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Index sets

$$HHD = \{01, 02, 03, 04, 05, 06, 07, 08, 09, 10\}$$

$$ROW = \{\text{eu}, \text{neu}\}$$

$$SEC = \{\text{A}, \text{B}, \text{C}, \text{D}, \text{E}, \text{F}, \text{G}, \text{H}, \text{I}, \text{J}, \text{K}\}$$

$h \in HHD$

oblem

$$\max_{S^{\langle h\rangle},L^{\langle h\rangle},K^{\langle h\rangle},BTINC^{\langle h\rangle},INC^{\langle h\rangle},PIT^{\mathrm{base}\,\langle h\rangle},SAV^{\langle h\rangle},THBANK^{\langle h\rangle},\left(THROW^{\langle h,r\rangle}\right)_{r\in ROW},TRAN^{\langle h\rangle}} U^{\langle h\rangle} = \left(\alpha^{\mathrm{u}\langle h\rangle} DEM^{\langle h\rangle\omega^{\mathrm{u}\langle h\rangle-1}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle h\rangle}\right) LEIS^{\langle h\rangle\omega^{\mathrm{u}\langle h\rangle-1}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)}\right)^{\omega^{\mathrm{u}\langle h\rangle}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)^{-1}} \tag{1.1}$$

$$le^{\langle h\rangle} \quad \left(\lambda^{\mathrm{CONSUMER}^{1}\langle h\rangle}\right) \tag{1.2}$$

$$\left(\lambda^{\mathrm{CONSUMER}^{2}\langle h\rangle}\right) \tag{1.3}$$

$$^{s,h\rangle} D^{\langle s,h\rangle\omega^{-1}(-1+\omega)}\Bigg)^{\omega(-1+\omega)^{-1}} \quad \left(\lambda^{\mathrm{CONSUMER}^{3}\langle h\rangle}\right) \tag{1.4}$$

$$+ \sum_{s\in SEC} p^{\mathrm{cons}\langle s\rangle} D^{\langle s,h\rangle} \quad \left(\lambda^{\mathrm{CONSUMER}^{4}\langle h\rangle}\right) \tag{1.5}$$

$$^{h\rangle} PIT^{\mathrm{base}\,\langle h\rangle} \quad \left(\lambda^{\mathrm{CONSUMER}^{5}\langle h\rangle}\right) \tag{1.6}$$

$$C^{\langle h\rangle} - \alpha ip^{\mathrm{l}} L^{\langle h\rangle} \quad \left(\lambda^{\mathrm{CONSUMER}^{6}\langle h\rangle}\right) \tag{1.7}$$

$$^{r} K^{\langle h\rangle} + p^{\mathrm{l}} L^{\langle h\rangle} \quad \left(\lambda^{\mathrm{CONSUMER}^{7}\langle h\rangle}\right) \tag{1.8}$$

$$\left(\lambda^{\mathrm{CONSUMER}^{8}\langle h\rangle}\right) \tag{1.9}$$

$$\mathrm{CONSUMER}^{9}\langle h\rangle}\right) \tag{1.10}$$

$$^{\rangle} \quad \left(\lambda^{\mathrm{CONSUMER}^{10}\langle h\rangle}\right) \tag{1.11}$$

$$^{r\langle h,r\rangle} = \alpha uh^{\mathrm{r}\langle h,r\rangle} INC^{\langle h\rangle} \quad \left(\lambda^{\mathrm{CONSUMER}^{11}\langle h,r\rangle}\right) \tag{1.12}$$

$$\sum_{\in ROW} ex^{\mathrm{rate}\langle r\rangle} THROW^{\langle h,r\rangle} \quad \left(\lambda^{\mathrm{CONSUMER}^{12}\langle h\rangle}\right) \tag{1.13}$$

1.2 Identities

$$TINSTH^{\langle h\rangle} = TBANKH^{\langle h\rangle} + TFIRMH^{\langle h\rangle} + TGOVH^{\langle h\rangle} + \sum_{r \in ROW} TROWH^{\langle r,h\rangle} \tag{1.14}$$

1.3 First order conditions

$$s \in SEC: \quad \lambda^{\mathrm{CONSUMER}^{4}\langle h\rangle} p^{\mathrm{cons}\langle s\rangle} + \alpha^{\langle s,h\rangle} \theta^{\mathrm{dem}\langle h\rangle} \lambda^{\mathrm{CONSUMER}^{3}\langle h\rangle} D^{\langle s,h\rangle -1+\omega^{-1}(-1+\omega)} \left(\sum_{s \in SEC} \alpha^{\langle s,h\rangle} D^{\langle s,h\rangle \omega^{-1}(-1+\omega)} \right)^{-1+\omega(-1+\omega)^{-1}} = 0 \quad \left(D^{\langle s,h\rangle}\right) \tag{1.15}$$

$$-\lambda^{\mathrm{CONSUMER}^{3}\langle h\rangle} + \alpha^{\mathrm{u}\langle h\rangle} DEM^{\langle h\rangle -1+\omega^{\mathrm{u}\langle h\rangle -1}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)} \left(\alpha^{\mathrm{u}\langle h\rangle} DEM^{\langle h\rangle \omega^{\mathrm{u}\langle h\rangle -1}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle h\rangle}\right) LEIS^{\langle h\rangle \omega^{\mathrm{u}\langle h\rangle -1}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)} \right)^{-1+\omega^{\mathrm{u}\langle h\rangle}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)^{-1}} = 0 \quad \left(DEM^{\langle h\rangle}\right) \tag{1.16}$$

$$-\lambda^{\mathrm{CONSUMER}^{2}\langle h\rangle} - scale^{\langle h\rangle} \lambda^{\mathrm{CONSUMER}^{1}\langle h\rangle} = 0 \quad \left(LL^{\langle h\rangle}\right) \tag{1.17}$$

$$-scale^{\langle h\rangle} \lambda^{\mathrm{CONSUMER}^{1}\langle h\rangle} + \left(1-\alpha^{\mathrm{u}\langle h\rangle}\right) LEIS^{\langle h\rangle -1+\omega^{\mathrm{u}\langle h\rangle -1}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)} \left(\alpha^{\mathrm{u}\langle h\rangle} DEM^{\langle h\rangle \omega^{\mathrm{u}\langle h\rangle -1}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle h\rangle}\right) LEIS^{\langle h\rangle \omega^{\mathrm{u}\langle h\rangle -1}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)} \right)^{-1+\omega^{\mathrm{u}\langle h\rangle}\left(-1+\omega^{\mathrm{u}\langle h\rangle}\right)^{-1}} = 0 \quad \left(LEIS^{\langle h\rangle}\right) \tag{1.18}$$

$$\lambda^{\mathrm{CONSUMER}^{2}\langle h\rangle} + p^{\mathrm{l}} \lambda^{\mathrm{CONSUMER}^{7}\langle h\rangle} - \alpha ip^{\mathrm{l}} \lambda^{\mathrm{CONSUMER}^{6}\langle h\rangle} = 0 \quad \left(L^{\langle h\rangle}\right) \tag{1.19}$$

$$p^{\mathrm{k}} \lambda^{\mathrm{CONSUMER}^{7}\langle h\rangle} - scale^{\langle h\rangle} \lambda^{\mathrm{CONSUMER}^{8}\langle h\rangle} = 0 \quad \left(K^{\langle h\rangle}\right) \tag{1.20}$$

$$\lambda^{\mathrm{CONSUMER}^{5}\langle h\rangle} + \lambda^{\mathrm{CONSUMER}^{6}\langle h\rangle} - \lambda^{\mathrm{CONSUMER}^{7}\langle h\rangle} = 0 \quad \left(BTINC^{\langle h\rangle}\right) \tag{1.21}$$

$$-\lambda^{\mathrm{CONSUMER}^{4}\langle h\rangle} - \lambda^{\mathrm{CONSUMER}^{5}\langle h\rangle} + \alpha uh^{\mathrm{b}\langle h\rangle} \lambda^{\mathrm{CONSUMER}^{10}\langle h\rangle} + sav^{\langle h\rangle} \lambda^{\mathrm{CONSUMER}^{9}\langle h\rangle} + \sum_{r \in ROW} \alpha uh^{\mathrm{r}\langle h,r\rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle h,r\rangle} = 0 \quad \left(INC^{\langle h\rangle}\right) \tag{1.22}$$

$$-\lambda^{\mathrm{CONSUMER}^{6}\langle h\rangle} - pit^{\mathrm{tax}\langle h\rangle} \lambda^{\mathrm{CONSUMER}^{5}\langle h\rangle} = 0 \quad \left(PIT^{\mathrm{base}\langle h\rangle}\right) \tag{1.23}$$

$$\lambda^{\mathrm{CONSUMER}^{4}\langle h\rangle} - \lambda^{\mathrm{CONSUMER}^{9}\langle h\rangle} = 0 \quad \left(SAV^{\langle h\rangle}\right) \tag{1.24}$$

$$-\lambda^{\mathrm{CONSUMER}^{10}\langle h\rangle} + \lambda^{\mathrm{CONSUMER}^{12}\langle h\rangle} = 0 \quad \left(THBANK^{\langle h\rangle}\right) \tag{1.25}$$

$$r \in ROW: \quad ex^{\text{rate}\langle r\rangle}\lambda^{\text{CONSUMER}^{12}\langle h\rangle} - ex^{\text{rate}\langle r\rangle}\lambda^{\text{CONSUMER}^{11}\langle h,r\rangle} = 0 \quad \left(THROW^{\langle h,r\rangle}\right) \tag{1.26}$$

$$\lambda^{\text{CONSUMER}^{4}\langle h\rangle} - \lambda^{\text{CONSUMER}^{12}\langle h\rangle} = 0 \quad \left(TRAN^{\langle h\rangle}\right) \tag{1.27}$$

1.4 First order conditions after reduction

$$s \in SEC: \quad \lambda^{\text{CONSUMER}^{12}\langle h\rangle} p^{\text{cons}\langle s\rangle} + \alpha^{\langle s,h\rangle}\alpha^{\text{u}\langle h\rangle}\theta^{\text{dem}\langle h\rangle} D^{\langle s,h\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle h\rangle^{-1+\omega^{\text{u}\langle h\rangle^{-1}}\left(-1+\omega^{\text{u}\langle h\rangle}\right)}} \left(\alpha^{\text{u}\langle h\rangle} DEM^{\langle h\rangle^{\omega^{\text{u}\langle h\rangle^{-1}}\left(-1+\omega^{\text{u}\langle h\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle h\rangle}\right) LEIS^{\langle h\rangle^{\omega^{\text{u}\langle h\rangle^{-1}}\left(-1+\omega^{\text{u}\langle h\rangle}\right)}}\right)$$

(1.28)

$$-scale^{\langle h\rangle}\lambda^{\text{CONSUMER}^{1}\langle h\rangle} + \left(1-\alpha^{\text{u}\langle h\rangle}\right) LEIS^{\langle h\rangle^{-1+\omega^{\text{u}\langle h\rangle^{-1}}\left(-1+\omega^{\text{u}\langle h\rangle}\right)}} \left(\alpha^{\text{u}\langle h\rangle} DEM^{\langle h\rangle^{\omega^{\text{u}\langle h\rangle^{-1}}\left(-1+\omega^{\text{u}\langle h\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle h\rangle}\right) LEIS^{\langle h\rangle^{\omega^{\text{u}\langle h\rangle^{-1}}\left(-1+\omega^{\text{u}\langle h\rangle}\right)}}\right)^{-1+\omega^{\text{u}\langle h\rangle}\left(-1+\omega^{\text{u}\langle h\rangle}\right)^{-1}} = 0 \quad \left(LEIS^{\langle h\rangle}\right)$$

(1.29)

$$-scale^{\langle h\rangle}\lambda^{\text{CONSUMER}^{1}\langle h\rangle} + p^{\text{l}}\left(-\lambda^{\text{CONSUMER}^{12}\langle h\rangle} + auh^{\text{b}\langle h\rangle}\lambda^{\text{CONSUMER}^{12}\langle h\rangle} - pit^{\text{tax}\langle h\rangle}\left(-\lambda^{\text{CONSUMER}^{12}\langle h\rangle} + auh^{\text{b}\langle h\rangle}\lambda^{\text{CONSUMER}^{12}\langle h\rangle} + saw^{\langle h\rangle}\lambda^{\text{CONSUMER}^{12}\langle h\rangle} + \sum_{r\in ROW} auh^{\text{r}\langle h,r\rangle}\lambda^{\text{CO}}\right.\right.$$

(1.30)

$$p^{\text{k}}\left(-\lambda^{\text{CONSUMER}^{12}\langle h\rangle} + auh^{\text{b}\langle h\rangle}\lambda^{\text{CONSUMER}^{12}\langle h\rangle} - pit^{\text{tax}\langle h\rangle}\left(-\lambda^{\text{CONSUMER}^{12}\langle h\rangle} + auh^{\text{b}\langle h\rangle}\lambda^{\text{CONSUMER}^{12}\langle h\rangle} + saw^{\langle h\rangle}\lambda^{\text{CONSUMER}^{12}\langle h\rangle} + \sum_{r\in ROW} auh^{\text{r}\langle h,r\rangle}\lambda^{\text{CONSUMER}^{11}\langle h,r\rangle}\right) + saw^{\langle h\rangle}\lambda\right.$$

(1.31)

$$r \in ROW: \quad ex^{\text{rate}\langle r\rangle}\lambda^{\text{CONSUMER}^{12}\langle h\rangle} - ex^{\text{rate}\langle r\rangle}\lambda^{\text{CONSUMER}^{11}\langle h,r\rangle} = 0 \quad \left(\left(THROW^{\langle h,r\rangle}\right)_{r\in ROW}\right) \tag{1.32}$$

2 PRODUCTION OF GOODS $s \in SEC$

2.1 Optimisation problem

$$\max_{Y^{\langle s\rangle},K^{\langle s\rangle},L^{\langle s\rangle},Y^{\mathrm{VA}\langle s\rangle},Y^{\mathrm{INT}\langle s\rangle},\left(X^{\langle si,s\rangle}\right)_{si\in SEC}} \pi^{\langle s\rangle} = p^{\langle s\rangle}Y^{\langle s\rangle} - \left(1 - sub^{\mathrm{rate}\langle s\rangle} + tax^{\mathrm{rate}\langle s\rangle}\right)\left(p^{\mathrm{k}}K^{\langle s\rangle}\left(1+k^{\mathrm{tax}}\right) + p^{\mathrm{l}}L^{\langle s\rangle}\left(1+l^{\mathrm{tax}}\right) + \sum_{si\in SEC} p^{\mathrm{int}\langle si\rangle}X^{\langle si,s\rangle}\right) \tag{2.1}$$

s.t. :

$$Y^{\langle s\rangle} = Y^{\mathrm{VA}\langle s\rangle} \quad \left(\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{1}}\langle s\rangle}\right) \tag{2.2}$$

$$Y^{\mathrm{VA}\langle s\rangle} = Y^{\mathrm{INT}\langle s\rangle} \quad \left(\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{2}}\langle s\rangle}\right) \tag{2.3}$$

$$Y^{\mathrm{VA}\langle s\rangle} = \gamma^{\mathrm{yva}\langle s\rangle}K^{\langle s\rangle^{\beta^{\mathrm{k}\langle s\rangle}}}L^{\langle s\rangle^{\beta^{\mathrm{l}\langle s\rangle}}} \quad \left(\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{3}}\langle s\rangle}\right) \tag{2.4}$$

$$si \in SEC: \quad X^{\langle si,s\rangle} = \beta^{\mathrm{x}\langle si,s\rangle}Y^{\mathrm{INT}\langle s\rangle} \quad \left(\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{4}}\langle s,si\rangle}\right) \tag{2.5}$$

2.2 First order conditions

$$-\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{1}}\langle s\rangle} + p^{\langle s\rangle} = 0 \quad \left(Y^{\langle s\rangle}\right) \tag{2.6}$$

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1 - sub^{\mathrm{rate}\langle s\rangle} + tax^{\mathrm{rate}\langle s\rangle}\right) + \beta^{\mathrm{k}\langle s\rangle}\gamma^{\mathrm{yva}\langle s\rangle}\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{3}}\langle s\rangle}K^{\langle s\rangle^{-1+\beta^{\mathrm{k}\langle s\rangle}}}L^{\langle s\rangle^{\beta^{\mathrm{l}\langle s\rangle}}} = 0 \quad \left(K^{\langle s\rangle}\right) \tag{2.7}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1 - sub^{\mathrm{rate}\langle s\rangle} + tax^{\mathrm{rate}\langle s\rangle}\right) + \beta^{\mathrm{l}\langle s\rangle}\gamma^{\mathrm{yva}\langle s\rangle}\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{3}}\langle s\rangle}K^{\langle s\rangle^{\beta^{\mathrm{k}\langle s\rangle}}}L^{\langle s\rangle^{-1+\beta^{\mathrm{l}\langle s\rangle}}} = 0 \quad \left(L^{\langle s\rangle}\right) \tag{2.8}$$

$$\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{1}}\langle s\rangle} - \lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{2}}\langle s\rangle} - \lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{3}}\langle s\rangle} = 0 \quad \left(Y^{\mathrm{VA}\langle s\rangle}\right) \tag{2.9}$$

$$\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{2}}\langle s\rangle} + \sum_{si\in SEC}\beta^{\mathrm{x}\langle si,s\rangle}\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{4}}\langle s,si\rangle} = 0 \quad \left(Y^{\mathrm{INT}\langle s\rangle}\right) \tag{2.10}$$

$$si \in SEC: \quad -\lambda^{\mathrm{PRODUCTION}^{\mathrm{OF\,GOODS}^{4}}\langle s,si\rangle} - p^{\mathrm{int}\langle si\rangle}\left(1 - sub^{\mathrm{rate}\langle s\rangle} + tax^{\mathrm{rate}\langle s\rangle}\right) = 0 \quad \left(X^{\langle si,s\rangle}\right) \tag{2.11}$$

2.3 First order conditions after reduction

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle s\rangle}+tax^{\mathrm{rate}\langle s\rangle}\right)+\beta^{\mathrm{k}\langle s\rangle}\gamma^{\mathrm{yva}\langle s\rangle}\left(p^{\langle s\rangle}+\sum_{si\in SEC}\beta^{\mathrm{x}\langle si,s\rangle}\lambda^{\mathrm{PRODUCTION^{OF\,GOODS^4}}\langle s,si\rangle}\right)K^{\langle s\rangle\,-1+\beta^{\mathrm{k}\langle s\rangle}}L^{\langle s\rangle\,\beta^{\mathrm{l}\langle s\rangle}}=0\quad\left(K^{\langle s\rangle}\right)\tag{2.12}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle s\rangle}+tax^{\mathrm{rate}\langle s\rangle}\right)+\beta^{\mathrm{l}\langle s\rangle}\gamma^{\mathrm{yva}\langle s\rangle}\left(p^{\langle s\rangle}+\sum_{si\in SEC}\beta^{\mathrm{x}\langle si,s\rangle}\lambda^{\mathrm{PRODUCTION^{OF\,GOODS^4}}\langle s,si\rangle}\right)K^{\langle s\rangle\,\beta^{\mathrm{k}\langle s\rangle}}L^{\langle s\rangle\,-1+\beta^{\mathrm{l}\langle s\rangle}}=0\quad\left(L^{\langle s\rangle}\right)\tag{2.13}$$

$$si\in SEC:\quad-\lambda^{\mathrm{PRODUCTION^{OF\,GOODS^4}}\langle s,si\rangle}-p^{\mathrm{int}\langle si\rangle}\left(1-sub^{\mathrm{rate}\langle s\rangle}+tax^{\mathrm{rate}\langle s\rangle}\right)=0\quad\left(\left(X^{\langle si,s\rangle}\right)_{si\in SEC}\right)\tag{2.14}$$

3 TAXES PRODUCER

3.1 Identities

$$s\in SEC:\quad SUB^{\mathrm{s}\langle s\rangle}=sub^{\mathrm{rate}\langle s\rangle}\left(p^{\mathrm{k}}K^{\langle s\rangle}\left(1+k^{\mathrm{tax}}\right)+p^{\mathrm{l}}L^{\langle s\rangle}\left(1+l^{\mathrm{tax}}\right)+\sum_{si\in SEC}p^{\mathrm{int}\langle si\rangle}X^{\langle si,s\rangle}\right)\tag{3.1}$$

$$s\in SEC:\quad TAX^{\mathrm{s}\langle s\rangle}=tax^{\mathrm{rate}\langle s\rangle}\left(p^{\mathrm{k}}K^{\langle s\rangle}\left(1+k^{\mathrm{tax}}\right)+p^{\mathrm{l}}L^{\langle s\rangle}\left(1+l^{\mathrm{tax}}\right)+\sum_{si\in SEC}p^{\mathrm{int}\langle si\rangle}X^{\langle si,s\rangle}\right)\tag{3.2}$$

$$L^{\mathrm{TAX}}=l^{\mathrm{tax}}p^{\mathrm{l}}\left(\sum_{s\in SEC}L^{\langle s\rangle}\right)\tag{3.3}$$

$$K^{\mathrm{TAX}}=k^{\mathrm{tax}}p^{\mathrm{k}}\left(\sum_{s\in SEC}K^{\langle s\rangle}\right)\tag{3.4}$$

4 EXPORT COMPOSITE $s\in SEC$

4.1 Optimisation problem

$$\max_{EXPORT^{\langle s\rangle},\left(EXP^{\langle r,s\rangle}\right)_{r\in ROW}}\Pi^{\mathrm{EXP}\langle s\rangle}=p^{\mathrm{exp}\langle s\rangle}EXPORT^{\langle s\rangle}-\sum_{r\in ROW}p^{\mathrm{for}\langle r\rangle}EXP^{\langle r,s\rangle}\tag{4.1}$$

s.t. :

$$EXPORT^{\langle s\rangle}=\theta^{\mathrm{exp}\langle s\rangle}\left(\sum_{r\in ROW}\alpha^{\mathrm{exp}\langle r,s\rangle}\left(am^{\mathrm{exp}\langle r\rangle}EXP^{\langle r,s\rangle}\right)^{\sigma^{\mathrm{exp}\langle s\rangle}-1\left(1+\sigma^{\mathrm{exp}\langle s\rangle}\right)}\right)^{\sigma^{\mathrm{exp}\langle s\rangle}\left(1+\sigma^{\mathrm{exp}\langle s\rangle}\right)^{-1}}\quad\left(\lambda^{\mathrm{EXPORT^{COMPOSITE^1}}\langle s\rangle}\right)\tag{4.2}$$

