**Model Specification and Results**

**MPlus INPUT/OUTPUT**

INPUT INSTRUCTIONS

TITLE: Certification Analysis Falls with Magnet Status as Control;

DATA: FILE IS FallsAnalysis\_MV.dat;

VARIABLE:

NAMES ARE UnitID HospID UnitTypR MagStat Metro xBedCat xOwner RNHrs

NonRNHrs AgcyHrs pctBSN RNHrsC NonRNHrC AgcyHrsC RN\_BSN\_C

Cert\_0 Cert\_1 Cert\_2 Cert\_3 Cert\_4 Cert\_5 Cert\_6

Year\_0 Year\_1 Year\_2 Year\_3 Year\_4 Year\_5 Year\_6

TFalls\_0 TFalls\_1 TFalls\_2 TFalls\_3 TFalls\_4 TFalls\_5 TFalls\_6

IFalls\_0 IFalls\_1 IFalls\_2 IFalls\_3 IFalls\_4 IFalls\_5 IFalls\_6

Risk\_0 Risk\_1 Risk\_2 Risk\_3 Risk\_4 Risk\_5 Risk\_6

Prev\_0 Prev\_1 Prev\_2 Prev\_3 Prev\_4 Prev\_5 Prev\_6

TFRate\_0 TFRate\_1 TFRate\_2 TFRate\_3 TFRate\_4 TFRate\_5 TFRate\_6

IFRate\_0 IFRate\_1 IFRate\_2 IFRate\_3 IFRate\_4 IFRate\_5 IFRate\_6

RiskRt\_0 RiskRt\_1 RiskRt\_2 RiskRt\_3 RiskRt\_4 RiskRt\_5 RiskRt\_6

PrevRt\_0 PrevRt\_1 PrevRt\_2 PrevRt\_3 PrevRt\_4 PrevRt\_5 PrevRt\_6;

USEVAR =

TFRate\_0 TFRate\_1 TFRate\_2 TFRate\_3 TFRate\_4 TFRate\_5 TFRate\_6

Cert\_0 Cert\_1 Cert\_2 Cert\_3 Cert\_4 Cert\_5 Cert\_6

RNHrsC NonRNHrC AgcyHrsC RN\_BSN\_C UnitTypR

xBedCat xOwner MagStat Metro;

WITHIN = RNHrsC NonRNHrC AgcyHrsC RN\_BSN\_C UnitTypR;

BETWEEN = xBedCat xOwner MagStat Metro;

CLUSTER = HospID;

MISSING ARE ALL (-99);

ANALYSIS:

TYPE=TWOLEVEL ;

MODEL:

!Unit-level model with unit-specific covariates as controls;

%WITHIN%

iw1 sw1 | Cert\_0@0 Cert\_1@1 Cert\_2@2 Cert\_3@3 Cert\_4@4 Cert\_5@5 Cert\_6@6;

Cert\_0 - Cert\_6 (0);

iw2 sw2 | TFRate\_0@0 TFRate\_1@1 TFRate\_2@2 TFRate\_3@3 TFRate\_4@4 TFRate\_5@5 TFRate\_6@6;

TFRate\_0 - TFRate\_6 (1);

IW1 SW1 ON RNHrsC NonRNHrC AgcyHrsC RN\_BSN\_C UnitTypR;

IW2 SW2 ON RNHrsC NonRNHrC AgcyHrsC RN\_BSN\_C UnitTypR;

!Hospital-level model with Magnet status as random variable;

%BETWEEN%

ib1 sb1 | Cert\_0@0 Cert\_1@1 Cert\_2@2 Cert\_3@3 Cert\_4@4 Cert\_5@5 Cert\_6@6;

Cert\_0 - Cert\_6 (2);

ib2 sb2 | TFRate\_0@0 TFRate\_1@1 TFRate\_2@2 TFRate\_3@3 TFRate\_4@4 TFRate\_5@5 TFRate\_6@6;

TFRate\_0 - TFRate\_6 (3);

IB1 SB1 ON xBedCat xOwner MagStat Metro;

IB2 SB2 ON xBedCat xOwner MagStat Metro;

OUTPUT: STDYX ;

Certification Analysis Falls with Magnet Status as Control;

