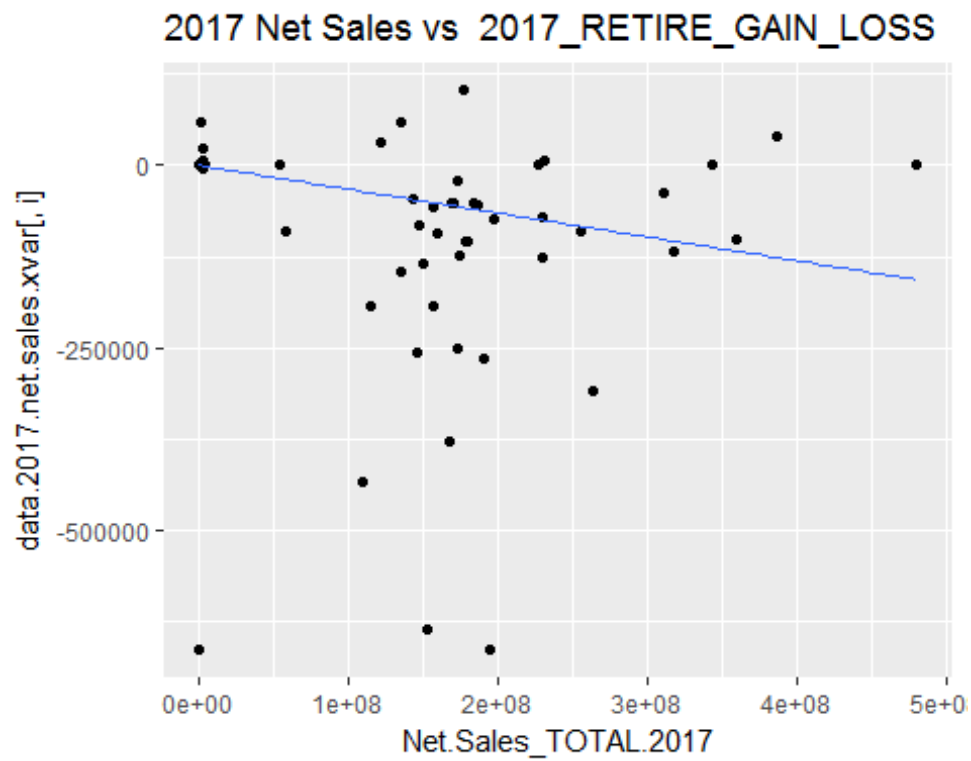
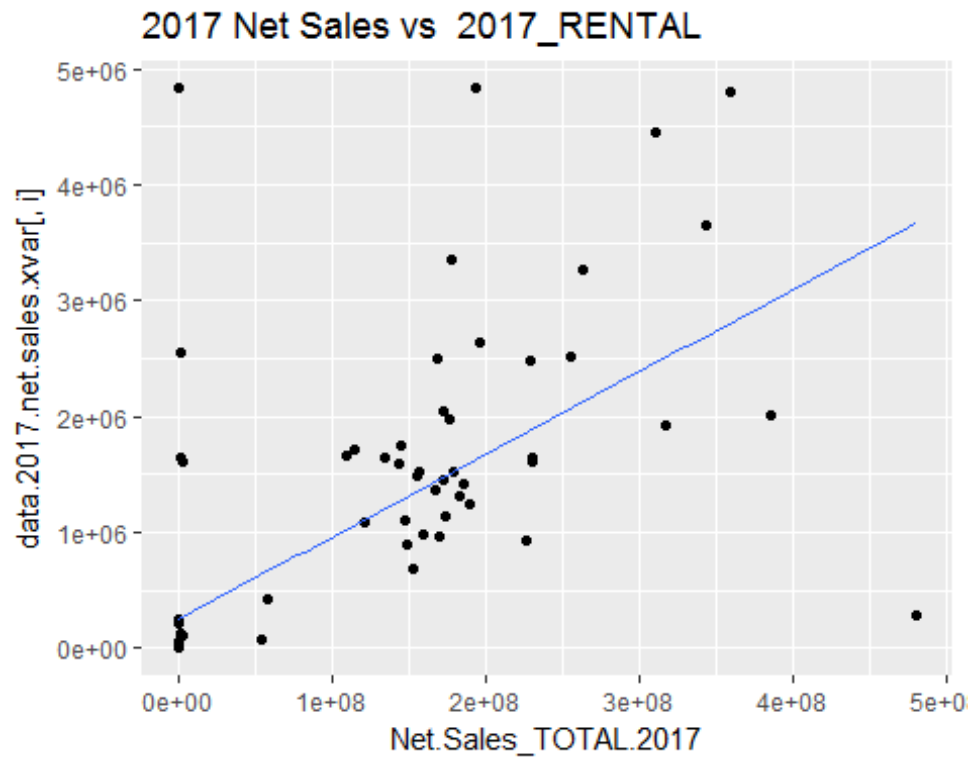
2017 Net Sales vs 2017_LOSS_DAMAGE_CLAI



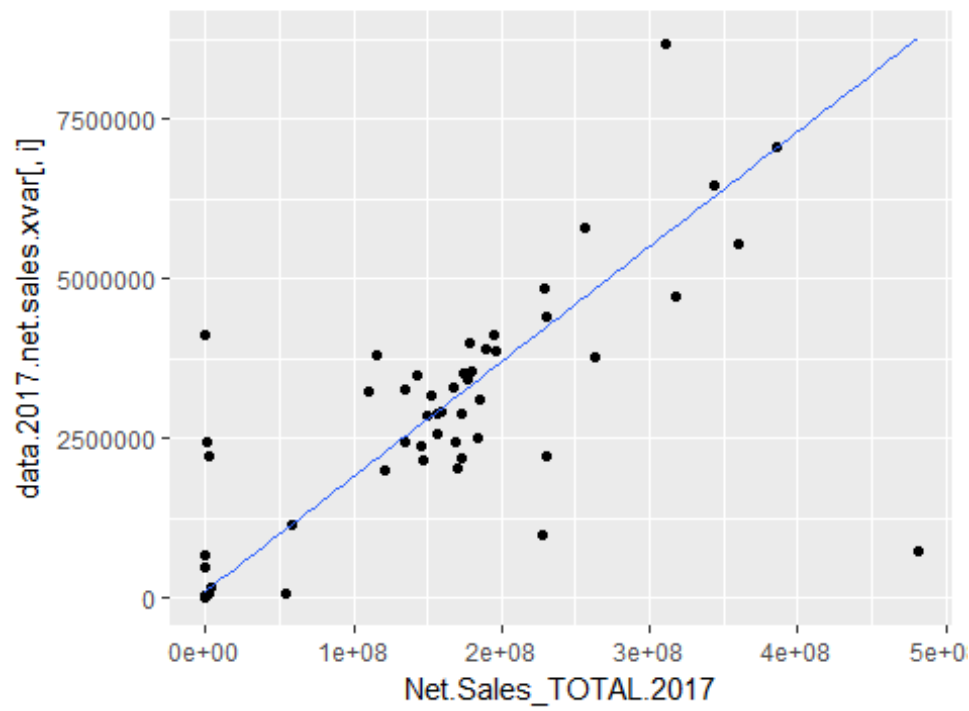




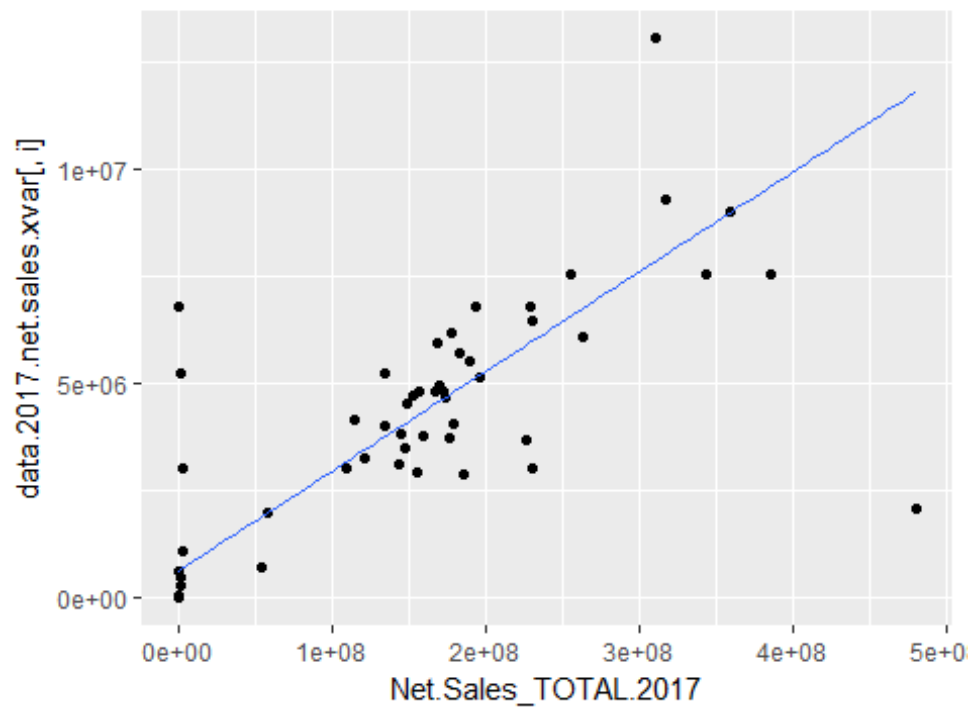




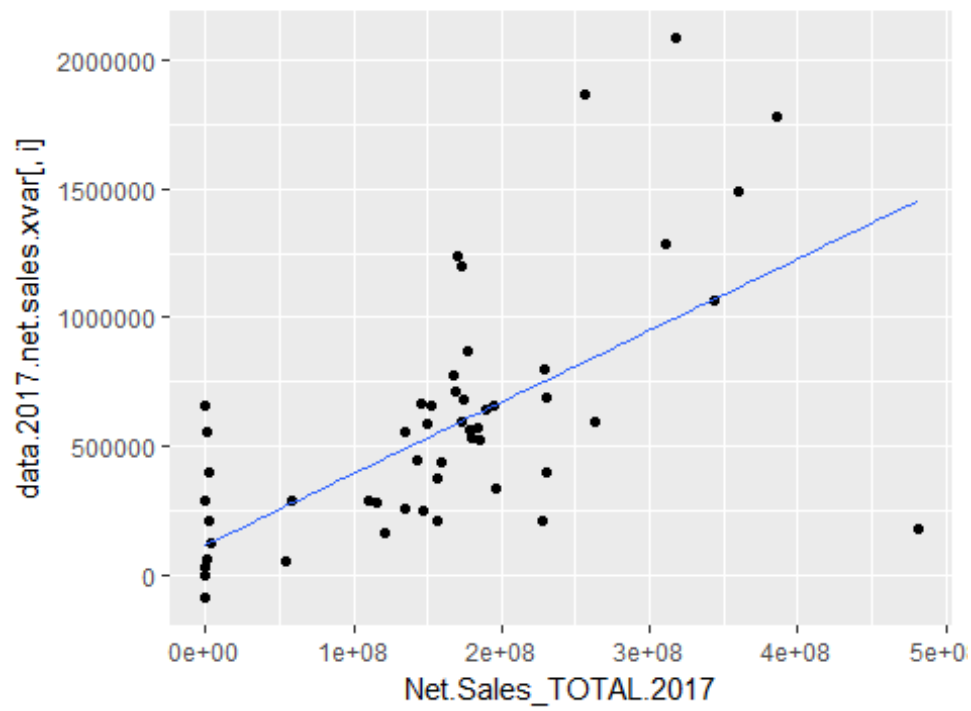
2017 Net Sales vs 2017_ROLLING_STOCK



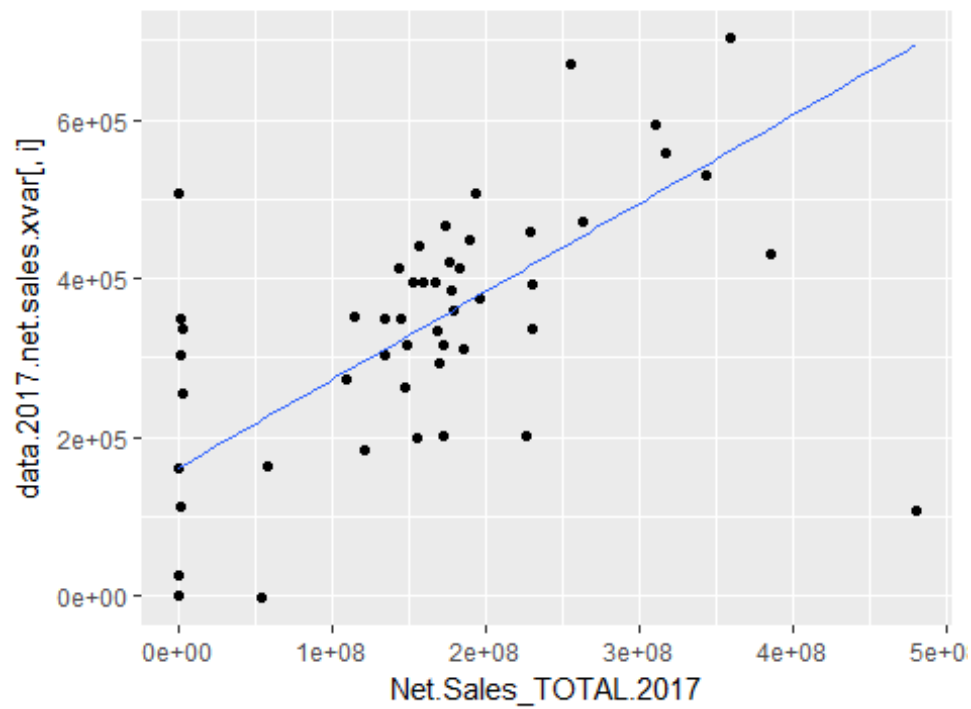
2017 Net Sales vs 2017_SALARIES



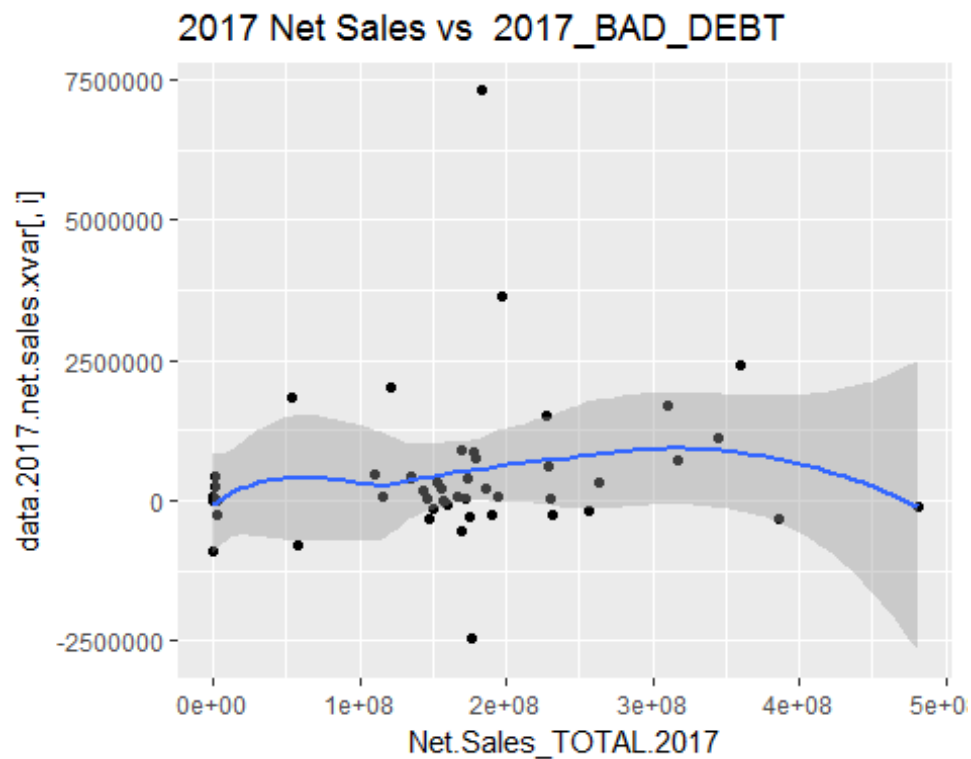
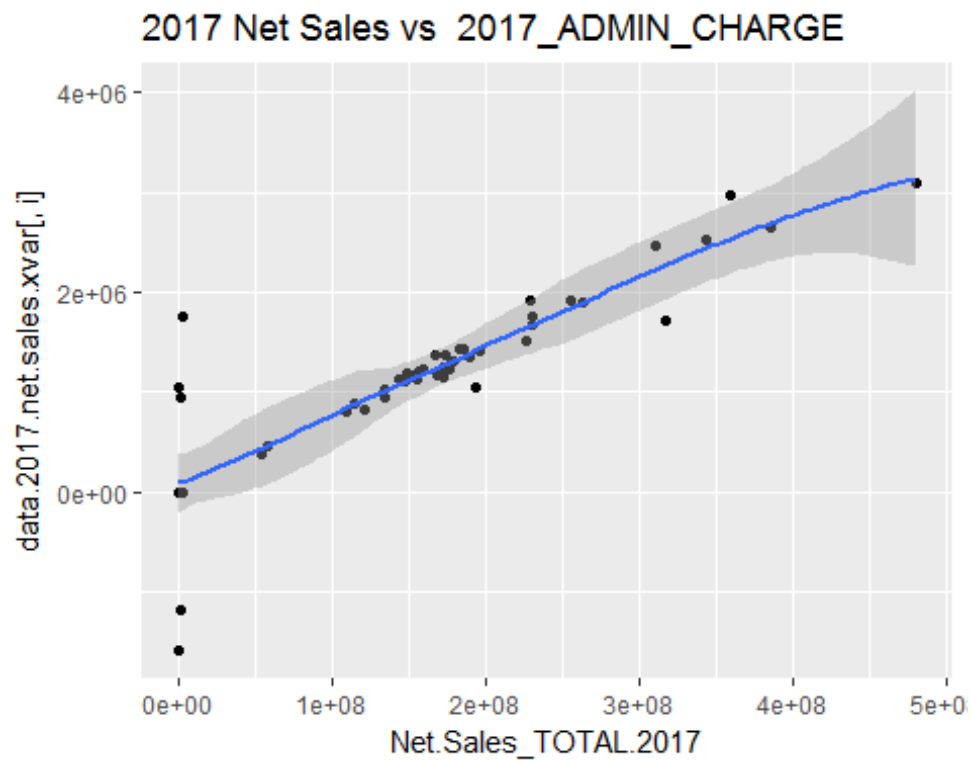
2017 Net Sales vs 2017_TAXES_LICENSES

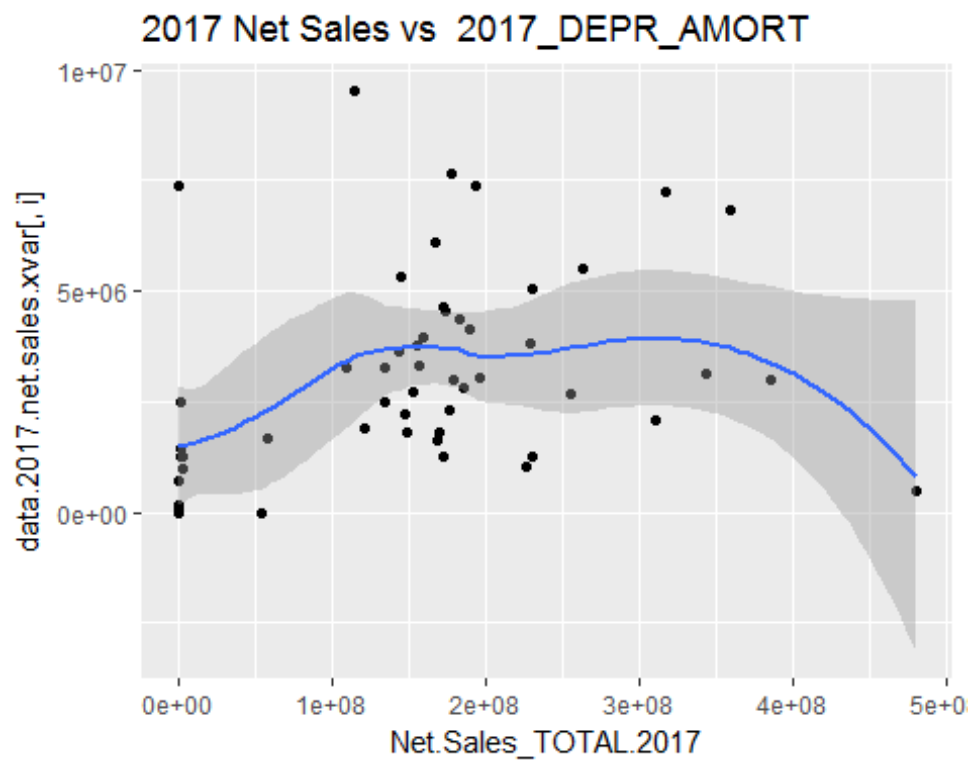
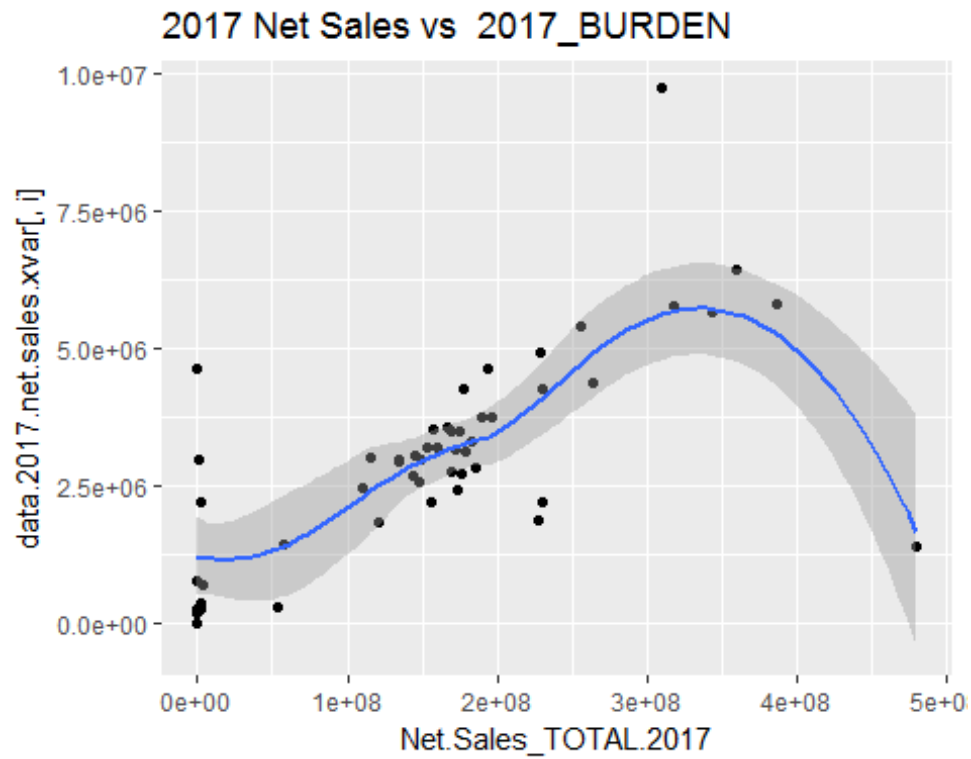