4.2 First order conditions

$$-\lambda^{\text{EXPORT}^{\text{COMPOSITE}^1}\langle s\rangle} + p^{\exp\langle s\rangle} = 0 \quad \left(EXPORT^{\langle s\rangle}\right) \tag{4.3}$$

$$r \in ROW: \quad -p^{\text{for}\langle r\rangle} + \alpha^{\exp\langle r,s\rangle} am^{\exp\langle r\rangle} \theta^{\exp\langle s\rangle} \lambda^{\text{EXPORT}^{\text{COMPOSITE}^1}\langle s\rangle} \left(am^{\exp\langle r\rangle} EXP^{\langle r,s\rangle}\right)^{-1+\sigma^{\exp\langle s\rangle -1}\left(1+\sigma^{\exp\langle s\rangle}\right)} \left(\sum_{r\in ROW} \alpha^{\exp\langle r,s\rangle} \left(am^{\exp\langle r\rangle} EXP^{\langle r,s\rangle}\right)^{\sigma^{\exp\langle s\rangle -1}\left(1+\sigma^{\exp\langle s\rangle}\right)}\right)^{-1+\sigma^{\exp\langle s\rangle}\left(1-\right.} \tag{4.4}$$

4.3 First order conditions after reduction

$$r \in ROW: \quad -p^{\text{for}\langle r\rangle} + \alpha^{\exp\langle r,s\rangle} am^{\exp\langle r\rangle} \theta^{\exp\langle s\rangle} p^{\exp\langle s\rangle} \left(am^{\exp\langle r\rangle} EXP^{\langle r,s\rangle}\right)^{-1+\sigma^{\exp\langle s\rangle -1}\left(1+\sigma^{\exp\langle s\rangle}\right)} \left(\sum_{r\in ROW} \alpha^{\exp\langle r,s\rangle} \left(am^{\exp\langle r\rangle} EXP^{\langle r,s\rangle}\right)^{\sigma^{\exp\langle s\rangle -1}\left(1+\sigma^{\exp\langle s\rangle}\right)}\right)^{-1+\sigma^{\exp\langle s\rangle}\left(1+\sigma^{\exp\langle s\rangle}\right)^{-1}} = 0 \tag{4.5}$$

5 FINAL PRODUCT COMPOSITE $s \in SEC$

5.1 Optimisation problem

$$\max_{Y^{\text{f}\langle s\rangle}, Y^{\text{HOME}\langle s\rangle}, EXPORT^{\text{f}\langle s\rangle}} \Pi^{\text{Y}\langle s\rangle} = p^{\langle s\rangle} Y^{\text{f}\langle s\rangle} - p^{\text{home}\langle s\rangle} Y^{\text{HOME}\langle s\rangle} - p^{\exp\langle s\rangle} EXPORT^{\text{f}\langle s\rangle} \tag{5.1}$$

s.t. :

$$Y^{\text{f}\langle s\rangle} = \theta^{\text{y}\langle s\rangle} \left(\alpha^{\text{prod}^{\text{h}}\langle s\rangle} Y^{\text{HOME}\langle s\rangle^{\sigma^{\text{fprod}\langle s\rangle -1}\left(1+\sigma^{\text{fprod}\langle s\rangle}\right)}} + \alpha^{\text{prod}^{\text{e}}\langle s\rangle} EXPORT^{\text{f}\langle s\rangle^{\sigma^{\text{fprod}\langle s\rangle -1}\left(1+\sigma^{\text{fprod}\langle s\rangle}\right)}}\right)^{\sigma^{\text{fprod}\langle s\rangle}\left(1+\sigma^{\text{fprod}\langle s\rangle}\right)^{-1}} \left(\lambda^{\text{FINAL}^{\text{PRODUCT}^{\text{COMPOSITE}^1}}\langle s\rangle}\right) \tag{5.2}$$

5.2 First order conditions

$$-\lambda^{\text{FINAL}^{\text{PRODUCT}^{\text{COMPOSITE}^1}}\langle s\rangle} + p^{\langle s\rangle} = 0 \quad \left(Y^{\text{f}\langle s\rangle}\right) \tag{5.3}$$

$$-p^{\text{home}\langle s\rangle} + \alpha^{\text{prod}^{\text{h}}\langle s\rangle} \theta^{\text{y}\langle s\rangle} \lambda^{\text{FINAL}^{\text{PRODUCT}^{\text{COMPOSITE}^1}}\langle s\rangle} Y^{\text{HOME}\langle s\rangle^{-1+\sigma^{\text{fprod}\langle s\rangle -1}\left(1+\sigma^{\text{fprod}\langle s\rangle}\right)}} \left(\alpha^{\text{prod}^{\text{h}}\langle s\rangle} Y^{\text{HOME}\langle s\rangle^{\sigma^{\text{fprod}\langle s\rangle -1}\left(1+\sigma^{\text{fprod}\langle s\rangle}\right)}} + \alpha^{\text{prod}^{\text{e}}\langle s\rangle} EXPORT^{\text{f}\langle s\rangle^{\sigma^{\text{fprod}\langle s\rangle -1}\left(1+\sigma^{\text{fprod}\langle s\rangle}\right)}}\right)^{} \tag{5.4}$$

$$-p^{\exp\langle s\rangle}+\alpha^{\text{prod}^{\text{e}}\langle s\rangle}\theta^{\text{y}\langle s\rangle}\lambda^{\text{FINAL}^{\text{PRODUCT}^{\text{COMPOSITE}^1}}\langle s\rangle}EXPORT^{\text{f}\langle s\rangle-1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}\left(\alpha^{\text{prod}^{\text{h}}\langle s\rangle}Y^{\text{HOME}\langle s\rangle\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}+\alpha^{\text{prod}^{\text{e}}\langle s\rangle}EXPORT^{\text{f}\langle s\rangle\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}\right.$$

(5.5)

5.3 First order conditions after reduction

$$-p^{\text{home}\langle s\rangle}+\alpha^{\text{prod}^{\text{h}}\langle s\rangle}\theta^{\text{y}\langle s\rangle}p^{\langle s\rangle}Y^{\text{HOME}\langle s\rangle-1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}\left(\alpha^{\text{prod}^{\text{h}}\langle s\rangle}Y^{\text{HOME}\langle s\rangle\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}+\alpha^{\text{prod}^{\text{e}}\langle s\rangle}EXPORT^{\text{f}\langle s\rangle\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}\right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right.}$$

(5.6)

$$-p^{\exp\langle s\rangle}+\alpha^{\text{prod}^{\text{e}}\langle s\rangle}\theta^{\text{y}\langle s\rangle}p^{\langle s\rangle}EXPORT^{\text{f}\langle s\rangle-1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}\left(\alpha^{\text{prod}^{\text{h}}\langle s\rangle}Y^{\text{HOME}\langle s\rangle\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}+\alpha^{\text{prod}^{\text{e}}\langle s\rangle}EXPORT^{\text{f}\langle s\rangle\sigma^{\text{f}^{\text{prod}}\langle s\rangle-1}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right)}\right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\left(1+\sigma^{\text{f}^{\text{prod}}\langle s\rangle}\right.}$$

(5.7)

∞

6 IMPORT COMPOSITE $s \in SEC$

6.1 Optimisation problem

$$\max_{IMPORT^{\langle s\rangle},\left(IMP^{\langle r,s\rangle}\right)_{r\in ROW}}\Pi^{\text{IMP}\langle s\rangle}=p^{\text{imp}\langle s\rangle}IMPORT^{\langle s\rangle}-\sum_{r\in ROW}p^{\text{for}\langle r\rangle}ex^{\text{rate}\langle r\rangle}IMP^{\langle r,s\rangle}\left(1+im^{\text{tax}\langle r,s\rangle}\right) \tag{6.1}$$

s.t. :

$$IMPORT^{\langle s\rangle}=\theta^{\text{imp}\langle s\rangle}\left(\sum_{r\in ROW}\alpha^{\text{imp}\langle r,s\rangle}\left(am^{\text{imp}\langle r\rangle}IMP^{\langle r,s\rangle}\right)^{\sigma^{\text{imp}\langle s\rangle-1}\left(-1+\sigma^{\text{imp}\langle s\rangle}\right)}\right)^{\sigma^{\text{imp}\langle s\rangle}\left(-1+\sigma^{\text{imp}\langle s\rangle}\right)^{-1}}\left(\lambda^{\text{IMPORT}^{\text{COMPOSITE}^1}\langle s\rangle}\right) \tag{6.2}$$

6.2 First order conditions

$$-\lambda^{\text{IMPORT}^{\text{COMPOSITE}^1}\langle s\rangle}+p^{\text{imp}\langle s\rangle}=0\quad\left(IMPORT^{\langle s\rangle}\right) \tag{6.3}$$

$$r \in ROW: \quad -p^{\text{for}\langle r\rangle} ex^{\text{rate}\langle r\rangle}\left(1+im^{\text{tax}\langle r,s\rangle}\right)+\alpha^{\text{imp}\langle r,s\rangle} am^{\text{imp}\langle r\rangle}\theta^{\text{imp}\langle s\rangle}\lambda^{\text{IMPORT}^{\text{COMPOSITE}^1}\langle s\rangle}\left(am^{\text{imp}\langle r\rangle} IMP^{\langle r,s\rangle}\right)^{-1+\sigma^{\text{imp}\langle s\rangle-1}\left(-1+\sigma^{\text{imp}\langle s\rangle}\right)}\left(\sum_{r\in ROW}\alpha^{\text{imp}\langle r,s\rangle}\left(am^{\text{imp}\langle r\rangle} IMP^{\langle r,s\rangle}\right)^{\sigma^{\text{imp}\langle s\rangle-1}\left(-1+\sigma^{\text{imp}\langle s\rangle}\right)}\right.$$
(6.4)

6.3 First order conditions after reduction

$$r \in ROW: \quad -p^{\text{for}\langle r\rangle} ex^{\text{rate}\langle r\rangle}\left(1+im^{\text{tax}\langle r,s\rangle}\right)+\alpha^{\text{imp}\langle r,s\rangle} am^{\text{imp}\langle r\rangle}\theta^{\text{imp}\langle s\rangle} p^{\text{imp}\langle s\rangle}\left(am^{\text{imp}\langle r\rangle} IMP^{\langle r,s\rangle}\right)^{-1+\sigma^{\text{imp}\langle s\rangle-1}\left(-1+\sigma^{\text{imp}\langle s\rangle}\right)}\left(\sum_{r\in ROW}\alpha^{\text{imp}\langle r,s\rangle}\left(am^{\text{imp}\langle r\rangle} IMP^{\langle r,s\rangle}\right)^{\sigma^{\text{imp}\langle s\rangle-1}\left(-1+\sigma^{\text{imp}\langle s\rangle}\right)}\right.$$
(6.5)

7 ARMINGTON COMPOSITE $s \in SEC$

7.1 Optimisation problem

$$\max_{ARM^{\langle s\rangle}, Y^{\text{HOME}^{\text{a}}\langle s\rangle}, IMPORT^{\text{a}\langle s\rangle}} \Pi^{\text{ARM}\langle s\rangle} = -p^{\text{home}\langle s\rangle} Y^{\text{HOME}^{\text{a}}\langle s\rangle} + p^{\text{arm}\langle s\rangle} ARM^{\langle s\rangle} - p^{\text{imp}\langle s\rangle} IMPORT^{\text{a}\langle s\rangle}$$
(7.1)

s.t. :

$$ARM^{\langle s\rangle} = \theta^{\text{arm}\langle s\rangle}\left(\alpha^{\text{arm}^{\text{h}}\langle s\rangle} Y^{\text{HOME}^{\text{a}}\langle s\rangle^{\sigma^{\text{arm}\langle s\rangle-1}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)}} + \alpha^{\text{arm}^{\text{i}}\langle s\rangle} IMPORT^{\text{a}\langle s\rangle^{\sigma^{\text{arm}\langle s\rangle-1}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)}}\right)^{\sigma^{\text{arm}\langle s\rangle}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)^{-1}} \left(\lambda^{\text{ARMINGTON}^{\text{COMPOSITE}^1}\langle s\rangle}\right)$$
(7.2)

7.2 First order conditions

$$-\lambda^{\text{ARMINGTON}^{\text{COMPOSITE}^1}\langle s\rangle} + p^{\text{arm}\langle s\rangle} = 0 \quad \left(ARM^{\langle s\rangle}\right)$$
(7.3)

$$-p^{\text{home}\langle s\rangle}+\alpha^{\text{arm}^{\text{h}}\langle s\rangle}\theta^{\text{arm}\langle s\rangle}\lambda^{\text{ARMINGTON}^{\text{COMPOSITE}^1}\langle s\rangle} Y^{\text{HOME}^{\text{a}}\langle s\rangle^{-1+\sigma^{\text{arm}\langle s\rangle-1}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle s\rangle} Y^{\text{HOME}^{\text{a}}\langle s\rangle^{\sigma^{\text{arm}\langle s\rangle-1}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)}} + \alpha^{\text{arm}^{\text{i}}\langle s\rangle} IMPORT^{\text{a}\langle s\rangle^{\sigma^{\text{arm}\langle s\rangle-1}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)}}\right)^{-1+\sigma}$$
(7.4)

$$-p^{\text{imp}\langle s\rangle}+\alpha^{\text{arm}^{\text{i}}\langle s\rangle}\theta^{\text{arm}\langle s\rangle}\lambda^{\text{ARMINGTON}^{\text{COMPOSITE}^1}\langle s\rangle} IMPORT^{\text{a}\langle s\rangle^{-1+\sigma^{\text{arm}\langle s\rangle-1}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle s\rangle} Y^{\text{HOME}^{\text{a}}\langle s\rangle^{\sigma^{\text{arm}\langle s\rangle-1}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)}} + \alpha^{\text{arm}^{\text{i}}\langle s\rangle} IMPORT^{\text{a}\langle s\rangle^{\sigma^{\text{arm}\langle s\rangle-1}\left(-1+\sigma^{\text{arm}\langle s\rangle}\right)}}\right)^{-1+\sigma}$$
(7.5)

7.3 First order conditions after reduction

$$-p^{\mathrm{home}\langle s\rangle}+\alpha^{\mathrm{arm^h}\langle s\rangle}\theta^{\mathrm{arm}\langle s\rangle}p^{\mathrm{arm}\langle s\rangle}Y^{\mathrm{HOME^a}\langle s\rangle-1+\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle s\rangle}Y^{\mathrm{HOME^a}\langle s\rangle\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle s\rangle}IMPORT^{\mathrm{a}\langle s\rangle\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle s\rangle}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)^{-1}} \tag{7.6}$$

$$-p^{\mathrm{imp}\langle s\rangle}+\alpha^{\mathrm{arm^i}\langle s\rangle}\theta^{\mathrm{arm}\langle s\rangle}p^{\mathrm{arm}\langle s\rangle}IMPORT^{\mathrm{a}\langle s\rangle-1+\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle s\rangle}Y^{\mathrm{HOME^a}\langle s\rangle\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle s\rangle}IMPORT^{\mathrm{a}\langle s\rangle\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle s\rangle}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)^{-1}} \tag{7.7}$$

8 SALES $s \in SEC$

8.1 Identities

$$TAX^{\mathrm{p}\langle s\rangle}=EXCISE^{\langle s\rangle}+VAT^{\langle s\rangle} \tag{8.1}$$

$$VAT^{\langle s\rangle}=vat^{\langle s\rangle}p^{\mathrm{market}\langle s\rangle}\left(1+excise^{\langle s\rangle}\right)\left(D^{\mathrm{GOV}\langle s\rangle}+INV^{\langle s\rangle}+\sum_{h\in HHD}scale^{\langle h\rangle}D^{\langle s,h\rangle}\right) \tag{8.2}$$

$$EXCISE^{\langle s\rangle}=excise^{\langle s\rangle}p^{\mathrm{market}\langle s\rangle}\left(D^{\mathrm{GOV}\langle s\rangle}+INV^{\langle s\rangle}+\sum_{h\in HHD}scale^{\langle h\rangle}D^{\langle s,h\rangle}+\sum_{si\in SEC}X^{\langle s,si\rangle}\right) \tag{8.3}$$

9 FIRM

9.1 Identities

$$INC^{\mathrm{FIRM}}=BTINC^{\mathrm{FIRM}}\left(1-firm^{\mathrm{tax}}\right) \tag{9.1}$$

$$BTINC^{\mathrm{FIRM}}=PROFIT+TBANKFIRM+TGOVFIRM+p^{\mathrm{k}}K^{\mathrm{FIRM}}+\sum_{r\in ROW}TROWFIRM^{\langle r\rangle} \tag{9.2}$$

$$PROFIT=\sum_{s\in SEC}\pi^{\langle s\rangle} \tag{9.3}$$

$$K^{\mathrm{FIRM}}=ourc^{\mathrm{f}}KS \tag{9.4}$$

$$SAV^{\mathrm{FIRM}}+TRAN^{\mathrm{FIRM}}=INC^{\mathrm{FIRM}} \tag{9.5}$$

$$TRAN^{\mathrm{FIRM}} = TFIRMBANK + \sum_{h \in HHD} scale^{\langle h \rangle} TFIRMH^{\langle h \rangle} + \sum_{r \in ROW} ex^{\mathrm{rate}\langle r \rangle} TFIRMROW^{\langle r \rangle} \tag{9.6}$$

$$h \in HHD: \quad scale^{\langle h \rangle} TFIRMH^{\langle h \rangle} = owf^{\langle h \rangle} INC^{\mathrm{FIRM}} \tag{9.7}$$

$$r \in ROW: \quad ex^{\mathrm{rate}\langle r \rangle} TFIRMROW^{\langle r \rangle} = owf^{\langle r \rangle} INC^{\mathrm{FIRM}} \tag{9.8}$$

$$TFIRMBANK = owf^{\mathrm{b}} INC^{\mathrm{FIRM}} \tag{9.9}$$

10 BANK

10.1 Identities

$$INC^{\mathrm{BANK}} = BTINC^{\mathrm{BANK}} \left(1 - bank^{\mathrm{tax}}\right) \tag{10.1}$$

$$BTINC^{\mathrm{BANK}} = TFIRMBANK + TGOVBANK + p^{\mathrm{k}} K^{\mathrm{BANK}} + \sum_{h \in HHD} scale^{\langle h \rangle} THBANK^{\langle h \rangle} + \sum_{r \in ROW} TROWBANK^{\langle r \rangle} \tag{10.2}$$

$$K^{\mathrm{BANK}} = ouc^{\mathrm{b}} KS \tag{10.3}$$

$$SAV^{\mathrm{BANK}} + TRAN^{\mathrm{BANK}} = INC^{\mathrm{BANK}} \tag{10.4}$$

$$TRAN^{\mathrm{BANK}} = TBANKFIRM + \sum_{h \in HHD} scale^{\langle h \rangle} TBANKH^{\langle h \rangle} + \sum_{r \in ROW} ex^{\mathrm{rate}\langle r \rangle} TBANKROW^{\langle r \rangle} \tag{10.5}$$

$$h \in HHD: \quad scale^{\langle h \rangle} TBANKH^{\langle h \rangle} = oub^{\mathrm{h}\langle h \rangle} INC^{\mathrm{BANK}} \tag{10.6}$$

$$r \in ROW: \quad ex^{\mathrm{rate}\langle r \rangle} TBANKROW^{\langle r \rangle} = oub^{\mathrm{r}\langle r \rangle} INC^{\mathrm{BANK}} \tag{10.7}$$

$$TBANKFIRM = oub^{\mathrm{f}} INC^{\mathrm{BANK}} \tag{10.8}$$

11 GOVERNMENT

11.1 Identities

$$INC^{\mathrm{GOV}} = CIT + EXCISE + IMTAX + PIT + SOCTAX + STAX + TROWGOV + VAT \tag{11.1}$$

$$VAT = \sum_{s \in SEC} VAT^{\langle s \rangle} \tag{11.2}$$

$$EXCISE = \sum_{s \in SEC} EXCISE^{\langle s \rangle} \tag{11.3}$$

$$STAX = \sum_{s \in SEC} TAX^{\mathrm{s}\langle s \rangle} \tag{11.4}$$

$$SOCTAX = K^{\mathrm{TAX}} + L^{\mathrm{TAX}} \tag{11.5}$$

$$IMTAX = \sum_{s \in SEC} \sum_{r \in ROW} im^{\mathrm{tax}\langle r,s \rangle} p^{\mathrm{for}\langle r \rangle} ex^{\mathrm{rate}\langle r \rangle} IMP^{\langle r,s \rangle} \tag{11.6}$$

$$PIT = \sum_{h \in HHD} pit^{\mathrm{tax}\langle h \rangle} scale^{\langle h \rangle} PIT^{\mathrm{base}\langle h \rangle} \tag{11.7}$$

$$CIT = BANKTAX + FIRMTAX \tag{11.8}$$

$$FIRMTAX = firm^{\mathrm{tax}} BTINC^{\mathrm{FIRM}} \tag{11.9}$$

$$BANKTAX = bank^{\mathrm{tax}} BTINC^{\mathrm{BANK}} \tag{11.10}$$

$$TROWGOV = \sum_{r \in ROW} TROWGOV^{\langle r \rangle} \tag{11.11}$$

$$EXP^{\mathrm{GOV}} = DEM^{\mathrm{GOV}} + SUB + TRAN^{\mathrm{GOV}} \tag{11.12}$$

$$DEM^{\mathrm{GOV}} = \sum_{s \in SEC} p^{\mathrm{cons}\langle s \rangle} D^{\mathrm{GOV}\langle s \rangle} \tag{11.13}$$

$$s \in SEC: \quad p^{\mathrm{cons}\langle s \rangle} D^{\mathrm{GOV}\langle s \rangle} = dgov^{\mathrm{data}\langle s \rangle} \tag{11.14}$$

$$SUB = \sum_{s \in SEC} SUB^{\mathrm{s}\langle s\rangle} + \sum_{s \in SEC} SUB^{\mathrm{p}\langle s\rangle} \tag{11.15}$$

$$s \in SEC: \quad SUB^{\mathrm{p}\langle s\rangle} = sub^{\mathrm{p}\langle s\rangle} ARM^{\langle s\rangle} \tag{11.16}$$

$$TRAN^{\mathrm{GOV}} = TGOVFIRM + TGOVBANK + \sum_{h \in HHD} scale^{\langle h\rangle} TGOVH^{\langle h\rangle} + \sum_{r \in ROW} ex^{\mathrm{rate}\langle r\rangle} TGOVROW^{\langle r\rangle} \tag{11.17}$$

$$h \in HHD: \quad scale^{\langle h\rangle} TGOVH^{\langle h\rangle} = tgovh^{\mathrm{data}\langle h\rangle} + tgovh^{\mathrm{data^{extra}}\langle h\rangle} \tag{11.18}$$

$$r \in ROW: \quad ex^{\mathrm{rate}\langle r\rangle} TGOVROW^{\langle r\rangle} = tgovrow^{\mathrm{data}\langle r\rangle} \tag{11.19}$$

$$TGOVFIRM = tgovfirm^{\mathrm{data}} \tag{11.20}$$

$$TGOVBANK = tgovbank^{\mathrm{data}} \tag{11.21}$$

$$INC^{\mathrm{GOV}} = EXP^{\mathrm{GOV}} + SAV^{\mathrm{GOV}} \tag{11.22}$$

12 REST OF THE WORLD $r \in ROW$

12.1 Identities

$$INC^{\mathrm{ROW}\langle r\rangle} = IMPORT^{\mathrm{ROW}\langle r\rangle} + ex^{\mathrm{rate}\langle r\rangle} \left(TBANKROW^{\langle r\rangle} + TFIRMROW^{\langle r\rangle} + TGOVROW^{\langle r\rangle} + \sum_{h \in HHD} scale^{\langle h\rangle} THROW^{\langle h,r\rangle} \right) \tag{12.1}$$

$$IMPORT^{\mathrm{ROW}\langle r\rangle} = p^{\mathrm{for}\langle r\rangle} ex^{\mathrm{rate}\langle r\rangle} \left(\sum_{s \in SEC} IMP^{\langle r,s\rangle} \right) \tag{12.2}$$

$$EXP^{\mathrm{ROW}\langle r\rangle} = EXPORT^{\mathrm{ROW}\langle r\rangle} + TRAN^{\langle r\rangle} \tag{12.3}$$

$$EXPORT^{\mathrm{ROW}\langle r\rangle} = p^{\mathrm{for}\langle r\rangle} \left(\sum_{s \in SEC} EXP^{\langle r,s\rangle} \right) \tag{12.4}$$

$$TRAN^{\langle r\rangle} = TROWFIRM^{\langle r\rangle} + TROWBANK^{\langle r\rangle} + TROWGOV^{\langle r\rangle} + \sum_{h \in HHD} scale^{\langle h\rangle} TROWH^{\langle r,h\rangle} \tag{12.5}$$

$$TROWFIRM^{\langle r\rangle} = t^{\mathrm{rf}\langle r\rangle} EXP^{\mathrm{ROW}\langle r\rangle} \tag{12.6}$$

$$TROWGOV^{\langle r\rangle} = t^{\mathrm{rg}\langle r\rangle} EXP^{\mathrm{ROW}\langle r\rangle} \tag{12.7}$$

$$h \in HHD: \quad scale^{\langle h\rangle} TROWH^{\langle r,h\rangle} = t^{\mathrm{rh}\langle r,h\rangle} EXP^{\mathrm{ROW}\langle r\rangle} \tag{12.8}$$

$$TROWBANK^{\langle r\rangle} = t^{\mathrm{rb}\langle r\rangle} EXP^{\mathrm{ROW}\langle r\rangle} \tag{12.9}$$

$$INC^{\mathrm{ROW}\langle r\rangle} = EXP^{\mathrm{ROW}\langle r\rangle} + SAV^{\langle r\rangle} \tag{12.10}$$