SUMMARY OF ANALYSIS

Number of groups 1

Number of observations 7434

Number of dependent variables 14

Number of independent variables 9

Number of continuous latent variables 8

Observed dependent variables

Continuous

TFRATE\_0 TFRATE\_1 TFRATE\_2 TFRATE\_3 TFRATE\_4 TFRATE\_5

TFRATE\_6 CERT\_0 CERT\_1 CERT\_2 CERT\_3 CERT\_4

CERT\_5 CERT\_6

Observed independent variables

RNHRSC NONRNHRC AGCYHRSC RN\_BSN\_C UNITTYPR XBEDCAT

XOWNER MAGSTAT METRO

Continuous latent variables

IW1 SW1 IW2 SW2 IB1 SB1

IB2 SB2

Variables with special functions

Cluster variable HOSPID

Within variables

RNHRSC NONRNHRC AGCYHRSC RN\_BSN\_C UNITTYPR

Between variables

XBEDCAT XOWNER MAGSTAT METRO

Estimator MLR

Information matrix OBSERVED

Maximum number of iterations 100

Convergence criterion 0.100D-05

Maximum number of EM iterations 500

Convergence criteria for the EM algorithm

Loglikelihood change 0.100D-02

Relative loglikelihood change 0.100D-05

Derivative 0.100D-03

Minimum variance 0.100D-03

Maximum number of steepest descent iterations 20

Maximum number of iterations for H1 2000

Convergence criterion for H1 0.100D-03

Optimization algorithm EMA

Input data file(s)