2017 Net Sales vs 2017_UTILITIES

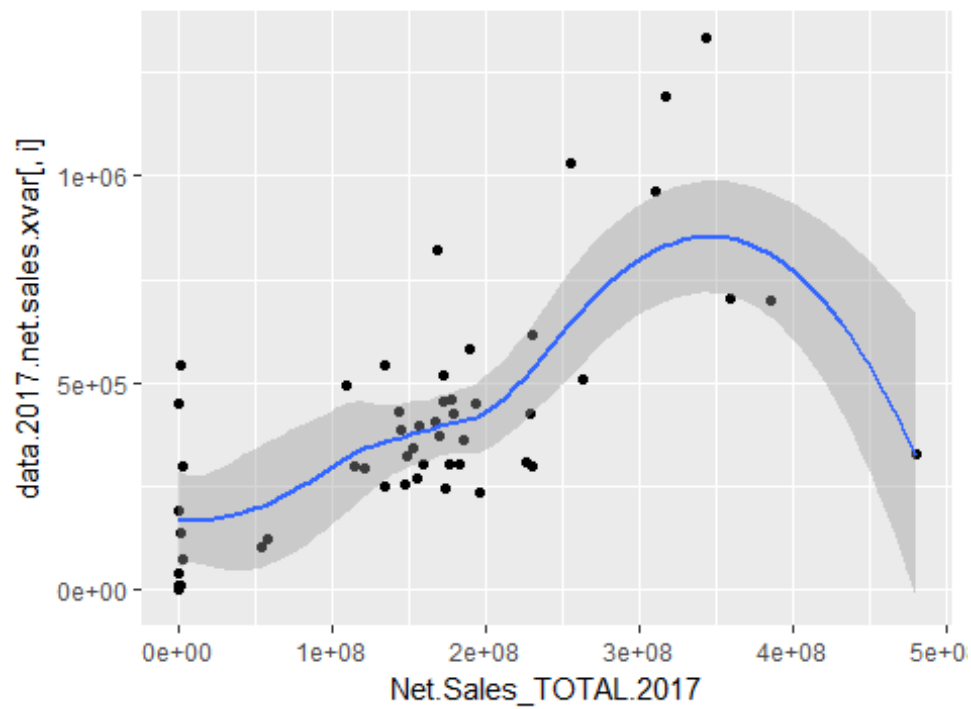


Lowess Regression: How does the relationship between an account change for divisions of different sizes?

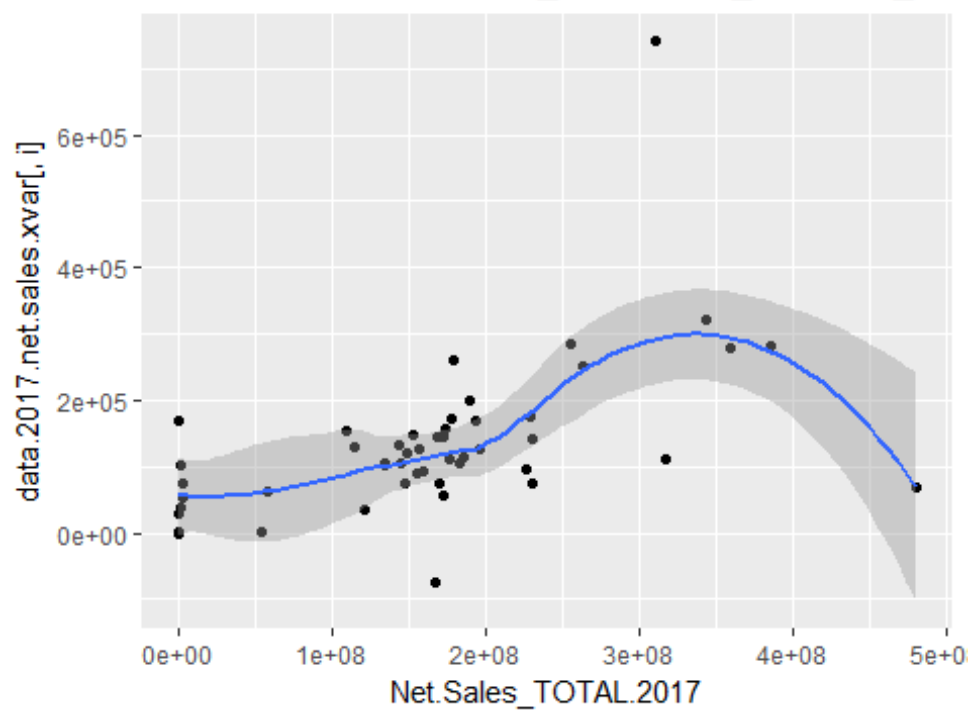


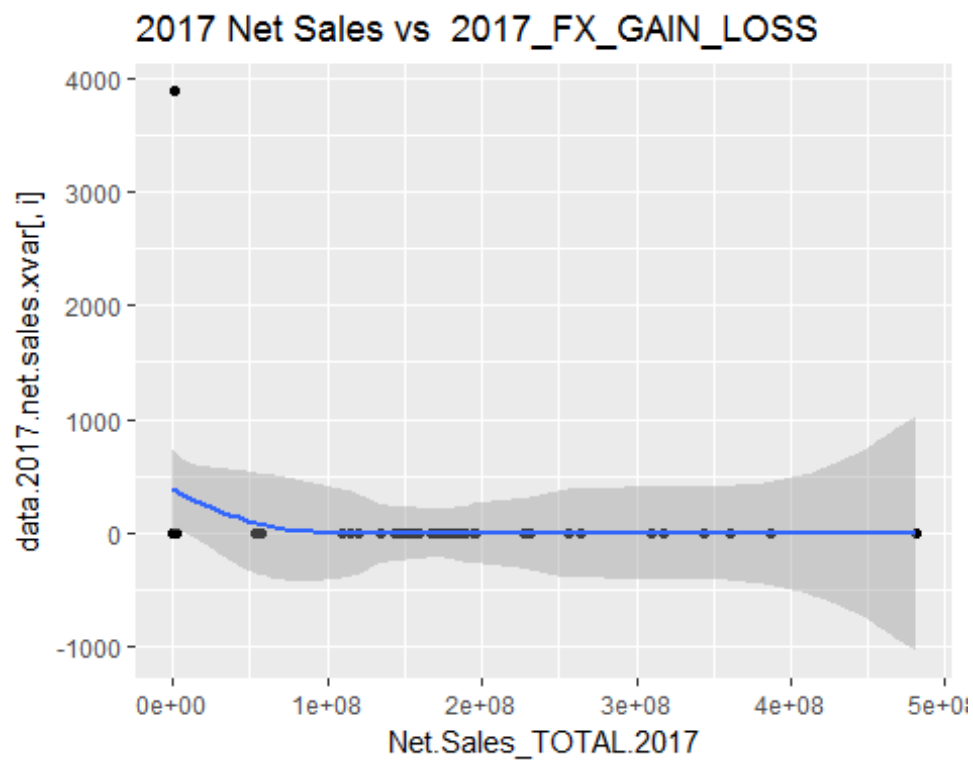
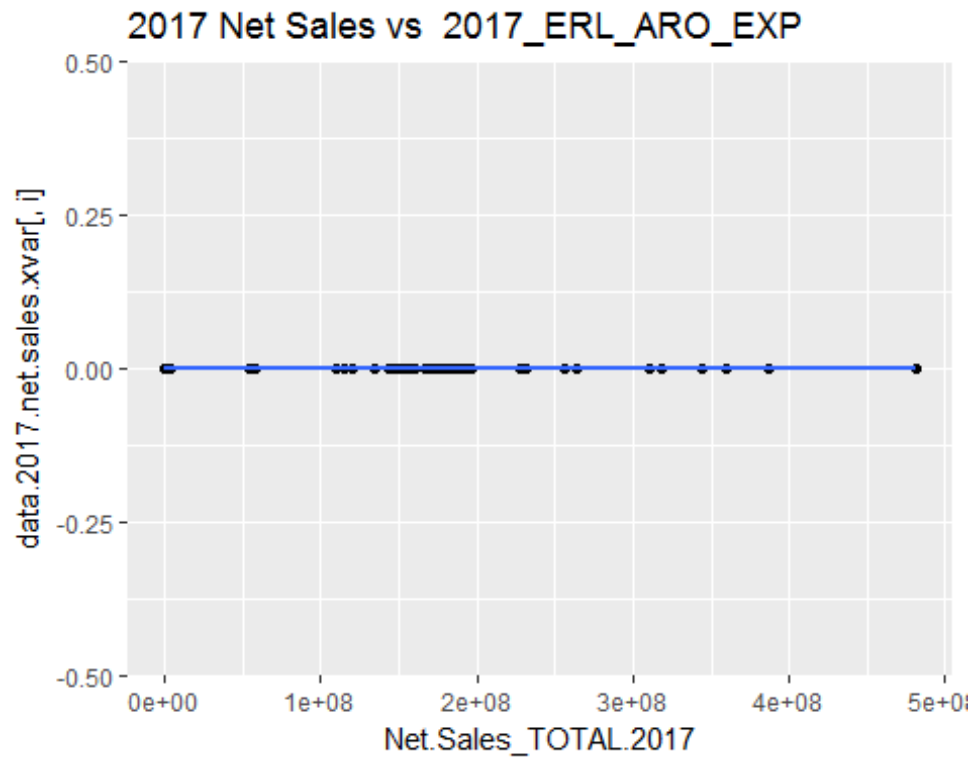


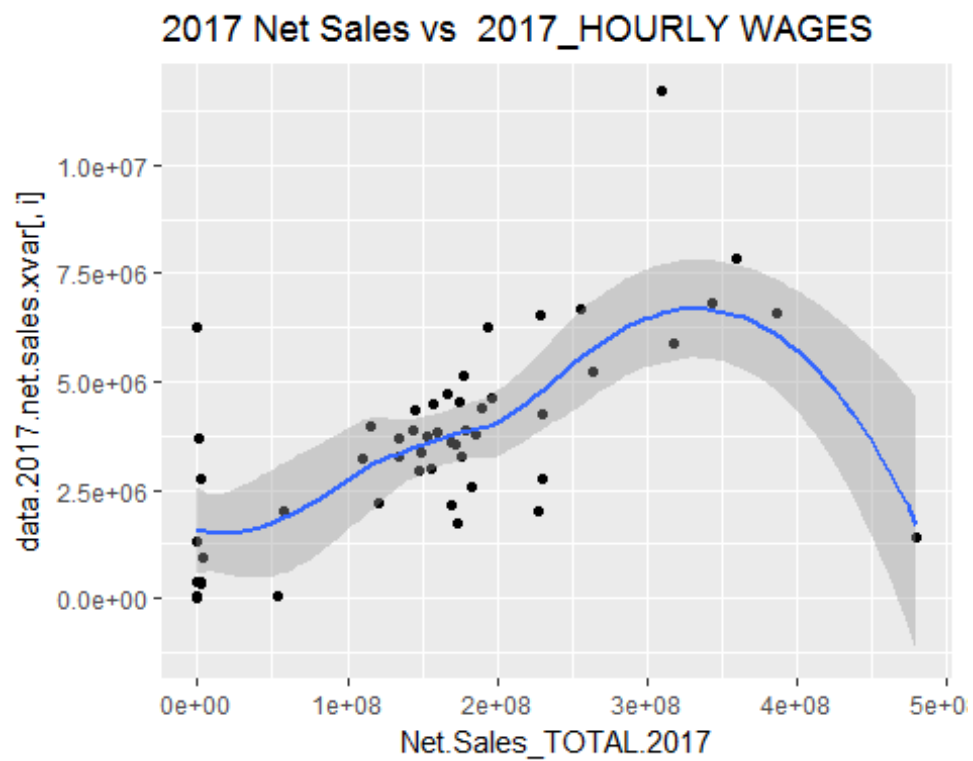
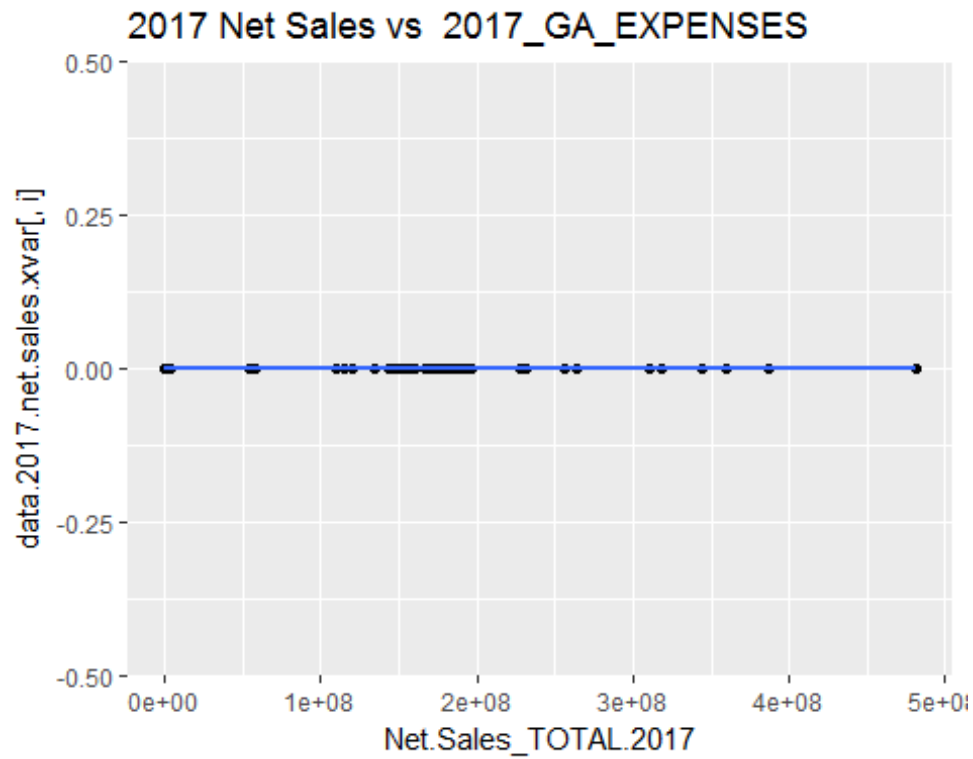
2017 Net Sales vs 2017_EMPLOYEE_EXPENSE



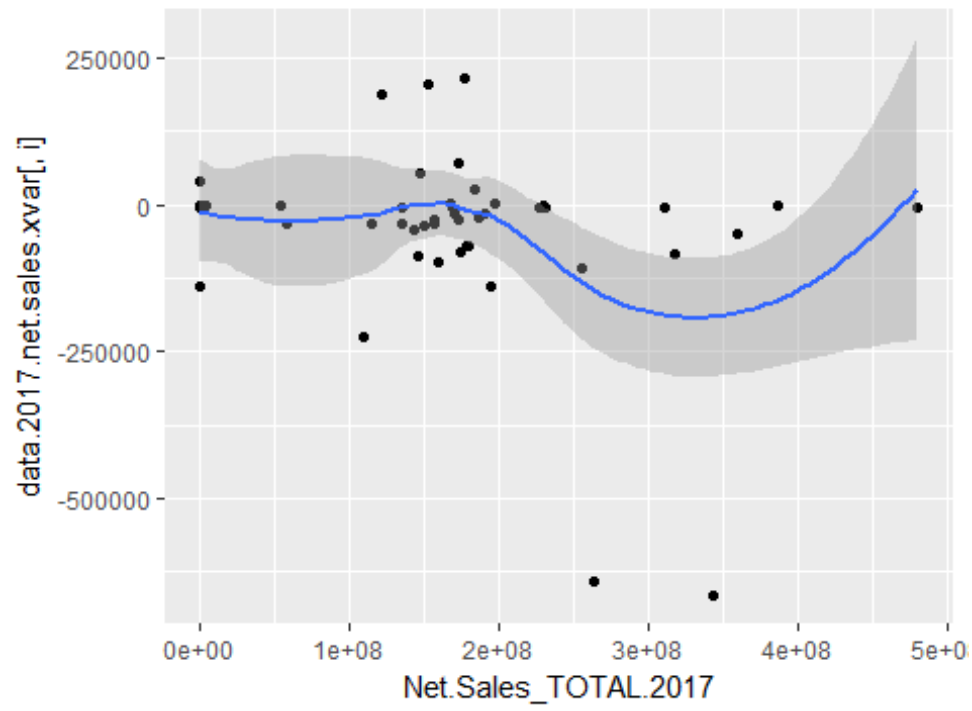
2017 Net Sales vs 2017_ENVMTNL_SAFETY_EXPENSE