13 CAPITAL

13.1 Identities

$$SAV = SAV^{\mathrm{FIRM}} + SAV^{\mathrm{BANK}} + SAV^{\mathrm{GOV}} + \sum_{h \in HHD} scale^{\langle h\rangle} SAV^{\langle h\rangle} + \sum_{r \in ROW} SAV^{\langle r\rangle} \tag{13.1}$$

$$s \in SEC: \quad p^{\mathrm{cons}\langle s\rangle} INV^{\langle s\rangle} = inv^{\langle s\rangle} INV \tag{13.2}$$

14 MARKET CLEARING

14.1 Identities

$$s \in SEC: \quad ARM^{\langle s\rangle} = D^{\mathrm{GOV}\langle s\rangle} + INV^{\langle s\rangle} + \sum_{h \in HHD} scale^{\langle h\rangle} D^{\langle s,h\rangle} + \sum_{si \in SEC} X^{\langle s,si\rangle} \tag{14.1}$$

$$s \in SEC: \quad EXPORT^{\mathrm{f}\langle s\rangle} = EXPORT^{\langle s\rangle} \tag{14.2}$$

$$s \in SEC: \quad IMPORT^{\mathrm{a}\langle s\rangle} = IMPORT^{\langle s\rangle} \tag{14.3}$$

$$s \in SEC: \quad Y^{\mathrm{HOME}^{\mathrm{a}}\langle s\rangle} = Y^{\mathrm{HOME}\langle s\rangle} \tag{14.4}$$

$$s \in SEC: \quad Y^{\mathrm{f}\langle s\rangle} = Y^{\langle s\rangle} \tag{14.5}$$

$$\left(\sum_{s \in SEC} p^{\langle s\rangle} ARM^{\langle s\rangle}\right) \left(\sum_{si \in SEC} ARM^{\langle si\rangle}\right)^{-1} = 1 \tag{14.6}$$

$$KS = \sum_{s \in SEC} K^{\langle s \rangle} \tag{14.7}$$

$$KS = k^{\text{total}^{\text{data}}} \tag{14.8}$$

$$\sum_{s \in SEC} L^{\langle s \rangle} = \sum_{h \in HHD} scale^{\langle h \rangle} L^{\langle h \rangle} \tag{14.9}$$

$$LS = \sum_{h \in HHD} scale^{\langle h \rangle} L^{\langle h \rangle} \tag{14.10}$$

$$h \in HHD: \quad UNEMP^{\langle h \rangle} = 0 \tag{14.11}$$

$$r \in ROW: \quad ex^{\text{rate}\langle r \rangle} = 1 \tag{14.12}$$

$$s \in SEC: \quad p^{\text{int}\langle s \rangle} = p^{\text{market}\langle s \rangle} \left(1 + excise^{\langle s \rangle}\right) \tag{14.13}$$

$$s \in SEC: \quad p^{\text{cons}\langle s \rangle} = p^{\text{market}\langle s \rangle} \left(1 + excise^{\langle s \rangle}\right) \left(1 + vat^{\langle s \rangle}\right) \tag{14.14}$$

$$s \in SEC: \quad p^{\text{market}\langle s \rangle} = -sub^{\text{p}\langle s \rangle} + p^{\text{arm}\langle s \rangle} \tag{14.15}$$

15 Equilibrium relationships (before expansion and reduction)

$$1 - \left(\sum_{s \in SEC} p^{\langle s \rangle} ARM^{\langle s \rangle}\right) \left(\sum_{si \in SEC} ARM^{\langle si \rangle}\right)^{-1} = 0 \tag{15.1}$$

$$k^{\text{total}^{\text{data}}} - KS = 0 \tag{15.2}$$

$$tgovfirm^{\text{data}} - TGOVFIRM = 0 \tag{15.3}$$

$$tgovbank^{\text{data}} - TGOVBANK = 0 \tag{15.4}$$

$$-BANKTAX + bank^{\text{tax}} BTINC^{\text{BANK}} = 0 \tag{15.5}$$

$$-DEM^{\mathrm{GOV}} + \sum_{s \in SEC} p^{\mathrm{cons}\langle s \rangle} D^{\mathrm{GOV}\langle s \rangle} = 0 \tag{15.6}$$

$$-EXCISE + \sum_{s \in SEC} EXCISE^{\langle s \rangle} = 0 \tag{15.7}$$

$$-FIRMTAX + firm^{\mathrm{tax}} BTINC^{\mathrm{FIRM}} = 0 \tag{15.8}$$

$$-IMTAX + \sum_{s \in SEC} \sum_{r \in ROW} im^{\mathrm{tax}\langle r,s \rangle} p^{\mathrm{for}\langle r \rangle} ex^{\mathrm{rate}\langle r \rangle} IMP^{\langle r,s \rangle} = 0 \tag{15.9}$$

$$-INC^{\mathrm{FIRM}} + BTINC^{\mathrm{FIRM}} \left(1 - firm^{\mathrm{tax}}\right) = 0 \tag{15.10}$$

$$-INC^{\mathrm{BANK}} + BTINC^{\mathrm{BANK}} \left(1 - bank^{\mathrm{tax}}\right) = 0 \tag{15.11}$$

$$-K^{\mathrm{TAX}} + k^{\mathrm{tax}} p^{\mathrm{k}} \left(\sum_{s \in SEC} K^{\langle s \rangle} \right) = 0 \tag{15.12}$$

$$-K^{\mathrm{FIRM}} + ouc^{\mathrm{f}} KS = 0 \tag{15.13}$$

$$-K^{\mathrm{BANK}} + ouc^{\mathrm{b}} KS = 0 \tag{15.14}$$

$$-KS + \sum_{s \in SEC} K^{\langle s \rangle} = 0 \tag{15.15}$$

$$-L^{\mathrm{TAX}} + l^{\mathrm{tax}} p^{\mathrm{l}} \left(\sum_{s \in SEC} L^{\langle s \rangle} \right) = 0 \tag{15.16}$$

$$-LS + \sum_{h \in HHD} scale^{\langle h \rangle} L^{\langle h \rangle} = 0 \tag{15.17}$$

$$-PIT + \sum_{h \in HHD} pit^{\mathrm{tax}\langle h \rangle} scale^{\langle h \rangle} PIT^{\mathrm{base}\langle h \rangle} = 0 \tag{15.18}$$

$$-PROFIT + \sum_{s \in SEC} \pi^{\langle s \rangle} = 0 \tag{15.19}$$

$$-STAX + \sum_{s \in SEC} TAX^{\mathrm{s}\langle s \rangle} = 0 \tag{15.20}$$

$$-TBANKFIRM + aub^{\mathrm{f}}\, INC^{\mathrm{BANK}} = 0 \tag{15.21}$$

$$-TFIRMBANK + awf^{\mathrm{b}}\, INC^{\mathrm{FIRM}} = 0 \tag{15.22}$$

$$-TROWGOV + \sum_{r \in ROW} TROWGOV^{\langle r \rangle} = 0 \tag{15.23}$$

$$-VAT + \sum_{s \in SEC} VAT^{\langle s \rangle} = 0 \tag{15.24}$$

$$\sum_{h \in HHD} scale^{\langle h \rangle} L^{\langle h \rangle} - \sum_{s \in SEC} L^{\langle s \rangle} = 0 \tag{15.25}$$

$$BANKTAX - CIT + FIRMTAX = 0 \tag{15.26}$$

$$EXP^{\mathrm{GOV}} - INC^{\mathrm{GOV}} + SAV^{\mathrm{GOV}} = 0 \tag{15.27}$$

$$INC^{\mathrm{FIRM}} - SAV^{\mathrm{FIRM}} - TRAN^{\mathrm{FIRM}} = 0 \tag{15.28}$$

$$INC^{\mathrm{BANK}} - SAV^{\mathrm{BANK}} - TRAN^{\mathrm{BANK}} = 0 \tag{15.29}$$

$$K^{\mathrm{TAX}} + L^{\mathrm{TAX}} - SOCTAX = 0 \tag{15.30}$$

$$-SUB + \sum_{s \in SEC} SUB^{\mathrm{s}\langle s \rangle} + \sum_{s \in SEC} SUB^{\mathrm{p}\langle s \rangle} = 0 \tag{15.31}$$

$$DEM^{\mathrm{GOV}} - EXP^{\mathrm{GOV}} + SUB + TRAN^{\mathrm{GOV}} = 0 \tag{15.32}$$

$$TBANKFIRM - TRAN^{\mathrm{BANK}} + \sum_{h \in HHD} scale^{\langle h \rangle} TBANKH^{\langle h \rangle} + \sum_{r \in ROW} ex^{\mathrm{rate}\langle r \rangle} TBANKROW^{\langle r \rangle} = 0 \tag{15.33}$$

$$TFIRMBANK - TRAN^{\mathrm{FIRM}} + \sum_{h \in HHD} scale^{\langle h \rangle} TFIRMH^{\langle h \rangle} + \sum_{r \in ROW} ex^{\mathrm{rate}\langle r \rangle} TFIRMROW^{\langle r \rangle} = 0 \tag{15.34}$$

$$TGOVFIRM + TGOVBANK - TRAN^{\mathrm{GOV}} + \sum_{h \in HHD} scale^{\langle h \rangle} TGOVH^{\langle h \rangle} + \sum_{r \in ROW} ex^{\mathrm{rate}\langle r \rangle} TGOVROW^{\langle r \rangle} = 0 \tag{15.35}$$

$$-BTINC^{\mathrm{FIRM}} + PROFIT + TBANKFIRM + TGOVFIRM + p^{\mathrm{k}}K^{\mathrm{FIRM}} + \sum_{r \in ROW} TROWFIRM^{\langle r \rangle} = 0 \tag{15.36}$$

$$-BTINC^{\mathrm{BANK}} + TFIRMBANK + TGOVBANK + p^{\mathrm{k}}K^{\mathrm{BANK}} + \sum_{h \in HHD} scale^{\langle h \rangle} THBANK^{\langle h \rangle} + \sum_{r \in ROW} TROWBANK^{\langle r \rangle} = 0 \tag{15.37}$$

$$-SAV + SAV^{\mathrm{FIRM}} + SAV^{\mathrm{BANK}} + SAV^{\mathrm{GOV}} + \sum_{h \in HHD} scale^{\langle h \rangle} SAV^{\langle h \rangle} + \sum_{r \in ROW} SAV^{\langle r \rangle} = 0 \tag{15.38}$$

$$CIT + EXCISE + IMTAX - INC^{\mathrm{GOV}} + PIT + SOCTAX + STAX + TROWGOV + VAT = 0 \tag{15.39}$$

$$h \in HHD: \quad -UNEMP^{\langle h \rangle} = 0 \tag{15.40}$$

$$h \in HHD: \quad le^{\langle h \rangle} - scale^{\langle h \rangle} \left(LEIS^{\langle h \rangle} + LL^{\langle h \rangle} \right) = 0 \tag{15.41}$$

$$h \in HHD: \quad -DEM^{\langle h \rangle} + \theta^{\mathrm{dem}\langle h \rangle} \left(\sum_{s \in SEC} \alpha^{\langle s,h \rangle} D^{\langle s,h \rangle^{\omega^{-1}(-1+\omega)}} \right)^{\omega(-1+\omega)^{-1}} = 0 \tag{15.42}$$

$$h \in HHD: \quad -SAV^{\langle h \rangle} + sav^{\langle h \rangle} INC^{\langle h \rangle} = 0 \tag{15.43}$$

$$h \in HHD: \quad -THBANK^{\langle h \rangle} + auh^{\mathrm{b}\langle h \rangle} INC^{\langle h \rangle} = 0 \tag{15.44}$$

$$h \in HHD: \quad U^{\langle h \rangle} - \left(\alpha^{\mathrm{u}\langle h \rangle} DEM^{\langle h \rangle^{\omega^{\mathrm{u}\langle h \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)}} + \left(1 - \alpha^{\mathrm{u}\langle h \rangle}\right) LEIS^{\langle h \rangle^{\omega^{\mathrm{u}\langle h \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)}} \right)^{\omega^{\mathrm{u}\langle h \rangle}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)^{-1}} = 0 \tag{15.45}$$

$$h \in HHD: \quad k^{\mathrm{total}^{\mathrm{data}}} auc^{\langle h \rangle} - scale^{\langle h \rangle} K^{\langle h \rangle} = 0 \tag{15.46}$$

$$h \in HHD: \quad auf^{\langle h \rangle} INC^{\mathrm{FIRM}} - scale^{\langle h \rangle} TFIRMH^{\langle h \rangle} = 0 \tag{15.47}$$

$$h \in HHD: \quad aub^{\mathrm{h}\langle h \rangle} INC^{\mathrm{BANK}} - scale^{\langle h \rangle} TBANKH^{\langle h \rangle} = 0 \tag{15.48}$$

$$h \in HHD: \quad -scale^{\langle h \rangle} \lambda^{\mathrm{CONSUMER}^{1}\langle h \rangle} + \left(1 - \alpha^{\mathrm{u}\langle h \rangle}\right) LEIS^{\langle h \rangle^{-1+\omega^{\mathrm{u}\langle h \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)}} \left(\alpha^{\mathrm{u}\langle h \rangle} DEM^{\langle h \rangle^{\omega^{\mathrm{u}\langle h \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)}} + \left(1 - \alpha^{\mathrm{u}\langle h \rangle}\right) LEIS^{\langle h \rangle^{\omega^{\mathrm{u}\langle h \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)}} \right)^{-1+\omega^{\mathrm{u}\langle h \rangle}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)^{-1}} = 0 \tag{15.49}$$

$$h \in HHD: \quad p^{\mathrm{k}} \left(-\lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} + outh^{\mathrm{b}\langle h \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} - pit^{\mathrm{tax}\langle h \rangle} \left(-\lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} + outh^{\mathrm{b}\langle h \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} + sav^{\langle h \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} + \sum_{r \in ROW} outh^{\mathrm{r}\langle h,r \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle h \right. \right. \tag{15.50}$$

$$h \in HHD: \quad tgovh^{\mathrm{data}\langle h \rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle h \rangle} - scale^{\langle h \rangle} TGOVH^{\langle h \rangle} = 0 \tag{15.51}$$

$$h \in HHD: \quad BTINC^{\langle h \rangle} - INC^{\langle h \rangle} - pit^{\mathrm{tax}\langle h \rangle} PIT^{\mathrm{base}\langle h \rangle} = 0 \tag{15.52}$$

$$h \in HHD: \quad L^{\langle h \rangle} - LL^{\langle h \rangle} + UNEMP^{\langle h \rangle} = 0 \tag{15.53}$$

$$h \in HHD: \quad THBANK^{\langle h \rangle} - TRAN^{\langle h \rangle} + \sum_{r \in ROW} ex^{\mathrm{rate}\langle r \rangle} THROW^{\langle h,r \rangle} = 0 \tag{15.54}$$

$$h \in HHD: \quad -scale^{\langle h \rangle} \lambda^{\mathrm{CONSUMER}^{1}\langle h \rangle} + p^{\mathrm{l}} \left(-\lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} + outh^{\mathrm{b}\langle h \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} - pit^{\mathrm{tax}\langle h \rangle} \left(-\lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} + outh^{\mathrm{b}\langle h \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} + sav^{\langle h \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} + \sum_{r \in ROW} \right. \right. \tag{15.55}$$

$$h \in HHD: \quad -pit^{\mathrm{free}} + BTINC^{\langle h \rangle} - PIT^{\mathrm{base}\langle h \rangle} - cei p^{\mathrm{l}} L^{\langle h \rangle} = 0 \tag{15.56}$$

$$h \in HHD: \quad -BTINC^{\langle h \rangle} + TINSTH^{\langle h \rangle} + p^{\mathrm{k}} K^{\langle h \rangle} + p^{\mathrm{l}} L^{\langle h \rangle} = 0 \tag{15.57}$$

$$h \in HHD: \quad -INC^{\langle h \rangle} + SAV^{\langle h \rangle} + TRAN^{\langle h \rangle} + \sum_{s \in SEC} p^{\mathrm{cons}\langle s \rangle} D^{\langle s,h \rangle} = 0 \tag{15.58}$$

$$h \in HHD: \quad TBANKH^{\langle h \rangle} + TFIRMH^{\langle h \rangle} + TGOVH^{\langle h \rangle} - TINSTH^{\langle h \rangle} + \sum_{r \in ROW} TROWH^{\langle r,h \rangle} = 0 \tag{15.59}$$

$$h \in HHD: \quad r \in ROW: \quad outh^{\mathrm{r}\langle h,r \rangle} INC^{\langle h \rangle} - ex^{\mathrm{rate}\langle r \rangle} THROW^{\langle h,r \rangle} = 0 \tag{15.60}$$

$$h \in HHD: \quad r \in ROW: \quad ex^{\mathrm{rate}\langle r \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} - ex^{\mathrm{rate}\langle r \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle h,r \rangle} = 0 \tag{15.61}$$

$$h \in HHD: \quad s \in SEC: \quad \lambda^{\mathrm{CONSUMER}^{12}\langle h \rangle} p^{\mathrm{cons}\langle s \rangle} + \alpha^{\langle s,h \rangle} \alpha^{\mathrm{u}\langle h \rangle} \theta^{\mathrm{dem}\langle h \rangle} D^{\langle s,h \rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle h \rangle^{-1+\omega^{\mathrm{u}\langle h \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)}} \left(\alpha^{\mathrm{u}\langle h \rangle} DEM^{\langle h \rangle^{\omega^{\mathrm{u}\langle h \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle h \rangle}\right)}} + \left(1 - \alpha^{\mathrm{u}\langle h \rangle}\right) LEIS^{\langle h \rangle^{\omega^{\mathrm{u}\langle h \rangle}}} \right. \tag{15.62}$$

$$r \in ROW: \quad 1 - ex^{\mathrm{rate}\langle r\rangle} = 0 \tag{15.63}$$

$$r \in ROW: \quad tgourow^{\mathrm{data}\langle r\rangle} - ex^{\mathrm{rate}\langle r\rangle} TGOVROW^{\langle r\rangle} = 0 \tag{15.64}$$

$$r \in ROW: \quad -EXPORT^{\mathrm{ROW}\langle r\rangle} + p^{\mathrm{for}\langle r\rangle} \left(\sum_{s \in SEC} EXP^{\langle r,s\rangle} \right) = 0 \tag{15.65}$$

$$r \in ROW: \quad -IMPORT^{\mathrm{ROW}\langle r\rangle} + p^{\mathrm{for}\langle r\rangle} ex^{\mathrm{rate}\langle r\rangle} \left(\sum_{s \in SEC} IMP^{\langle r,s\rangle} \right) = 0 \tag{15.66}$$

$$r \in ROW: \quad -TROWFIRM^{\langle r\rangle} + t^{\mathrm{rf}\langle r\rangle} EXP^{\mathrm{ROW}\langle r\rangle} = 0 \tag{15.67}$$

$$r \in ROW: \quad -TROWBANK^{\langle r\rangle} + t^{\mathrm{rb}\langle r\rangle} EXP^{\mathrm{ROW}\langle r\rangle} = 0 \tag{15.68}$$

$$r \in ROW: \quad -TROWGOV^{\langle r\rangle} + t^{\mathrm{rg}\langle r\rangle} EXP^{\mathrm{ROW}\langle r\rangle} = 0 \tag{15.69}$$

$$r \in ROW: \quad oavf^{\langle r\rangle} INC^{\mathrm{FIRM}} - ex^{\mathrm{rate}\langle r\rangle} TFIRMROW^{\langle r\rangle} = 0 \tag{15.70}$$

$$r \in ROW: \quad oavb^{\mathrm{r}\langle r\rangle} INC^{\mathrm{BANK}} - ex^{\mathrm{rate}\langle r\rangle} TBANKROW^{\langle r\rangle} = 0 \tag{15.71}$$