FallsAnalysis\_MV.dat

Input data format FREE

SUMMARY OF DATA

Number of missing data patterns 479

Number of clusters 891

Average cluster size 8.343

Estimated Intraclass Correlations for the Y Variables

Intraclass Intraclass Intraclass

Variable Correlation Variable Correlation Variable Correlation

TFRATE\_0 0.114 TFRATE\_1 0.118 TFRATE\_2 0.128

TFRATE\_3 0.103 TFRATE\_4 0.185 TFRATE\_5 0.155

TFRATE\_6 0.163 CERT\_0 0.485 CERT\_1 0.414

CERT\_2 0.393 CERT\_3 0.393 CERT\_4 0.456

CERT\_5 0.395 CERT\_6 0.392

COVARIANCE COVERAGE OF DATA

Minimum covariance coverage value 0.100

PROPORTION OF DATA PRESENT

Covariance Coverage

TFRATE\_0 TFRATE\_1 TFRATE\_2 TFRATE\_3 TFRATE\_4

\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

TFRATE\_0 0.414

TFRATE\_1 0.404 0.546

TFRATE\_2 0.392 0.528 0.655

TFRATE\_3 0.380 0.506 0.619 0.710

TFRATE\_4 0.359 0.473 0.579 0.663 0.760

TFRATE\_5 0.339 0.445 0.544 0.616 0.702

TFRATE\_6 0.325 0.424 0.515 0.578 0.654

CERT\_0 0.334 0.330 0.320 0.311 0.296

CERT\_1 0.305 0.421 0.413 0.395 0.368

CERT\_2 0.296 0.416 0.525 0.503 0.471

CERT\_3 0.277 0.380 0.478 0.547 0.517

CERT\_4 0.250 0.345 0.431 0.499 0.580

CERT\_5 0.239 0.322 0.401 0.462 0.539

CERT\_6 0.229 0.309 0.378 0.436 0.505

RNHRSC 0.414 0.546 0.655 0.710 0.760

NONRNHRC 0.414 0.546 0.655 0.710 0.760

AGCYHRSC 0.414 0.546 0.655 0.710 0.760

RN\_BSN\_C 0.414 0.546 0.655 0.710 0.760

UNITTYPR 0.414 0.546 0.655 0.710 0.760

XBEDCAT 0.414 0.546 0.655 0.710 0.760

XOWNER 0.414 0.546 0.655 0.710 0.760

MAGSTAT 0.414 0.546 0.655 0.710 0.760

METRO 0.414 0.546 0.655 0.710 0.760

Covariance Coverage

TFRATE\_5 TFRATE\_6 CERT\_0 CERT\_1 CERT\_2

\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

TFRATE\_5 0.790

TFRATE\_6 0.735 0.800

CERT\_0 0.278 0.266 0.343

CERT\_1 0.342 0.327 0.271 0.433

CERT\_2 0.441 0.414 0.254 0.371 0.537

CERT\_3 0.474 0.443 0.244 0.337 0.446

CERT\_4 0.542 0.504 0.220 0.306 0.394

CERT\_5 0.610 0.582 0.207 0.280 0.357

CERT\_6 0.575 0.635 0.197 0.259 0.331

RNHRSC 0.790 0.800 0.343 0.433 0.537

NONRNHRC 0.790 0.800 0.343 0.433 0.537

AGCYHRSC 0.790 0.800 0.343 0.433 0.537

RN\_BSN\_C 0.790 0.800 0.343 0.433 0.537

UNITTYPR 0.790 0.800 0.343 0.433 0.537

XBEDCAT 0.790 0.800 0.343 0.433 0.537

XOWNER 0.790 0.800 0.343 0.433 0.537

MAGSTAT 0.790 0.800 0.343 0.433 0.537

METRO 0.790 0.800 0.343 0.433 0.537

Covariance Coverage

CERT\_3 CERT\_4 CERT\_5 CERT\_6 RNHRSC

\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

CERT\_3 0.556

CERT\_4 0.468 0.589

CERT\_5 0.418 0.497 0.620

CERT\_6 0.386 0.450 0.540 0.639

RNHRSC 0.556 0.589 0.620 0.639 1.000

NONRNHRC 0.556 0.589 0.620 0.639 1.000

AGCYHRSC 0.556 0.589 0.620 0.639 1.000

RN\_BSN\_C 0.556 0.589 0.620 0.639 1.000

UNITTYPR 0.556 0.589 0.620 0.639 1.000

XBEDCAT 0.556 0.589 0.620 0.639 1.000

XOWNER 0.556 0.589 0.620 0.639 1.000

MAGSTAT 0.556 0.589 0.620 0.639 1.000

METRO 0.556 0.589 0.620 0.639 1.000

Covariance Coverage

NONRNHRC AGCYHRSC RN\_BSN\_C UNITTYPR XBEDCAT

\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

NONRNHRC 1.000

AGCYHRSC 1.000 1.000

RN\_BSN\_C 1.000 1.000 1.000

UNITTYPR 1.000 1.000 1.000 1.000

XBEDCAT 1.000 1.000 1.000 1.000 1.000

XOWNER 1.000 1.000 1.000 1.000 1.000

MAGSTAT 1.000 1.000 1.000 1.000 1.000

METRO 1.000 1.000 1.000 1.000 1.000

Covariance Coverage

XOWNER MAGSTAT METRO

\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

XOWNER 1.000

MAGSTAT 1.000 1.000

METRO 1.000 1.000 1.000

THE MODEL ESTIMATION TERMINATED NORMALLY

MODEL FIT INFORMATION

Number of Free Parameters 64

Loglikelihood

H0 Value -162806.115

H0 Scaling Correction Factor 4.076

for MLR

H1 Value -160921.044

H1 Scaling Correction Factor 3.108

for MLR

Information Criteria

Akaike (AIC) 325740.229

Bayesian (BIC) 326182.713

Sample-Size Adjusted BIC 325979.335

(n\* = (n + 2) / 24)

Chi-Square Test of Model Fit

Value 1303.778\*

Degrees of Freedom 286

P-Value 0.0000

Scaling Correction Factor 2.892

for MLR

\* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used

for chi-square difference testing in the regular way. MLM, MLR and WLSM

chi-square difference testing is described on the Mplus website. MLMV, WLSMV,

and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate 0.022

CFI/TLI

CFI 0.939

TLI 0.934

Chi-Square Test of Model Fit for the Baseline Model

Value 16897.039

Degrees of Freedom 308

P-Value 0.0000

SRMR (Standardized Root Mean Square Residual)