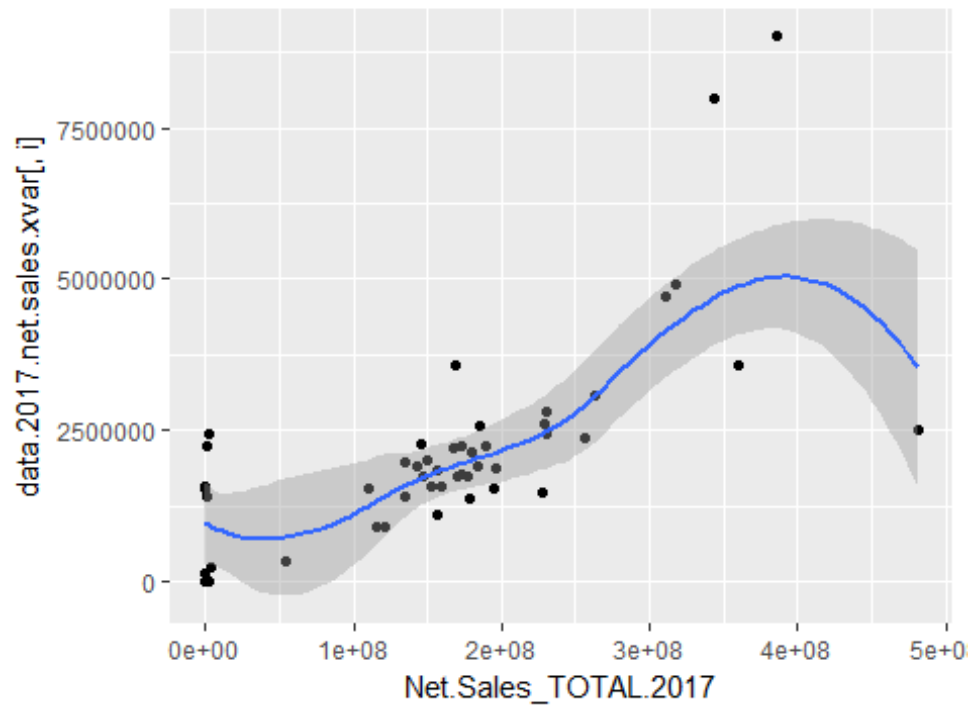




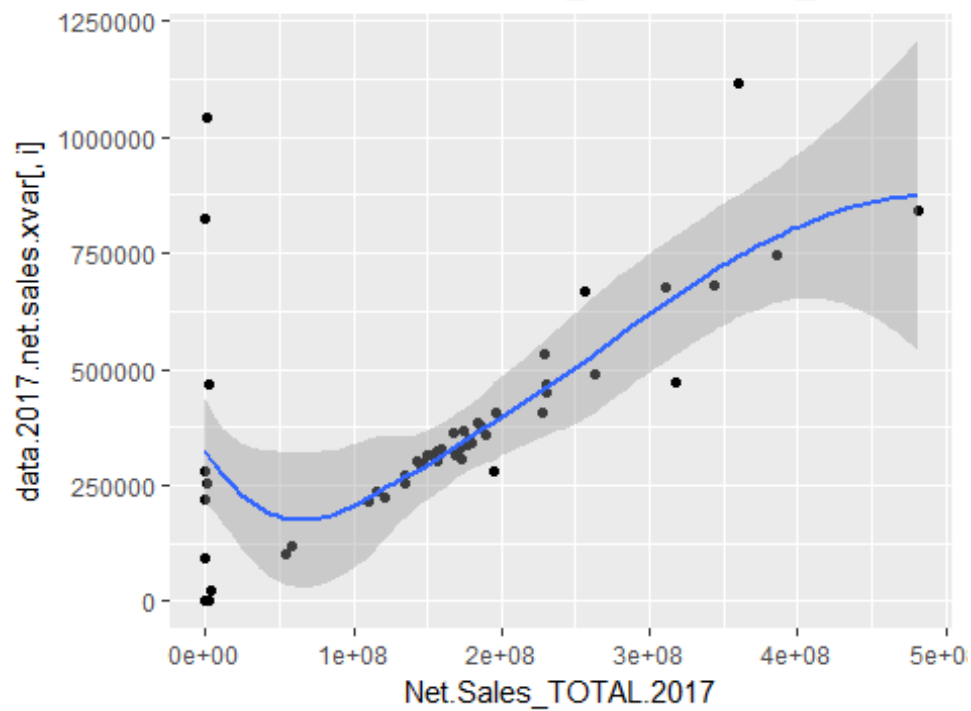
2017 Net Sales vs 2017_INC_EXP_OTHER



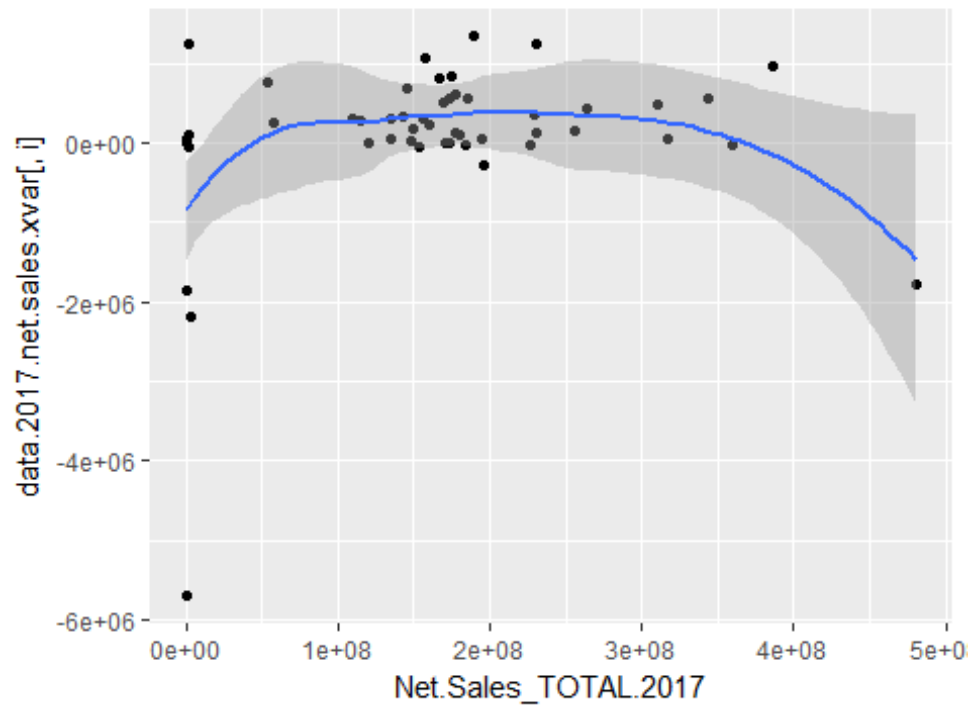
2017 Net Sales vs 2017_INCENTIVE



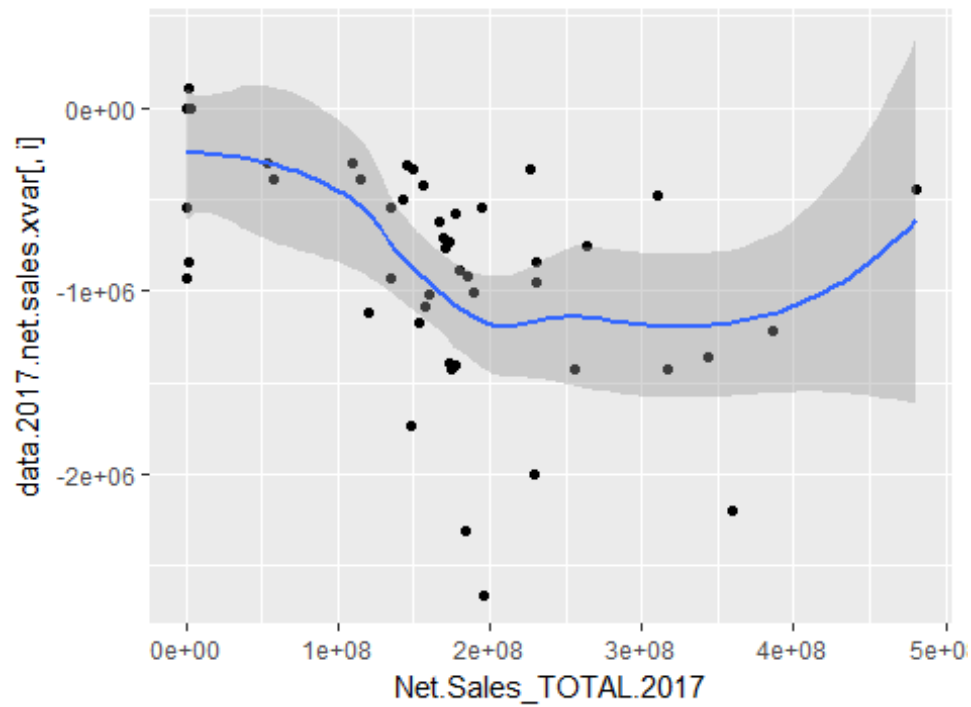
2017 Net Sales vs 2017_INSURANCE_PREMIUM



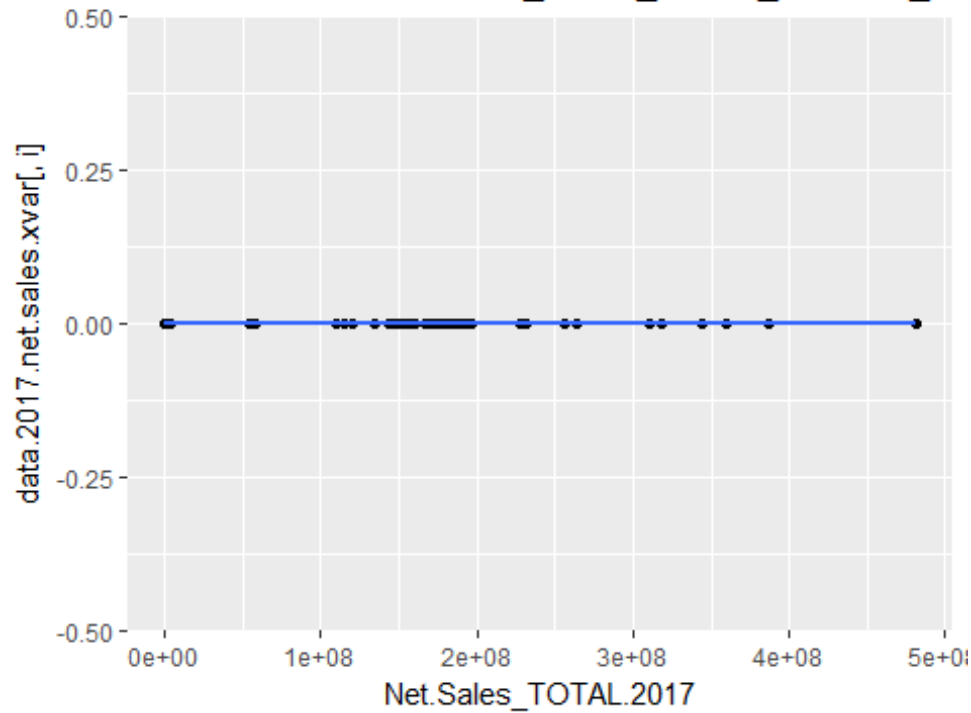
2017 Net Sales vs 2017_INTERBRANCH_CHRG

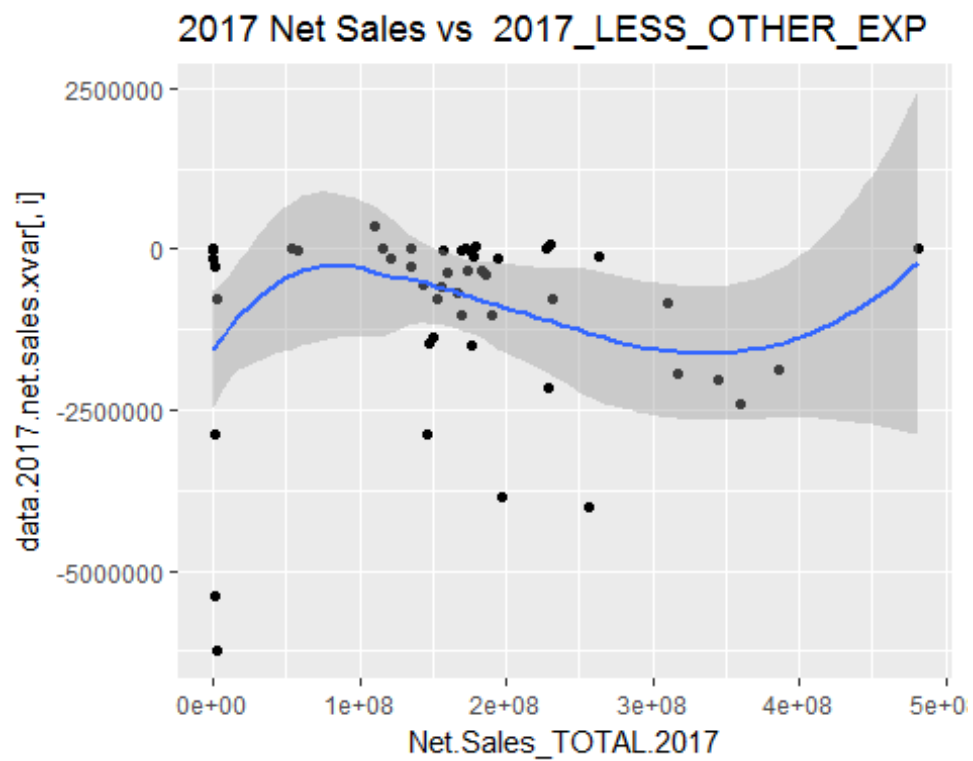
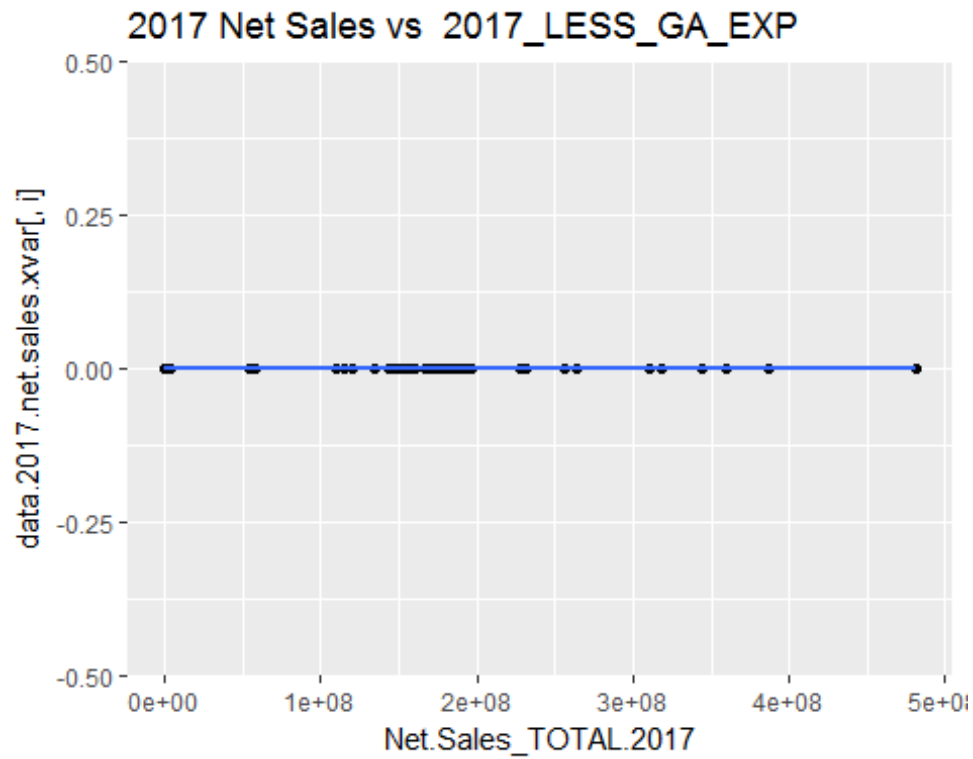


2017 Net Sales vs 2017_INTEREST_INCOME

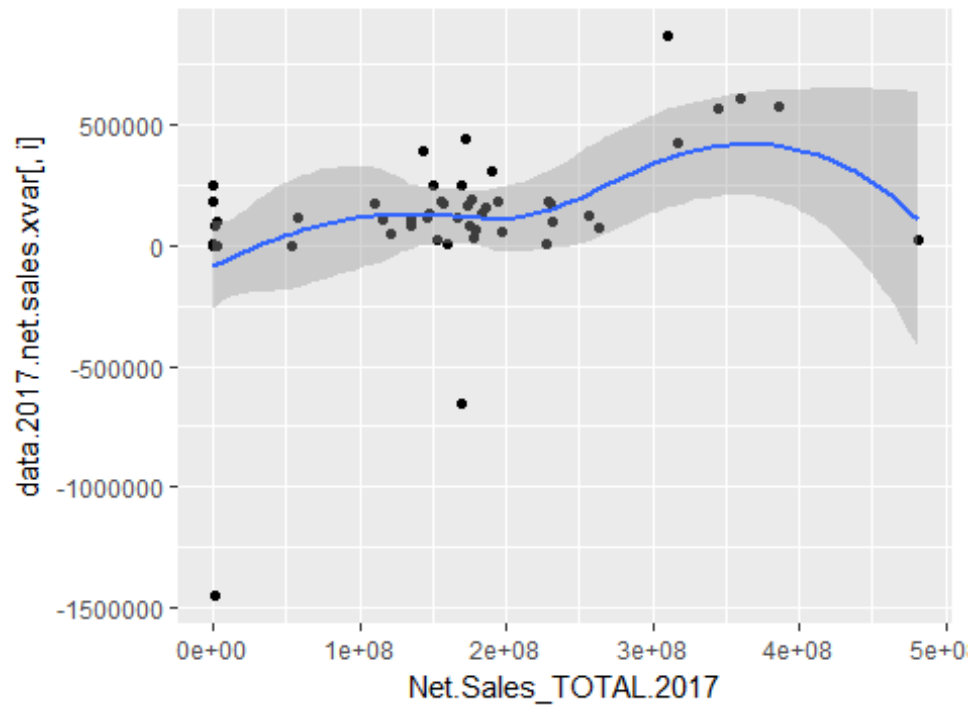


2017 Net Sales vs 2017_LESS_DEPR_AMORT_EXP

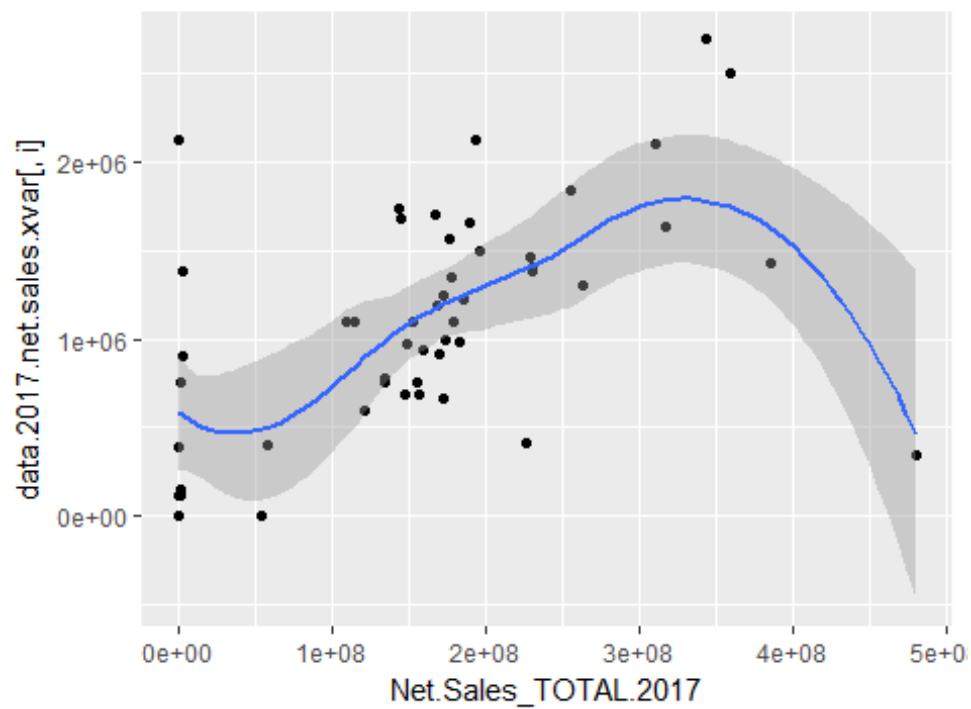


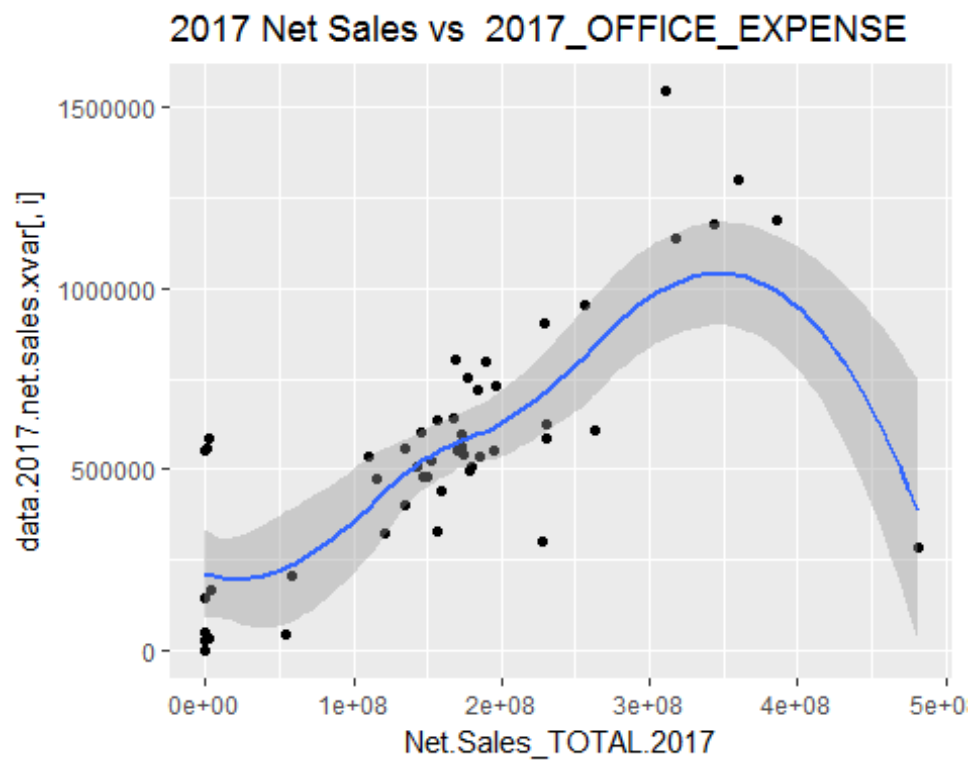
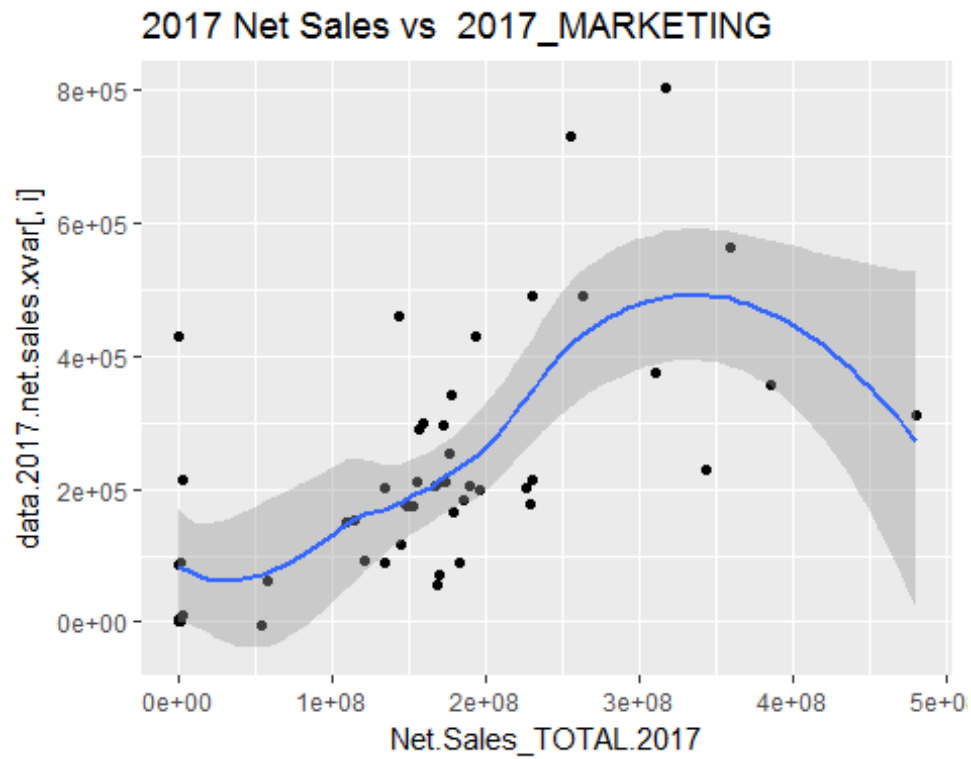