$$r \in ROW: \quad -EXP^{\mathrm{ROW}\langle r\rangle} + EXPORT^{\mathrm{ROW}\langle r\rangle} + TRAN^{\langle r\rangle} = 0 \tag{15.72}$$

$$r \in ROW: \quad EXP^{\mathrm{ROW}\langle r\rangle} - INC^{\mathrm{ROW}\langle r\rangle} + SAV^{\langle r\rangle} = 0 \tag{15.73}$$

$$r \in ROW: \quad IMPORT^{\mathrm{ROW}\langle r\rangle} - INC^{\mathrm{ROW}\langle r\rangle} + ex^{\mathrm{rate}\langle r\rangle} \left(TBANKROW^{\langle r\rangle} + TFIRMROW^{\langle r\rangle} + TGOVROW^{\langle r\rangle} + \sum_{h \in HHD} scale^{\langle h\rangle} THROW^{\langle h,r\rangle} \right) = 0 \tag{15.74}$$

$$r \in ROW: \quad -TRAN^{\langle r\rangle} + TROWFIRM^{\langle r\rangle} + TROWBANK^{\langle r\rangle} + TROWGOV^{\langle r\rangle} + \sum_{h \in HHD} scale^{\langle h\rangle} TROWH^{\langle r,h\rangle} = 0 \tag{15.75}$$

$$r \in ROW: \quad h \in HHD: \quad t^{\mathrm{rh}\langle r,h\rangle} EXP^{\mathrm{ROW}\langle r\rangle} - scale^{\langle h\rangle} TROWH^{\langle r,h\rangle} = 0 \tag{15.76}$$

$$s \in SEC: \quad dgov^{\mathrm{data}\langle s\rangle} - p^{\mathrm{cons}\langle s\rangle} D^{\mathrm{GOV}\langle s\rangle} = 0 \tag{15.77}$$

$$s \in SEC: \quad -p^{\mathrm{cons}\langle s\rangle} + p^{\mathrm{market}\langle s\rangle}\left(1+excise^{\langle s\rangle}\right)\left(1+vat^{\langle s\rangle}\right) = 0 \tag{15.78}$$

$$s \in SEC: \quad -p^{\mathrm{int}\langle s\rangle} + p^{\mathrm{market}\langle s\rangle}\left(1+excise^{\langle s\rangle}\right) = 0 \tag{15.79}$$

$$s \in SEC: \quad -p^{\mathrm{exp}\langle s\rangle}+\alpha^{\mathrm{prod^e}\langle s\rangle}\theta^{\mathrm{y}\langle s\rangle}p^{\langle s\rangle}EXPORT^{\mathrm{f}\langle s\rangle^{-1+\sigma^{\mathrm{fprod}\langle s\rangle-1}\left(1+\sigma^{\mathrm{fprod}\langle s\rangle}\right)}}\left(\alpha^{\mathrm{prod^h}\langle s\rangle}Y^{\mathrm{HOME}\langle s\rangle^{\sigma^{\mathrm{fprod}\langle s\rangle-1}\left(1+\sigma^{\mathrm{fprod}\langle s\rangle}\right)}}+\alpha^{\mathrm{prod^e}\langle s\rangle}EXPORT^{\mathrm{f}\langle s\rangle^{\sigma^{\mathrm{fprod}\langle s\rangle-1}\left(1+\sigma^{\mathrm{fprod}\langle s\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{fprod}\langle} \tag{15.80}$$

$$s \in SEC: \quad -p^{\mathrm{home}\langle s\rangle}+\alpha^{\mathrm{prod^h}\langle s\rangle}\theta^{\mathrm{y}\langle s\rangle}p^{\langle s\rangle}Y^{\mathrm{HOME}\langle s\rangle^{-1+\sigma^{\mathrm{fprod}\langle s\rangle-1}\left(1+\sigma^{\mathrm{fprod}\langle s\rangle}\right)}}\left(\alpha^{\mathrm{prod^h}\langle s\rangle}Y^{\mathrm{HOME}\langle s\rangle^{\sigma^{\mathrm{fprod}\langle s\rangle-1}\left(1+\sigma^{\mathrm{fprod}\langle s\rangle}\right)}}+\alpha^{\mathrm{prod^e}\langle s\rangle}EXPORT^{\mathrm{f}\langle s\rangle^{\sigma^{\mathrm{fprod}\langle s\rangle-1}\left(1+\sigma^{\mathrm{fprod}\langle s\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{fprod}\langle s} \tag{15.81}$$

$$s \in SEC: \quad -p^{\mathrm{home}\langle s\rangle}+\alpha^{\mathrm{arm^h}\langle s\rangle}\theta^{\mathrm{arm}\langle s\rangle}p^{\mathrm{arm}\langle s\rangle}Y^{\mathrm{HOME^a}\langle s\rangle^{-1+\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}}\left(\alpha^{\mathrm{arm^h}\langle s\rangle}Y^{\mathrm{HOME^a}\langle s\rangle^{\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}}+\alpha^{\mathrm{arm^i}\langle s\rangle}IMPORT^{\mathrm{a}\langle s\rangle^{\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{arm}\langle s\rangle}\left(} \tag{15.82}$$

$$s \in SEC: \quad -p^{\mathrm{imp}\langle s\rangle}+\alpha^{\mathrm{arm^i}\langle s\rangle}\theta^{\mathrm{arm}\langle s\rangle}p^{\mathrm{arm}\langle s\rangle}IMPORT^{\mathrm{a}\langle s\rangle^{-1+\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}}\left(\alpha^{\mathrm{arm^h}\langle s\rangle}Y^{\mathrm{HOME^a}\langle s\rangle^{\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}}+\alpha^{\mathrm{arm^i}\langle s\rangle}IMPORT^{\mathrm{a}\langle s\rangle^{\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{arm}\langle s\rangle}\left(} \tag{15.83}$$

$$s \in SEC: \quad -ARM^{\langle s\rangle}+\theta^{\mathrm{arm}\langle s\rangle}\left(\alpha^{\mathrm{arm^h}\langle s\rangle}Y^{\mathrm{HOME^a}\langle s\rangle^{\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}}+\alpha^{\mathrm{arm^i}\langle s\rangle}IMPORT^{\mathrm{a}\langle s\rangle^{\sigma^{\mathrm{arm}\langle s\rangle-1}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)}}\right)^{\sigma^{\mathrm{arm}\langle s\rangle}\left(-1+\sigma^{\mathrm{arm}\langle s\rangle}\right)^{-1}} = 0 \tag{15.84}$$

$$s \in SEC: \quad -EXPORT^{\mathrm{f}\langle s\rangle}+EXPORT^{\langle s\rangle} = 0 \tag{15.85}$$

$$s \in SEC: \quad -EXPORT^{\langle s\rangle}+\theta^{\mathrm{exp}\langle s\rangle}\left(\sum_{r\in ROW}\alpha^{\mathrm{exp}\langle r,s\rangle}\left(am^{\mathrm{exp}\langle r\rangle}EXP^{\langle r,s\rangle}\right)^{\sigma^{\mathrm{exp}\langle s\rangle-1}\left(1+\sigma^{\mathrm{exp}\langle s\rangle}\right)}\right)^{\sigma^{\mathrm{exp}\langle s\rangle}\left(1+\sigma^{\mathrm{exp}\langle s\rangle}\right)^{-1}} = 0 \tag{15.86}$$

$$s \in SEC: \quad -EXCISE^{\langle s\rangle}+excise^{\langle s\rangle}p^{\mathrm{market}\langle s\rangle}\left(D^{\mathrm{GOV}\langle s\rangle}+INV^{\langle s\rangle}+\sum_{h\in HHD}scale^{\langle h\rangle}D^{\langle s,h\rangle}+\sum_{si\in SEC}X^{\langle s,si\rangle}\right) = 0 \tag{15.87}$$

$$s \in SEC: \quad -IMPORT^{\mathrm{a}\langle s\rangle} + IMPORT^{\langle s\rangle} = 0 \tag{15.88}$$

$$s \in SEC: \quad -IMPORT^{\langle s\rangle} + \theta^{\mathrm{imp}\langle s\rangle}\left(\sum_{r\in ROW}\alpha^{\mathrm{imp}\langle r,s\rangle}\left(am^{\mathrm{imp}\langle r\rangle}IMP^{\langle r,s\rangle}\right)^{\sigma^{\mathrm{imp}\langle s\rangle}-1\left(-1+\sigma^{\mathrm{imp}\langle s\rangle}\right)}\right)^{\sigma^{\mathrm{imp}\langle s\rangle}\left(-1+\sigma^{\mathrm{imp}\langle s\rangle}\right)^{-1}} = 0 \tag{15.89}$$

$$s \in SEC: \quad -SUB^{\mathrm{s}\langle s\rangle} + sub^{\mathrm{rate}\langle s\rangle}\left(p^{\mathrm{k}}K^{\langle s\rangle}\left(1+k^{\mathrm{tax}}\right) + p^{\mathrm{l}}L^{\langle s\rangle}\left(1+l^{\mathrm{tax}}\right) + \sum_{si\in SEC}p^{\mathrm{int}\langle si\rangle}X^{\langle si,s\rangle}\right) = 0 \tag{15.90}$$

$$s \in SEC: \quad -SUB^{\mathrm{p}\langle s\rangle} + sub^{\mathrm{p}\langle s\rangle}ARM^{\langle s\rangle} = 0 \tag{15.91}$$

$$s \in SEC: \quad -TAX^{\mathrm{s}\langle s\rangle} + tax^{\mathrm{rate}\langle s\rangle}\left(p^{\mathrm{k}}K^{\langle s\rangle}\left(1+k^{\mathrm{tax}}\right) + p^{\mathrm{l}}L^{\langle s\rangle}\left(1+l^{\mathrm{tax}}\right) + \sum_{si\in SEC}p^{\mathrm{int}\langle si\rangle}X^{\langle si,s\rangle}\right) = 0 \tag{15.92}$$

$$s \in SEC: \quad -VAT^{\langle s\rangle} + vat^{\langle s\rangle}p^{\mathrm{market}\langle s\rangle}\left(1+excise^{\langle s\rangle}\right)\left(D^{\mathrm{GOV}\langle s\rangle} + INV^{\langle s\rangle} + \sum_{h\in HHD}scale^{\langle h\rangle}D^{\langle s,h\rangle}\right) = 0 \tag{15.93}$$

$$s \in SEC: \quad -Y^{\langle s\rangle} + Y^{\mathrm{VA}\langle s\rangle} = 0 \tag{15.94}$$

$$s \in SEC: \quad Y^{\langle s\rangle} - Y^{\mathrm{f}\langle s\rangle} = 0 \tag{15.95}$$

$$s \in SEC: \quad -Y^{\mathrm{VA}\langle s\rangle} + Y^{\mathrm{INT}\langle s\rangle} = 0 \tag{15.96}$$

$$s \in SEC: \quad -Y^{\mathrm{VA}\langle s\rangle} + \gamma^{\mathrm{yva}\langle s\rangle}K^{\langle s\rangle\beta^{\mathrm{k}\langle s\rangle}}L^{\langle s\rangle\beta^{\mathrm{l}\langle s\rangle}} = 0 \tag{15.97}$$

$$s \in SEC: \quad -Y^{\mathrm{HOME}^{\mathrm{a}}\langle s\rangle} + Y^{\mathrm{HOME}\langle s\rangle} = 0 \tag{15.98}$$

$$s \in SEC: \quad -Y^{\mathrm{f}\langle s\rangle} + \theta^{\mathrm{y}\langle s\rangle}\left(\alpha^{\mathrm{prod}^{\mathrm{h}}\langle s\rangle}Y^{\mathrm{HOME}\langle s\rangle\sigma^{\mathrm{f}\mathrm{prod}\langle s\rangle-1}\left(1+\sigma^{\mathrm{f}\mathrm{prod}\langle s\rangle}\right)} + \alpha^{\mathrm{prod}^{\mathrm{e}}\langle s\rangle}EXPORT^{\mathrm{f}\langle s\rangle\sigma^{\mathrm{f}\mathrm{prod}\langle s\rangle-1}\left(1+\sigma^{\mathrm{f}\mathrm{prod}\langle s\rangle}\right)}\right)^{\sigma^{\mathrm{f}\mathrm{prod}\langle s\rangle}\left(1+\sigma^{\mathrm{f}\mathrm{prod}\langle s\rangle}\right)^{-1}} = 0 \tag{15.99}$$

$$s \in SEC: \quad inv^{\langle s\rangle}INV - p^{\mathrm{cons}\langle s\rangle}INV^{\langle s\rangle} = 0 \tag{15.100}$$

$$s \in SEC: \quad -p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle s\rangle}+tax^{\mathrm{rate}\langle s\rangle}\right)+\beta^{\mathrm{k}\langle s\rangle}\gamma^{\mathrm{yva}\langle s\rangle}\left(p^{\langle s\rangle}+\sum_{si\in SEC}\beta^{\mathrm{x}\langle si,s\rangle}\lambda^{\mathrm{PRODUCTION^{OFGOODS^4}}\langle s,si\rangle}\right)K^{\langle s\rangle -1+\beta^{\mathrm{k}\langle s\rangle}}L^{\langle s\rangle \beta^{\mathrm{l}\langle s\rangle}}=0 \tag{15.101}$$

$$s \in SEC: \quad -p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle s\rangle}+tax^{\mathrm{rate}\langle s\rangle}\right)+\beta^{\mathrm{l}\langle s\rangle}\gamma^{\mathrm{yva}\langle s\rangle}\left(p^{\langle s\rangle}+\sum_{si\in SEC}\beta^{\mathrm{x}\langle si,s\rangle}\lambda^{\mathrm{PRODUCTION^{OFGOODS^4}}\langle s,si\rangle}\right)K^{\langle s\rangle \beta^{\mathrm{k}\langle s\rangle}}L^{\langle s\rangle -1+\beta^{\mathrm{l}\langle s\rangle}}=0 \tag{15.102}$$

$$s \in SEC: \quad -sub^{\mathrm{p}\langle s\rangle}+p^{\mathrm{arm}\langle s\rangle}-p^{\mathrm{market}\langle s\rangle}=0 \tag{15.103}$$

$$s \in SEC: \quad \pi^{\langle s\rangle}-p^{\langle s\rangle}Y^{\langle s\rangle}+\left(1-sub^{\mathrm{rate}\langle s\rangle}+tax^{\mathrm{rate}\langle s\rangle}\right)\left(p^{\mathrm{k}}K^{\langle s\rangle}\left(1+k^{\mathrm{tax}}\right)+p^{\mathrm{l}}L^{\langle s\rangle}\left(1+l^{\mathrm{tax}}\right)+\sum_{si\in SEC}p^{\mathrm{int}\langle si\rangle}X^{\langle si,s\rangle}\right)=0 \tag{15.104}$$

$$s \in SEC: \quad EXCISE^{\langle s\rangle}-TAX^{\mathrm{p}\langle s\rangle}+VAT^{\langle s\rangle}=0 \tag{15.105}$$

$$s \in SEC: \quad \Pi^{\mathrm{EXP}\langle s\rangle}-p^{\mathrm{exp}\langle s\rangle}EXPORT^{\langle s\rangle}+\sum_{r\in ROW}p^{\mathrm{for}\langle r\rangle}EXP^{\langle r,s\rangle}=0 \tag{15.106}$$

$$s \in SEC: \quad \Pi^{\mathrm{IMP}\langle s\rangle}-p^{\mathrm{imp}\langle s\rangle}IMPORT^{\langle s\rangle}+\sum_{r\in ROW}p^{\mathrm{for}\langle r\rangle}ex^{\mathrm{rate}\langle r\rangle}IMP^{\langle r,s\rangle}\left(1+im^{\mathrm{tax}\langle r,s\rangle}\right)=0 \tag{15.107}$$

$$s \in SEC: \quad \Pi^{\mathrm{Y}\langle s\rangle}-p^{\langle s\rangle}Y^{\mathrm{f}\langle s\rangle}+p^{\mathrm{exp}\langle s\rangle}EXPORT^{\mathrm{f}\langle s\rangle}+p^{\mathrm{home}\langle s\rangle}Y^{\mathrm{HOME}\langle s\rangle}=0 \tag{15.108}$$

$$s \in SEC: \quad \Pi^{\mathrm{ARM}\langle s\rangle}+p^{\mathrm{home}\langle s\rangle}Y^{\mathrm{HOME^a}\langle s\rangle}+p^{\mathrm{imp}\langle s\rangle}IMPORT^{\mathrm{a}\langle s\rangle}-p^{\mathrm{arm}\langle s\rangle}ARM^{\langle s\rangle}=0 \tag{15.109}$$

$$s \in SEC: \quad -ARM^{\langle s\rangle}+D^{\mathrm{GOV}\langle s\rangle}+INV^{\langle s\rangle}+\sum_{h\in HHD}scale^{\langle h\rangle}D^{\langle s,h\rangle}+\sum_{si\in SEC}X^{\langle s,si\rangle}=0 \tag{15.110}$$

$$s \in SEC: \quad r \in ROW: \quad -p^{\mathrm{for}\langle r\rangle}+\alpha^{\mathrm{exp}\langle r,s\rangle}am^{\mathrm{exp}\langle r\rangle}\theta^{\mathrm{exp}\langle s\rangle}p^{\mathrm{exp}\langle s\rangle}\left(am^{\mathrm{exp}\langle r\rangle}EXP^{\langle r,s\rangle}\right)^{-1+\sigma^{\mathrm{exp}\langle s\rangle -1}\left(1+\sigma^{\mathrm{exp}\langle s\rangle}\right)}\left(\sum_{r\in ROW}\alpha^{\mathrm{exp}\langle r,s\rangle}\left(am^{\mathrm{exp}\langle r\rangle}EXP^{\langle r,s\rangle}\right)^{\sigma^{\mathrm{exp}\langle s\rangle -1}\left(1+\sigma^{\mathrm{exp}\langle s\rangle}\right)}\right)^{-1+\sigma^{\mathrm{exp}\langle s\rangle}\left(1+\sigma^{\mathrm{ex}}\right.}=0 \tag{15.111}$$

$$s \in SEC: \quad r \in ROW: \quad -p^{\mathrm{for}\langle r\rangle}ex^{\mathrm{rate}\langle r\rangle}\left(1+im^{\mathrm{tax}\langle r,s\rangle}\right)+\alpha^{\mathrm{imp}\langle r,s\rangle}am^{\mathrm{imp}\langle r\rangle}\theta^{\mathrm{imp}\langle s\rangle}p^{\mathrm{imp}\langle s\rangle}\left(am^{\mathrm{imp}\langle r\rangle}IMP^{\langle r,s\rangle}\right)^{-1+\sigma^{\mathrm{imp}\langle s\rangle -1}\left(-1+\sigma^{\mathrm{imp}\langle s\rangle}\right)}\left(\sum_{r\in ROW}\alpha^{\mathrm{imp}\langle r,s\rangle}\left(am^{\mathrm{imp}\langle r\rangle}IMP^{\langle r,s\rangle}\right)^{\sigma^{\mathrm{imp}\langle s\rangle -1}}\right.=0 \tag{15.112}$$

$$s \in SEC: \quad si \in SEC: \quad -\lambda^{\text{PRODUCTION}^{\text{OF GOODS}^4}\langle s,si\rangle} - p^{\text{int}\langle si\rangle}\left(1 - sub^{\text{rate}\langle s\rangle} + tax^{\text{rate}\langle s\rangle}\right) = 0 \tag{15.113}$$

$$s \in SEC: \quad si \in SEC: \quad -X^{\langle si,s\rangle} + \beta^{\text{x}\langle si,s\rangle} Y^{\text{INT}\langle s\rangle} = 0 \tag{15.114}$$