Value for Within 0.025

Value for Between 0.049

MODEL RESULTS

Two-Tailed

Estimate S.E. Est./S.E. P-Value

Within Level

IW1 |

CERT\_0 1.000 0.000 999.000 999.000

CERT\_1 1.000 0.000 999.000 999.000

CERT\_2 1.000 0.000 999.000 999.000

CERT\_3 1.000 0.000 999.000 999.000

CERT\_4 1.000 0.000 999.000 999.000

CERT\_5 1.000 0.000 999.000 999.000

CERT\_6 1.000 0.000 999.000 999.000

SW1 |

CERT\_0 0.000 0.000 999.000 999.000

CERT\_1 1.000 0.000 999.000 999.000

CERT\_2 2.000 0.000 999.000 999.000

CERT\_3 3.000 0.000 999.000 999.000

CERT\_4 4.000 0.000 999.000 999.000

CERT\_5 5.000 0.000 999.000 999.000

CERT\_6 6.000 0.000 999.000 999.000

IW2 |

TFRATE\_0 1.000 0.000 999.000 999.000

TFRATE\_1 1.000 0.000 999.000 999.000

TFRATE\_2 1.000 0.000 999.000 999.000

TFRATE\_3 1.000 0.000 999.000 999.000

TFRATE\_4 1.000 0.000 999.000 999.000

TFRATE\_5 1.000 0.000 999.000 999.000

TFRATE\_6 1.000 0.000 999.000 999.000

SW2 |

TFRATE\_0 0.000 0.000 999.000 999.000

TFRATE\_1 1.000 0.000 999.000 999.000

TFRATE\_2 2.000 0.000 999.000 999.000

TFRATE\_3 3.000 0.000 999.000 999.000

TFRATE\_4 4.000 0.000 999.000 999.000

TFRATE\_5 5.000 0.000 999.000 999.000

TFRATE\_6 6.000 0.000 999.000 999.000

IW1 ON

RNHRSC 0.514 0.057 9.062 0.000

NONRNHRC -0.216 0.185 -1.167 0.243

AGCYHRSC -1.112 0.332 -3.345 0.001

RN\_BSN\_C 0.037 0.015 2.400 0.016

UNITTYPR 0.248 0.034 7.389 0.000

SW1 ON

RNHRSC 0.025 0.012 2.104 0.035

NONRNHRC -0.005 0.040 -0.131 0.896

AGCYHRSC 0.008 0.085 0.090 0.929

RN\_BSN\_C -0.001 0.003 -0.322 0.747

UNITTYPR 0.006 0.008 0.793 0.428

IW2 ON

RNHRSC -0.167 0.009 -18.965 0.000

NONRNHRC 0.084 0.028 2.936 0.003

AGCYHRSC 0.052 0.038 1.378 0.168

RN\_BSN\_C 0.001 0.002 0.351 0.725

UNITTYPR 0.129 0.009 14.242 0.000

SW2 ON

RNHRSC -0.002 0.002 -1.126 0.260

NONRNHRC -0.007 0.005 -1.244 0.213

AGCYHRSC 0.004 0.007 0.610 0.542

RN\_BSN\_C 0.000 0.000 -1.218 0.223

UNITTYPR -0.002 0.002 -1.572 0.116

SW1 WITH

IW1 -9.986 1.238 -8.065 0.000

IW2 WITH

IW1 0.252 0.300 0.839 0.402

SW1 -0.015 0.075 -0.197 0.843

SW2 WITH

IW1 0.064 0.059 1.078 0.281

SW1 -0.029 0.015 -1.992 0.046

IW2 -0.221 0.023 -9.455 0.000

Residual Variances

TFRATE\_0 1.333 0.082 16.218 0.000

TFRATE\_1 1.333 0.082 16.218 0.000

TFRATE\_2 1.333 0.082 16.218 0.000

TFRATE\_3 1.333 0.082 16.218 0.000

TFRATE\_4 1.333 0.082 16.218 0.000

TFRATE\_5 1.333 0.082 16.218 0.000

TFRATE\_6 1.333 0.082 16.218 0.000

CERT\_0 30.884 2.007 15.387 0.000

CERT\_1 30.884 2.007 15.387 0.000

CERT\_2 30.884 2.007 15.387 0.000

CERT\_3 30.884 2.007 15.387 0.000

CERT\_4 30.884 2.007 15.387 0.000

CERT\_5 30.884 2.007 15.387 0.000

CERT\_6 30.884 2.007 15.387 0.000

IW1 92.960 6.996 13.287 0.000