2017 Net Sales vs 2017_LOSS_DAMAGE_CLAI

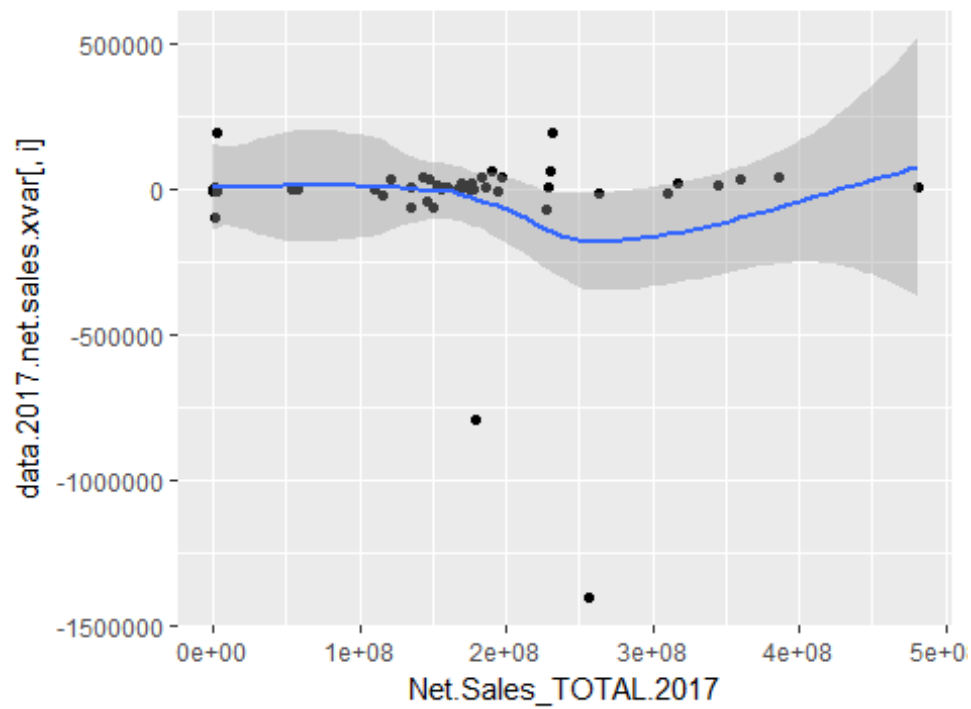


2017 Net Sales vs 2017_MAINTENANCE

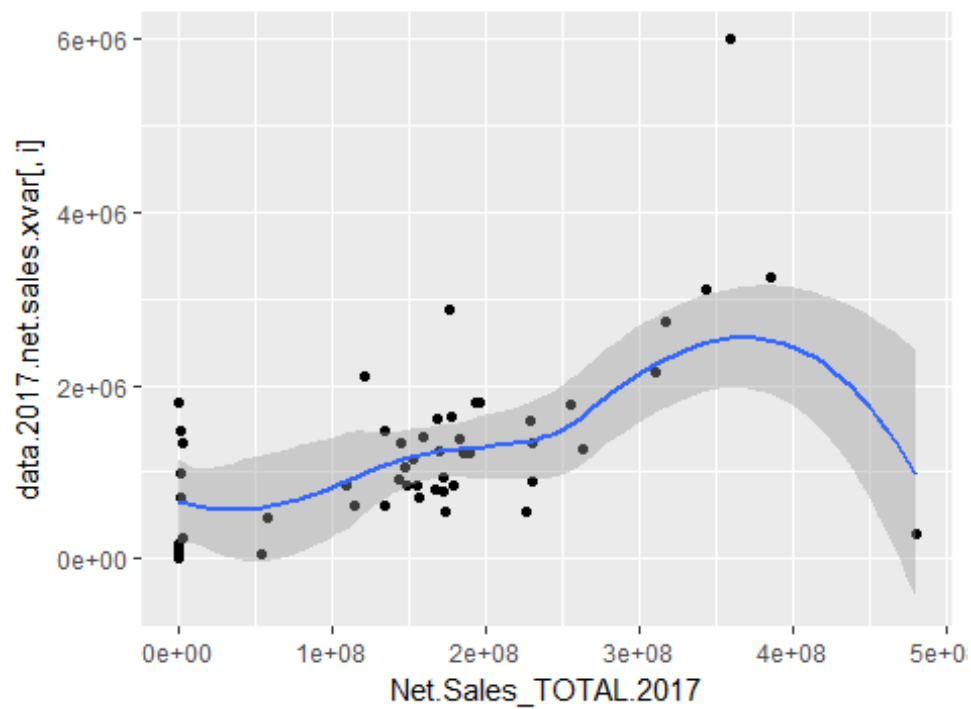


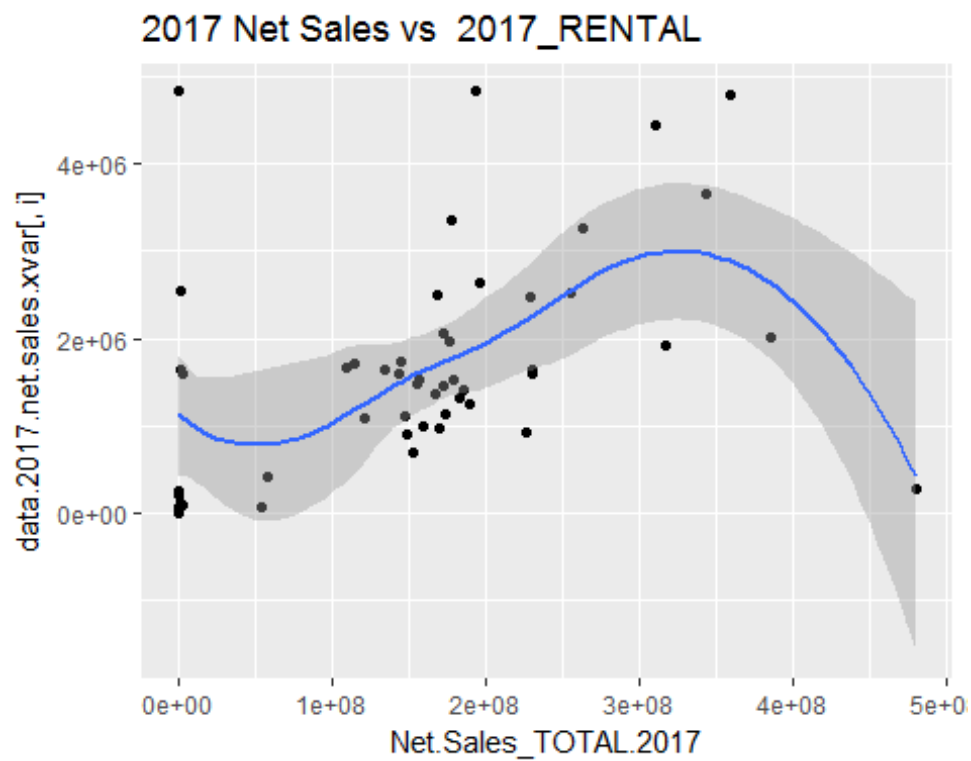
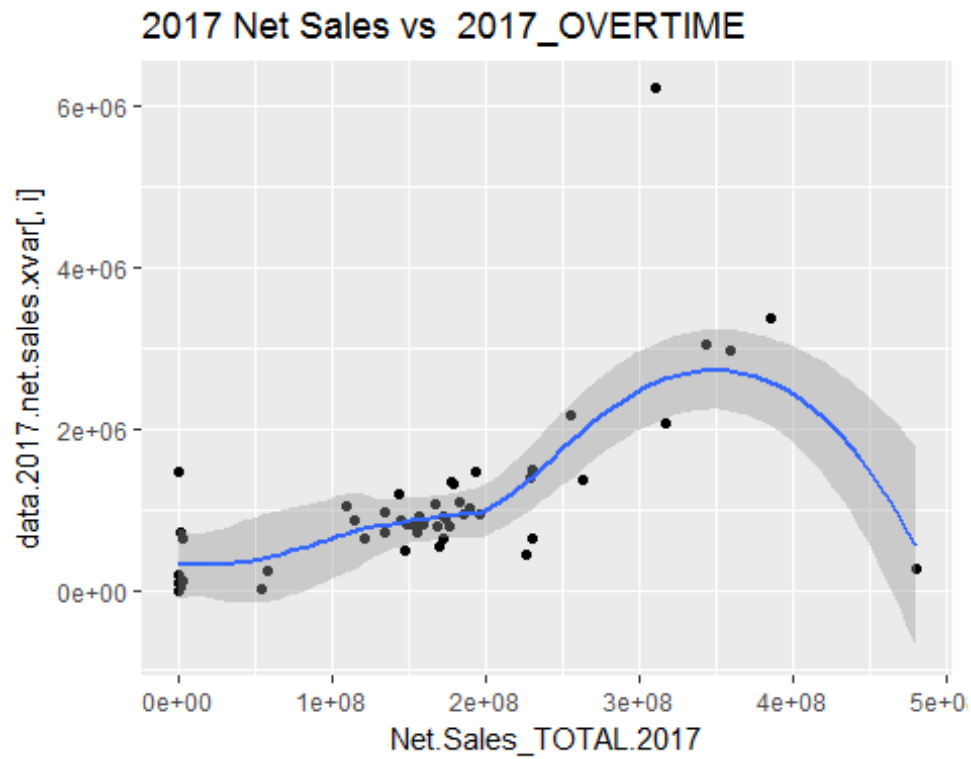