16 Equilibrium relationships (after expansion and reduction)

$$-UNEMP^{\langle 01\rangle} = 0 \tag{16.1}$$

$$-UNEMP^{\langle 02\rangle} = 0 \tag{16.2}$$

$$-UNEMP^{\langle 03\rangle} = 0 \tag{16.3}$$

$$-UNEMP^{\langle 04\rangle} = 0 \tag{16.4}$$

$$-UNEMP^{\langle 05\rangle} = 0 \tag{16.5}$$

$$-UNEMP^{\langle 06\rangle} = 0 \tag{16.6}$$

$$-UNEMP^{\langle 07\rangle} = 0 \tag{16.7}$$

$$-UNEMP^{\langle 08\rangle} = 0 \tag{16.8}$$

$$-UNEMP^{\langle 09\rangle} = 0 \tag{16.9}$$

$$-UNEMP^{\langle 10\rangle} = 0 \tag{16.10}$$

$$1 - ex^{\text{rate}\langle \text{eu}\rangle} = 0 \tag{16.11}$$

$$1 - ex^{\text{rate}\langle \text{neu}\rangle} = 0 \tag{16.12}$$

$$1 - \left(ARM^{\langle \text{A}\rangle} + ARM^{\langle \text{B}\rangle} + ARM^{\langle \text{C}\rangle} + ARM^{\langle \text{D}\rangle} + ARM^{\langle \text{E}\rangle} + ARM^{\langle \text{F}\rangle} + ARM^{\langle \text{G}\rangle} + ARM^{\langle \text{H}\rangle} + ARM^{\langle \text{I}\rangle} + ARM^{\langle \text{J}\rangle} + ARM^{\langle \text{K}\rangle}\right)^{-1} \left(p^{\langle \text{A}\rangle} ARM^{\langle \text{A}\rangle} + p^{\langle \text{B}\rangle} ARM^{\langle \text{B}\rangle} + p^{\langle \text{C}\rangle} ARM^{\langle \text{C}\rangle} + p^{\langle \text{D}\rangle} AR \tag{16.13}$$

$$k^{\text{total}^{\text{data}}} - KS = 0 \tag{16.14}$$

$$tgovfirm^{\text{data}} - TGOVFIRM = 0 \tag{16.15}$$

$$tgovbank^{\text{data}} - TGOVBANK = 0 \tag{16.16}$$

$$dgov^{\text{data}\langle \text{A} \rangle} - p^{\text{cons}\langle \text{A} \rangle} D^{\text{GOV}\langle \text{A} \rangle} = 0 \tag{16.17}$$

$$dgov^{\text{data}\langle \text{B} \rangle} - p^{\text{cons}\langle \text{B} \rangle} D^{\text{GOV}\langle \text{B} \rangle} = 0 \tag{16.18}$$

$$dgov^{\text{data}\langle \text{C} \rangle} - p^{\text{cons}\langle \text{C} \rangle} D^{\text{GOV}\langle \text{C} \rangle} = 0 \tag{16.19}$$

$$dgov^{\text{data}\langle \text{D} \rangle} - p^{\text{cons}\langle \text{D} \rangle} D^{\text{GOV}\langle \text{D} \rangle} = 0 \tag{16.20}$$

$$dgov^{\text{data}\langle \text{E} \rangle} - p^{\text{cons}\langle \text{E} \rangle} D^{\text{GOV}\langle \text{E} \rangle} = 0 \tag{16.21}$$

$$dgov^{\text{data}\langle \text{F} \rangle} - p^{\text{cons}\langle \text{F} \rangle} D^{\text{GOV}\langle \text{F} \rangle} = 0 \tag{16.22}$$

$$dgov^{\text{data}\langle \text{G} \rangle} - p^{\text{cons}\langle \text{G} \rangle} D^{\text{GOV}\langle \text{G} \rangle} = 0 \tag{16.23}$$

$$dgov^{\text{data}\langle \text{H} \rangle} - p^{\text{cons}\langle \text{H} \rangle} D^{\text{GOV}\langle \text{H} \rangle} = 0 \tag{16.24}$$

$$dgov^{\text{data}\langle \text{I} \rangle} - p^{\text{cons}\langle \text{I} \rangle} D^{\text{GOV}\langle \text{I} \rangle} = 0 \tag{16.25}$$

$$dgov^{\text{data}\langle \text{J} \rangle} - p^{\text{cons}\langle \text{J} \rangle} D^{\text{GOV}\langle \text{J} \rangle} = 0 \tag{16.26}$$

$$dgov^{\text{data}\langle \text{K} \rangle} - p^{\text{cons}\langle \text{K} \rangle} D^{\text{GOV}\langle \text{K} \rangle} = 0 \tag{16.27}$$

$$le^{\langle 01 \rangle} - scale^{\langle 01 \rangle} \left(LEIS^{\langle 01 \rangle} + LL^{\langle 01 \rangle} \right) = 0 \tag{16.28}$$

$$le^{\langle 02 \rangle} - scale^{\langle 02 \rangle} \left(LEIS^{\langle 02 \rangle} + LL^{\langle 02 \rangle} \right) = 0 \tag{16.29}$$

$$le^{\langle 03\rangle} - scale^{\langle 03\rangle}\left(LEIS^{\langle 03\rangle} + LL^{\langle 03\rangle}\right) = 0 \tag{16.30}$$

$$le^{\langle 04\rangle} - scale^{\langle 04\rangle}\left(LEIS^{\langle 04\rangle} + LL^{\langle 04\rangle}\right) = 0 \tag{16.31}$$

$$le^{\langle 05\rangle} - scale^{\langle 05\rangle}\left(LEIS^{\langle 05\rangle} + LL^{\langle 05\rangle}\right) = 0 \tag{16.32}$$

$$le^{\langle 06\rangle} - scale^{\langle 06\rangle}\left(LEIS^{\langle 06\rangle} + LL^{\langle 06\rangle}\right) = 0 \tag{16.33}$$

$$le^{\langle 07\rangle} - scale^{\langle 07\rangle}\left(LEIS^{\langle 07\rangle} + LL^{\langle 07\rangle}\right) = 0 \tag{16.34}$$

$$le^{\langle 08\rangle} - scale^{\langle 08\rangle}\left(LEIS^{\langle 08\rangle} + LL^{\langle 08\rangle}\right) = 0 \tag{16.35}$$

$$le^{\langle 09\rangle} - scale^{\langle 09\rangle}\left(LEIS^{\langle 09\rangle} + LL^{\langle 09\rangle}\right) = 0 \tag{16.36}$$

$$le^{\langle 10\rangle} - scale^{\langle 10\rangle}\left(LEIS^{\langle 10\rangle} + LL^{\langle 10\rangle}\right) = 0 \tag{16.37}$$

$$-p^{\text{for}\langle \text{eu}\rangle}+\alpha^{\exp\langle \text{eu,A}\rangle}am^{\exp\langle \text{eu}\rangle}\theta^{\exp\langle \text{A}\rangle}p^{\exp\langle \text{A}\rangle}\left(\alpha^{\exp\langle \text{eu,A}\rangle}\left(am^{\exp\langle \text{eu}\rangle}EXP^{\langle \text{eu,A}\rangle}\right)^{\sigma^{\exp\langle \text{A}\rangle}-1\left(1+\sigma^{\exp\langle \text{A}\rangle}\right)}+\alpha^{\exp\langle \text{neu,A}\rangle}\left(am^{\exp\langle \text{neu}\rangle}EXP^{\langle \text{neu,A}\rangle}\right)^{\sigma^{\exp\langle \text{A}\rangle}-1\left(1+\sigma^{\exp\langle \text{A}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{A}\rangle}\left(1+\sigma^{\exp\langle \text{A}\rangle}\right)^{-1}} \tag{16.38}$$

$$-p^{\text{for}\langle \text{eu}\rangle}+\alpha^{\exp\langle \text{eu,B}\rangle}am^{\exp\langle \text{eu}\rangle}\theta^{\exp\langle \text{B}\rangle}p^{\exp\langle \text{B}\rangle}\left(\alpha^{\exp\langle \text{eu,B}\rangle}\left(am^{\exp\langle \text{eu}\rangle}EXP^{\langle \text{eu,B}\rangle}\right)^{\sigma^{\exp\langle \text{B}\rangle}-1\left(1+\sigma^{\exp\langle \text{B}\rangle}\right)}+\alpha^{\exp\langle \text{neu,B}\rangle}\left(am^{\exp\langle \text{neu}\rangle}EXP^{\langle \text{neu,B}\rangle}\right)^{\sigma^{\exp\langle \text{B}\rangle}-1\left(1+\sigma^{\exp\langle \text{B}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{B}\rangle}\left(1+\sigma^{\exp\langle \text{B}\rangle}\right)^{-1}} \tag{16.39}$$

$$-p^{\text{for}\langle \text{eu}\rangle}+\alpha^{\exp\langle \text{eu,C}\rangle}am^{\exp\langle \text{eu}\rangle}\theta^{\exp\langle \text{C}\rangle}p^{\exp\langle \text{C}\rangle}\left(\alpha^{\exp\langle \text{eu,C}\rangle}\left(am^{\exp\langle \text{eu}\rangle}EXP^{\langle \text{eu,C}\rangle}\right)^{\sigma^{\exp\langle \text{C}\rangle}-1\left(1+\sigma^{\exp\langle \text{C}\rangle}\right)}+\alpha^{\exp\langle \text{neu,C}\rangle}\left(am^{\exp\langle \text{neu}\rangle}EXP^{\langle \text{neu,C}\rangle}\right)^{\sigma^{\exp\langle \text{C}\rangle}-1\left(1+\sigma^{\exp\langle \text{C}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{C}\rangle}\left(1+\sigma^{\exp\langle \text{C}\rangle}\right)^{-1}} \tag{16.40}$$

$$-p^{\text{for}\langle \text{eu}\rangle}+\alpha^{\exp\langle \text{eu,D}\rangle}am^{\exp\langle \text{eu}\rangle}\theta^{\exp\langle \text{D}\rangle}p^{\exp\langle \text{D}\rangle}\left(\alpha^{\exp\langle \text{eu,D}\rangle}\left(am^{\exp\langle \text{eu}\rangle}EXP^{\langle \text{eu,D}\rangle}\right)^{\sigma^{\exp\langle \text{D}\rangle}-1\left(1+\sigma^{\exp\langle \text{D}\rangle}\right)}+\alpha^{\exp\langle \text{neu,D}\rangle}\left(am^{\exp\langle \text{neu}\rangle}EXP^{\langle \text{neu,D}\rangle}\right)^{\sigma^{\exp\langle \text{D}\rangle}-1\left(1+\sigma^{\exp\langle \text{D}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{D}\rangle}\left(1+\sigma^{\exp\langle \text{D}\rangle}\right)^{-1}} \tag{16.41}$$

$$-p^{\text{for}\langle \text{eu} \rangle}+\alpha^{\exp\langle \text{eu,E} \rangle}am^{\exp\langle \text{eu} \rangle}\theta^{\exp\langle \text{E} \rangle}p^{\exp\langle \text{E} \rangle}\left(\alpha^{\exp\langle \text{eu,E} \rangle}\left(am^{\exp\langle \text{eu} \rangle}EXP^{\langle \text{eu,E} \rangle}\right)^{\sigma^{\exp\langle \text{E} \rangle}-1\left(1+\sigma^{\exp\langle \text{E} \rangle}\right)}+\alpha^{\exp\langle \text{neu,E} \rangle}\left(am^{\exp\langle \text{neu} \rangle}EXP^{\langle \text{neu,E} \rangle}\right)^{\sigma^{\exp\langle \text{E} \rangle}-1\left(1+\sigma^{\exp\langle \text{E} \rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{E} \rangle}\left(1+\sigma^{\exp\langle \text{E} \rangle}\right)^{-1}}\left(a \tag{16.42}$$

$$-p^{\text{for}\langle \text{eu} \rangle}+\alpha^{\exp\langle \text{eu,F} \rangle}am^{\exp\langle \text{eu} \rangle}\theta^{\exp\langle \text{F} \rangle}p^{\exp\langle \text{F} \rangle}\left(\alpha^{\exp\langle \text{eu,F} \rangle}\left(am^{\exp\langle \text{eu} \rangle}EXP^{\langle \text{eu,F} \rangle}\right)^{\sigma^{\exp\langle \text{F} \rangle}-1\left(1+\sigma^{\exp\langle \text{F} \rangle}\right)}+\alpha^{\exp\langle \text{neu,F} \rangle}\left(am^{\exp\langle \text{neu} \rangle}EXP^{\langle \text{neu,F} \rangle}\right)^{\sigma^{\exp\langle \text{F} \rangle}-1\left(1+\sigma^{\exp\langle \text{F} \rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{F} \rangle}\left(1+\sigma^{\exp\langle \text{F} \rangle}\right)^{-1}}\left(a \tag{16.43}$$

$$-p^{\text{for}\langle \text{eu} \rangle}+\alpha^{\exp\langle \text{eu,G} \rangle}am^{\exp\langle \text{eu} \rangle}\theta^{\exp\langle \text{G} \rangle}p^{\exp\langle \text{G} \rangle}\left(\alpha^{\exp\langle \text{eu,G} \rangle}\left(am^{\exp\langle \text{eu} \rangle}EXP^{\langle \text{eu,G} \rangle}\right)^{\sigma^{\exp\langle \text{G} \rangle}-1\left(1+\sigma^{\exp\langle \text{G} \rangle}\right)}+\alpha^{\exp\langle \text{neu,G} \rangle}\left(am^{\exp\langle \text{neu} \rangle}EXP^{\langle \text{neu,G} \rangle}\right)^{\sigma^{\exp\langle \text{G} \rangle}-1\left(1+\sigma^{\exp\langle \text{G} \rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{G} \rangle}\left(1+\sigma^{\exp\langle \text{G} \rangle}\right)^{-1}} \tag{16.44}$$

$$-p^{\text{for}\langle \text{eu} \rangle}+\alpha^{\exp\langle \text{eu,H} \rangle}am^{\exp\langle \text{eu} \rangle}\theta^{\exp\langle \text{H} \rangle}p^{\exp\langle \text{H} \rangle}\left(\alpha^{\exp\langle \text{eu,H} \rangle}\left(am^{\exp\langle \text{eu} \rangle}EXP^{\langle \text{eu,H} \rangle}\right)^{\sigma^{\exp\langle \text{H} \rangle}-1\left(1+\sigma^{\exp\langle \text{H} \rangle}\right)}+\alpha^{\exp\langle \text{neu,H} \rangle}\left(am^{\exp\langle \text{neu} \rangle}EXP^{\langle \text{neu,H} \rangle}\right)^{\sigma^{\exp\langle \text{H} \rangle}-1\left(1+\sigma^{\exp\langle \text{H} \rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{H} \rangle}\left(1+\sigma^{\exp\langle \text{H} \rangle}\right)^{-1}} \tag{16.45}$$

$$-p^{\text{for}\langle \text{eu} \rangle}+\alpha^{\exp\langle \text{eu,I} \rangle}am^{\exp\langle \text{eu} \rangle}\theta^{\exp\langle \text{I} \rangle}p^{\exp\langle \text{I} \rangle}\left(\alpha^{\exp\langle \text{eu,I} \rangle}\left(am^{\exp\langle \text{eu} \rangle}EXP^{\langle \text{eu,I} \rangle}\right)^{\sigma^{\exp\langle \text{I} \rangle}-1\left(1+\sigma^{\exp\langle \text{I} \rangle}\right)}+\alpha^{\exp\langle \text{neu,I} \rangle}\left(am^{\exp\langle \text{neu} \rangle}EXP^{\langle \text{neu,I} \rangle}\right)^{\sigma^{\exp\langle \text{I} \rangle}-1\left(1+\sigma^{\exp\langle \text{I} \rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{I} \rangle}\left(1+\sigma^{\exp\langle \text{I} \rangle}\right)^{-1}}\left(am^{\exp\langle \text{e} \tag{16.46}$$

$$-p^{\text{for}\langle \text{eu} \rangle}+\alpha^{\exp\langle \text{eu,J} \rangle}am^{\exp\langle \text{eu} \rangle}\theta^{\exp\langle \text{J} \rangle}p^{\exp\langle \text{J} \rangle}\left(\alpha^{\exp\langle \text{eu,J} \rangle}\left(am^{\exp\langle \text{eu} \rangle}EXP^{\langle \text{eu,J} \rangle}\right)^{\sigma^{\exp\langle \text{J} \rangle}-1\left(1+\sigma^{\exp\langle \text{J} \rangle}\right)}+\alpha^{\exp\langle \text{neu,J} \rangle}\left(am^{\exp\langle \text{neu} \rangle}EXP^{\langle \text{neu,J} \rangle}\right)^{\sigma^{\exp\langle \text{J} \rangle}-1\left(1+\sigma^{\exp\langle \text{J} \rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{J} \rangle}\left(1+\sigma^{\exp\langle \text{J} \rangle}\right)^{-1}}\left(am^{\ex \tag{16.47}$$

$$-p^{\text{for}\langle \text{eu} \rangle}+\alpha^{\exp\langle \text{eu,K} \rangle}am^{\exp\langle \text{eu} \rangle}\theta^{\exp\langle \text{K} \rangle}p^{\exp\langle \text{K} \rangle}\left(\alpha^{\exp\langle \text{eu,K} \rangle}\left(am^{\exp\langle \text{eu} \rangle}EXP^{\langle \text{eu,K} \rangle}\right)^{\sigma^{\exp\langle \text{K} \rangle}-1\left(1+\sigma^{\exp\langle \text{K} \rangle}\right)}+\alpha^{\exp\langle \text{neu,K} \rangle}\left(am^{\exp\langle \text{neu} \rangle}EXP^{\langle \text{neu,K} \rangle}\right)^{\sigma^{\exp\langle \text{K} \rangle}-1\left(1+\sigma^{\exp\langle \text{K} \rangle}\right)}\right)^{-1+\sigma^{\exp\langle \text{K} \rangle}\left(1+\sigma^{\exp\langle \text{K} \rangle}\right)^{-1}} \tag{16.48}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,A}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{A}\rangle}p^{\exp\langle\text{A}\rangle}\left(\alpha^{\exp\langle\text{eu,A}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,A}\rangle}\right)^{\sigma^{\exp\langle\text{A}\rangle}-1\left(1+\sigma^{\exp\langle\text{A}\rangle}\right)}+\alpha^{\exp\langle\text{neu,A}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,A}\rangle}\right)^{\sigma^{\exp\langle\text{A}\rangle}-1\left(1+\sigma^{\exp\langle\text{A}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{A}\rangle}\left(1+\sigma^{\exp\langle\text{A}\rangle}\right)} \tag{16.49}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,B}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{B}\rangle}p^{\exp\langle\text{B}\rangle}\left(\alpha^{\exp\langle\text{eu,B}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,B}\rangle}\right)^{\sigma^{\exp\langle\text{B}\rangle}-1\left(1+\sigma^{\exp\langle\text{B}\rangle}\right)}+\alpha^{\exp\langle\text{neu,B}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,B}\rangle}\right)^{\sigma^{\exp\langle\text{B}\rangle}-1\left(1+\sigma^{\exp\langle\text{B}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{B}\rangle}\left(1+\sigma^{\exp\langle\text{B}\rangle}\right)^{-}} \tag{16.50}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,C}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{C}\rangle}p^{\exp\langle\text{C}\rangle}\left(\alpha^{\exp\langle\text{eu,C}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,C}\rangle}\right)^{\sigma^{\exp\langle\text{C}\rangle}-1\left(1+\sigma^{\exp\langle\text{C}\rangle}\right)}+\alpha^{\exp\langle\text{neu,C}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,C}\rangle}\right)^{\sigma^{\exp\langle\text{C}\rangle}-1\left(1+\sigma^{\exp\langle\text{C}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{C}\rangle}\left(1+\sigma^{\exp\langle\text{C}\rangle}\right)^{-}} \tag{16.51}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,D}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{D}\rangle}p^{\exp\langle\text{D}\rangle}\left(\alpha^{\exp\langle\text{eu,D}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,D}\rangle}\right)^{\sigma^{\exp\langle\text{D}\rangle}-1\left(1+\sigma^{\exp\langle\text{D}\rangle}\right)}+\alpha^{\exp\langle\text{neu,D}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,D}\rangle}\right)^{\sigma^{\exp\langle\text{D}\rangle}-1\left(1+\sigma^{\exp\langle\text{D}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{D}\rangle}\left(1+\sigma^{\exp\langle\text{D}\rangle}\right)} \tag{16.52}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,E}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{E}\rangle}p^{\exp\langle\text{E}\rangle}\left(\alpha^{\exp\langle\text{eu,E}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,E}\rangle}\right)^{\sigma^{\exp\langle\text{E}\rangle}-1\left(1+\sigma^{\exp\langle\text{E}\rangle}\right)}+\alpha^{\exp\langle\text{neu,E}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,E}\rangle}\right)^{\sigma^{\exp\langle\text{E}\rangle}-1\left(1+\sigma^{\exp\langle\text{E}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{E}\rangle}\left(1+\sigma^{\exp\langle\text{E}\rangle}\right)^{-}} \tag{16.53}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,F}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{F}\rangle}p^{\exp\langle\text{F}\rangle}\left(\alpha^{\exp\langle\text{eu,F}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,F}\rangle}\right)^{\sigma^{\exp\langle\text{F}\rangle}-1\left(1+\sigma^{\exp\langle\text{F}\rangle}\right)}+\alpha^{\exp\langle\text{neu,F}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,F}\rangle}\right)^{\sigma^{\exp\langle\text{F}\rangle}-1\left(1+\sigma^{\exp\langle\text{F}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{F}\rangle}\left(1+\sigma^{\exp\langle\text{F}\rangle}\right)^{-1}} \tag{16.54}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,G}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{G}\rangle}p^{\exp\langle\text{G}\rangle}\left(\alpha^{\exp\langle\text{eu,G}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,G}\rangle}\right)^{\sigma^{\exp\langle\text{G}\rangle}-1\left(1+\sigma^{\exp\langle\text{G}\rangle}\right)}+\alpha^{\exp\langle\text{neu,G}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,G}\rangle}\right)^{\sigma^{\exp\langle\text{G}\rangle}-1\left(1+\sigma^{\exp\langle\text{G}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{G}\rangle}\left(1+\sigma^{\exp\langle\text{G}\rangle}\right.} \tag{16.55}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,H}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{H}\rangle}p^{\exp\langle\text{H}\rangle}\left(\alpha^{\exp\langle\text{eu,H}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,H}\rangle}\right)^{\sigma^{\exp\langle\text{H}\rangle}-1\left(1+\sigma^{\exp\langle\text{H}\rangle}\right)}+\alpha^{\exp\langle\text{neu,H}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,H}\rangle}\right)^{\sigma^{\exp\langle\text{H}\rangle}-1\left(1+\sigma^{\exp\langle\text{H}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{H}\rangle}\left(1+\sigma^{\exp\langle\text{H}\rangle}\right)} \tag{16.56}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,I}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{I}\rangle}p^{\exp\langle\text{I}\rangle}\left(\alpha^{\exp\langle\text{eu,I}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,I}\rangle}\right)^{\sigma^{\exp\langle\text{I}\rangle}-1\left(1+\sigma^{\exp\langle\text{I}\rangle}\right)}+\alpha^{\exp\langle\text{neu,I}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,I}\rangle}\right)^{\sigma^{\exp\langle\text{I}\rangle}-1\left(1+\sigma^{\exp\langle\text{I}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{I}\rangle}\left(1+\sigma^{\exp\langle\text{I}\rangle}\right)^{-1}}\left(am^{\exp} \tag{16.57}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,J}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{J}\rangle}p^{\exp\langle\text{J}\rangle}\left(\alpha^{\exp\langle\text{eu,J}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,J}\rangle}\right)^{\sigma^{\exp\langle\text{J}\rangle}-1\left(1+\sigma^{\exp\langle\text{J}\rangle}\right)}+\alpha^{\exp\langle\text{neu,J}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,J}\rangle}\right)^{\sigma^{\exp\langle\text{J}\rangle}-1\left(1+\sigma^{\exp\langle\text{J}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{J}\rangle}\left(1+\sigma^{\exp\langle\text{J}\rangle}\right)^{-1}}\left(a \tag{16.58}$$

$$-p^{\text{for}\langle\text{neu}\rangle}+\alpha^{\exp\langle\text{neu,K}\rangle}am^{\exp\langle\text{neu}\rangle}\theta^{\exp\langle\text{K}\rangle}p^{\exp\langle\text{K}\rangle}\left(\alpha^{\exp\langle\text{eu,K}\rangle}\left(am^{\exp\langle\text{eu}\rangle}EXP^{\langle\text{eu,K}\rangle}\right)^{\sigma^{\exp\langle\text{K}\rangle}-1\left(1+\sigma^{\exp\langle\text{K}\rangle}\right)}+\alpha^{\exp\langle\text{neu,K}\rangle}\left(am^{\exp\langle\text{neu}\rangle}EXP^{\langle\text{neu,K}\rangle}\right)^{\sigma^{\exp\langle\text{K}\rangle}-1\left(1+\sigma^{\exp\langle\text{K}\rangle}\right)}\right)^{-1+\sigma^{\exp\langle\text{K}\rangle}\left(1+\sigma^{\exp\langle\text{K}\rangle}\right)} \tag{16.59}$$

$$tgovrow^{\text{data}\langle\text{eu}\rangle}-ex^{\text{rate}\langle\text{eu}\rangle}TGOVROW^{\langle\text{eu}\rangle}=0 \tag{16.60}$$

$$tgovrow^{\text{data}\langle\text{neu}\rangle}-ex^{\text{rate}\langle\text{neu}\rangle}TGOVROW^{\langle\text{neu}\rangle}=0 \tag{16.61}$$