SW1 3.627 0.307 11.819 0.000

IW2 2.550 0.194 13.145 0.000

SW2 0.040 0.004 9.380 0.000

Between Level

IB1 |

CERT\_0 1.000 0.000 999.000 999.000

CERT\_1 1.000 0.000 999.000 999.000

CERT\_2 1.000 0.000 999.000 999.000

CERT\_3 1.000 0.000 999.000 999.000

CERT\_4 1.000 0.000 999.000 999.000

CERT\_5 1.000 0.000 999.000 999.000

CERT\_6 1.000 0.000 999.000 999.000

SB1 |

CERT\_0 0.000 0.000 999.000 999.000

CERT\_1 1.000 0.000 999.000 999.000

CERT\_2 2.000 0.000 999.000 999.000

CERT\_3 3.000 0.000 999.000 999.000

CERT\_4 4.000 0.000 999.000 999.000

CERT\_5 5.000 0.000 999.000 999.000

CERT\_6 6.000 0.000 999.000 999.000

IB2 |

TFRATE\_0 1.000 0.000 999.000 999.000

TFRATE\_1 1.000 0.000 999.000 999.000

TFRATE\_2 1.000 0.000 999.000 999.000

TFRATE\_3 1.000 0.000 999.000 999.000

TFRATE\_4 1.000 0.000 999.000 999.000

TFRATE\_5 1.000 0.000 999.000 999.000

TFRATE\_6 1.000 0.000 999.000 999.000

SB2 |

TFRATE\_0 0.000 0.000 999.000 999.000

TFRATE\_1 1.000 0.000 999.000 999.000

TFRATE\_2 2.000 0.000 999.000 999.000

TFRATE\_3 3.000 0.000 999.000 999.000

TFRATE\_4 4.000 0.000 999.000 999.000

TFRATE\_5 5.000 0.000 999.000 999.000

TFRATE\_6 6.000 0.000 999.000 999.000

IB1 ON

XBEDCAT 0.528 0.372 1.419 0.156

XOWNER -0.125 0.504 -0.248 0.804

MAGSTAT 3.845 1.051 3.660 0.000

METRO -2.041 3.463 -0.589 0.556

SB1 ON

XBEDCAT -0.112 0.068 -1.647 0.100

XOWNER -0.041 0.116 -0.356 0.721

MAGSTAT 0.415 0.190 2.192 0.028

METRO 0.524 0.649 0.808 0.419

IB2 ON

XBEDCAT -0.036 0.030 -1.204 0.229

XOWNER -0.088 0.066 -1.326 0.185

MAGSTAT -0.071 0.094 -0.760 0.447

METRO -0.572 0.597 -0.958 0.338

SB2 ON

XBEDCAT 0.008 0.007 1.187 0.235

XOWNER 0.003 0.013 0.265 0.791

MAGSTAT 0.000 0.018 0.022 0.982

METRO 0.063 0.099 0.639 0.523

SB1 WITH

IB1 -9.958 3.883 -2.564 0.010

IB2 WITH

IB1 0.392 0.403 0.972 0.331

SB1 -0.154 0.087 -1.776 0.076

SB2 WITH

IB1 -0.127 0.073 -1.738 0.082

SB1 -0.005 0.015 -0.352 0.725

IB2 -0.078 0.017 -4.661 0.000

Intercepts

TFRATE\_0 0.000 0.000 999.000 999.000

TFRATE\_1 0.000 0.000 999.000 999.000

TFRATE\_2 0.000 0.000 999.000 999.000

TFRATE\_3 0.000 0.000 999.000 999.000

TFRATE\_4 0.000 0.000 999.000 999.000

TFRATE\_5 0.000 0.000 999.000 999.000

TFRATE\_6 0.000 0.000 999.000 999.000

CERT\_0 0.000 0.000 999.000 999.000

CERT\_1 0.000 0.000 999.000 999.000

CERT\_2 0.000 0.000 999.000 999.000

CERT\_3 0.000 0.000 999.000 999.000

CERT\_4 0.000 0.000 999.000 999.000

CERT\_5 0.000 0.000 999.000 999.000

CERT\_6 0.000 0.000 999.000 999.000

IB1 6.763 3.541 1.910 0.056

SB1 0.422 0.679 0.622 0.534

IB2 3.711 0.608 6.100 0.000

SB2 -0.128 0.100 -1.282 0.200

Residual Variances

TFRATE\_0 0.127 0.033 3.863 0.000