2017 Net Sales vs 2017_OTHER EXPENSES

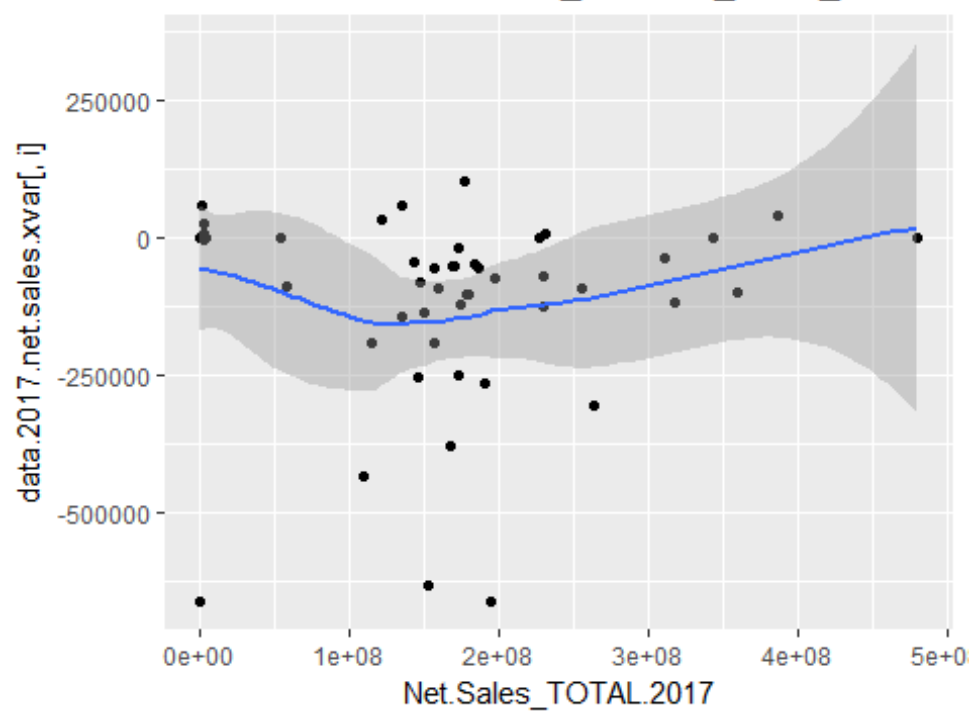


2017 Net Sales vs 2017_OUTSIDE_SERVICES

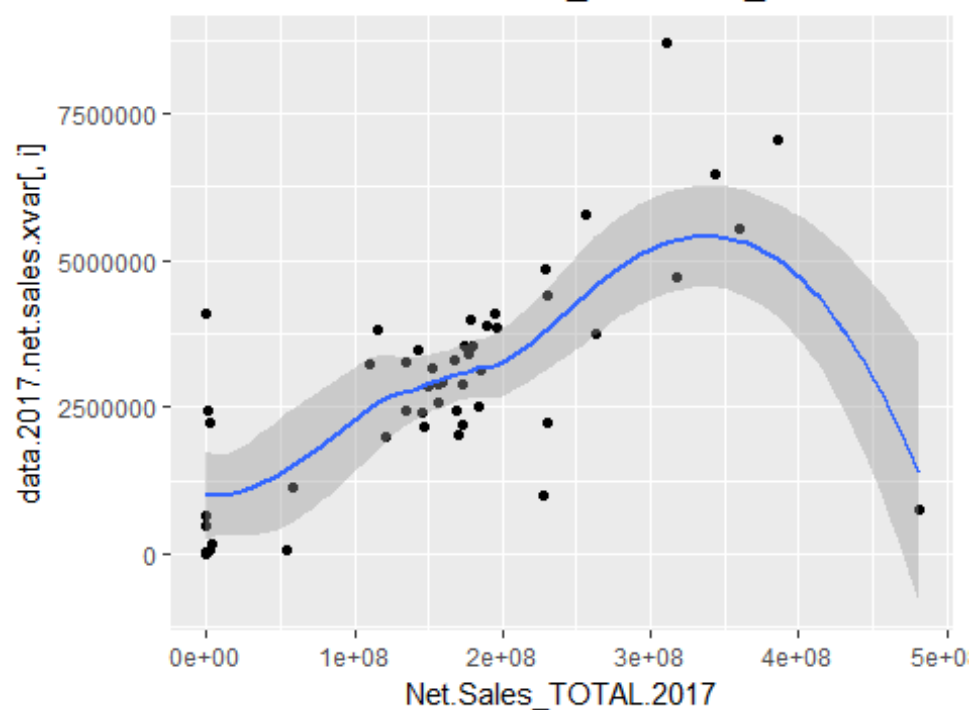




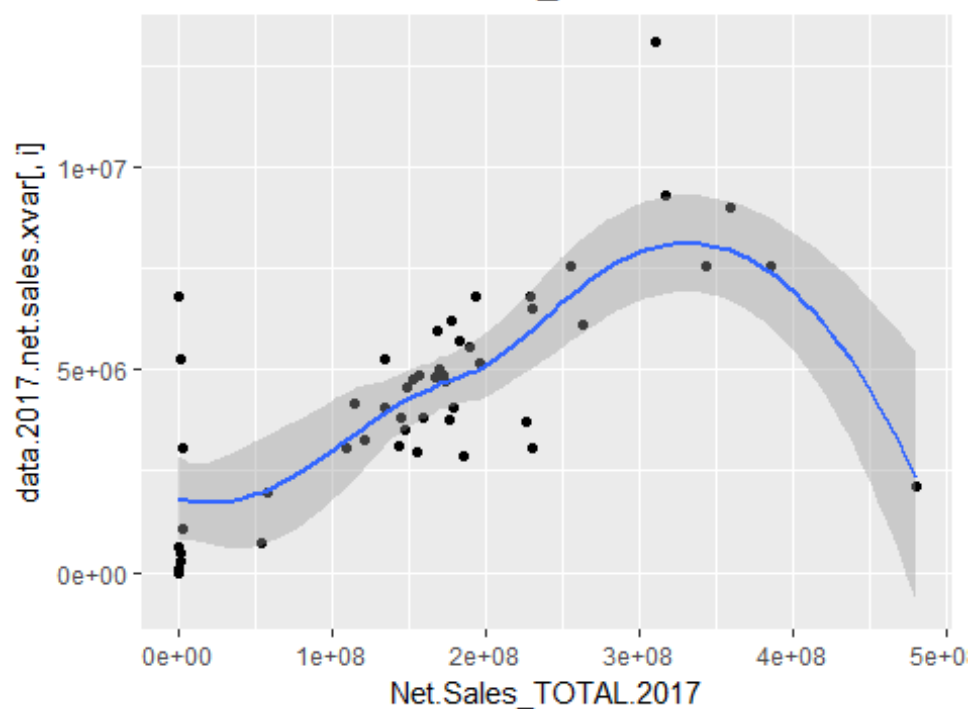
2017 Net Sales vs 2017_RETIRE_GAIN_LOSS



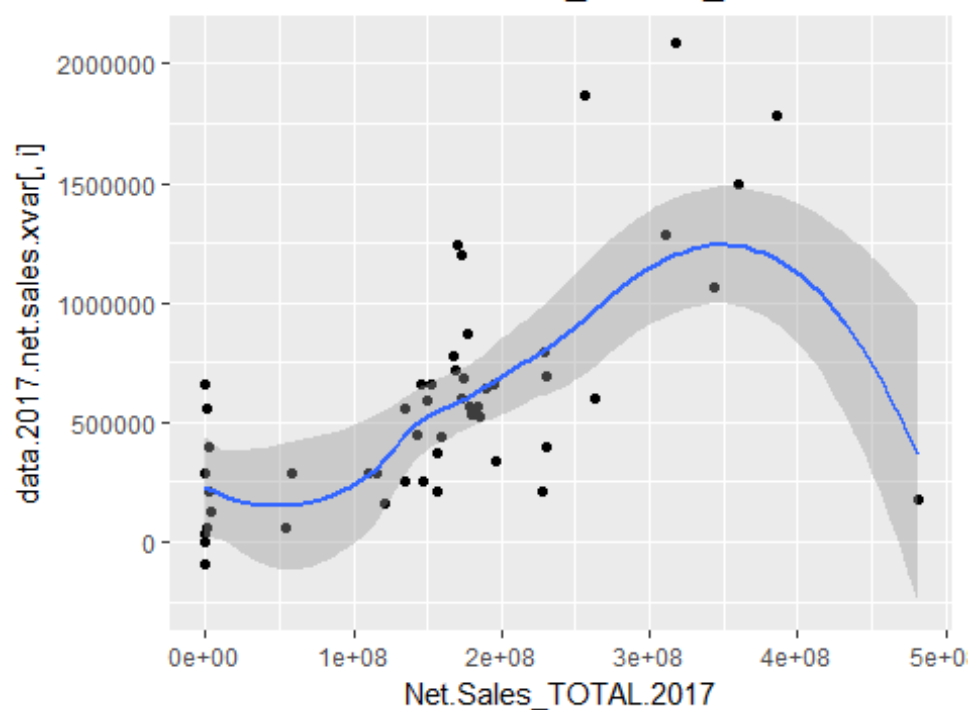
2017 Net Sales vs 2017_ROLLING_STOCK

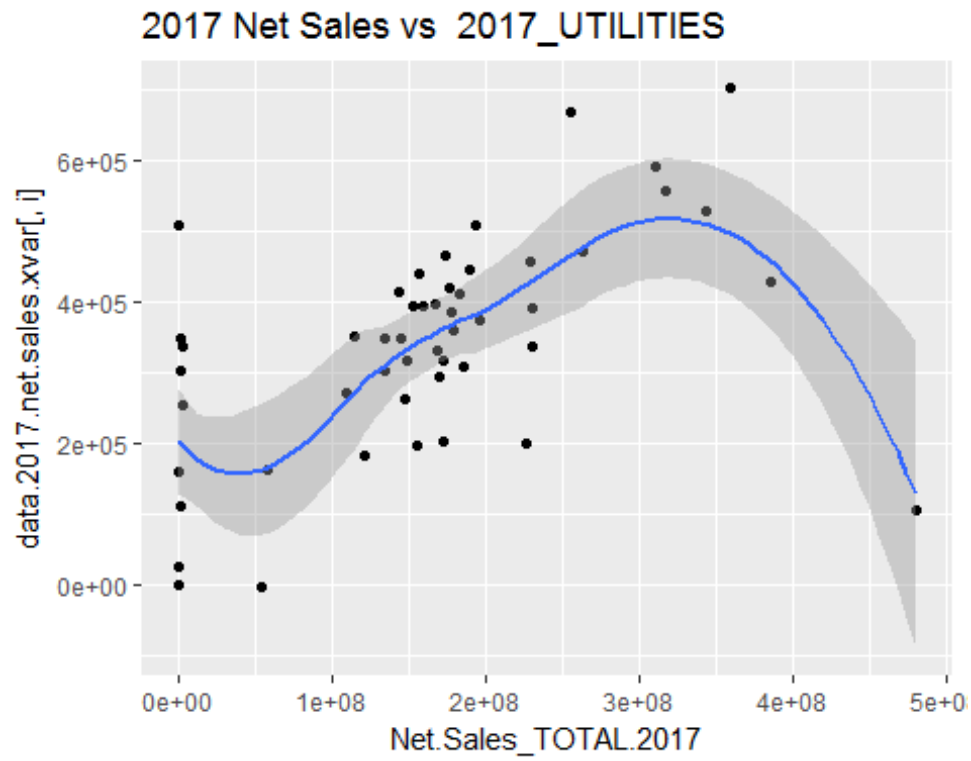


2017 Net Sales vs 2017_SALARIES

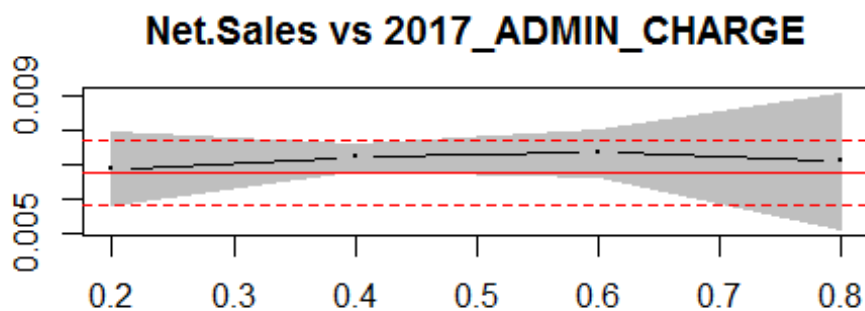
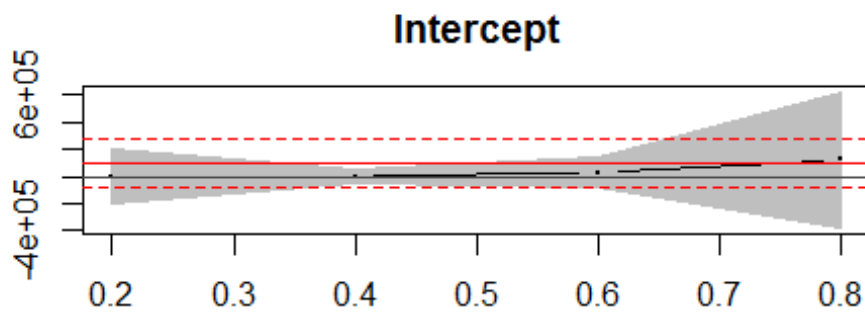


2017 Net Sales vs 2017_TAXES_LICENSES



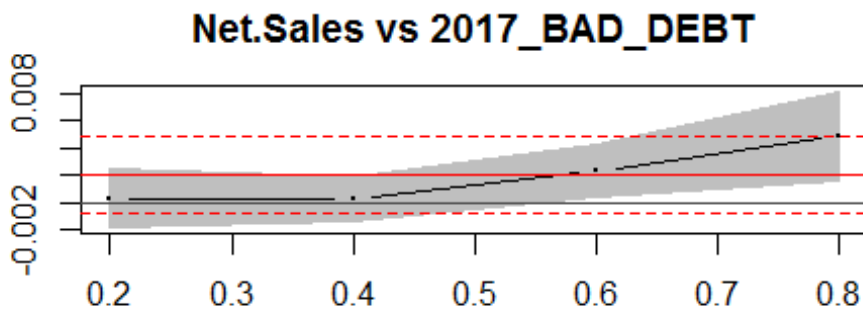
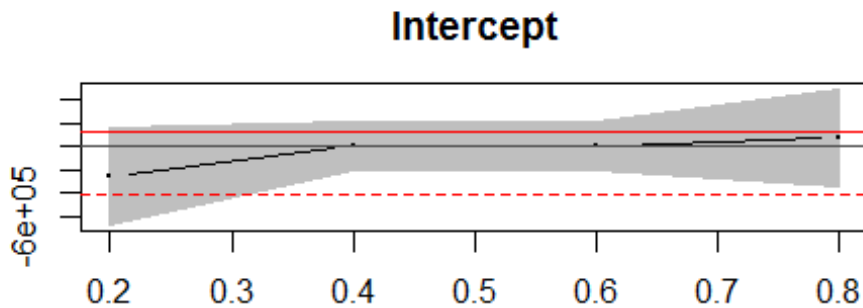


Quantile Regression: How does the relationship between an account change for divisions of different sizes?



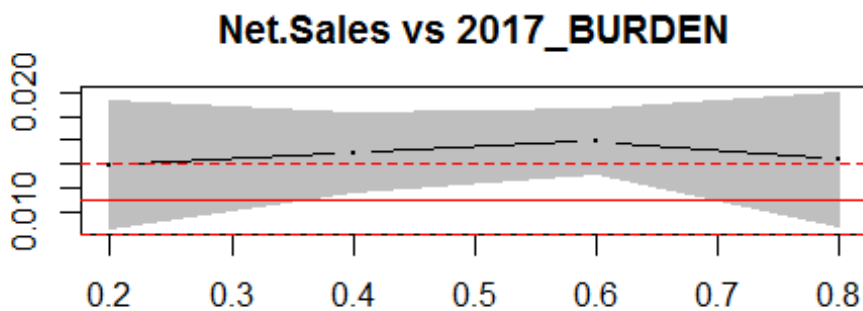
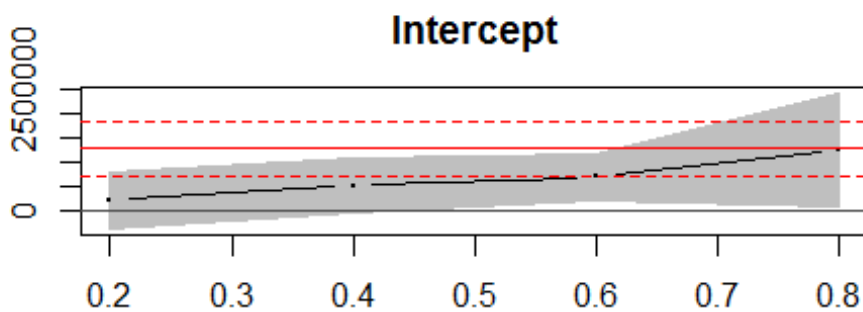
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      -15.972245683 -2.057496e+05 2.057176e+05
## Net.Sales_TOTAL.2017  0.006872148  5.800656e-03 7.943639e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)           0.000000000 -5.187320e+04 5.187320e+04
## Net.Sales_TOTAL.2017  0.007219989  6.821122e-03 7.618855e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.774344e+04 -8.781840e+04 1.433053e+05
## Net.Sales_TOTAL.2017 7.358238e-03  6.683099e-03 8.033378e-03
##
## , , tau= 0.8
```

```
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.205415e+05 -3.835662e+05 6.246492e+05
## Net.Sales_TOTAL.2017 7.096458e-03  5.103077e-03 9.089839e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      9.608800e+04 -8.664416e+04 2.788202e+05
## Net.Sales_TOTAL.2017 6.782646e-03  5.833038e-03 7.732255e-03
```



```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      -2.657346e+05 -6.830938e+05 1.516245e+05
## Net.Sales_TOTAL.2017 2.976236e-04 -1.854464e-03 2.449711e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      -0.7131512616 -2.079975e+05 2.079960e+05
## Net.Sales_TOTAL.2017 0.0003068373 -1.297699e-03 1.911374e-03
##
```

```
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      0.000000000 -2.142676e+05 2.142676e+05
## Net.Sales_TOTAL.2017 0.002260418 3.495840e-04 4.171252e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      6.97580e+04 -3.549481e+05 4.944641e+05
## Net.Sales_TOTAL.2017 4.87434e-03 1.632103e-03 8.116577e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.181519e+05 -4.239310e+05 6.602348e+05
## Net.Sales_TOTAL.2017 2.062871e-03 -7.541838e-04 4.879926e-03
```

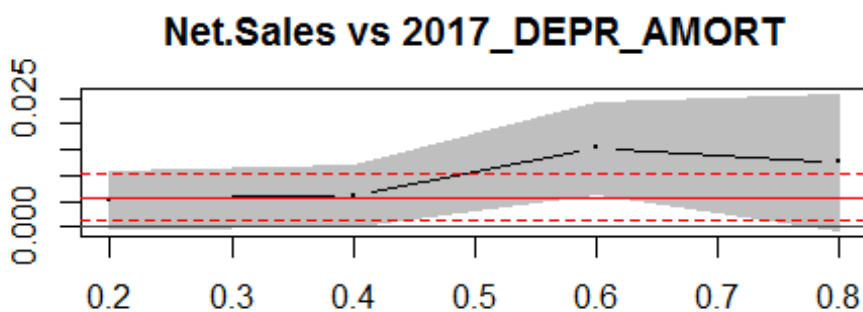
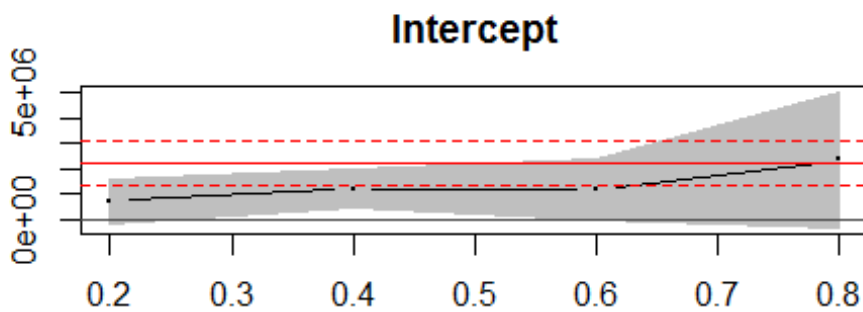


```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.268659e+05 -3.679761e+05 8.217079e+05
## Net.Sales_TOTAL.2017 1.396427e-02 8.602365e-03 1.932618e-02
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
```

```

## (Intercept)          5.295530e+05 -2.121020e+04 1.080316e+06
## Net.Sales_TOTAL.2017 1.494642e-02  1.160611e-02 1.828674e-02
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      7.036164e+05 2.436344e+05 1.163598e+06
## Net.Sales_TOTAL.2017 1.592906e-02 1.324684e-02 1.861128e-02
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.262104e+06 9.215531e+04 2.432053e+06
## Net.Sales_TOTAL.2017 1.437850e-02 8.753535e-03 2.000347e-02
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.291640e+06 7.238538e+05 1.859425e+06
## Net.Sales_TOTAL.2017 1.107873e-02 8.128105e-03 1.402936e-02

```

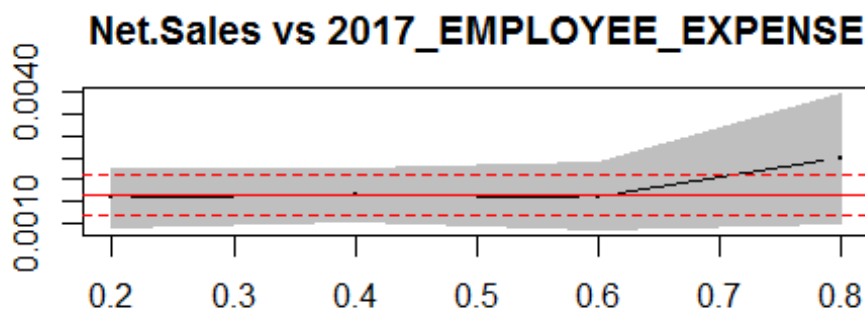
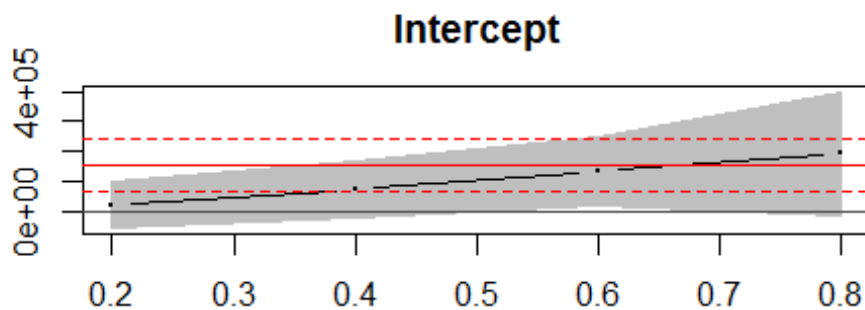


```

## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      7.213585e+05 -1.250554e+05 1.567772e+06
## Net.Sales_TOTAL.2017 5.398603e-03 -7.155954e-05 1.086877e-02
##

```

```
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.235174e+06  4.447298e+05  2.025618e+06
## Net.Sales_TOTAL.2017 5.975994e-03  6.633427e-05  1.188565e-02
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.218585e+06  3.717257e+04  2.399997e+06
## Net.Sales_TOTAL.2017 1.533972e-02  6.556283e-03  2.412317e-02
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.352388e+06 -3.430307e+05  5.047806e+06
## Net.Sales_TOTAL.2017 1.247670e-02 -7.454074e-04  2.569881e-02
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.256125e+06  1.372601e+06  3.139649e+06
## Net.Sales_TOTAL.2017 5.719137e-03  1.127707e-03  1.031057e-02
```



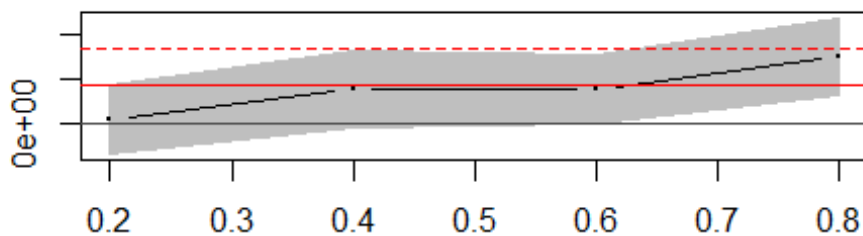
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
```

```

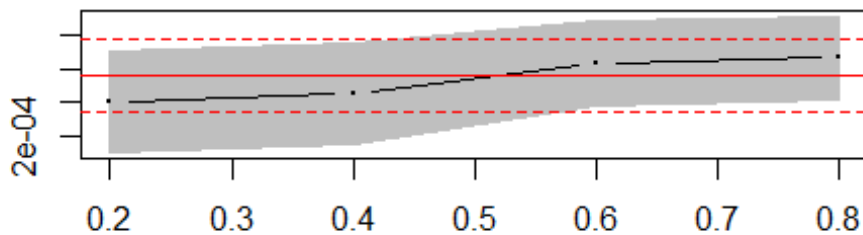
## (Intercept)          1.943432e+04 -5.911382e+04 9.798247e+04
## Net.Sales_TOTAL.2017 1.590208e-03  9.341105e-04 2.246306e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      7.149098e+04 -2.333779e+04 1.663197e+05
## Net.Sales_TOTAL.2017 1.664092e-03  1.066772e-03 2.261412e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.333817e+05 1.756459e+04 2.491988e+05
## Net.Sales_TOTAL.2017 1.625624e-03  8.633347e-04 2.387913e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.907280e+05 -1.722736e+04 3.986834e+05
## Net.Sales_TOTAL.2017 2.479987e-03  9.998974e-04 3.960076e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.505205e+05 6.236539e+04 2.386756e+05
## Net.Sales_TOTAL.2017 1.635143e-03  1.177026e-03 2.093261e-03

```

Intercept



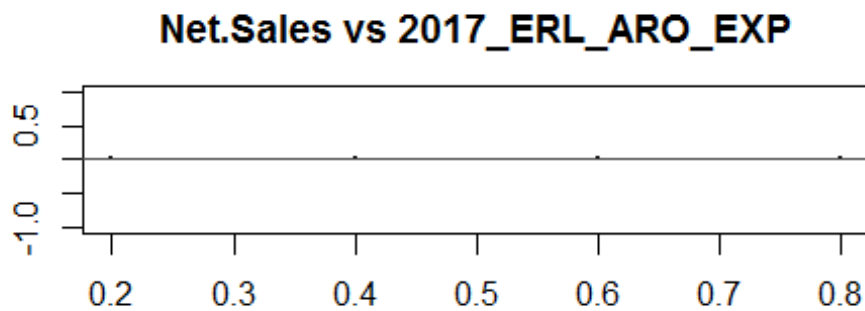
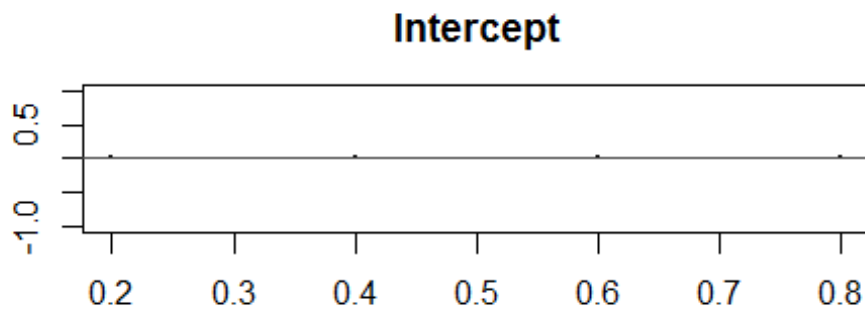
Net.Sales vs 2017_ENVMTL_SAFETY_EXP



```

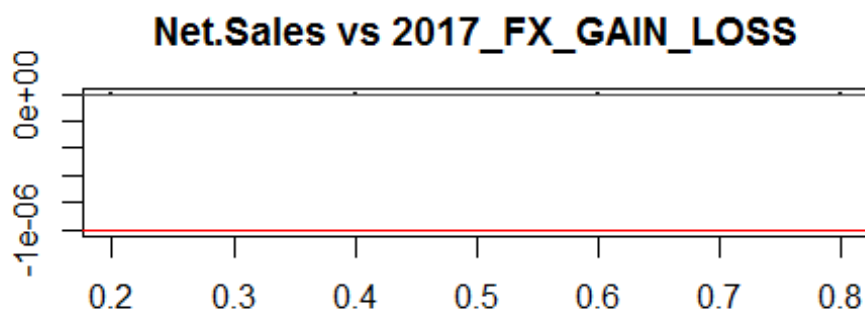
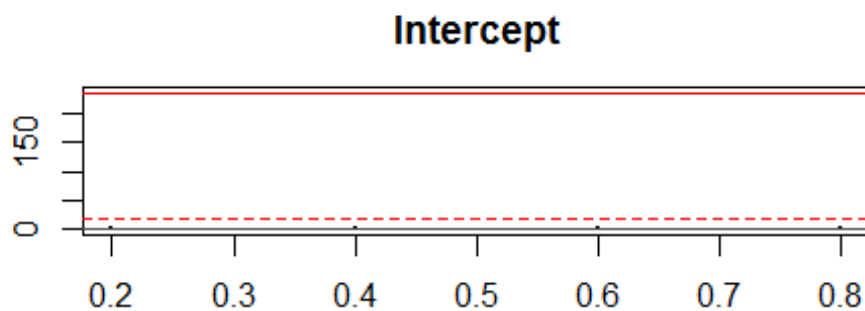
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.218000e+03 -3.504317e+04 4.147917e+04
## Net.Sales_TOTAL.2017 4.028295e-04  1.036927e-04 7.019664e-04
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.743937e+04 -5.234572e+03 8.011331e+04
## Net.Sales_TOTAL.2017 4.523028e-04  1.499826e-04 7.546229e-04
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.816546e+04 -1.019632e+03 7.735056e+04
## Net.Sales_TOTAL.2017 6.280446e-04  3.800817e-04 8.760076e-04
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      7.401552e+04 3.023897e+04 1.177921e+05
## Net.Sales_TOTAL.2017 6.644915e-04 4.200402e-04 9.089427e-04
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      4.173385e+04 1.384050e+02 8.332929e+04
## Net.Sales_TOTAL.2017 5.586023e-04 3.424422e-04 7.747623e-04

