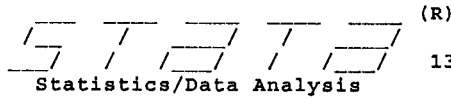


User: Kaylee Baldassin
Project: HW6



MP - Parallel Edition

13.1 Copyright 1985-2013 StataCorp LP
StataCorp
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Notes:

1. (/v# option or -set maxvar-) 5000 maximum variables
- 1 . use "J:\AD_ORGANIZE PAPER\final_merged.dta", clear
- 2 . pca original_interest_rate original_upb dti ltv cltv borrower_credit_score original_loan_term
> co_borrower_credit_score mortgage_insurance_percentage

Principal components/correlation

| | | |
|-----------------------------------|---|--------------|
| Number of obs | = | 81205 |
| Number of comp. | = | 9 |
| Trace | = | 9 |
| Rotation: (unrotated = principal) | = | Rho = 1.0000 |

| Component | Eigenvalue | Difference | Proportion | Cumulative |
|-----------|------------|------------|------------|------------|
| Comp1 | 2.66887 | .923336 | 0.2965 | 0.2965 |
| Comp2 | 1.74554 | .477675 | 0.1939 | 0.4905 |
| Comp3 | 1.26786 | .263545 | 0.1409 | 0.6314 |
| Comp4 | 1.00432 | .0215175 | 0.1116 | 0.7430 |
| Comp5 | .982801 | .279588 | 0.1092 | 0.8522 |
| Comp6 | .703213 | .394982 | 0.0781 | 0.9303 |
| Comp7 | .308232 | .00453517 | 0.0342 | 0.9645 |
| Comp8 | .303697 | .288237 | 0.0337 | 0.9983 |
| Comp9 | .0154602 | . | 0.0017 | 1.0000 |

Principal components (eigenvectors)

| Variable | Comp1 | Comp2 | Comp3 | Comp4 | Comp5 | Comp6 | Comp7 |
|--------------|---------|---------|---------|---------|---------|---------|---------|
| original_i-e | -0.0043 | -0.2165 | -0.5056 | -0.2930 | 0.5501 | 0.5401 | -0.1147 |
| original_upb | 0.0201 | -0.0149 | 0.7237 | -0.0184 | -0.0210 | 0.6886 | 0.0160 |
| dti | 0.0383 | -0.1440 | 0.4581 | -0.2714 | 0.6863 | -0.4724 | 0.0053 |
| ltv | 0.5954 | -0.0132 | 0.0135 | 0.0258 | -0.0420 | -0.0199 | -0.2962 |
| cltv | 0.5948 | -0.0121 | 0.0149 | 0.0258 | -0.0443 | -0.0204 | -0.3012 |
| borrower_c-e | 0.0360 | 0.6829 | -0.0249 | -0.0542 | 0.1574 | 0.0383 | -0.4262 |
| original_l-m | 0.0157 | -0.0302 | -0.0216 | 0.9104 | 0.4060 | 0.0571 | 0.0278 |
| co_borrowe-e | 0.0343 | 0.6797 | -0.0304 | -0.0599 | 0.1797 | 0.0541 | 0.4333 |
| mortgage_i-e | 0.5358 | -0.0514 | -0.0912 | -0.0588 | 0.0181 | 0.0494 | 0.6618 |

| Variable | Comp8 | Comp9 | Unexplained |
|--------------|---------|---------|-------------|
| original_i-e | -0.0647 | 0.0011 | 0 |
| original_upb | 0.0181 | -0.0003 | 0 |
| dti | 0.0105 | 0.0007 | 0 |
| ltv | -0.2279 | -0.7090 | 0 |
| cltv | -0.2339 | 0.7052 | 0 |
| borrower_c-e | 0.5665 | 0.0006 | 0 |
| original_l-m | 0.0257 | 0.0009 | 0 |
| co_borrowe-e | -0.5562 | -0.0010 | 0 |
| mortgage_i-e | 0.5078 | 0.0049 | 0 |

3 . predict pc1 pc2 pc3 pc4, score
(5 components skipped)

Scoring coefficients
sum of squares(column-loading) = 1

| Variable | Comp1 | Comp2 | Comp3 | Comp4 | Comp5 | Comp6 | Comp7 |
|--------------|---------|---------|---------|---------|---------|---------|---------|
| original_i-e | -0.0043 | -0.2165 | -0.5056 | -0.2930 | 0.5501 | 0.5401 | -0.1147 |
| original_upb | 0.0201 | -0.0149 | 0.7237 | -0.0184 | -0.0210 | 0.6886 | 0.0160 |
| dti | 0.0383 | -0.1440 | 0.4581 | -0.2714 | 0.6863 | -0.4724 | 0.0053 |
| ltv | 0.5954 | -0.0132 | 0.0135 | 0.0258 | -0.0420 | -0.0199 | -0.2962 |
| cltv | 0.5948 | -0.0121 | 0.0149 | 0.0258 | -0.0443 | -0.0204 | -0.3012 |
| borrower_c-e | 0.0360 | 0.6829 | -0.0249 | -0.0542 | 0.1574 | 0.0383 | -0.4262 |
| original_l-m | 0.0157 | -0.0302 | -0.0216 | 0.9104 | 0.4060 | 0.0571 | 0.0278 |
| co_borrowe-e | 0.0343 | 0.6797 | -0.0304 | -0.0599 | 0.1797 | 0.0541 | 0.4333 |
| mortgage_i-e | 0.5358 | -0.0514 | -0.0912 | -0.0588 | 0.0181 | 0.0494 | 0.6618 |

| Variable | Comp8 | Comp9 |
|--------------|---------|---------|
| original_i-e | -0.0647 | 0.0011 |
| original_upb | 0.0181 | -0.0003 |
| dti | 0.0105 | 0.0007 |
| ltv | -0.2279 | -0.7090 |
| cltv | -0.2339 | 0.7052 |
| borrower_c-e | 0.5665 | 0.0006 |
| original_l-m | 0.0257 | 0.0009 |
| co_borrowe-e | -0.5562 | -0.0010 |
| mortgage_i-e | 0.5078 | 0.0049 |