TFRATE\_1 0.127 0.033 3.863 0.000

TFRATE\_2 0.127 0.033 3.863 0.000

TFRATE\_3 0.127 0.033 3.863 0.000

TFRATE\_4 0.127 0.033 3.863 0.000

TFRATE\_5 0.127 0.033 3.863 0.000

TFRATE\_6 0.127 0.033 3.863 0.000

CERT\_0 14.136 3.328 4.248 0.000

CERT\_1 14.136 3.328 4.248 0.000

CERT\_2 14.136 3.328 4.248 0.000

CERT\_3 14.136 3.328 4.248 0.000

CERT\_4 14.136 3.328 4.248 0.000

CERT\_5 14.136 3.328 4.248 0.000

CERT\_6 14.136 3.328 4.248 0.000

IB1 95.211 25.295 3.764 0.000

SB1 2.521 0.718 3.509 0.000

IB2 0.694 0.095 7.344 0.000

SB2 0.027 0.008 3.349 0.001

STANDARDIZED MODEL RESULTS

STDYX Standardization

Two-Tailed

Estimate S.E. Est./S.E. P-Value

Within Level

IW1 |

CERT\_0 0.874 0.010 86.057 0.000

CERT\_1 0.933 0.016 59.977 0.000

CERT\_2 0.970 0.022 43.110 0.000

CERT\_3 0.976 0.029 34.036 0.000

CERT\_4 0.949 0.032 29.293 0.000

CERT\_5 0.897 0.033 26.879 0.000

CERT\_6 0.832 0.032 25.706 0.000

SW1 |

CERT\_0 0.000 0.000 999.000 999.000

CERT\_1 0.178 0.007 26.616 0.000

CERT\_2 0.370 0.015 24.442 0.000

CERT\_3 0.558 0.024 23.338 0.000

CERT\_4 0.724 0.031 23.340 0.000

CERT\_5 0.855 0.035 24.356 0.000

CERT\_6 0.951 0.036 26.228 0.000

IW2 |

TFRATE\_0 0.873 0.008 104.474 0.000

TFRATE\_1 0.909 0.011 84.159 0.000

TFRATE\_2 0.941 0.014 68.112 0.000

TFRATE\_3 0.967 0.017 56.524 0.000

TFRATE\_4 0.988 0.020 48.174 0.000

TFRATE\_5 0.999 0.024 41.998 0.000

TFRATE\_6 1.002 0.027 37.270 0.000

SW2 |

TFRATE\_0 0.000 0.000 999.000 999.000

TFRATE\_1 0.088 0.005 18.468 0.000

TFRATE\_2 0.182 0.010 17.943 0.000

TFRATE\_3 0.281 0.016 17.619 0.000

TFRATE\_4 0.383 0.022 17.515 0.000

TFRATE\_5 0.484 0.027 17.647 0.000

TFRATE\_6 0.583 0.032 18.030 0.000

IW1 ON

RNHRSC 0.229 0.024 9.416 0.000

NONRNHRC -0.036 0.031 -1.174 0.240

AGCYHRSC -0.105 0.031 -3.430 0.001

RN\_BSN\_C 0.073 0.030 2.392 0.017

UNITTYPR 0.156 0.021 7.327 0.000

SW1 ON

RNHRSC 0.058 0.028 2.067 0.039

NONRNHRC -0.005 0.035 -0.131 0.896

AGCYHRSC 0.004 0.042 0.090 0.928

RN\_BSN\_C -0.011 0.033 -0.322 0.747

UNITTYPR 0.021 0.026 0.792 0.428

IW2 ON

RNHRSC -0.358 0.022 -16.669 0.000

NONRNHRC 0.067 0.023 2.935 0.003

AGCYHRSC 0.024 0.017 1.374 0.169

RN\_BSN\_C 0.007 0.019 0.352 0.725

UNITTYPR 0.392 0.023 16.681 0.000

SW2 ON

RNHRSC -0.040 0.035 -1.132 0.258

NONRNHRC -0.056 0.046 -1.238 0.216

AGCYHRSC 0.021 0.034 0.613 0.540

RN\_BSN\_C -0.041 0.034 -1.221 0.222

UNITTYPR -0.076 0.048 -1.573 0.116

SW1 WITH

IW1 -0.544 0.034 -16.218 0.000

IW2 WITH

IW1 0.016 0.020 0.838 0.402

SW1 -0.005 0.025 -0.197 0.843

SW2 WITH

IW1 0.033 0.030 1.083 0.279

SW1 -0.077 0.038 -2.005 0.045

IW2 -0.692 0.029 -23.833 0.000

Residual Variances

TFRATE\_0 0.237 0.015 16.230 0.000