$$-BANKTAX+bank^{\text{tax}}BTINC^{\text{BANK}}=0 \tag{16.62}$$

$$-FIRMTAX+firm^{\text{tax}}BTINC^{\text{FIRM}}=0 \tag{16.63}$$

$$-INC^{\text{FIRM}}+BTINC^{\text{FIRM}}\left(1-firm^{\text{tax}}\right)=0 \tag{16.64}$$

$$-INC^{\text{BANK}}+BTINC^{\text{BANK}}\left(1-bank^{\text{tax}}\right)=0 \tag{16.65}$$

$$-K^{\text{TAX}}+k^{\text{tax}}p^{\text{k}}\left(K^{\langle\text{A}\rangle}+K^{\langle\text{B}\rangle}+K^{\langle\text{C}\rangle}+K^{\langle\text{D}\rangle}+K^{\langle\text{E}\rangle}+K^{\langle\text{F}\rangle}+K^{\langle\text{G}\rangle}+K^{\langle\text{H}\rangle}+K^{\langle\text{I}\rangle}+K^{\langle\text{J}\rangle}+K^{\langle\text{K}\rangle}\right)=0 \tag{16.66}$$

$$-K^{\mathrm{FIRM}} + \mathit{alloc}^{\mathrm{f}} KS = 0 \tag{16.67}$$

$$-K^{\mathrm{BANK}} + \mathit{alloc}^{\mathrm{b}} KS = 0 \tag{16.68}$$

$$-L^{\mathrm{TAX}} + l^{\mathrm{tax}} p^{\mathrm{l}} \left(L^{\langle \mathrm{A} \rangle} + L^{\langle \mathrm{B} \rangle} + L^{\langle \mathrm{C} \rangle} + L^{\langle \mathrm{D} \rangle} + L^{\langle \mathrm{E} \rangle} + L^{\langle \mathrm{F} \rangle} + L^{\langle \mathrm{G} \rangle} + L^{\langle \mathrm{H} \rangle} + L^{\langle \mathrm{I} \rangle} + L^{\langle \mathrm{J} \rangle} + L^{\langle \mathrm{K} \rangle} \right) = 0 \tag{16.69}$$

$$-\mathit{TBANKFIRM} + \mathit{alloc}^{\mathrm{f}} \mathit{INC}^{\mathrm{BANK}} = 0 \tag{16.70}$$

$$-\mathit{TFIRMBANK} + \mathit{alloc}^{\mathrm{b}} \mathit{INC}^{\mathrm{FIRM}} = 0 \tag{16.71}$$

$$-p^{\mathrm{cons}\langle \mathrm{A} \rangle} + p^{\mathrm{market}\langle \mathrm{A} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{A} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{A} \rangle} \right) = 0 \tag{16.72}$$

$$-p^{\mathrm{cons}\langle \mathrm{B} \rangle} + p^{\mathrm{market}\langle \mathrm{B} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{B} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{B} \rangle} \right) = 0 \tag{16.73}$$

$$-p^{\mathrm{cons}\langle \mathrm{C} \rangle} + p^{\mathrm{market}\langle \mathrm{C} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{C} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{C} \rangle} \right) = 0 \tag{16.74}$$

$$-p^{\mathrm{cons}\langle \mathrm{D} \rangle} + p^{\mathrm{market}\langle \mathrm{D} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{D} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{D} \rangle} \right) = 0 \tag{16.75}$$

$$-p^{\mathrm{cons}\langle \mathrm{E} \rangle} + p^{\mathrm{market}\langle \mathrm{E} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{E} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{E} \rangle} \right) = 0 \tag{16.76}$$

$$-p^{\mathrm{cons}\langle \mathrm{F} \rangle} + p^{\mathrm{market}\langle \mathrm{F} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{F} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{F} \rangle} \right) = 0 \tag{16.77}$$

$$-p^{\mathrm{cons}\langle \mathrm{G} \rangle} + p^{\mathrm{market}\langle \mathrm{G} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{G} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{G} \rangle} \right) = 0 \tag{16.78}$$

$$-p^{\mathrm{cons}\langle \mathrm{H} \rangle} + p^{\mathrm{market}\langle \mathrm{H} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{H} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{H} \rangle} \right) = 0 \tag{16.79}$$

$$-p^{\mathrm{cons}\langle \mathrm{I} \rangle} + p^{\mathrm{market}\langle \mathrm{I} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{I} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{I} \rangle} \right) = 0 \tag{16.80}$$

$$-p^{\mathrm{cons}\langle \mathrm{J} \rangle} + p^{\mathrm{market}\langle \mathrm{J} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{J} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{J} \rangle} \right) = 0 \tag{16.81}$$

$$-p^{\mathrm{cons}\langle \mathrm{K} \rangle} + p^{\mathrm{market}\langle \mathrm{K} \rangle} \left(1 + \mathit{excise}^{\langle \mathrm{K} \rangle} \right) \left(1 + \mathit{vat}^{\langle \mathrm{K} \rangle} \right) = 0 \tag{16.82}$$

$$-p^{\text{int}\langle \text{A} \rangle} + p^{\text{market}\langle \text{A} \rangle} \left(1 + excise^{\langle \text{A} \rangle}\right) = 0 \tag{16.83}$$

$$-p^{\text{int}\langle \text{B} \rangle} + p^{\text{market}\langle \text{B} \rangle} \left(1 + excise^{\langle \text{B} \rangle}\right) = 0 \tag{16.84}$$

$$-p^{\text{int}\langle \text{C} \rangle} + p^{\text{market}\langle \text{C} \rangle} \left(1 + excise^{\langle \text{C} \rangle}\right) = 0 \tag{16.85}$$

$$-p^{\text{int}\langle \text{D} \rangle} + p^{\text{market}\langle \text{D} \rangle} \left(1 + excise^{\langle \text{D} \rangle}\right) = 0 \tag{16.86}$$

$$-p^{\text{int}\langle \text{E} \rangle} + p^{\text{market}\langle \text{E} \rangle} \left(1 + excise^{\langle \text{E} \rangle}\right) = 0 \tag{16.87}$$

$$-p^{\text{int}\langle \text{F} \rangle} + p^{\text{market}\langle \text{F} \rangle} \left(1 + excise^{\langle \text{F} \rangle}\right) = 0 \tag{16.88}$$

$$-p^{\text{int}\langle \text{G} \rangle} + p^{\text{market}\langle \text{G} \rangle} \left(1 + excise^{\langle \text{G} \rangle}\right) = 0 \tag{16.89}$$

$$-p^{\text{int}\langle \text{H} \rangle} + p^{\text{market}\langle \text{H} \rangle} \left(1 + excise^{\langle \text{H} \rangle}\right) = 0 \tag{16.90}$$

$$-p^{\text{int}\langle \text{I} \rangle} + p^{\text{market}\langle \text{I} \rangle} \left(1 + excise^{\langle \text{I} \rangle}\right) = 0 \tag{16.91}$$

$$-p^{\text{int}\langle \text{J} \rangle} + p^{\text{market}\langle \text{J} \rangle} \left(1 + excise^{\langle \text{J} \rangle}\right) = 0 \tag{16.92}$$

$$-p^{\text{int}\langle \text{K} \rangle} + p^{\text{market}\langle \text{K} \rangle} \left(1 + excise^{\langle \text{K} \rangle}\right) = 0 \tag{16.93}$$

$$-p^{\text{exp}\langle \text{A} \rangle} + \alpha^{\text{prod}^{\text{e}}\langle \text{A} \rangle} \theta^{\text{y}\langle \text{A} \rangle} p^{\langle \text{A} \rangle} EXPORT^{\langle \text{A} \rangle^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{A} \rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{A} \rangle}\right)}} \left(\alpha^{\text{prod}^{\text{h}}\langle \text{A} \rangle} Y^{\text{HOME}\langle \text{A} \rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{A} \rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{A} \rangle}\right)}} + \alpha^{\text{prod}^{\text{e}}\langle \text{A} \rangle} EXPORT^{\langle \text{A} \rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{A} \rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{A} \rangle}\right)}} \right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{A} \rangle}\left(1+\sigma^{\text{f}} \right.} \tag{16.94}$$

$$-p^{\text{exp}\langle \text{B} \rangle} + \alpha^{\text{prod}^{\text{e}}\langle \text{B} \rangle} \theta^{\text{y}\langle \text{B} \rangle} p^{\langle \text{B} \rangle} EXPORT^{\langle \text{B} \rangle^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{B} \rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{B} \rangle}\right)}} \left(\alpha^{\text{prod}^{\text{h}}\langle \text{B} \rangle} Y^{\text{HOME}\langle \text{B} \rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{B} \rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{B} \rangle}\right)}} + \alpha^{\text{prod}^{\text{e}}\langle \text{B} \rangle} EXPORT^{\langle \text{B} \rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{B} \rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{B} \rangle}\right)}} \right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{B} \rangle}\left(1+\sigma^{\text{f}^{\text{pr}}} \right.} \tag{16.95}$$

$$-p^{\exp\langle \mathrm{C}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{C}\rangle}\theta^{\mathrm{y}\langle \mathrm{C}\rangle}p^{\langle \mathrm{C}\rangle}EXPORT^{\langle \mathrm{C}\rangle}{}^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{C}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{C}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{C}\rangle}Y^{\mathrm{HOME}\langle \mathrm{C}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{C}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{C}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{C}\rangle}EXPORT^{\langle \mathrm{C}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{C}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{C}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{C}\rangle}\left(1+\sigma^{\mathrm{f^{p}}}\right.} \tag{16.96}$$

$$-p^{\exp\langle \mathrm{D}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{D}\rangle}\theta^{\mathrm{y}\langle \mathrm{D}\rangle}p^{\langle \mathrm{D}\rangle}EXPORT^{\langle \mathrm{D}\rangle}{}^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{D}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{D}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{D}\rangle}Y^{\mathrm{HOME}\langle \mathrm{D}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{D}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{D}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{D}\rangle}EXPORT^{\langle \mathrm{D}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{D}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{D}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{D}\rangle}\left(1+\sigma^{\mathrm{f}}\right.} \tag{16.97}$$

$$-p^{\exp\langle \mathrm{E}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{E}\rangle}\theta^{\mathrm{y}\langle \mathrm{E}\rangle}p^{\langle \mathrm{E}\rangle}EXPORT^{\langle \mathrm{E}\rangle}{}^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{E}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{E}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{E}\rangle}Y^{\mathrm{HOME}\langle \mathrm{E}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{E}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{E}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{E}\rangle}EXPORT^{\langle \mathrm{E}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{E}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{E}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{E}\rangle}\left(1+\sigma^{\mathrm{f^{pro}}}\right.} \tag{16.98}$$

$$-p^{\exp\langle \mathrm{F}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{F}\rangle}\theta^{\mathrm{y}\langle \mathrm{F}\rangle}p^{\langle \mathrm{F}\rangle}EXPORT^{\langle \mathrm{F}\rangle}{}^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{F}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{F}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{F}\rangle}Y^{\mathrm{HOME}\langle \mathrm{F}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{F}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{F}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{F}\rangle}EXPORT^{\langle \mathrm{F}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{F}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{F}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{F}\rangle}\left(1+\sigma^{\mathrm{f^{proc}}}\right.} \tag{16.99}$$

$$-p^{\exp\langle \mathrm{G}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{G}\rangle}\theta^{\mathrm{y}\langle \mathrm{G}\rangle}p^{\langle \mathrm{G}\rangle}EXPORT^{\langle \mathrm{G}\rangle}{}^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{G}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{G}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{G}\rangle}Y^{\mathrm{HOME}\langle \mathrm{G}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{G}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{G}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{G}\rangle}EXPORT^{\langle \mathrm{G}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{G}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{G}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{G}\rangle}\left(1+\sigma\right.} \tag{16.100}$$

$$-p^{\exp\langle \mathrm{H}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{H}\rangle}\theta^{\mathrm{y}\langle \mathrm{H}\rangle}p^{\langle \mathrm{H}\rangle}EXPORT^{\langle \mathrm{H}\rangle}{}^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{H}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{H}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{H}\rangle}Y^{\mathrm{HOME}\langle \mathrm{H}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{H}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{H}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{H}\rangle}EXPORT^{\langle \mathrm{H}\rangle}{}^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{H}\rangle}{}^{-1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{H}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{H}\rangle}\left(1+\sigma^{\mathrm{f}}\right.} \tag{16.101}$$

$$-p^{\exp\langle \mathrm{I}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{I}\rangle}\theta^{\mathrm{y}\langle \mathrm{I}\rangle}p^{\langle \mathrm{I}\rangle}EXPORT^{\langle \mathrm{I}\rangle\,-1+\sigma^{\mathrm{fprod}\langle \mathrm{I}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{I}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{I}\rangle}Y^{\mathrm{HOME}\langle \mathrm{I}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{I}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{I}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{I}\rangle}EXPORT^{\langle \mathrm{I}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{I}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{I}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{I}\rangle}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{I}\rangle}\right)^{-1}} \tag{16.102}$$

$$-p^{\exp\langle \mathrm{J}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{J}\rangle}\theta^{\mathrm{y}\langle \mathrm{J}\rangle}p^{\langle \mathrm{J}\rangle}EXPORT^{\langle \mathrm{J}\rangle\,-1+\sigma^{\mathrm{fprod}\langle \mathrm{J}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{J}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{J}\rangle}Y^{\mathrm{HOME}\langle \mathrm{J}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{J}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{J}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{J}\rangle}EXPORT^{\langle \mathrm{J}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{J}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{J}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{J}\rangle}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{J}\rangle}\right.} \tag{16.103}$$

$$-p^{\exp\langle \mathrm{K}\rangle}+\alpha^{\mathrm{prod^e}\langle \mathrm{K}\rangle}\theta^{\mathrm{y}\langle \mathrm{K}\rangle}p^{\langle \mathrm{K}\rangle}EXPORT^{\langle \mathrm{K}\rangle\,-1+\sigma^{\mathrm{fprod}\langle \mathrm{K}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{K}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{K}\rangle}Y^{\mathrm{HOME}\langle \mathrm{K}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{K}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{K}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{K}\rangle}EXPORT^{\langle \mathrm{K}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{K}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{K}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{K}\rangle}\left(1+\sigma\right.} \tag{16.104}$$

$$-p^{\mathrm{home}\langle \mathrm{A}\rangle}+\alpha^{\mathrm{prod^h}\langle \mathrm{A}\rangle}\theta^{\mathrm{y}\langle \mathrm{A}\rangle}p^{\langle \mathrm{A}\rangle}Y^{\mathrm{HOME}\langle \mathrm{A}\rangle\,-1+\sigma^{\mathrm{fprod}\langle \mathrm{A}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{A}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{A}\rangle}Y^{\mathrm{HOME}\langle \mathrm{A}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{A}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{A}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{A}\rangle}EXPORT^{\langle \mathrm{A}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{A}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{A}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{A}\rangle}\left(1+\sigma^{\mathrm{f}}\right.} \tag{16.105}$$

$$-p^{\mathrm{home}\langle \mathrm{A}\rangle}+\alpha^{\mathrm{arm^h}\langle \mathrm{A}\rangle}\theta^{\mathrm{arm}\langle \mathrm{A}\rangle}p^{\mathrm{arm}\langle \mathrm{A}\rangle}Y^{\mathrm{HOME}\langle \mathrm{A}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{A}\rangle}Y^{\mathrm{HOME}\langle \mathrm{A}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{A}\rangle}IMPORT^{\langle \mathrm{A}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\right.} \tag{16.106}$$

$$-p^{\mathrm{home}\langle \mathrm{B}\rangle}+\alpha^{\mathrm{prod^h}\langle \mathrm{B}\rangle}\theta^{\mathrm{y}\langle \mathrm{B}\rangle}p^{\langle \mathrm{B}\rangle}Y^{\mathrm{HOME}\langle \mathrm{B}\rangle\,-1+\sigma^{\mathrm{fprod}\langle \mathrm{B}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{B}\rangle}\right)}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{B}\rangle}Y^{\mathrm{HOME}\langle \mathrm{B}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{B}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{B}\rangle}\right)}+\alpha^{\mathrm{prod^e}\langle \mathrm{B}\rangle}EXPORT^{\langle \mathrm{B}\rangle\,\sigma^{\mathrm{fprod}\langle \mathrm{B}\rangle\,-1}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{B}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{B}\rangle}\left(1+\sigma^{\mathrm{fp}}\right.} \tag{16.107}$$

$$-p^{\mathrm{home}\langle \mathrm{B}\rangle}+\alpha^{\mathrm{arm^h}\langle \mathrm{B}\rangle}\theta^{\mathrm{arm}\langle \mathrm{B}\rangle}p^{\mathrm{arm}\langle \mathrm{B}\rangle}Y^{\mathrm{HOME}\langle \mathrm{B}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{B}\rangle}Y^{\mathrm{HOME}\langle \mathrm{B}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{B}\rangle}IMPORT^{\langle \mathrm{B}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\right.} \tag{16.108}$$

$$-p^{\mathrm{home}\langle \mathrm{C}\rangle}+\alpha^{\mathrm{prod^h}\langle \mathrm{C}\rangle}\theta^{\mathrm{y}\langle \mathrm{C}\rangle}p^{\langle \mathrm{C}\rangle}Y^{\mathrm{HOME}\langle \mathrm{C}\rangle^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{C}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{C}\rangle}\right)}}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{C}\rangle}Y^{\mathrm{HOME}\langle \mathrm{C}\rangle^{\sigma^{\mathrm{fprod}\langle \mathrm{C}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{C}\rangle}\right)}}+\alpha^{\mathrm{prod^e}\langle \mathrm{C}\rangle}EXPORT^{\langle \mathrm{C}\rangle^{\sigma^{\mathrm{fprod}\langle \mathrm{C}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{C}\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{C}\rangle}\left(1+\sigma^{\mathrm{fp}}\right.} \tag{16.109}$$

$$-p^{\mathrm{home}\langle \mathrm{C}\rangle}+\alpha^{\mathrm{arm^h}\langle \mathrm{C}\rangle}\theta^{\mathrm{arm}\langle \mathrm{C}\rangle}p^{\mathrm{arm}\langle \mathrm{C}\rangle}Y^{\mathrm{HOME}\langle \mathrm{C}\rangle^{-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle}\right)}}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{C}\rangle}Y^{\mathrm{HOME}\langle \mathrm{C}\rangle^{\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle}\right)}}+\alpha^{\mathrm{arm^i}\langle \mathrm{C}\rangle}IMPORT^{\langle \mathrm{C}\rangle^{\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\right.} \tag{16.110}$$

$$-p^{\mathrm{home}\langle \mathrm{D}\rangle}+\alpha^{\mathrm{prod^h}\langle \mathrm{D}\rangle}\theta^{\mathrm{y}\langle \mathrm{D}\rangle}p^{\langle \mathrm{D}\rangle}Y^{\mathrm{HOME}\langle \mathrm{D}\rangle^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{D}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{D}\rangle}\right)}}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{D}\rangle}Y^{\mathrm{HOME}\langle \mathrm{D}\rangle^{\sigma^{\mathrm{fprod}\langle \mathrm{D}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{D}\rangle}\right)}}+\alpha^{\mathrm{prod^e}\langle \mathrm{D}\rangle}EXPORT^{\langle \mathrm{D}\rangle^{\sigma^{\mathrm{fprod}\langle \mathrm{D}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{D}\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{D}\rangle}\left(1+\sigma\right.} \tag{16.111}$$

$$-p^{\mathrm{home}\langle \mathrm{D}\rangle}+\alpha^{\mathrm{arm^h}\langle \mathrm{D}\rangle}\theta^{\mathrm{arm}\langle \mathrm{D}\rangle}p^{\mathrm{arm}\langle \mathrm{D}\rangle}Y^{\mathrm{HOME}\langle \mathrm{D}\rangle^{-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)}}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{D}\rangle}Y^{\mathrm{HOME}\langle \mathrm{D}\rangle^{\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)}}+\alpha^{\mathrm{arm^i}\langle \mathrm{D}\rangle}IMPORT^{\langle \mathrm{D}\rangle^{\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \right.} \tag{16.112}$$

$$-p^{\mathrm{home}\langle \mathrm{E}\rangle}+\alpha^{\mathrm{prod^h}\langle \mathrm{E}\rangle}\theta^{\mathrm{y}\langle \mathrm{E}\rangle}p^{\langle \mathrm{E}\rangle}Y^{\mathrm{HOME}\langle \mathrm{E}\rangle^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{E}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{E}\rangle}\right)}}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{E}\rangle}Y^{\mathrm{HOME}\langle \mathrm{E}\rangle^{\sigma^{\mathrm{fprod}\langle \mathrm{E}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{E}\rangle}\right)}}+\alpha^{\mathrm{prod^e}\langle \mathrm{E}\rangle}EXPORT^{\langle \mathrm{E}\rangle^{\sigma^{\mathrm{fprod}\langle \mathrm{E}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{E}\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{E}\rangle}\left(1+\sigma^{\mathrm{fpro}}\right.} \tag{16.113}$$

$$-p^{\mathrm{home}\langle \mathrm{E}\rangle}+\alpha^{\mathrm{arm^h}\langle \mathrm{E}\rangle}\theta^{\mathrm{arm}\langle \mathrm{E}\rangle}p^{\mathrm{arm}\langle \mathrm{E}\rangle}Y^{\mathrm{HOME}\langle \mathrm{E}\rangle^{-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)}}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{E}\rangle}Y^{\mathrm{HOME}\langle \mathrm{E}\rangle^{\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)}}+\alpha^{\mathrm{arm^i}\langle \mathrm{E}\rangle}IMPORT^{\langle \mathrm{E}\rangle^{\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle^{-1}}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right.} \tag{16.114}$$

$$-p^{\mathrm{home}\langle \mathrm{F}\rangle}+\alpha^{\mathrm{prod^h}\langle \mathrm{F}\rangle}\theta^{\mathrm{y}\langle \mathrm{F}\rangle}p^{\langle \mathrm{F}\rangle}Y^{\mathrm{HOME}\langle \mathrm{F}\rangle^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{F}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{F}\rangle}\right)}}\left(\alpha^{\mathrm{prod^h}\langle \mathrm{F}\rangle}Y^{\mathrm{HOME}\langle \mathrm{F}\rangle^{\sigma^{\mathrm{fprod}\langle \mathrm{F}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{F}\rangle}\right)}}+\alpha^{\mathrm{prod^e}\langle \mathrm{F}\rangle}EXPORT^{\langle \mathrm{F}\rangle^{\sigma^{\mathrm{fprod}\langle \mathrm{F}\rangle^{-1}}\left(1+\sigma^{\mathrm{fprod}\langle \mathrm{F}\rangle}\right)}}\right)^{-1+\sigma^{\mathrm{fprod}\langle \mathrm{F}\rangle}\left(1+\sigma^{\mathrm{fpro}}\right.} \tag{16.115}$$

