Assumptions:

* 'Loan\_Status\_MartoMay' - gives data for loans that were TBO each month
* 'Loan\_Status\_AprtoJun' - gives data for the next month for loans that were TBO each month in 'Loan\_Status\_MartoMay'

Roll Forward Rate:

Roll rate for TBO loans in March: 60.92119289025509

Roll rate for TB0 loans in April: 67.12858524009023

Roll rate for TB0 loans in May: 72.17581001016387

Roll rate for March TB0 loans: 1.591

Roll rate for April TB0 loans: 1.998

Roll rate for May TB0 loans: 1.556

Principal Balance Roll forward rate:

Total sanctioned amount: 1862351670144

Balance roll rate for TB0 loans in March: 44.44533007622233

Balance roll rate for TB0 loans in April: 48.56477897441339

Balance roll rate for TB0 loans in May: 53.393612868539655

|  |  |  |  |
| --- | --- | --- | --- |
|  | Roll Forward Rate | Principal Balance Roll Forward | Principal Balance Roll Forward Rate |
| MONTH |  |  |  |
| March | 60.92119289025509 | 827728346975.54 | 44.44533007622233 |
| April | 67.12858524009023 | 904446972331.73 | 48.56477897441339 |
| May | 72.17581001016387 | 994376841007.47 | 53.393612868539655 |

Roll rate for March TB0 loans: 1.591

Roll rate for April TB0 loans: 1.998

Roll rate for May TB0 loans: 1.556

Average Metrics:

|  |  |  |  |
| --- | --- | --- | --- |
|  | avg\_intensity | avg\_rpc\_rate | avg\_ptp\_rate |
| month |  |  |  |
| 3 | 12.957694 | 0.494614 | 0.236683 |
| 4 | 11.247509 | 0.484527 | 0.218108 |
| 5 | 10.963286 | 0.496549 | 0.214621 |

Correlation between principal balance and term:

-0.551402347382676

If we estimate the absolute correlation value as being moderate if it falls between 0.5 and 0.7, we can conclude that there is a moderate correlation between term completed and principal balance. In addition as this is a negative value, we conclude that this is a negative relationship, meaning as there is an increase in one variable there is a decrease in the other and vice-versa.

Identify the agents who are showing the best and worst performance:

agent\_table['perf\_metric1'] = agent\_table['month\_count'] \* agent\_table['RPC\_rate'] \* agent\_table['PTP\_rate'] + 0.01

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | No. of Months | Right Party Contacted | Promise to Pay | Total Contacts | RPC rate | PTP rate | Perf metric | Perf metric1 | Perf metric2 |
| Login\_ID |  |  |  |  |  |  |  |  |  |
| AGNT91 | 2 | 7 | 2 | 7 | 1.000 | 0.286 | 196.01 | 0.582000 | 4.014000 |
| AGNT58 | 1 | 2 | 1 | 2 | 1.000 | 0.500 | 4.01 | 0.510000 | 1.010000 |
| AGNT79 | 2 | 9 | 8 | 17 | 0.529 | 0.471 | 2448.01 | 0.508318 | 8.481406 |
| AGNT71 | 1 | 4 | 4 | 6 | 0.667 | 0.667 | 96.01 | 0.454889 | 2.679334 |
| AGNT80 | 2 | 9 | 2 | 9 | 1.000 | 0.222 | 324.01 | 0.454000 | 4.006000 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | No. of Months | Right Party Contacted | Promise to Pay | Total Contacts | RPC rate | PTP rate | Perf metric | Perf metric1 | Perf metric2 |
| Login\_ID |  |  |  |  |  |  |  |  |  |
| AGNT83 | 3 | 9 | 0 | 9 | 1.0 | 0.0 | 0.01 | 0.01 | 0.01 |
| AGNT76 | 1 | 1 | 0 | 1 | 1.0 | 0.0 | 0.01 | 0.01 | 0.01 |
| AGNT77 | 2 | 4 | 0 | 5 | 0.8 | 0.0 | 0.01 | 0.01 | 0.01 |
| AGNT81 | 1 | 2 | 0 | 2 | 1.0 | 0.0 | 0.01 | 0.01 | 0.01 |
| AGNT82 | 1 | 2 | 0 | 2 | 1.0 | 0.0 | 0.01 | 0.01 | 0.01 |