TFRATE\_1 0.257 0.015 17.255 0.000

TFRATE\_2 0.275 0.015 18.213 0.000

TFRATE\_3 0.291 0.015 18.935 0.000

TFRATE\_4 0.303 0.016 19.205 0.000

TFRATE\_5 0.310 0.016 18.864 0.000

TFRATE\_6 0.312 0.017 17.918 0.000

CERT\_0 0.236 0.018 13.266 0.000

CERT\_1 0.268 0.018 14.649 0.000

CERT\_2 0.290 0.018 16.095 0.000

CERT\_3 0.294 0.017 17.160 0.000

CERT\_4 0.278 0.016 17.500 0.000

CERT\_5 0.248 0.014 17.151 0.000

CERT\_6 0.213 0.013 16.390 0.000

IW1 0.928 0.011 84.536 0.000

SW1 0.997 0.003 373.414 0.000

IW2 0.594 0.024 25.182 0.000

SW2 0.989 0.008 118.107 0.000

Between Level

IB1 |

CERT\_0 0.936 0.016 59.197 0.000

CERT\_1 1.015 0.032 32.089 0.000

CERT\_2 1.083 0.058 18.715 0.000

CERT\_3 1.128 0.089 12.609 0.000

CERT\_4 1.139 0.120 9.529 0.000

CERT\_5 1.113 0.141 7.910 0.000

CERT\_6 1.057 0.149 7.072 0.000

SB1 |

CERT\_0 0.000 0.000 999.000 999.000

CERT\_1 0.163 0.017 9.399 0.000

CERT\_2 0.348 0.040 8.785 0.000

CERT\_3 0.543 0.066 8.235 0.000

CERT\_4 0.732 0.094 7.812 0.000

CERT\_5 0.894 0.118 7.592 0.000

CERT\_6 1.019 0.134 7.616 0.000

IB2 |

TFRATE\_0 0.921 0.022 41.724 0.000

TFRATE\_1 1.005 0.030 33.491 0.000

TFRATE\_2 1.066 0.049 21.566 0.000

TFRATE\_3 1.089 0.076 14.230 0.000

TFRATE\_4 1.064 0.105 10.111 0.000

TFRATE\_5 1.000 0.127 7.879 0.000

TFRATE\_6 0.916 0.137 6.680 0.000

SB2 |

TFRATE\_0 0.000 0.000 999.000 999.000

TFRATE\_1 0.195 0.028 6.945 0.000

TFRATE\_2 0.415 0.058 7.146 0.000

TFRATE\_3 0.635 0.080 7.965 0.000

TFRATE\_4 0.827 0.087 9.542 0.000

TFRATE\_5 0.973 0.083 11.767 0.000

TFRATE\_6 1.069 0.076 14.103 0.000

IB1 ON

XBEDCAT 0.080 0.055 1.460 0.144

XOWNER -0.011 0.044 -0.247 0.805

MAGSTAT 0.179 0.037 4.764 0.000

METRO -0.034 0.059 -0.583 0.560

SB1 ON

XBEDCAT -0.106 0.061 -1.741 0.082

XOWNER -0.022 0.061 -0.366 0.714

MAGSTAT 0.120 0.065 1.845 0.065

METRO 0.055 0.068 0.803 0.422

IB2 ON

XBEDCAT -0.065 0.054 -1.199 0.230

XOWNER -0.090 0.068 -1.319 0.187

MAGSTAT -0.039 0.051 -0.765 0.444

METRO -0.114 0.117 -0.970 0.332

SB2 ON

XBEDCAT 0.071 0.066 1.080 0.280

XOWNER 0.018 0.067 0.262 0.793

MAGSTAT 0.001 0.050 0.022 0.982

METRO 0.064 0.100 0.647 0.518

SB1 WITH

IB1 -0.643 0.105 -6.149 0.000

IB2 WITH

IB1 0.048 0.048 0.997 0.319

SB1 -0.117 0.062 -1.870 0.062

SB2 WITH

IB1 -0.080 0.045 -1.760 0.078

SB1 -0.020 0.056 -0.354 0.724

IB2 -0.573 0.064 -8.976 0.000

Intercepts

TFRATE\_0 0.000 0.000 999.000 999.000

TFRATE\_1 0.000 0.000 999.000 999.000

TFRATE\_2 0.000 0.000 999.000 999.000

TFRATE\_3 0.000 0.000 999.000 999.000

TFRATE\_4 0.000 0.000 999.000 999.000

TFRATE\_5 0.000 0.000 999.000 999.000

TFRATE\_6 0.000 0.000 999.000 999.000

CERT\_0 0.000 0.000 999.000 999.000