$$-p^{\text{home}\langle \text{F}\rangle}+\alpha^{\text{arm}^{\text{h}}\langle \text{F}\rangle}\theta^{\text{arm}\langle \text{F}\rangle}p^{\text{arm}\langle \text{F}\rangle}Y^{\text{HOME}\langle \text{F}\rangle^{-1+\sigma^{\text{arm}\langle \text{F}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{F}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{F}\rangle}Y^{\text{HOME}\langle \text{F}\rangle^{\sigma^{\text{arm}\langle \text{F}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{F}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{F}\rangle}IMPORT^{\langle \text{F}\rangle^{\sigma^{\text{arm}\langle \text{F}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{F}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{F}\rangle}\left(-1+\sigma^{\text{arm}\langle \text{F}\rangle}\right)} \tag{16.116}$$

$$-p^{\text{home}\langle \text{G}\rangle}+\alpha^{\text{prod}^{\text{h}}\langle \text{G}\rangle}\theta^{\text{y}\langle \text{G}\rangle}p^{\langle \text{G}\rangle}Y^{\text{HOME}\langle \text{G}\rangle^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{G}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{G}\rangle}\right)}}\left(\alpha^{\text{prod}^{\text{h}}\langle \text{G}\rangle}Y^{\text{HOME}\langle \text{G}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{G}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{G}\rangle}\right)}}+\alpha^{\text{prod}^{\text{e}}\langle \text{G}\rangle}EXPORT^{\langle \text{G}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{G}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{G}\rangle}\right)}}\right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{G}\rangle}\left(1+\sigma\right.} \tag{16.117}$$

$$-p^{\text{home}\langle \text{G}\rangle}+\alpha^{\text{arm}^{\text{h}}\langle \text{G}\rangle}\theta^{\text{arm}\langle \text{G}\rangle}p^{\text{arm}\langle \text{G}\rangle}Y^{\text{HOME}\langle \text{G}\rangle^{-1+\sigma^{\text{arm}\langle \text{G}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{G}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{G}\rangle}Y^{\text{HOME}\langle \text{G}\rangle^{\sigma^{\text{arm}\langle \text{G}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{G}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{G}\rangle}IMPORT^{\langle \text{G}\rangle^{\sigma^{\text{arm}\langle \text{G}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{G}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{G}\rangle}\left(-1+\sigma^{\text{arm}}\right.} \tag{16.118}$$

$$-p^{\text{home}\langle \text{H}\rangle}+\alpha^{\text{prod}^{\text{h}}\langle \text{H}\rangle}\theta^{\text{y}\langle \text{H}\rangle}p^{\langle \text{H}\rangle}Y^{\text{HOME}\langle \text{H}\rangle^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{H}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{H}\rangle}\right)}}\left(\alpha^{\text{prod}^{\text{h}}\langle \text{H}\rangle}Y^{\text{HOME}\langle \text{H}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{H}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{H}\rangle}\right)}}+\alpha^{\text{prod}^{\text{e}}\langle \text{H}\rangle}EXPORT^{\langle \text{H}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{H}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{H}\rangle}\right)}}\right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{H}\rangle}\left(1+\sigma^{\text{f}}\right.} \tag{16.119}$$

$$-p^{\text{home}\langle \text{H}\rangle}+\alpha^{\text{arm}^{\text{h}}\langle \text{H}\rangle}\theta^{\text{arm}\langle \text{H}\rangle}p^{\text{arm}\langle \text{H}\rangle}Y^{\text{HOME}\langle \text{H}\rangle^{-1+\sigma^{\text{arm}\langle \text{H}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{H}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{H}\rangle}Y^{\text{HOME}\langle \text{H}\rangle^{\sigma^{\text{arm}\langle \text{H}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{H}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{H}\rangle}IMPORT^{\langle \text{H}\rangle^{\sigma^{\text{arm}\langle \text{H}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{H}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{H}\rangle}\left(-1+\sigma^{\text{arm}\langle \text{I}\rangle}\right.} \tag{16.120}$$

$$-p^{\text{home}\langle \text{I}\rangle}+\alpha^{\text{prod}^{\text{h}}\langle \text{I}\rangle}\theta^{\text{y}\langle \text{I}\rangle}p^{\langle \text{I}\rangle}Y^{\text{HOME}\langle \text{I}\rangle^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{I}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{I}\rangle}\right)}}\left(\alpha^{\text{prod}^{\text{h}}\langle \text{I}\rangle}Y^{\text{HOME}\langle \text{I}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{I}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{I}\rangle}\right)}}+\alpha^{\text{prod}^{\text{e}}\langle \text{I}\rangle}EXPORT^{\langle \text{I}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{I}\rangle}-1\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{I}\rangle}\right)}}\right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{I}\rangle}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{I}\rangle}\right)^{-1}} \tag{16.121}$$

$$-p^{\text{home}\langle \text{I}\rangle}+\alpha^{\text{arm}^{\text{h}}\langle \text{I}\rangle}\theta^{\text{arm}\langle \text{I}\rangle}p^{\text{arm}\langle \text{I}\rangle}Y^{\text{HOME}\langle \text{I}\rangle^{-1+\sigma^{\text{arm}\langle \text{I}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{I}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{I}\rangle}Y^{\text{HOME}\langle \text{I}\rangle^{\sigma^{\text{arm}\langle \text{I}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{I}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{I}\rangle}IMPORT^{\langle \text{I}\rangle^{\sigma^{\text{arm}\langle \text{I}\rangle}-1\left(-1+\sigma^{\text{arm}\langle \text{I}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{I}\rangle}\left(-1+\sigma^{\text{arm}\langle \text{I}\rangle}\right)^{-1}}=0 \tag{16.122}$$

$$-p^{\text{home}\langle \text{J}\rangle}+\alpha^{\text{prod}^{\text{h}}\langle \text{J}\rangle}\theta^{\text{y}\langle \text{J}\rangle}p^{\langle \text{J}\rangle}Y^{\text{HOME}\langle \text{J}\rangle^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{J}\rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{J}\rangle}\right)}}\left(\alpha^{\text{prod}^{\text{h}}\langle \text{J}\rangle}Y^{\text{HOME}\langle \text{J}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{J}\rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{J}\rangle}\right)}}+\alpha^{\text{prod}^{\text{e}}\langle \text{J}\rangle}EXPORT^{\langle \text{J}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{J}\rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{J}\rangle}\right)}}\right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{J}\rangle}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{J}\rangle}\right.} \tag{16.123}$$

$$-p^{\text{home}\langle \text{J}\rangle}+\alpha^{\text{arm}^{\text{h}}\langle \text{J}\rangle}\theta^{\text{arm}\langle \text{J}\rangle}p^{\text{arm}\langle \text{J}\rangle}Y^{\text{HOME}\langle \text{J}\rangle^{-1+\sigma^{\text{arm}\langle \text{J}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{J}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{J}\rangle}Y^{\text{HOME}\langle \text{J}\rangle^{\sigma^{\text{arm}\langle \text{J}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{J}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{J}\rangle}IMPORT^{\langle \text{J}\rangle^{\sigma^{\text{arm}\langle \text{J}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{J}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{J}\rangle}\left(-1+\sigma^{\text{arm}\langle \text{J}\rangle}\right)^{-1}}= \tag{16.124}$$

$$-p^{\text{home}\langle \text{K}\rangle}+\alpha^{\text{prod}^{\text{h}}\langle \text{K}\rangle}\theta^{\text{y}\langle \text{K}\rangle}p^{\langle \text{K}\rangle}Y^{\text{HOME}\langle \text{K}\rangle^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{K}\rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{K}\rangle}\right)}}\left(\alpha^{\text{prod}^{\text{h}}\langle \text{K}\rangle}Y^{\text{HOME}\langle \text{K}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{K}\rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{K}\rangle}\right)}}+\alpha^{\text{prod}^{\text{e}}\langle \text{K}\rangle}EXPORT^{\langle \text{K}\rangle^{\sigma^{\text{f}^{\text{prod}}\langle \text{K}\rangle^{-1}}\left(1+\sigma^{\text{f}^{\text{prod}}\langle \text{K}\rangle}\right)}}\right)^{-1+\sigma^{\text{f}^{\text{prod}}\langle \text{K}\rangle}\left(1+\sigma\right.} \tag{16.125}$$

$$-p^{\text{home}\langle \text{K}\rangle}+\alpha^{\text{arm}^{\text{h}}\langle \text{K}\rangle}\theta^{\text{arm}\langle \text{K}\rangle}p^{\text{arm}\langle \text{K}\rangle}Y^{\text{HOME}\langle \text{K}\rangle^{-1+\sigma^{\text{arm}\langle \text{K}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{K}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{K}\rangle}Y^{\text{HOME}\langle \text{K}\rangle^{\sigma^{\text{arm}\langle \text{K}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{K}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{K}\rangle}IMPORT^{\langle \text{K}\rangle^{\sigma^{\text{arm}\langle \text{K}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{K}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{K}\rangle}\left(-1+\sigma^{\text{arm}\right.} \tag{16.126}$$

$$-p^{\text{imp}\langle \text{A}\rangle}+\alpha^{\text{arm}^{\text{i}}\langle \text{A}\rangle}\theta^{\text{arm}\langle \text{A}\rangle}p^{\text{arm}\langle \text{A}\rangle}IMPORT^{\langle \text{A}\rangle^{-1+\sigma^{\text{arm}\langle \text{A}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{A}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{A}\rangle}Y^{\text{HOME}\langle \text{A}\rangle^{\sigma^{\text{arm}\langle \text{A}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{A}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{A}\rangle}IMPORT^{\langle \text{A}\rangle^{\sigma^{\text{arm}\langle \text{A}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{A}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{A}\rangle}\left(-1+\sigma^{\text{arm}\langle \text{A}\right.} \tag{16.127}$$

$$-p^{\text{imp}\langle \text{B}\rangle}+\alpha^{\text{arm}^{\text{i}}\langle \text{B}\rangle}\theta^{\text{arm}\langle \text{B}\rangle}p^{\text{arm}\langle \text{B}\rangle}IMPORT^{\langle \text{B}\rangle^{-1+\sigma^{\text{arm}\langle \text{B}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{B}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{B}\rangle}Y^{\text{HOME}\langle \text{B}\rangle^{\sigma^{\text{arm}\langle \text{B}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{B}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{B}\rangle}IMPORT^{\langle \text{B}\rangle^{\sigma^{\text{arm}\langle \text{B}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{B}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{B}\rangle}\left(-1+\sigma^{\text{arm}\langle \text{B}\right.} \tag{16.128}$$

$$-p^{\text{imp}\langle \text{C}\rangle}+\alpha^{\text{arm}^{\text{i}}\langle \text{C}\rangle}\theta^{\text{arm}\langle \text{C}\rangle}p^{\text{arm}\langle \text{C}\rangle}IMPORT^{\langle \text{C}\rangle^{-1+\sigma^{\text{arm}\langle \text{C}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{C}\rangle}\right)}}\left(\alpha^{\text{arm}^{\text{h}}\langle \text{C}\rangle}Y^{\text{HOME}\langle \text{C}\rangle^{\sigma^{\text{arm}\langle \text{C}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{C}\rangle}\right)}}+\alpha^{\text{arm}^{\text{i}}\langle \text{C}\rangle}IMPORT^{\langle \text{C}\rangle^{\sigma^{\text{arm}\langle \text{C}\rangle^{-1}}\left(-1+\sigma^{\text{arm}\langle \text{C}\rangle}\right)}}\right)^{-1+\sigma^{\text{arm}\langle \text{C}\rangle}\left(-1+\sigma^{\text{arm}\langle \text{C}\right.} \tag{16.129}$$

$$-p^{\mathrm{imp}\langle \mathrm{D}\rangle}+\alpha^{\mathrm{arm^i}\langle \mathrm{D}\rangle}\theta^{\mathrm{arm}\langle \mathrm{D}\rangle}p^{\mathrm{arm}\langle \mathrm{D}\rangle}IMPORT^{\langle \mathrm{D}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{D}\rangle}Y^{\mathrm{HOME}\langle \mathrm{D}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{D}\rangle}IMPORT^{\langle \mathrm{D}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)^{-1}} \tag{16.130}$$

$$-p^{\mathrm{imp}\langle \mathrm{E}\rangle}+\alpha^{\mathrm{arm^i}\langle \mathrm{E}\rangle}\theta^{\mathrm{arm}\langle \mathrm{E}\rangle}p^{\mathrm{arm}\langle \mathrm{E}\rangle}IMPORT^{\langle \mathrm{E}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{E}\rangle}Y^{\mathrm{HOME}\langle \mathrm{E}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{E}\rangle}IMPORT^{\langle \mathrm{E}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)} \tag{16.131}$$

$$-p^{\mathrm{imp}\langle \mathrm{F}\rangle}+\alpha^{\mathrm{arm^i}\langle \mathrm{F}\rangle}\theta^{\mathrm{arm}\langle \mathrm{F}\rangle}p^{\mathrm{arm}\langle \mathrm{F}\rangle}IMPORT^{\langle \mathrm{F}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{F}\rangle}Y^{\mathrm{HOME}\langle \mathrm{F}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{F}\rangle}IMPORT^{\langle \mathrm{F}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\right)^{-} \tag{16.132}$$

$$-p^{\mathrm{imp}\langle \mathrm{G}\rangle}+\alpha^{\mathrm{arm^i}\langle \mathrm{G}\rangle}\theta^{\mathrm{arm}\langle \mathrm{G}\rangle}p^{\mathrm{arm}\langle \mathrm{G}\rangle}IMPORT^{\langle \mathrm{G}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{G}\rangle}Y^{\mathrm{HOME}\langle \mathrm{G}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{G}\rangle}IMPORT^{\langle \mathrm{G}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\right)} \tag{16.133}$$

$$-p^{\mathrm{imp}\langle \mathrm{H}\rangle}+\alpha^{\mathrm{arm^i}\langle \mathrm{H}\rangle}\theta^{\mathrm{arm}\langle \mathrm{H}\rangle}p^{\mathrm{arm}\langle \mathrm{H}\rangle}IMPORT^{\langle \mathrm{H}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{H}\rangle}Y^{\mathrm{HOME}\langle \mathrm{H}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{H}\rangle}IMPORT^{\langle \mathrm{H}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\right)} \tag{16.134}$$

$$-p^{\mathrm{imp}\langle \mathrm{I}\rangle}+\alpha^{\mathrm{arm^i}\langle \mathrm{I}\rangle}\theta^{\mathrm{arm}\langle \mathrm{I}\rangle}p^{\mathrm{arm}\langle \mathrm{I}\rangle}IMPORT^{\langle \mathrm{I}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{I}\rangle}Y^{\mathrm{HOME}\langle \mathrm{I}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{I}\rangle}IMPORT^{\langle \mathrm{I}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\right)^{-1}}=0 \tag{16.135}$$

$$-p^{\mathrm{imp}\langle \mathrm{J}\rangle}+\alpha^{\mathrm{arm^i}\langle \mathrm{J}\rangle}\theta^{\mathrm{arm}\langle \mathrm{J}\rangle}p^{\mathrm{arm}\langle \mathrm{J}\rangle}IMPORT^{\langle \mathrm{J}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{J}\rangle}Y^{\mathrm{HOME}\langle \mathrm{J}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{J}\rangle}IMPORT^{\langle \mathrm{J}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\right)^{-1}}= \tag{16.136}$$

$$-p^{\mathrm{imp}\langle \mathrm{K}\rangle}+\alpha^{\mathrm{arm^i}\langle \mathrm{K}\rangle}\theta^{\mathrm{arm}\langle \mathrm{K}\rangle}p^{\mathrm{arm}\langle \mathrm{K}\rangle}IMPORT^{\langle \mathrm{K}\rangle\,-1+\sigma^{\mathrm{arm}\langle \mathrm{K}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{K}\rangle}\right)}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{K}\rangle}Y^{\mathrm{HOME}\langle \mathrm{K}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{K}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{K}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{K}\rangle}IMPORT^{\langle \mathrm{K}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{K}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{K}\rangle}\right)}\right)^{-1+\sigma^{\mathrm{arm}\langle \mathrm{K}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle}\right.} \tag{16.137}$$

$$-ARM^{\langle \mathrm{A}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{A}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{A}\rangle}Y^{\mathrm{HOME}\langle \mathrm{A}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{A}\rangle}IMPORT^{\langle \mathrm{A}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{A}\rangle}\right)^{-1}}=0 \tag{16.138}$$

$$-ARM^{\langle \mathrm{B}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{B}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{B}\rangle}Y^{\mathrm{HOME}\langle \mathrm{B}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{B}\rangle}IMPORT^{\langle \mathrm{B}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{B}\rangle}\right)^{-1}}=0 \tag{16.139}$$

$$-ARM^{\langle \mathrm{C}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{C}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{C}\rangle}Y^{\mathrm{HOME}\langle \mathrm{C}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{C}\rangle}IMPORT^{\langle \mathrm{C}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{C}\rangle}\right)^{-1}}=0 \tag{16.140}$$

$$-ARM^{\langle \mathrm{D}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{D}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{D}\rangle}Y^{\mathrm{HOME}\langle \mathrm{D}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{D}\rangle}IMPORT^{\langle \mathrm{D}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{D}\rangle}\right)^{-1}}=0 \tag{16.141}$$

$$-ARM^{\langle \mathrm{E}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{E}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{E}\rangle}Y^{\mathrm{HOME}\langle \mathrm{E}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{E}\rangle}IMPORT^{\langle \mathrm{E}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{E}\rangle}\right)^{-1}}=0 \tag{16.142}$$

$$-ARM^{\langle \mathrm{F}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{F}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{F}\rangle}Y^{\mathrm{HOME}\langle \mathrm{F}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{F}\rangle}IMPORT^{\langle \mathrm{F}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{F}\rangle}\right)^{-1}}=0 \tag{16.143}$$

$$-ARM^{\langle \mathrm{G}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{G}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{G}\rangle}Y^{\mathrm{HOME}\langle \mathrm{G}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{G}\rangle}IMPORT^{\langle \mathrm{G}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{G}\rangle}\right)^{-1}}=0 \tag{16.144}$$

$$-ARM^{\langle \mathrm{H}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{H}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{H}\rangle}Y^{\mathrm{HOME}\langle \mathrm{H}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{H}\rangle}IMPORT^{\langle \mathrm{H}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{H}\rangle}\right)^{-1}}=0 \tag{16.145}$$

$$-ARM^{\langle \mathrm{I}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{I}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{I}\rangle}Y^{\mathrm{HOME}\langle \mathrm{I}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{I}\rangle}IMPORT^{\langle \mathrm{I}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{I}\rangle}\right)^{-1}}=0 \tag{16.146}$$

$$-ARM^{\langle \mathrm{J}\rangle}+\theta^{\mathrm{arm}\langle \mathrm{J}\rangle}\left(\alpha^{\mathrm{arm^h}\langle \mathrm{J}\rangle}Y^{\mathrm{HOME}\langle \mathrm{J}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\right)}+\alpha^{\mathrm{arm^i}\langle \mathrm{J}\rangle}IMPORT^{\langle \mathrm{J}\rangle\,\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle\,-1}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\right)}\right)^{\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\left(-1+\sigma^{\mathrm{arm}\langle \mathrm{J}\rangle}\right)^{-1}}=0 \tag{16.147}$$

$$-ARM^{\langle \mathrm{K} \rangle} + \theta^{\mathrm{arm}\,\langle \mathrm{K} \rangle} \left(\alpha^{\mathrm{arm^h}\,\langle \mathrm{K} \rangle} Y^{\mathrm{HOME}\,\langle \mathrm{K} \rangle^{\sigma^{\mathrm{arm}\,\langle \mathrm{K} \rangle}-1}\left(-1+\sigma^{\mathrm{arm}\,\langle \mathrm{K} \rangle}\right)} + \alpha^{\mathrm{arm^i}\,\langle \mathrm{K} \rangle} IMPORT^{\langle \mathrm{K} \rangle^{\sigma^{\mathrm{arm}\,\langle \mathrm{K} \rangle}-1}\left(-1+\sigma^{\mathrm{arm}\,\langle \mathrm{K} \rangle}\right)} \right)^{\sigma^{\mathrm{arm}\,\langle \mathrm{K} \rangle}\left(-1+\sigma^{\mathrm{arm}\,\langle \mathrm{K} \rangle}\right)^{-1}} = 0 \tag{16.148}$$

$$-DEM^{\langle 01 \rangle} + \theta^{\mathrm{dem}\,\langle 01 \rangle} \left(\alpha^{\langle \mathrm{A},01 \rangle} D^{\langle \mathrm{A},01 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{B},01 \rangle} D^{\langle \mathrm{B},01 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{C},01 \rangle} D^{\langle \mathrm{C},01 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{D},01 \rangle} D^{\langle \mathrm{D},01 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{E},01 \rangle} D^{\langle \mathrm{E},01 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{F},01 \rangle} D^{\langle \mathrm{F},01 \rangle^{\omega^{-1}(-1+\omega}} \right. \tag{16.149}$$

$$-DEM^{\langle 02 \rangle} + \theta^{\mathrm{dem}\,\langle 02 \rangle} \left(\alpha^{\langle \mathrm{A},02 \rangle} D^{\langle \mathrm{A},02 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{B},02 \rangle} D^{\langle \mathrm{B},02 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{C},02 \rangle} D^{\langle \mathrm{C},02 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{D},02 \rangle} D^{\langle \mathrm{D},02 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{E},02 \rangle} D^{\langle \mathrm{E},02 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{F},02 \rangle} D^{\langle \mathrm{F},02 \rangle^{\omega^{-1}(-1+\omega}} \right. \tag{16.150}$$

$$-DEM^{\langle 03 \rangle} + \theta^{\mathrm{dem}\,\langle 03 \rangle} \left(\alpha^{\langle \mathrm{A},03 \rangle} D^{\langle \mathrm{A},03 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{B},03 \rangle} D^{\langle \mathrm{B},03 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{C},03 \rangle} D^{\langle \mathrm{C},03 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{D},03 \rangle} D^{\langle \mathrm{D},03 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{E},03 \rangle} D^{\langle \mathrm{E},03 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{F},03 \rangle} D^{\langle \mathrm{F},03 \rangle^{\omega^{-1}(-1+\omega}} \right. \tag{16.151}$$