```

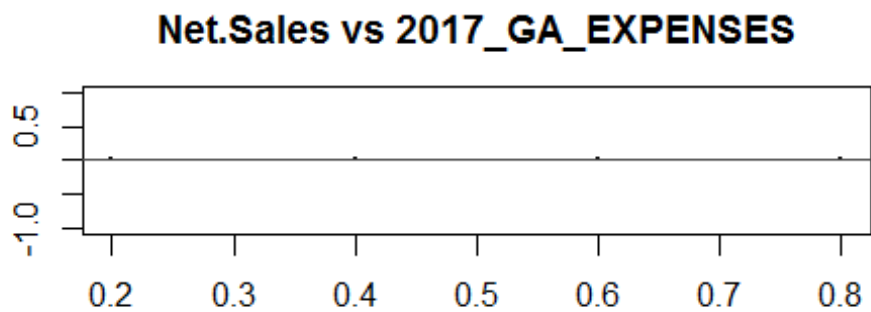
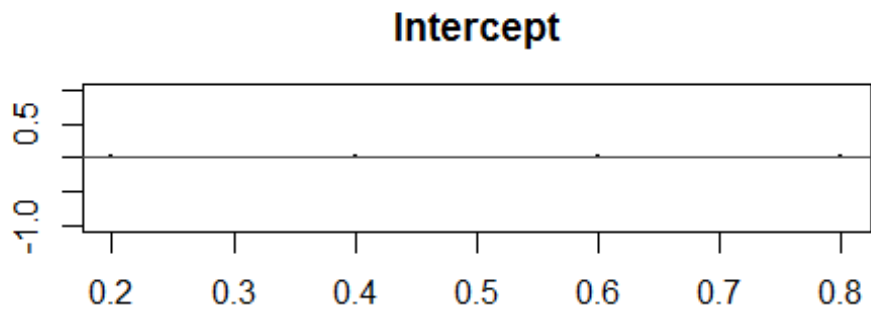
```
## , , tau= 0.2
##
##               coefficients lower bd upper bd
## (Intercept)                0      0      0
## Net.Sales_TOTAL.2017        0      0      0
##
## , , tau= 0.4
##
##               coefficients lower bd upper bd
## (Intercept)                0      0      0
## Net.Sales_TOTAL.2017        0      0      0
##
## , , tau= 0.6
##
##               coefficients lower bd upper bd
## (Intercept)                0      0      0
## Net.Sales_TOTAL.2017        0      0      0
##
## , , tau= 0.8
##
##               coefficients lower bd upper bd
## (Intercept)                0      0      0
## Net.Sales_TOTAL.2017        0      0      0
##
## , , ols
##
##               coefficients lower bd upper bd
```

## (Intercept)	0	0	0
## Net.Sales_TOTAL.2017	0	0	0



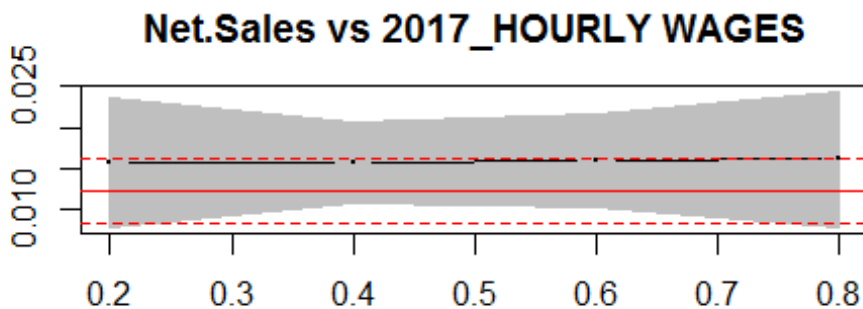
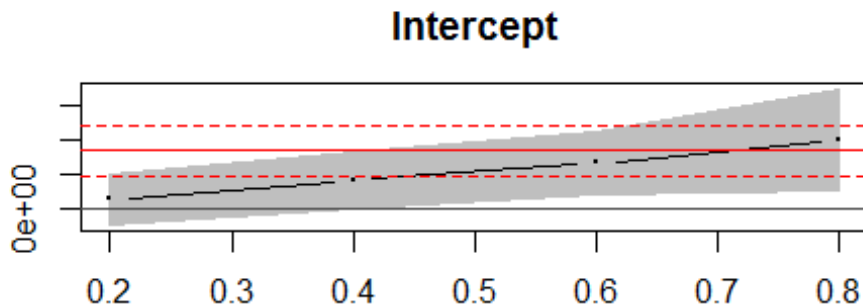
```
## , , tau= 0.2
##
##               coefficients lower bd upper bd
## (Intercept)           0           0           0
## Net.Sales_TOTAL.2017    0           0           0
##
## , , tau= 0.4
##
##               coefficients lower bd upper bd
## (Intercept)           0           0           0
## Net.Sales_TOTAL.2017    0           0           0
##
## , , tau= 0.6
##
##               coefficients lower bd upper bd
## (Intercept)           0           0           0
## Net.Sales_TOTAL.2017    0           0           0
##
## , , tau= 0.8
##
##               coefficients lower bd upper bd
## (Intercept)           0           0           0
## Net.Sales_TOTAL.2017    0           0           0
##
```

```
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.363026e+02  1.759222e+01 4.550129e+02
## Net.Sales_TOTAL.2017 -1.009801e-06 -2.146379e-06 1.267761e-07
```



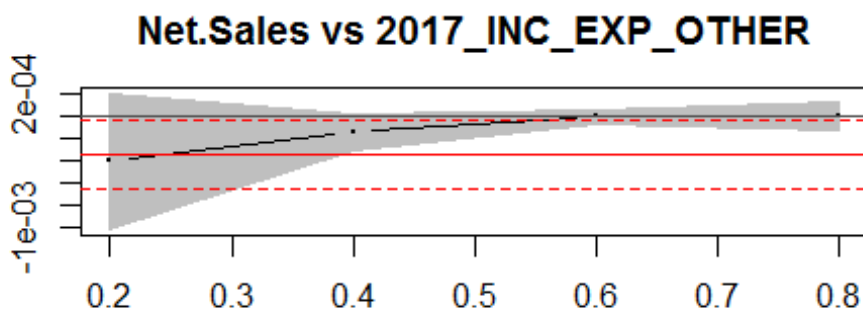
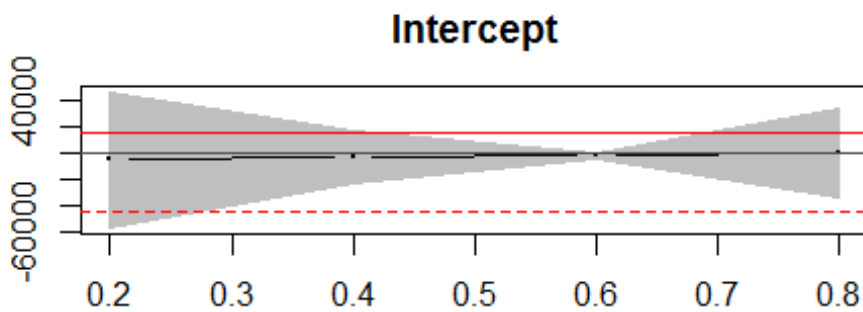
```
## , , tau= 0.2
##
##               coefficients lower bd upper bd
## (Intercept)              0         0         0
## Net.Sales_TOTAL.2017      0         0         0
##
## , , tau= 0.4
##
##               coefficients lower bd upper bd
## (Intercept)              0         0         0
## Net.Sales_TOTAL.2017      0         0         0
##
## , , tau= 0.6
##
##               coefficients lower bd upper bd
## (Intercept)              0         0         0
## Net.Sales_TOTAL.2017      0         0         0
##
## , , tau= 0.8
##
##               coefficients lower bd upper bd
```

```
## (Intercept)          0          0          0
## Net.Sales_TOTAL.2017  0          0          0
##
## , , ols
##
##               coefficients lower bd upper bd
## (Intercept)          0          0          0
## Net.Sales_TOTAL.2017  0          0          0
```



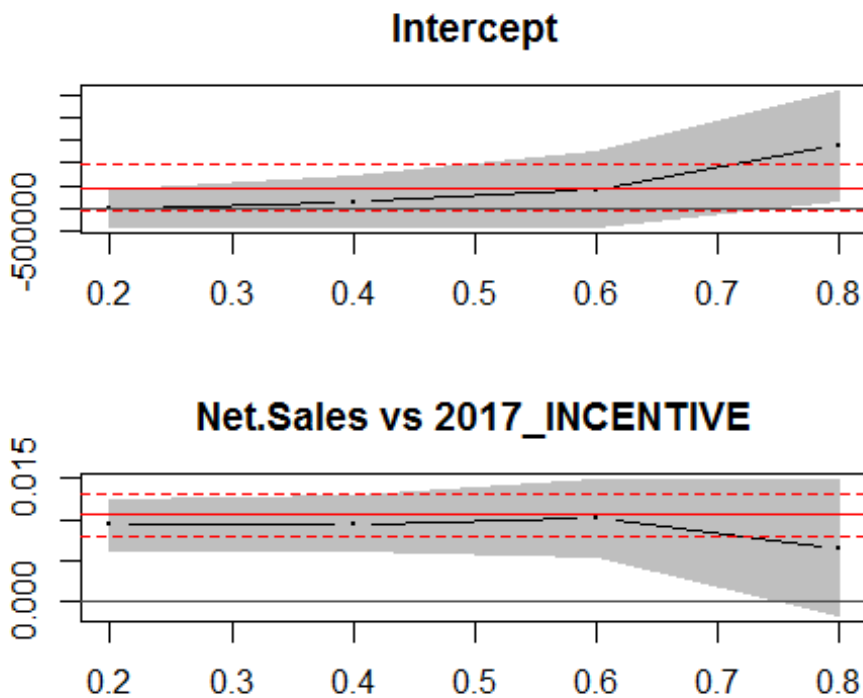
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.917137e+05 -4.568929e+05 1.040320e+06
## Net.Sales_TOTAL.2017 1.575422e-02  7.855987e-03 2.365245e-02
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      8.399066e+05 2.715761e+04 1.652655e+06
## Net.Sales_TOTAL.2017 1.582503e-02 1.092679e-02 2.072328e-02
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.339524e+06 4.153755e+05 2.263672e+06
## Net.Sales_TOTAL.2017 1.591485e-02 1.028795e-02 2.154175e-02
##
```

```
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.007124e+06  5.382548e+05  3.475993e+06
## Net.Sales_TOTAL.2017 1.617938e-02  8.007704e-03  2.435106e-02
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.698619e+06  9.562509e+05  2.440987e+06
## Net.Sales_TOTAL.2017 1.228208e-02  8.424199e-03  1.613996e-02
```



```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      -5.324063e+03 -5.693819e+04  4.629006e+04
## Net.Sales_TOTAL.2017 -4.031062e-04 -1.014316e-03  2.081036e-04
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      -2.850790e+03 -2.236094e+04  1.665936e+04
## Net.Sales_TOTAL.2017 -1.362085e-04 -2.961618e-04  2.374478e-05
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
```

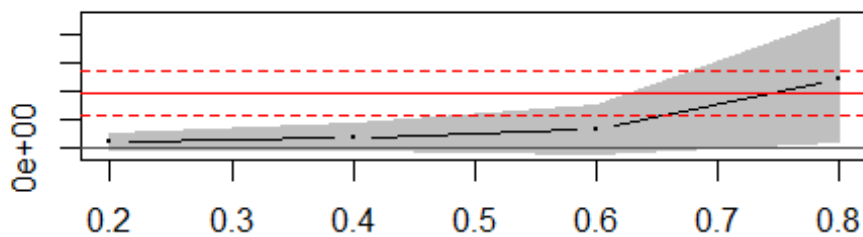
```
## (Intercept)          -2.189712e+03 -4.506881e+03 1.274580e+02
## Net.Sales_TOTAL.2017 -4.450917e-06 -7.496787e-05 6.606603e-05
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      0.000000e+00 -3.390989e+04 3.390989e+04
## Net.Sales_TOTAL.2017 8.926655e-07 -1.210588e-04 1.228442e-04
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.454670e+04 -4.352589e+04 7.261928e+04
## Net.Sales_TOTAL.2017 -3.375542e-04 -6.393414e-04 -3.576695e-05
```



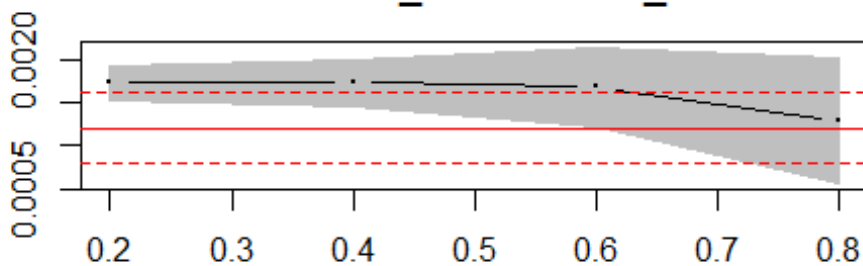
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      -5.323000e+03 -4.009616e+05 3.903156e+05
## Net.Sales_TOTAL.2017 9.291177e-03 6.273637e-03 1.230872e-02
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.455280e+05 -3.997303e+05 6.907863e+05
## Net.Sales_TOTAL.2017 9.472333e-03 6.124526e-03 1.282014e-02
##
```

```
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      4.110411e+05 -4.194311e+05 1.241513e+06
## Net.Sales_TOTAL.2017 1.014631e-02  5.356239e-03 1.493639e-02
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.381668e+06  1.807601e+05 2.582577e+06
## Net.Sales_TOTAL.2017 6.492230e-03 -1.835900e-03 1.482036e-02
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      4.505118e+05 -5.619925e+04 9.572229e+05
## Net.Sales_TOTAL.2017 1.053513e-02  7.930654e-03 1.313960e-02
```

Intercept



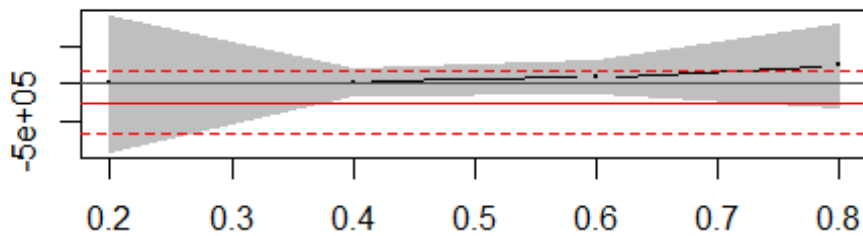
Net.Sales vs 2017_INSURANCE_PREMIUMS



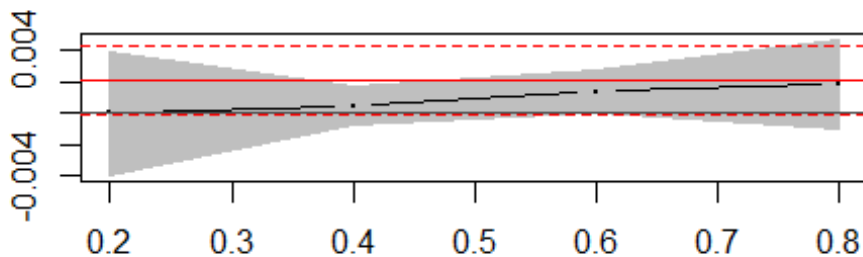
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.064026e+04 -8.607185e+03 4.988770e+04
## Net.Sales_TOTAL.2017 1.728530e-03  1.534503e-03 1.922557e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
```

```
## (Intercept)          3.513056e+04 -1.160358e+04 8.186470e+04
## Net.Sales_TOTAL.2017 1.728926e-03  1.461515e-03 1.996336e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      6.291892e+04 -2.559878e+04 1.514366e+05
## Net.Sales_TOTAL.2017 1.677701e-03  1.217682e-03 2.137721e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.402501e+05 2.092162e+04 4.595785e+05
## Net.Sales_TOTAL.2017 1.282505e-03 5.608547e-04 2.004156e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.909283e+05 1.121063e+05 2.697504e+05
## Net.Sales_TOTAL.2017 1.208923e-03 7.993062e-04 1.618539e-03
```

Intercept



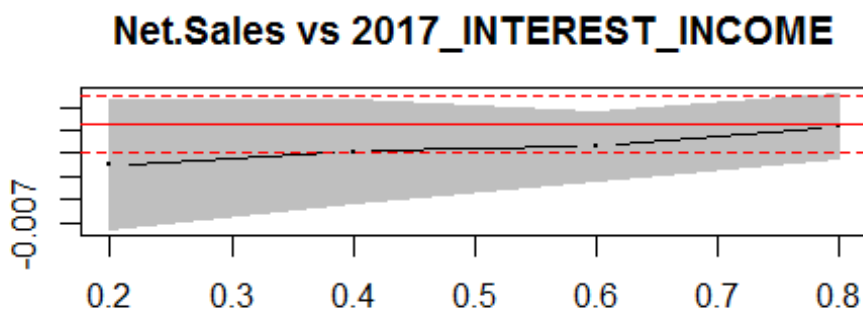
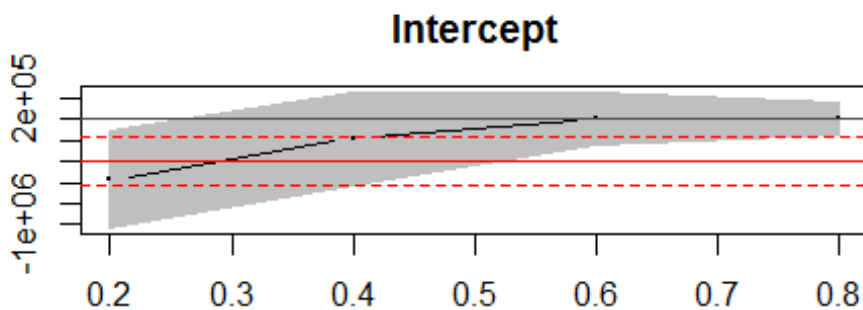
Net.Sales vs 2017_INTERBRANCH_CHRG



```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      -1.068479e+02 -9.132364e+05 9.130227e+05
## Net.Sales_TOTAL.2017 -4.044351e-05 -4.049831e-03 3.968944e-03
##
```



```
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.451000e+04 -1.484945e+05 1.975145e+05
## Net.Sales_TOTAL.2017 4.616207e-04 -8.036239e-04 1.726865e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      9.036351e+04 -1.259304e+05 3.066574e+05
## Net.Sales_TOTAL.2017 1.373543e-03 -2.856028e-05 2.775645e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.448290e+05 -3.204631e+05 8.101211e+05
## Net.Sales_TOTAL.2017 1.869151e-03 -1.000406e-03 4.738708e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)     -2.506942e+05 -6.758681e+05 1.744797e+05
## Net.Sales_TOTAL.2017 2.103300e-03 -1.062114e-04 4.312812e-03
```



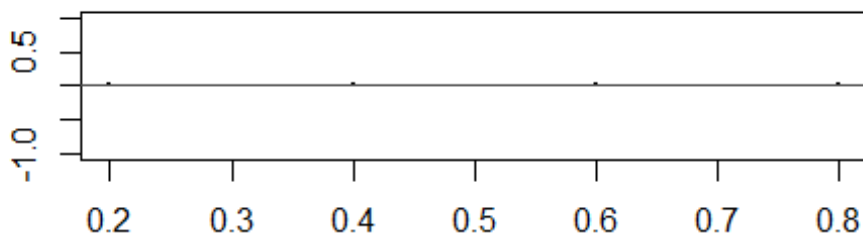
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
```

```

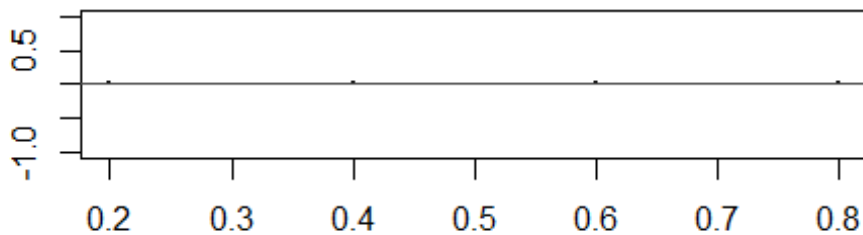
## (Intercept)          -5.764590e+05 -1.034710e+06 -1.182077e+05
## Net.Sales_TOTAL.2017 -4.513234e-03 -7.331261e-03 -1.695208e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      -1.822393e+05 -6.210647e+05  2.56586e+05
## Net.Sales_TOTAL.2017 -3.925812e-03 -6.186164e-03 -1.66546e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)           0.000000000 -2.51938e+05  2.51938e+05
## Net.Sales_TOTAL.2017 -0.003700775 -5.20954e-03 -2.19201e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.304819e+03 -1.465103e+05  1.511199e+05
## Net.Sales_TOTAL.2017 -2.797532e-03 -4.216541e-03 -1.378522e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      -3.997822e+05 -6.333094e+05 -1.662549e+05
## Net.Sales_TOTAL.2017 -2.734887e-03 -3.936507e-03 -1.533267e-03