CERT\_1 0.000 0.000 999.000 999.000

CERT\_2 0.000 0.000 999.000 999.000

CERT\_3 0.000 0.000 999.000 999.000

CERT\_4 0.000 0.000 999.000 999.000

CERT\_5 0.000 0.000 999.000 999.000

CERT\_6 0.000 0.000 999.000 999.000

IB1 0.677 0.383 1.768 0.077

SB1 0.263 0.416 0.633 0.527

IB2 4.385 0.705 6.215 0.000

SB2 -0.777 0.618 -1.258 0.209

Residual Variances

TFRATE\_0 0.151 0.041 3.706 0.000

TFRATE\_1 0.179 0.048 3.761 0.000

TFRATE\_2 0.202 0.050 4.069 0.000

TFRATE\_3 0.210 0.044 4.783 0.000

TFRATE\_4 0.201 0.034 5.938 0.000

TFRATE\_5 0.178 0.026 6.936 0.000

TFRATE\_6 0.149 0.021 6.956 0.000

CERT\_0 0.124 0.030 4.191 0.000

CERT\_1 0.146 0.033 4.480 0.000

CERT\_2 0.166 0.035 4.744 0.000

CERT\_3 0.180 0.037 4.806 0.000

CERT\_4 0.184 0.040 4.570 0.000

CERT\_5 0.175 0.042 4.197 0.000

CERT\_6 0.158 0.041 3.873 0.000

IB1 0.954 0.016 57.915 0.000

SB1 0.979 0.017 57.626 0.000

IB2 0.969 0.034 28.615 0.000

SB2 0.989 0.018 54.162 0.000

R-SQUARE

Within Level

Observed Two-Tailed

Variable Estimate S.E. Est./S.E. P-Value

TFRATE\_0 0.763 0.015 52.237 0.000

TFRATE\_1 0.743 0.015 50.009 0.000

TFRATE\_2 0.725 0.015 48.055 0.000

TFRATE\_3 0.709 0.015 46.184 0.000

TFRATE\_4 0.697 0.016 44.177 0.000

TFRATE\_5 0.690 0.016 41.913 0.000

TFRATE\_6 0.688 0.017 39.491 0.000

CERT\_0 0.764 0.018 43.029 0.000

CERT\_1 0.732 0.018 39.977 0.000

CERT\_2 0.710 0.018 39.434 0.000

CERT\_3 0.706 0.017 41.298 0.000

CERT\_4 0.722 0.016 45.481 0.000

CERT\_5 0.752 0.014 51.912 0.000

CERT\_6 0.787 0.013 60.482 0.000

Latent Two-Tailed

Variable Estimate S.E. Est./S.E. P-Value

IW1 0.072 0.011 6.559 0.000

SW1 0.003 0.003 1.156 0.248

IW2 0.406 0.024 17.201 0.000

SW2 0.011 0.008 1.325 0.185

Between Level

Observed Two-Tailed

Variable Estimate S.E. Est./S.E. P-Value

TFRATE\_0 0.849 0.041 20.862 0.000

TFRATE\_1 0.821 0.048 17.218 0.000

TFRATE\_2 0.798 0.050 16.079 0.000

TFRATE\_3 0.790 0.044 17.942 0.000

TFRATE\_4 0.799 0.034 23.611 0.000

TFRATE\_5 0.822 0.026 32.097 0.000

TFRATE\_6 0.851 0.021 39.678 0.000

CERT\_0 0.876 0.030 29.599 0.000

CERT\_1 0.854 0.033 26.260 0.000

CERT\_2 0.834 0.035 23.842 0.000

CERT\_3 0.820 0.037 21.879 0.000

CERT\_4 0.816 0.040 20.311 0.000

CERT\_5 0.825 0.042 19.728 0.000

CERT\_6 0.842 0.041 20.608 0.000

Latent Two-Tailed

Variable Estimate S.E. Est./S.E. P-Value

IB1 0.046 0.016 2.820 0.005

SB1 0.021 0.017 1.235 0.217

IB2 0.031 0.034 0.919 0.358

SB2 0.011 0.018 0.616 0.538

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.422E-08

(ratio of smallest to largest eigenvalue)

Beginning Time: 09:29:49

Ending Time: 09:32:19

Elapsed Time: 00:02:30

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