> setwd('C:/Users/guanz/Desktop/JIW2/Week12')

> exitdata <- read.csv('MarketExitAll\_week12.csv')

>

> # Our sample is all companies that have above 2000 member months in the

> # individual group in both 2014 and 2015 who have data in 2016. However,

> # companies that exited the market in 2016 are excluded in the analysis

> # because of missing data.

>

> # RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 + RiskTransfersPerMemberMonth2015

> exitfit <- glm(RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 + RiskTransfersPerMemberMonth2015, data=exitdata)

> summary(exitfit)

Call:

glm(formula = RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 +

RiskTransfersPerMemberMonth2015, data = exitdata)

Deviance Residuals:

Min 1Q Median 3Q Max

-326.40 -24.99 0.86 24.20 365.21

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 3.12937 3.85188 0.812 0.41721

TotalLossPerMemberMonth2014 -0.15413 0.05191 -2.969 0.00323 \*\*

RiskTransfersPerMemberMonth2015 1.16592 0.03779 30.853 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for gaussian family taken to be 3611.132)

Null deviance: 4501422 on 295 degrees of freedom

Residual deviance: 1058062 on 293 degrees of freedom

(81 observations deleted due to missingness)

AIC: 3269.8

Number of Fisher Scoring iterations: 2

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> # RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 + RiskTransfersPerMemberMonth2014

> exitfit <- glm(RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 + RiskTransfersPerMemberMonth2014, data=exitdata)

> summary(exitfit)

Call:

glm(formula = RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 +

RiskTransfersPerMemberMonth2014, data = exitdata)

Deviance Residuals:

Min 1Q Median 3Q Max

-343.89 -34.85 2.04 33.21 638.42

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 6.06770 6.00741 1.010 0.313

TotalLossPerMemberMonth2014 -0.33178 0.08273 -4.011 7.69e-05 \*\*\*

RiskTransfersPerMemberMonth2014 1.11954 0.07552 14.824 < 2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for gaussian family taken to be 8767.51)

Null deviance: 4501422 on 295 degrees of freedom

Residual deviance: 2568881 on 293 degrees of freedom

(81 observations deleted due to missingness)

AIC: 3532.3

Number of Fisher Scoring iterations: 2

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> # RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 + RiskTransfersPerMemberMonth2014

> # + TotalLossPerMemberMonth2015 + RiskTransfersPerMemberMonth2015

> exitfit <- glm(RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 + RiskTransfersPerMemberMonth2014

+ + TotalLossPerMemberMonth2015 + RiskTransfersPerMemberMonth2015, data=exitdata)

> summary(exitfit)

Call:

glm(formula = RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2014 +

RiskTransfersPerMemberMonth2014 + TotalLossPerMemberMonth2015 +

RiskTransfersPerMemberMonth2015, data = exitdata)

Deviance Residuals:

Min 1Q Median 3Q Max

-316.45 -23.51 0.41 24.88 308.45

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 2.48608 3.85193 0.645 0.5192

TotalLossPerMemberMonth2014 -0.08501 0.06080 -1.398 0.1631

RiskTransfersPerMemberMonth2014 -0.06090 0.07523 -0.809 0.4189

TotalLossPerMemberMonth2015 -0.09509 0.04293 -2.215 0.0275 \*

RiskTransfersPerMemberMonth2015 1.20196 0.05817 20.662 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for gaussian family taken to be 3573.919)

Null deviance: 4501422 on 295 degrees of freedom

Residual deviance: 1040010 on 291 degrees of freedom

(81 observations deleted due to missingness)

AIC: 3268.7

Number of Fisher Scoring iterations: 2

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> # RiskTransfersPerMemberMonth2015 ~ TotalLossPerMemberMonth2014 + RiskTransfersPerMemberMonth2014

> exitfit <- glm(RiskTransfersPerMemberMonth2015 ~ TotalLossPerMemberMonth2014 + RiskTransfersPerMemberMonth2014, data=exitdata)

> summary(exitfit)

Call:

glm(formula = RiskTransfersPerMemberMonth2015 ~ TotalLossPerMemberMonth2014 +

RiskTransfersPerMemberMonth2014, data = exitdata)

Deviance Residuals:

Min 1Q Median 3Q Max

-321.00 -16.61 3.30 24.72 438.79

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -2.68345 3.35425 -0.800 0.424

TotalLossPerMemberMonth2014 0.02378 0.04168 0.571 0.569

RiskTransfersPerMemberMonth2014 0.90847 0.04630 19.621 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for gaussian family taken to be 3765.444)

Null deviance: 2891691 on 376 degrees of freedom

Residual deviance: 1408276 on 374 degrees of freedom

AIC: 4178.9

Number of Fisher Scoring iterations: 2

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> # RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2015 + RiskTransfersPerMemberMonth2015

> exitfit <- glm(RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2015 + RiskTransfersPerMemberMonth2015, data=exitdata)

> summary(exitfit)

Call:

glm(formula = RiskTransfersPerMemberMonth2016 ~ TotalLossPerMemberMonth2015 +

RiskTransfersPerMemberMonth2015, data = exitdata)

Deviance Residuals:

Min 1Q Median 3Q Max

-320.29 -22.45 0.75 25.95 301.21

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -0.30525 3.54459 -0.086 0.93143

TotalLossPerMemberMonth2015 -0.12078 0.03787 -3.189 0.00158 \*\*

RiskTransfersPerMemberMonth2015 1.16283 0.03766 30.876 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for gaussian family taken to be 3594.993)

Null deviance: 4501422 on 295 degrees of freedom

Residual deviance: 1053333 on 293 degrees of freedom

(81 observations deleted due to missingness)

AIC: 3268.4

Number of Fisher Scoring iterations: 2

> coefficients(exitfit)

(Intercept) TotalLossPerMemberMonth2015 RiskTransfersPerMemberMonth2015

-0.3052503 -0.1207809 1.1628326

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