```

Intercept



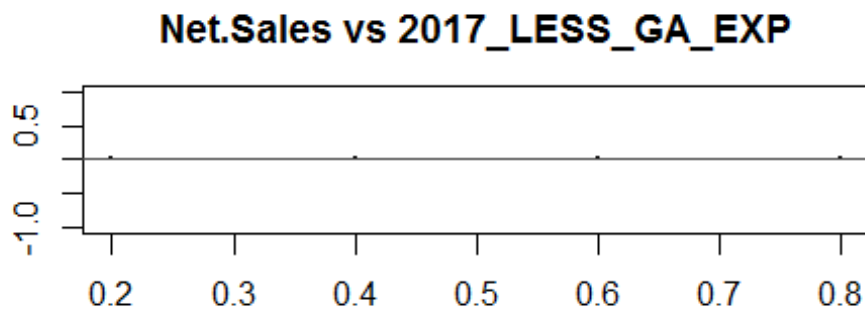
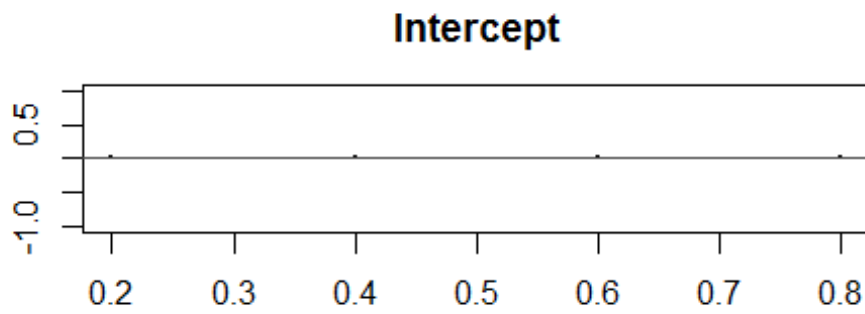
Net.Sales vs 2017_LESS_DEPR_AMORT_EXP



```

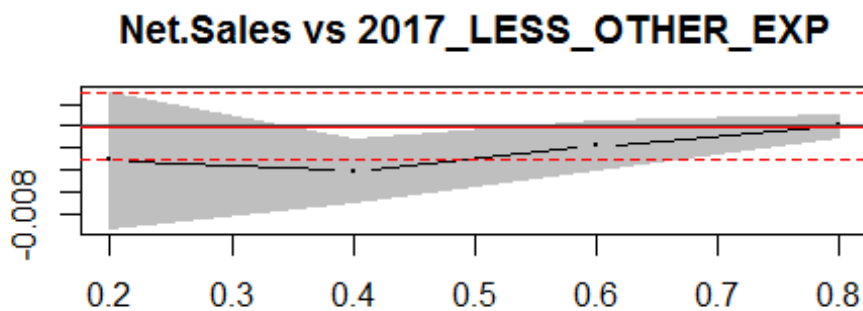
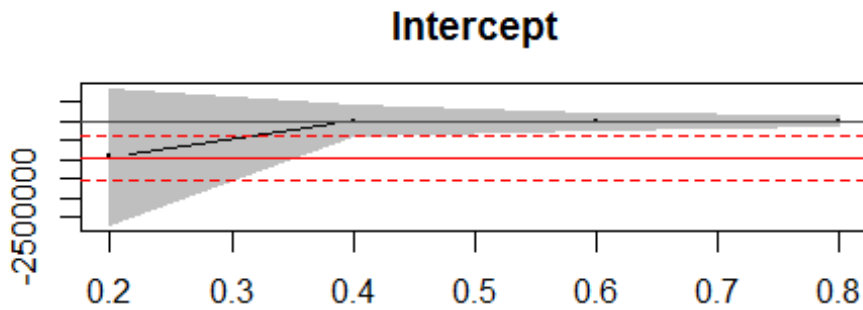
## , , tau= 0.2
##
##               coefficients lower bd upper bd
## (Intercept)           0         0         0
## Net.Sales_TOTAL.2017    0         0         0
##
## , , tau= 0.4
##
##               coefficients lower bd upper bd
## (Intercept)           0         0         0
## Net.Sales_TOTAL.2017    0         0         0
##
## , , tau= 0.6
##
##               coefficients lower bd upper bd
## (Intercept)           0         0         0
## Net.Sales_TOTAL.2017    0         0         0
##
## , , tau= 0.8
##
##               coefficients lower bd upper bd
## (Intercept)           0         0         0
## Net.Sales_TOTAL.2017    0         0         0
##
## , , ols
##
##               coefficients lower bd upper bd
## (Intercept)           0         0         0
## Net.Sales_TOTAL.2017    0         0         0

```



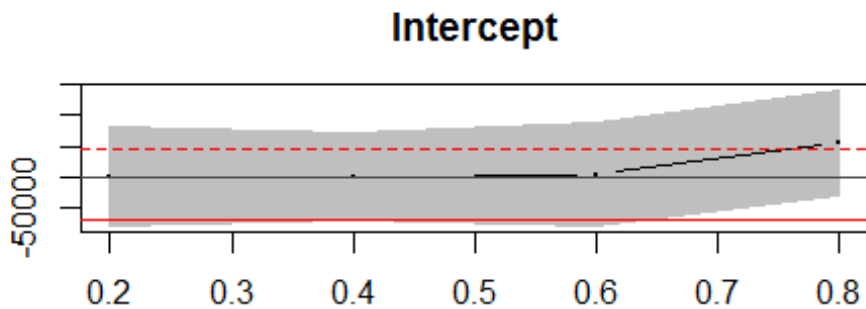
```
## , , tau= 0.2
##
##               coefficients lower bd upper bd
## (Intercept)                0      0      0
## Net.Sales_TOTAL.2017        0      0      0
##
## , , tau= 0.4
##
##               coefficients lower bd upper bd
## (Intercept)                0      0      0
## Net.Sales_TOTAL.2017        0      0      0
##
## , , tau= 0.6
##
##               coefficients lower bd upper bd
## (Intercept)                0      0      0
## Net.Sales_TOTAL.2017        0      0      0
##
## , , tau= 0.8
##
##               coefficients lower bd upper bd
## (Intercept)                0      0      0
## Net.Sales_TOTAL.2017        0      0      0
##
## , , ols
##
##               coefficients lower bd upper bd
```

## (Intercept)	0	0	0
## Net.Sales_TOTAL.2017	0	0	0

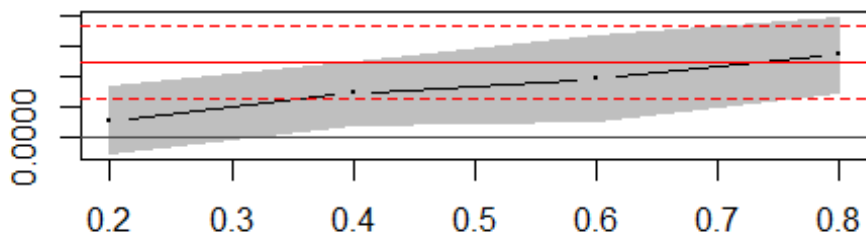


```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)    -9.351412e+05 -2.709513e+06  8.392310e+05
## Net.Sales_TOTAL.2017 -3.165827e-03 -9.427410e-03  3.095755e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)    -95.480813235 -4.026071e+05  4.024161e+05
## Net.Sales_TOTAL.2017 -0.004095683 -7.050632e-03 -1.140735e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      0.000000000 -2.181619e+05  2.181619e+05
## Net.Sales_TOTAL.2017 -0.001867053 -4.092001e-03  3.578955e-04
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      0.000000e+00 -1.256403e+05  1.256403e+05
## Net.Sales_TOTAL.2017  2.22654e-08 -9.942290e-04  9.942735e-04
##
```

```
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      -9.539246e+05 -1.543627e+06 -3.642223e+05
## Net.Sales_TOTAL.2017 -6.557907e-05 -3.130099e-03  2.998941e-03
```

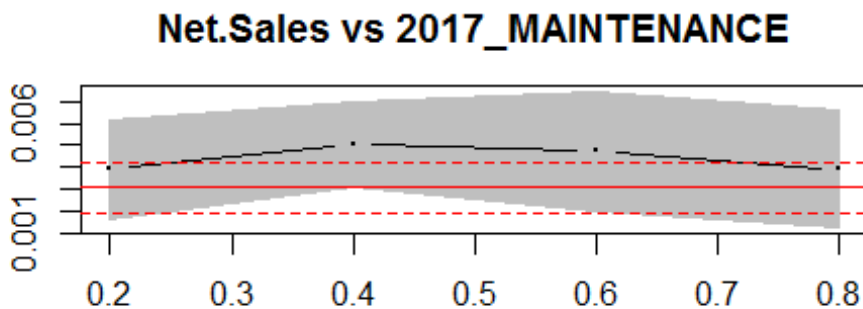
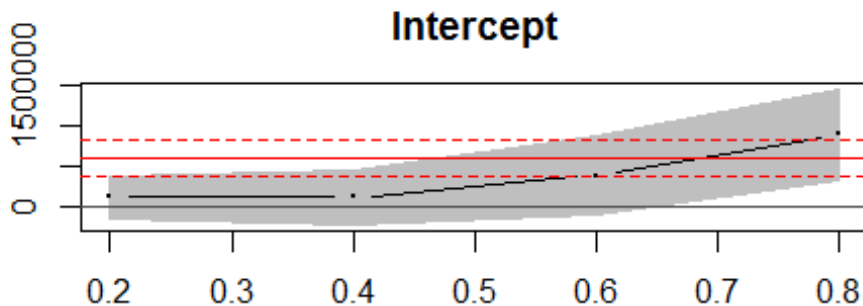


Net.Sales vs 2017_LOSS_DAMAGE_CLAIMS



```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      0.0000000000 -8.154197e+04 8.154197e+04
## Net.Sales_TOTAL.2017 0.0002930817 -2.577707e-04 8.439342e-04
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      0.0000000000 -7.197333e+04 7.197333e+04
## Net.Sales_TOTAL.2017 0.0007275981  2.111714e-04 1.244025e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.62800e+03 -7.979552e+04 8.705152e+04
## Net.Sales_TOTAL.2017 9.66057e-04  2.833424e-04 1.648772e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
```

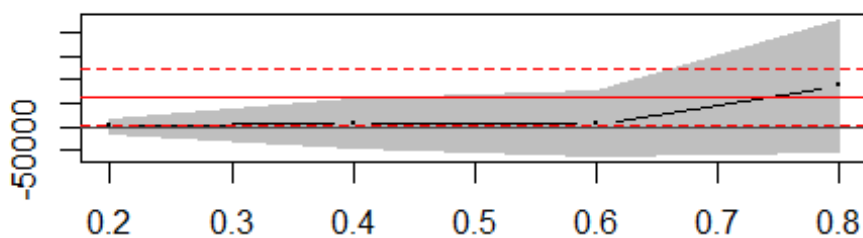
```
## (Intercept)          5.512962e+04 -3.193890e+04 1.421981e+05
## Net.Sales_TOTAL.2017 1.355820e-03  7.418067e-04 1.969834e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)    -7.050271e+04 -1.857073e+05 4.470185e+04
## Net.Sales_TOTAL.2017 1.232277e-03 6.335905e-04 1.830963e-03
```



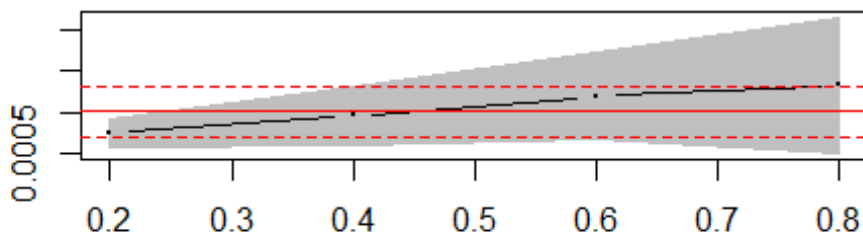
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)    1.120870e+05 -1.441112e+05 3.682852e+05
## Net.Sales_TOTAL.2017 3.892409e-03 1.611684e-03 6.173135e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)    1.120870e+05 -2.329082e+05 4.570822e+05
## Net.Sales_TOTAL.2017 5.052563e-03 3.077697e-03 7.027429e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)    3.85231e+05 -9.705997e+04 8.675220e+05
## Net.Sales_TOTAL.2017 4.72811e-03 1.978727e-03 7.477494e-03
##
```

```
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      8.895477e+05  3.206427e+05  1.458453e+06
## Net.Sales_TOTAL.2017 3.908050e-03  1.227121e-03  6.588980e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      6.105715e+05  3.847155e+05  8.364275e+05
## Net.Sales_TOTAL.2017 3.066444e-03  1.892733e-03  4.240156e-03
```

Intercept



Net.Sales vs 2017_MARKETING

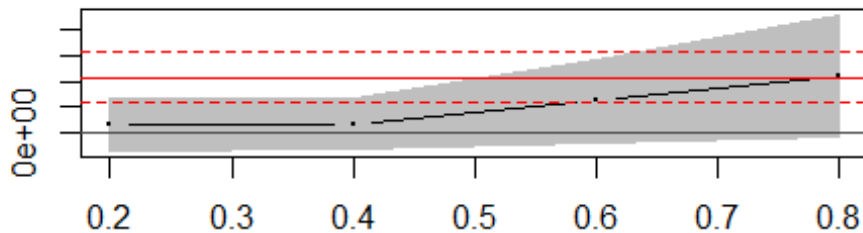


```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.484407e+03 -1.377397e+04  1.674279e+04
## Net.Sales_TOTAL.2017 7.505106e-04  5.713625e-04  9.296588e-04
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      6.929375e+03 -4.377618e+04  5.763493e+04
## Net.Sales_TOTAL.2017 9.583718e-04  6.126942e-04  1.304050e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
```

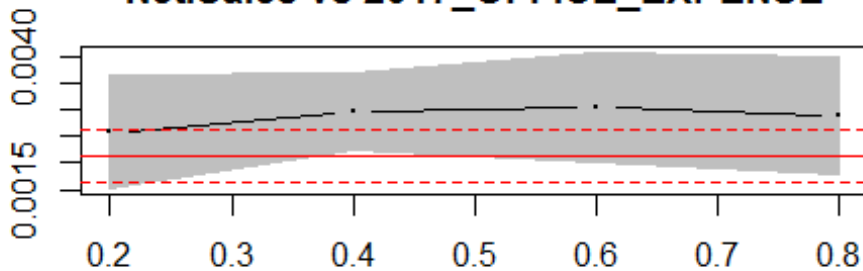


```
## (Intercept)          6.213124e+03 -6.306774e+04 7.549399e+04
## Net.Sales_TOTAL.2017 1.191804e-03  6.631742e-04 1.720433e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      8.807843e+04 -5.160476e+04 2.277616e+05
## Net.Sales_TOTAL.2017 1.320955e-03  4.966653e-04 2.145246e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      6.310372e+04 4.836962e+03 1.213705e+05
## Net.Sales_TOTAL.2017 1.005504e-03 7.027081e-04 1.308301e-03
```

Intercept

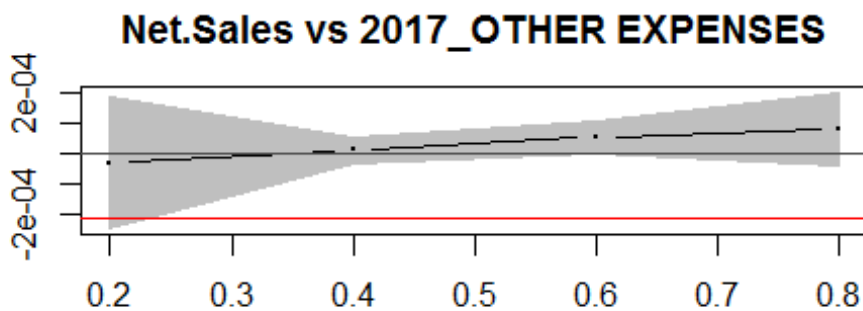
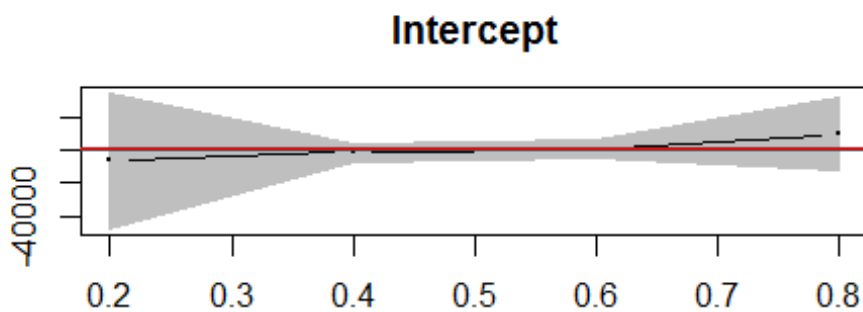


Net.Sales vs 2017_OFFICE_EXPENSE



```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.297600e+04 -7.147129e+04 1.374233e+05
## Net.Sales_TOTAL.2017 2.569565e-03  1.514218e-03 3.624912e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.601720e+04 -6.250638e+04 1.345408e+05
## Net.Sales_TOTAL.2017 2.969786e-03  2.259890e-03 3.679683e-03
##
```

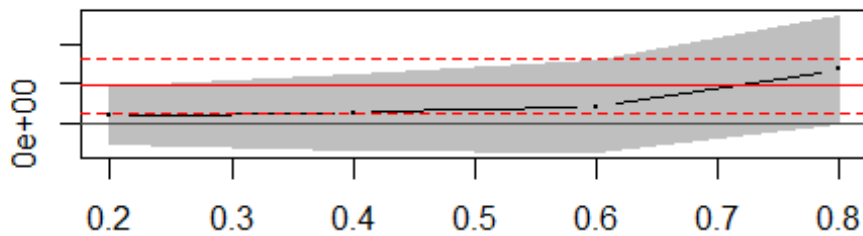
```
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.247124e+05 -3.581914e+04 2.852439e+05
## Net.Sales_TOTAL.2017 3.047935e-03  2.028583e-03 4.067286e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.194167e+05 -1.721253e+04 4.560459e+05
## Net.Sales_TOTAL.2017 2.884620e-03  1.800250e-03 3.968989e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.140048e+05 1.167446e+05 3.112650e+05
## Net.Sales_TOTAL.2017 2.125503e-03 1.620068e-03 2.630937e-03
```



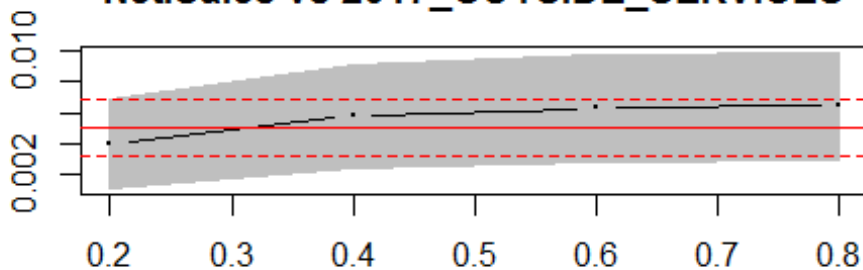
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      -6.653000e+03 -4.802460e+04 3.471860e+04
## Net.Sales_TOTAL.2017 -2.983187e-05 -2.448114e-04 1.851477e-04
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
```

```
## (Intercept)          -1.322814e+03 -6.689228e+03 4.04360e+03
## Net.Sales_TOTAL.2017  1.300893e-05 -2.920194e-05 5.52198e-05
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      5.54000e+02 -4.690801e+03 5.798801e+03
## Net.Sales_TOTAL.2017 5.48896e-05  3.669950e-06 1.061093e-04
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.000534e+04 -1.186655e+04 3.187723e+04
## Net.Sales_TOTAL.2017 8.104021e-05 -3.849748e-05 2.005779e-04
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.005617e+03 -9.364280e+04 9.565403e+04
## Net.Sales_TOTAL.2017 -2.128086e-04 -7.046702e-04 2.790531e-04
```

Intercept



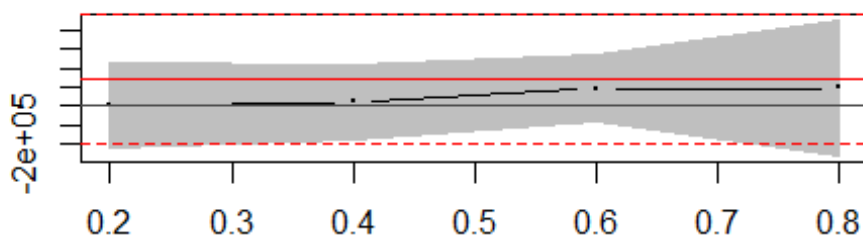
Net.Sales vs 2017_OUTSIDE_SERVICES



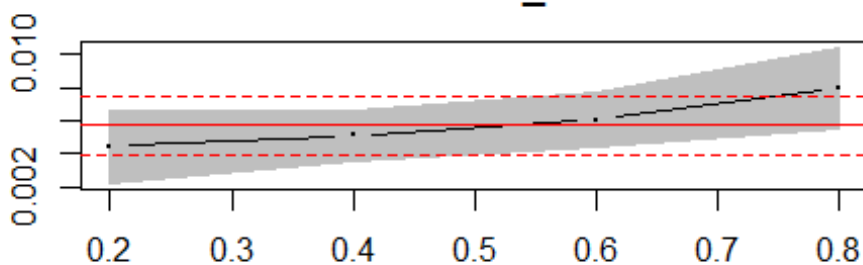
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.026278e+05 -2.662865e+05 4.715421e+05
## Net.Sales_TOTAL.2017 3.956686e-03  9.995400e-04 6.913833e-03
##
```

```
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.295485e+05 -3.451284e+05 6.042254e+05
## Net.Sales_TOTAL.2017 5.750959e-03  2.375730e-03 9.126189e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.125483e+05 -3.768610e+05 8.019575e+05
## Net.Sales_TOTAL.2017 6.286011e-03  2.808841e-03 9.763181e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      6.886129e+05 2.173946e+03 1.375052e+06
## Net.Sales_TOTAL.2017 6.445043e-03  2.945840e-03 9.944246e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      4.801457e+05 1.283487e+05 8.319427e+05
## Net.Sales_TOTAL.2017 5.004674e-03  3.176483e-03 6.832866e-03
```

Intercept



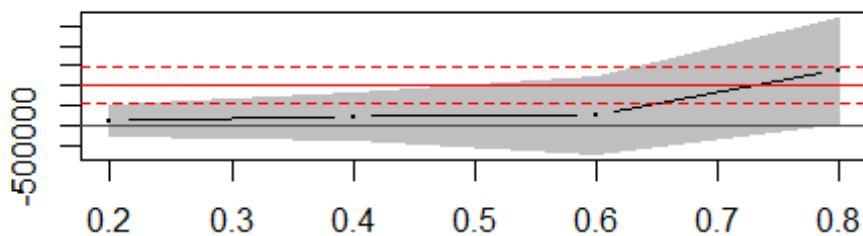
Net.Sales vs 2017_OVERTIME



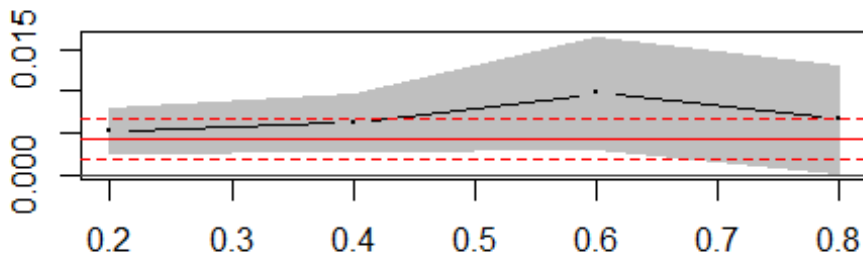
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
```

```
## (Intercept)          1.527000e+03 -2.183629e+05 2.214169e+05
## Net.Sales_TOTAL.2017 4.421207e-03  2.189013e-03 6.653400e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.102348e+04 -1.775095e+05 2.195564e+05
## Net.Sales_TOTAL.2017 5.127577e-03  3.614166e-03 6.640989e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      9.248800e+04 -8.402944e+04 2.690054e+05
## Net.Sales_TOTAL.2017 6.040025e-03  4.369346e-03 7.710703e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      9.451045e+04 -2.626864e+05 4.517073e+05
## Net.Sales_TOTAL.2017 7.987196e-03  5.56028e-03 1.040836e-02
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.421150e+05 -2.003079e+05 4.845378e+05
## Net.Sales_TOTAL.2017 5.731477e-03  3.952000e-03 7.510954e-03
```

Intercept



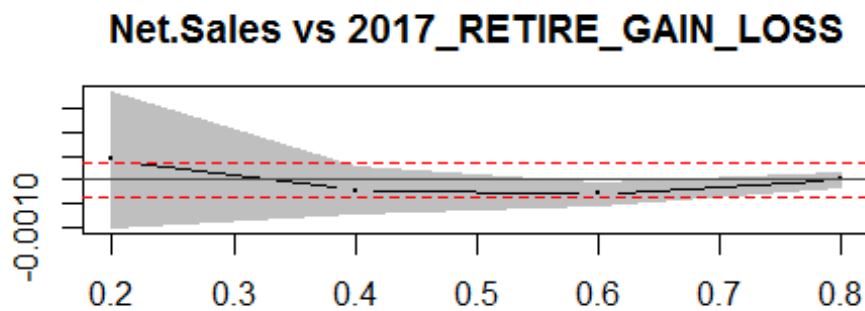
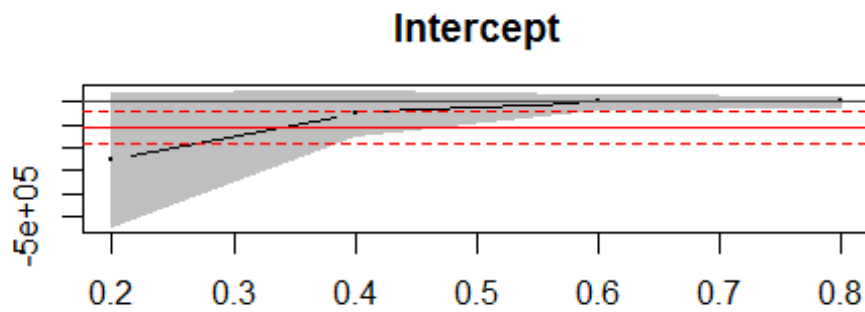
Net.Sales vs 2017_RENTAL



```

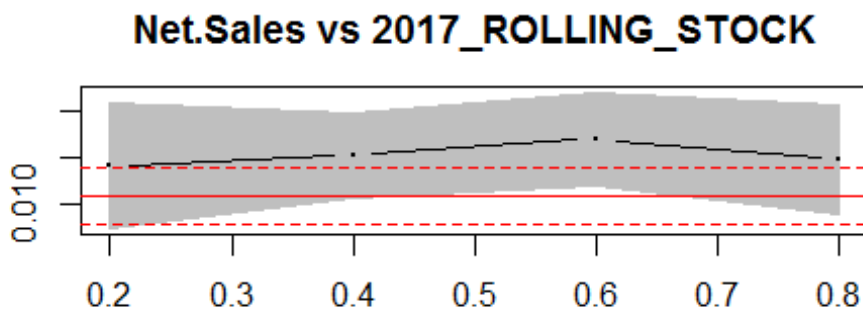
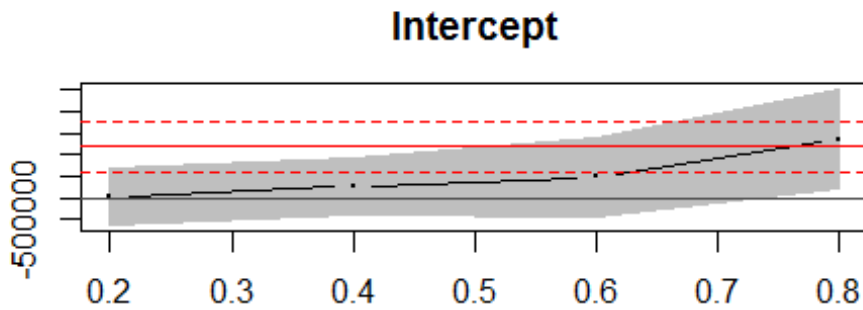
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.139832e+05 -2.542604e+05 4.822269e+05
## Net.Sales_TOTAL.2017 5.249348e-03  2.553811e-03 7.944884e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.189135e+05 -3.575130e+05 7.953399e+05
## Net.Sales_TOTAL.2017 6.243098e-03  2.825652e-03 9.660544e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.489710e+05 -7.366242e+05 1.234566e+06
## Net.Sales_TOTAL.2017 9.747432e-03  3.049706e-03 1.644516e-02
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.380592e+06 5.302502e+04 2.708159e+06
## Net.Sales_TOTAL.2017 6.601163e-03 1.115629e-04 1.309076e-02
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.010074e+06 5.439772e+05 1.476171e+06
## Net.Sales_TOTAL.2017 4.400948e-03 1.978770e-03 6.823126e-03

```



```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      -2.532031e+05 -5.486223e+05 4.221624e+04
## Net.Sales_TOTAL.2017 4.215306e-04 -1.023430e-03 1.866491e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      -4.803279e+04 -1.465510e+05 5.048542e+04
## Net.Sales_TOTAL.2017 -2.244525e-04 -7.262421e-04 2.773372e-04
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)           0.0000000000 -3.212688e+04 3.212688e+04
## Net.Sales_TOTAL.2017 -0.0002980193 -5.213405e-04 -7.469812e-05
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)           0 -2.114122e+04 2.114122e+04
## Net.Sales_TOTAL.2017           0 -1.574174e-04 1.574174e-04
##
## , , ols
##
##               coefficients      lower bd      upper bd
```

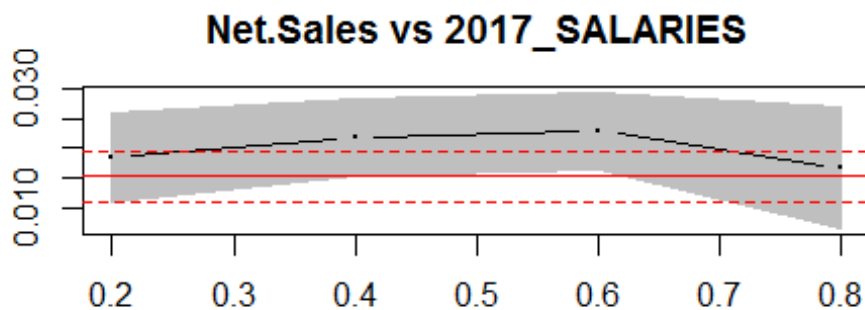
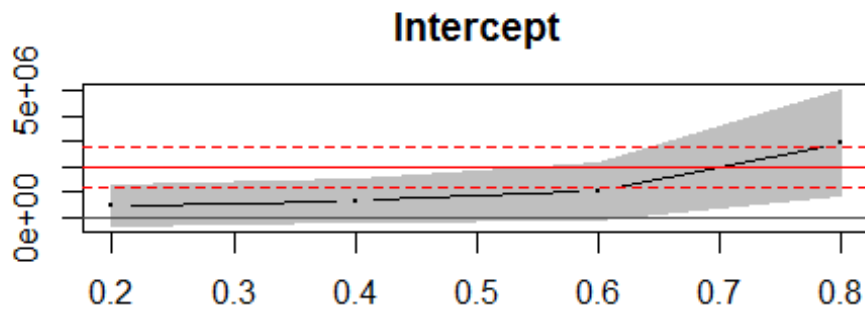
```
## (Intercept)          -1.132609e+05 -1.854360e+05 -4.108587e+04
## Net.Sales_TOTAL.2017  3.078514e-06 -3.719954e-04  3.781524e-04
```



```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.797800e+04 -6.336508e+05 7.096068e+05
## Net.Sales_TOTAL.2017 1.416895e-02 7.430277e-03 2.090763e-02
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.666963e+05 -3.747084e+05 9.081010e+05
## Net.Sales_TOTAL.2017 1.528212e-02 1.080948e-02 1.975476e-02
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      4.871340e+05 -4.110643e+05 1.385332e+06
## Net.Sales_TOTAL.2017 1.703027e-02 1.205534e-02 2.200521e-02
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.366671e+06 2.053449e+05 2.527997e+06
## Net.Sales_TOTAL.2017 1.475453e-02 8.928297e-03 2.058076e-02
##
```

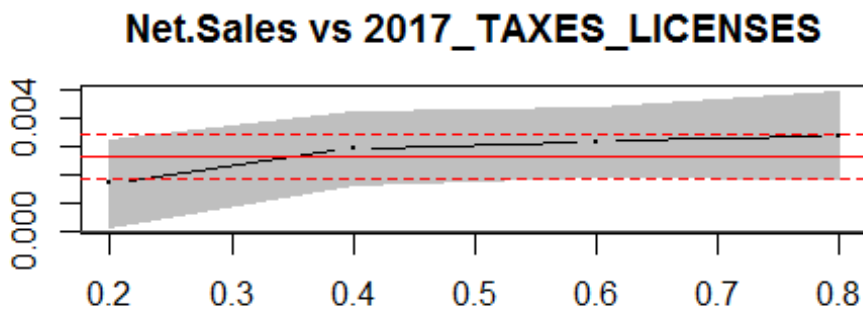
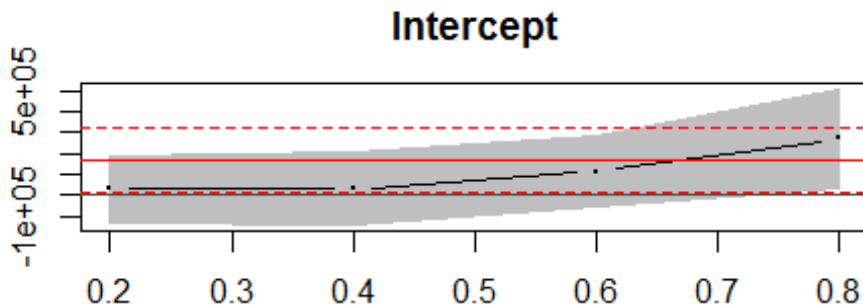


```
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.18605e+06  6.021316e+05  1.769969e+06
## Net.Sales_TOTAL.2017  1.09410e-02  7.906531e-03  1.397546e-02
```



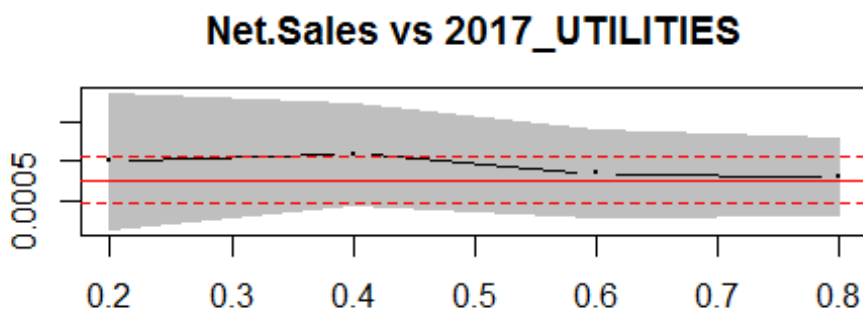
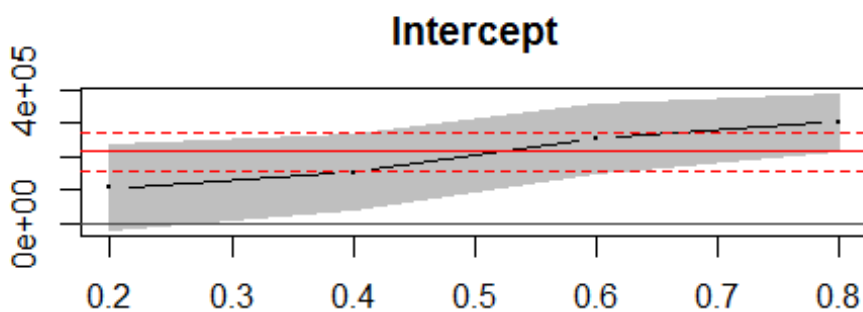
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      4.542729e+05 -3.678158e+05  1.276362e+06
## Net.Sales_TOTAL.2017  1.842588e-02  1.103907e-02  2.581269e-02
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      6.418490e+05 -2.113009e+05  1.494999e+06
## Net.Sales_TOTAL.2017  2.187452e-02  1.558487e-02  2.816416e-02
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.015554e+06 -7.947364e+04  2.110581e+06
## Net.Sales_TOTAL.2017  2.283553e-02  1.638642e-02  2.928463e-02
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
```

```
## (Intercept)          2.954073e+06  8.685590e+05  5.039586e+06
## Net.Sales_TOTAL.2017 1.682932e-02  6.685696e-03  2.697294e-02
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.972362e+06  1.160960e+06  2.783764e+06
## Net.Sales_TOTAL.2017 1.536229e-02  1.114566e-02  1.957893e-02
```



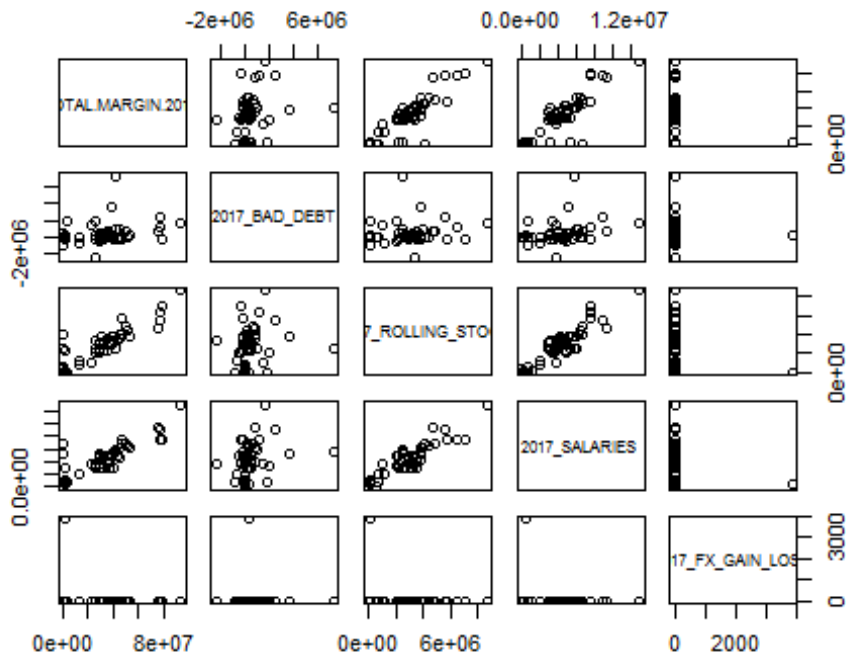
```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.010500e+04 -1.319283e+05  1.921383e+05
## Net.Sales_TOTAL.2017 1.671931e-03  1.085734e-04  3.235289e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.010500e+04 -1.438854e+05  2.040954e+05
## Net.Sales_TOTAL.2017 2.919563e-03  1.599811e-03  4.239314e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.140204e+05 -5.216765e+04  2.802085e+05
## Net.Sales_TOTAL.2017 3.169963e-03  1.949747e-03  4.390179e-03
##
```

```
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.722048e+05  3.432635e+04  5.100833e+05
## Net.Sales_TOTAL.2017 3.388127e-03  1.825363e-03  4.950892e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.708217e+05  1.579511e+04  3.258484e+05
## Net.Sales_TOTAL.2017 2.646476e-03  1.840845e-03  3.452106e-03
```



```
## , , tau= 0.2
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.059773e+05 -2.115996e+04  2.331146e+05
## Net.Sales_TOTAL.2017 9.996148e-04  1.441332e-04  1.855096e-03
##
## , , tau= 0.4
##
##               coefficients      lower bd      upper bd
## (Intercept)      1.527219e+05  4.229525e+04  2.631485e+05
## Net.Sales_TOTAL.2017 1.095884e-03  4.601640e-04  1.731604e-03
##
## , , tau= 0.6
##
##               coefficients      lower bd      upper bd
```

```
## (Intercept)          2.531542e+05 1.504434e+05 3.558651e+05
## Net.Sales_TOTAL.2017 8.492400e-04 3.151244e-04 1.383356e-03
##
## , , tau= 0.8
##
##               coefficients      lower bd      upper bd
## (Intercept)      3.017707e+05 2.163780e+05 3.871633e+05
## Net.Sales_TOTAL.2017 8.074804e-04 3.335218e-04 1.281439e-03
##
## , , ols
##
##               coefficients      lower bd      upper bd
## (Intercept)      2.13511e+05 1.576913e+05 2.693307e+05
## Net.Sales_TOTAL.2017 7.70086e-04 4.800066e-04 1.060165e-03
```



```
realaimpo.test <- lm(TOTAL.MARGIN.2017 ~ .,
                     data = df.cutdown)
summary(realaimpo.test)

##
## Call:
## lm(formula = TOTAL.MARGIN.2017 ~ ., data = df.cutdown)
##
## Residuals:
```

##	Min	1Q	Median	3Q	Max
----	-----	----	--------	----	-----

```

## -46505906 -1888820 1236148 6142180 18206196
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept) -1.311e+06  3.099e+06  -0.423  0.67416
## `2017_BAD_DEBT` 1.789e+00  1.220e+00   1.467  0.14929
## `2017_ROLLING_STOCK` 8.006e+00  1.996e+00   4.011  0.00022 ***
## `2017_SALARIES` 2.163e+00  1.468e+00   1.474  0.14740
## `2017_FX_GAIN_LOSS` 2.240e+02  2.872e+03   0.078  0.93818
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 10750000 on 46 degrees of freedom
## Multiple R-squared:  0.8, Adjusted R-squared:  0.7826
## F-statistic: 46 on 4 and 46 DF, p-value: 1.628e-15

relaimpo.calc <- calc.relimp(realaimpo.test, type = c("lmg"), rela = TRUE)
relaimpo.calc

## Response variable: TOTAL.MARGIN.2017
## Total response variance: 5.312089e+14
## Analysis based on 51 observations
##
## 4 Regressors:
## 2017_BAD_DEBT 2017_ROLLING_STOCK 2017_SALARIES 2017_FX_GAIN_LOSS
## Proportion of variance explained by model: 80%
## Metrics are normalized to sum to 100% (rela=TRUE).
##
## Relative importance metrics:
##
##              lmg
## 2017_BAD_DEBT 0.03312198
## 2017_ROLLING_STOCK 0.50793822
## 2017_SALARIES 0.44374963
## 2017_FX_GAIN_LOSS 0.01519017
##
## Average coefficients for different model sizes:
##
##              1X              2Xs              3Xs              4Xs
## 2017_BAD_DEBT 4.244109 2.361796 1.567241 1.789026
## 2017_ROLLING_STOCK 10.882648 9.593432 8.634995 8.005554
## 2017_SALARIES 7.581261 5.992646 4.185856 2.162820
## 2017_FX_GAIN_LOSS -8147.041143 -2730.593125 -6.933246 223.995322

```