$$-DEM^{\langle 04 \rangle} + \theta^{\mathrm{dem}\,\langle 04 \rangle} \left(\alpha^{\langle \mathrm{A},04 \rangle} D^{\langle \mathrm{A},04 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{B},04 \rangle} D^{\langle \mathrm{B},04 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{C},04 \rangle} D^{\langle \mathrm{C},04 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{D},04 \rangle} D^{\langle \mathrm{D},04 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{E},04 \rangle} D^{\langle \mathrm{E},04 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{F},04 \rangle} D^{\langle \mathrm{F},04 \rangle^{\omega^{-1}(-1+\omega}} \right. \tag{16.152}$$

$$-DEM^{\langle 05 \rangle} + \theta^{\mathrm{dem}\,\langle 05 \rangle} \left(\alpha^{\langle \mathrm{A},05 \rangle} D^{\langle \mathrm{A},05 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{B},05 \rangle} D^{\langle \mathrm{B},05 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{C},05 \rangle} D^{\langle \mathrm{C},05 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{D},05 \rangle} D^{\langle \mathrm{D},05 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{E},05 \rangle} D^{\langle \mathrm{E},05 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{F},05 \rangle} D^{\langle \mathrm{F},05 \rangle^{\omega^{-1}(-1+\omega}} \right. \tag{16.153}$$

$$-DEM^{\langle 06 \rangle} + \theta^{\mathrm{dem}\,\langle 06 \rangle} \left(\alpha^{\langle \mathrm{A},06 \rangle} D^{\langle \mathrm{A},06 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{B},06 \rangle} D^{\langle \mathrm{B},06 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{C},06 \rangle} D^{\langle \mathrm{C},06 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{D},06 \rangle} D^{\langle \mathrm{D},06 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{E},06 \rangle} D^{\langle \mathrm{E},06 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{F},06 \rangle} D^{\langle \mathrm{F},06 \rangle^{\omega^{-1}(-1+\omega}} \right. \tag{16.154}$$

$$-DEM^{\langle 07 \rangle} + \theta^{\mathrm{dem}\,\langle 07 \rangle} \left(\alpha^{\langle \mathrm{A},07 \rangle} D^{\langle \mathrm{A},07 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{B},07 \rangle} D^{\langle \mathrm{B},07 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{C},07 \rangle} D^{\langle \mathrm{C},07 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{D},07 \rangle} D^{\langle \mathrm{D},07 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{E},07 \rangle} D^{\langle \mathrm{E},07 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{F},07 \rangle} D^{\langle \mathrm{F},07 \rangle^{\omega^{-1}(-1+\omega}} \right. \tag{16.155}$$

$$-DEM^{\langle 08 \rangle} + \theta^{\mathrm{dem}\,\langle 08 \rangle} \left(\alpha^{\langle \mathrm{A},08 \rangle} D^{\langle \mathrm{A},08 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{B},08 \rangle} D^{\langle \mathrm{B},08 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{C},08 \rangle} D^{\langle \mathrm{C},08 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{D},08 \rangle} D^{\langle \mathrm{D},08 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{E},08 \rangle} D^{\langle \mathrm{E},08 \rangle^{\omega^{-1}(-1+\omega)}} + \alpha^{\langle \mathrm{F},08 \rangle} D^{\langle \mathrm{F},08 \rangle^{\omega^{-1}(-1+\omega}} \right. \tag{16.156}$$

$$-DEM^{\langle 09\rangle}+\theta^{\mathrm{dem}\,\langle 09\rangle}\left(\alpha^{\langle \mathrm{A},09\rangle}D^{\langle \mathrm{A},09\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{B},09\rangle}D^{\langle \mathrm{B},09\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{C},09\rangle}D^{\langle \mathrm{C},09\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{D},09\rangle}D^{\langle \mathrm{D},09\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{E},09\rangle}D^{\langle \mathrm{E},09\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{F},09\rangle}D^{\langle \mathrm{F},09\rangle^{\omega^{-1}(-1+\omega)}}\right.$$

(16.157)

$$-DEM^{\langle 10\rangle}+\theta^{\mathrm{dem}\,\langle 10\rangle}\left(\alpha^{\langle \mathrm{A},10\rangle}D^{\langle \mathrm{A},10\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{B},10\rangle}D^{\langle \mathrm{B},10\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{C},10\rangle}D^{\langle \mathrm{C},10\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{D},10\rangle}D^{\langle \mathrm{D},10\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{E},10\rangle}D^{\langle \mathrm{E},10\rangle^{\omega^{-1}(-1+\omega)}}+\alpha^{\langle \mathrm{F},10\rangle}D^{\langle \mathrm{F},10\rangle^{\omega^{-1}(-1+\omega)}}\right.$$

(16.158)

$$-EXPORT^{\langle \mathrm{A}\rangle}+\theta^{\exp\langle \mathrm{A}\rangle}\left(\alpha^{\exp\langle \mathrm{eu,A}\rangle}\left(am^{\exp\langle \mathrm{eu}\rangle}EXP^{\langle \mathrm{eu,A}\rangle}\right)^{\sigma^{\exp\langle \mathrm{A}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{A}\rangle}\right)}+\alpha^{\exp\langle \mathrm{neu,A}\rangle}\left(am^{\exp\langle \mathrm{neu}\rangle}EXP^{\langle \mathrm{neu,A}\rangle}\right)^{\sigma^{\exp\langle \mathrm{A}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{A}\rangle}\right)}\right)^{\sigma^{\exp\langle \mathrm{A}\rangle}\left(1+\sigma^{\exp\langle \mathrm{A}\rangle}\right)^{-1}}=0$$

(16.159)

$$-EXPORT^{\langle \mathrm{B}\rangle}+\theta^{\exp\langle \mathrm{B}\rangle}\left(\alpha^{\exp\langle \mathrm{eu,B}\rangle}\left(am^{\exp\langle \mathrm{eu}\rangle}EXP^{\langle \mathrm{eu,B}\rangle}\right)^{\sigma^{\exp\langle \mathrm{B}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{B}\rangle}\right)}+\alpha^{\exp\langle \mathrm{neu,B}\rangle}\left(am^{\exp\langle \mathrm{neu}\rangle}EXP^{\langle \mathrm{neu,B}\rangle}\right)^{\sigma^{\exp\langle \mathrm{B}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{B}\rangle}\right)}\right)^{\sigma^{\exp\langle \mathrm{B}\rangle}\left(1+\sigma^{\exp\langle \mathrm{B}\rangle}\right)^{-1}}=0$$

(16.160)

$$-EXPORT^{\langle \mathrm{C}\rangle}+\theta^{\exp\langle \mathrm{C}\rangle}\left(\alpha^{\exp\langle \mathrm{eu,C}\rangle}\left(am^{\exp\langle \mathrm{eu}\rangle}EXP^{\langle \mathrm{eu,C}\rangle}\right)^{\sigma^{\exp\langle \mathrm{C}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{C}\rangle}\right)}+\alpha^{\exp\langle \mathrm{neu,C}\rangle}\left(am^{\exp\langle \mathrm{neu}\rangle}EXP^{\langle \mathrm{neu,C}\rangle}\right)^{\sigma^{\exp\langle \mathrm{C}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{C}\rangle}\right)}\right)^{\sigma^{\exp\langle \mathrm{C}\rangle}\left(1+\sigma^{\exp\langle \mathrm{C}\rangle}\right)^{-1}}=0$$

(16.161)

$$-EXPORT^{\langle \mathrm{D}\rangle}+\theta^{\exp\langle \mathrm{D}\rangle}\left(\alpha^{\exp\langle \mathrm{eu,D}\rangle}\left(am^{\exp\langle \mathrm{eu}\rangle}EXP^{\langle \mathrm{eu,D}\rangle}\right)^{\sigma^{\exp\langle \mathrm{D}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{D}\rangle}\right)}+\alpha^{\exp\langle \mathrm{neu,D}\rangle}\left(am^{\exp\langle \mathrm{neu}\rangle}EXP^{\langle \mathrm{neu,D}\rangle}\right)^{\sigma^{\exp\langle \mathrm{D}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{D}\rangle}\right)}\right)^{\sigma^{\exp\langle \mathrm{D}\rangle}\left(1+\sigma^{\exp\langle \mathrm{D}\rangle}\right)^{-1}}=0$$

(16.162)

$$-EXPORT^{\langle \mathrm{E}\rangle}+\theta^{\exp\langle \mathrm{E}\rangle}\left(\alpha^{\exp\langle \mathrm{eu,E}\rangle}\left(am^{\exp\langle \mathrm{eu}\rangle}EXP^{\langle \mathrm{eu,E}\rangle}\right)^{\sigma^{\exp\langle \mathrm{E}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{E}\rangle}\right)}+\alpha^{\exp\langle \mathrm{neu,E}\rangle}\left(am^{\exp\langle \mathrm{neu}\rangle}EXP^{\langle \mathrm{neu,E}\rangle}\right)^{\sigma^{\exp\langle \mathrm{E}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{E}\rangle}\right)}\right)^{\sigma^{\exp\langle \mathrm{E}\rangle}\left(1+\sigma^{\exp\langle \mathrm{E}\rangle}\right)^{-1}}=0$$

(16.163)

$$-EXPORT^{\langle \mathrm{F}\rangle}+\theta^{\exp\langle \mathrm{F}\rangle}\left(\alpha^{\exp\langle \mathrm{eu,F}\rangle}\left(am^{\exp\langle \mathrm{eu}\rangle}EXP^{\langle \mathrm{eu,F}\rangle}\right)^{\sigma^{\exp\langle \mathrm{F}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{F}\rangle}\right)}+\alpha^{\exp\langle \mathrm{neu,F}\rangle}\left(am^{\exp\langle \mathrm{neu}\rangle}EXP^{\langle \mathrm{neu,F}\rangle}\right)^{\sigma^{\exp\langle \mathrm{F}\rangle-1}\left(1+\sigma^{\exp\langle \mathrm{F}\rangle}\right)}\right)^{\sigma^{\exp\langle \mathrm{F}\rangle}\left(1+\sigma^{\exp\langle \mathrm{F}\rangle}\right)^{-1}}=0$$

(16.164)

$$-EXPORT^{\langle \mathrm{G} \rangle} + \theta^{\exp\langle \mathrm{G} \rangle} \left(\alpha^{\exp\langle \mathrm{eu,G} \rangle} \left(am^{\exp\langle \mathrm{eu} \rangle} EXP^{\langle \mathrm{eu,G} \rangle} \right)^{\sigma^{\exp\langle \mathrm{G} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{G} \rangle} \right)} + \alpha^{\exp\langle \mathrm{neu,G} \rangle} \left(am^{\exp\langle \mathrm{neu} \rangle} EXP^{\langle \mathrm{neu,G} \rangle} \right)^{\sigma^{\exp\langle \mathrm{G} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{G} \rangle} \right)} \right)^{\sigma^{\exp\langle \mathrm{G} \rangle} \left(1 + \sigma^{\exp\langle \mathrm{G} \rangle} \right)^{-1}} = 0 \tag{16.165}$$

$$-EXPORT^{\langle \mathrm{H} \rangle} + \theta^{\exp\langle \mathrm{H} \rangle} \left(\alpha^{\exp\langle \mathrm{eu,H} \rangle} \left(am^{\exp\langle \mathrm{eu} \rangle} EXP^{\langle \mathrm{eu,H} \rangle} \right)^{\sigma^{\exp\langle \mathrm{H} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{H} \rangle} \right)} + \alpha^{\exp\langle \mathrm{neu,H} \rangle} \left(am^{\exp\langle \mathrm{neu} \rangle} EXP^{\langle \mathrm{neu,H} \rangle} \right)^{\sigma^{\exp\langle \mathrm{H} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{H} \rangle} \right)} \right)^{\sigma^{\exp\langle \mathrm{H} \rangle} \left(1 + \sigma^{\exp\langle \mathrm{H} \rangle} \right)^{-1}} = 0 \tag{16.166}$$

$$-EXPORT^{\langle \mathrm{I} \rangle} + \theta^{\exp\langle \mathrm{I} \rangle} \left(\alpha^{\exp\langle \mathrm{eu,I} \rangle} \left(am^{\exp\langle \mathrm{eu} \rangle} EXP^{\langle \mathrm{eu,I} \rangle} \right)^{\sigma^{\exp\langle \mathrm{I} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{I} \rangle} \right)} + \alpha^{\exp\langle \mathrm{neu,I} \rangle} \left(am^{\exp\langle \mathrm{neu} \rangle} EXP^{\langle \mathrm{neu,I} \rangle} \right)^{\sigma^{\exp\langle \mathrm{I} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{I} \rangle} \right)} \right)^{\sigma^{\exp\langle \mathrm{I} \rangle} \left(1 + \sigma^{\exp\langle \mathrm{I} \rangle} \right)^{-1}} = 0 \tag{16.167}$$

$$-EXPORT^{\langle \mathrm{J} \rangle} + \theta^{\exp\langle \mathrm{J} \rangle} \left(\alpha^{\exp\langle \mathrm{eu,J} \rangle} \left(am^{\exp\langle \mathrm{eu} \rangle} EXP^{\langle \mathrm{eu,J} \rangle} \right)^{\sigma^{\exp\langle \mathrm{J} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{J} \rangle} \right)} + \alpha^{\exp\langle \mathrm{neu,J} \rangle} \left(am^{\exp\langle \mathrm{neu} \rangle} EXP^{\langle \mathrm{neu,J} \rangle} \right)^{\sigma^{\exp\langle \mathrm{J} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{J} \rangle} \right)} \right)^{\sigma^{\exp\langle \mathrm{J} \rangle} \left(1 + \sigma^{\exp\langle \mathrm{J} \rangle} \right)^{-1}} = 0 \tag{16.168}$$

$$-EXPORT^{\langle \mathrm{K} \rangle} + \theta^{\exp\langle \mathrm{K} \rangle} \left(\alpha^{\exp\langle \mathrm{eu,K} \rangle} \left(am^{\exp\langle \mathrm{eu} \rangle} EXP^{\langle \mathrm{eu,K} \rangle} \right)^{\sigma^{\exp\langle \mathrm{K} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{K} \rangle} \right)} + \alpha^{\exp\langle \mathrm{neu,K} \rangle} \left(am^{\exp\langle \mathrm{neu} \rangle} EXP^{\langle \mathrm{neu,K} \rangle} \right)^{\sigma^{\exp\langle \mathrm{K} \rangle} - 1 \left(1 + \sigma^{\exp\langle \mathrm{K} \rangle} \right)} \right)^{\sigma^{\exp\langle \mathrm{K} \rangle} \left(1 + \sigma^{\exp\langle \mathrm{K} \rangle} \right)^{-1}} = 0 \tag{16.169}$$

$$-EXCISE^{\langle \mathrm{A} \rangle} + excise^{\langle \mathrm{A} \rangle} p^{\mathrm{market}\langle \mathrm{A} \rangle} \left(D^{\mathrm{GOV}\langle \mathrm{A} \rangle} + INV^{\langle \mathrm{A} \rangle} + X^{\langle \mathrm{A,A} \rangle} + X^{\langle \mathrm{A,B} \rangle} + X^{\langle \mathrm{A,C} \rangle} + X^{\langle \mathrm{A,D} \rangle} + X^{\langle \mathrm{A,E} \rangle} + X^{\langle \mathrm{A,F} \rangle} + X^{\langle \mathrm{A,G} \rangle} + X^{\langle \mathrm{A,H} \rangle} + X^{\langle \mathrm{A,I} \rangle} + X^{\langle \mathrm{A,J} \rangle} + X^{\langle \mathrm{A,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{A,01} \rangle} + \tag{16.170}$$

$$-EXCISE^{\langle \mathrm{B} \rangle} + excise^{\langle \mathrm{B} \rangle} p^{\mathrm{market}\langle \mathrm{B} \rangle} \left(D^{\mathrm{GOV}\langle \mathrm{B} \rangle} + INV^{\langle \mathrm{B} \rangle} + X^{\langle \mathrm{B,A} \rangle} + X^{\langle \mathrm{B,B} \rangle} + X^{\langle \mathrm{B,C} \rangle} + X^{\langle \mathrm{B,D} \rangle} + X^{\langle \mathrm{B,E} \rangle} + X^{\langle \mathrm{B,F} \rangle} + X^{\langle \mathrm{B,G} \rangle} + X^{\langle \mathrm{B,H} \rangle} + X^{\langle \mathrm{B,I} \rangle} + X^{\langle \mathrm{B,J} \rangle} + X^{\langle \mathrm{B,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{B,01} \rangle} + \tag{16.171}$$

$$-EXCISE^{\langle \mathrm{C} \rangle} + excise^{\langle \mathrm{C} \rangle} p^{\mathrm{market}\langle \mathrm{C} \rangle} \left(D^{\mathrm{GOV}\langle \mathrm{C} \rangle} + INV^{\langle \mathrm{C} \rangle} + X^{\langle \mathrm{C,A} \rangle} + X^{\langle \mathrm{C,B} \rangle} + X^{\langle \mathrm{C,C} \rangle} + X^{\langle \mathrm{C,D} \rangle} + X^{\langle \mathrm{C,E} \rangle} + X^{\langle \mathrm{C,F} \rangle} + X^{\langle \mathrm{C,G} \rangle} + X^{\langle \mathrm{C,H} \rangle} + X^{\langle \mathrm{C,I} \rangle} + X^{\langle \mathrm{C,J} \rangle} + X^{\langle \mathrm{C,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{C,01} \rangle} + \tag{16.172}$$

$$-EXCISE^{\langle \mathrm{D} \rangle} + excise^{\langle \mathrm{D} \rangle} p^{\mathrm{market}\langle \mathrm{D} \rangle} \left(D^{\mathrm{GOV}\langle \mathrm{D} \rangle} + INV^{\langle \mathrm{D} \rangle} + X^{\langle \mathrm{D,A} \rangle} + X^{\langle \mathrm{D,B} \rangle} + X^{\langle \mathrm{D,C} \rangle} + X^{\langle \mathrm{D,D} \rangle} + X^{\langle \mathrm{D,E} \rangle} + X^{\langle \mathrm{D,F} \rangle} + X^{\langle \mathrm{D,G} \rangle} + X^{\langle \mathrm{D,H} \rangle} + X^{\langle \mathrm{D,I} \rangle} + X^{\langle \mathrm{D,J} \rangle} + X^{\langle \mathrm{D,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{D,01} \rangle} + \tag{16.173}$$

$$-EXCISE^{\langle \mathrm{E} \rangle} + excise^{\langle \mathrm{E} \rangle} p^{\mathrm{market}\,\langle \mathrm{E} \rangle} \left(D^{\mathrm{GOV}\,\langle \mathrm{E} \rangle} + INV^{\langle \mathrm{E} \rangle} + X^{\langle \mathrm{E,A} \rangle} + X^{\langle \mathrm{E,B} \rangle} + X^{\langle \mathrm{E,C} \rangle} + X^{\langle \mathrm{E,D} \rangle} + X^{\langle \mathrm{E,E} \rangle} + X^{\langle \mathrm{E,F} \rangle} + X^{\langle \mathrm{E,G} \rangle} + X^{\langle \mathrm{E,H} \rangle} + X^{\langle \mathrm{E,I} \rangle} + X^{\langle \mathrm{E,J} \rangle} + X^{\langle \mathrm{E,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{E},01 \rangle} + s \right.$$
(16.174)

$$-EXCISE^{\langle \mathrm{F} \rangle} + excise^{\langle \mathrm{F} \rangle} p^{\mathrm{market}\,\langle \mathrm{F} \rangle} \left(D^{\mathrm{GOV}\,\langle \mathrm{F} \rangle} + INV^{\langle \mathrm{F} \rangle} + X^{\langle \mathrm{F,A} \rangle} + X^{\langle \mathrm{F,B} \rangle} + X^{\langle \mathrm{F,C} \rangle} + X^{\langle \mathrm{F,D} \rangle} + X^{\langle \mathrm{F,E} \rangle} + X^{\langle \mathrm{F,F} \rangle} + X^{\langle \mathrm{F,G} \rangle} + X^{\langle \mathrm{F,H} \rangle} + X^{\langle \mathrm{F,I} \rangle} + X^{\langle \mathrm{F,J} \rangle} + X^{\langle \mathrm{F,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{F},01 \rangle} + sc \right.$$
(16.175)

$$-EXCISE^{\langle \mathrm{G} \rangle} + excise^{\langle \mathrm{G} \rangle} p^{\mathrm{market}\,\langle \mathrm{G} \rangle} \left(D^{\mathrm{GOV}\,\langle \mathrm{G} \rangle} + INV^{\langle \mathrm{G} \rangle} + X^{\langle \mathrm{G,A} \rangle} + X^{\langle \mathrm{G,B} \rangle} + X^{\langle \mathrm{G,C} \rangle} + X^{\langle \mathrm{G,D} \rangle} + X^{\langle \mathrm{G,E} \rangle} + X^{\langle \mathrm{G,F} \rangle} + X^{\langle \mathrm{G,G} \rangle} + X^{\langle \mathrm{G,H} \rangle} + X^{\langle \mathrm{G,I} \rangle} + X^{\langle \mathrm{G,J} \rangle} + X^{\langle \mathrm{G,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{G},01 \rangle} \right.$$
(16.176)

$$-EXCISE^{\langle \mathrm{H} \rangle} + excise^{\langle \mathrm{H} \rangle} p^{\mathrm{market}\,\langle \mathrm{H} \rangle} \left(D^{\mathrm{GOV}\,\langle \mathrm{H} \rangle} + INV^{\langle \mathrm{H} \rangle} + X^{\langle \mathrm{H,A} \rangle} + X^{\langle \mathrm{H,B} \rangle} + X^{\langle \mathrm{H,C} \rangle} + X^{\langle \mathrm{H,D} \rangle} + X^{\langle \mathrm{H,E} \rangle} + X^{\langle \mathrm{H,F} \rangle} + X^{\langle \mathrm{H,G} \rangle} + X^{\langle \mathrm{H,H} \rangle} + X^{\langle \mathrm{H,I} \rangle} + X^{\langle \mathrm{H,J} \rangle} + X^{\langle \mathrm{H,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{H},01 \rangle} + \right.$$
(16.177)

$$-EXCISE^{\langle \mathrm{I} \rangle} + excise^{\langle \mathrm{I} \rangle} p^{\mathrm{market}\,\langle \mathrm{I} \rangle} \left(D^{\mathrm{GOV}\,\langle \mathrm{I} \rangle} + INV^{\langle \mathrm{I} \rangle} + X^{\langle \mathrm{I,A} \rangle} + X^{\langle \mathrm{I,B} \rangle} + X^{\langle \mathrm{I,C} \rangle} + X^{\langle \mathrm{I,D} \rangle} + X^{\langle \mathrm{I,E} \rangle} + X^{\langle \mathrm{I,F} \rangle} + X^{\langle \mathrm{I,G} \rangle} + X^{\langle \mathrm{I,H} \rangle} + X^{\langle \mathrm{I,I} \rangle} + X^{\langle \mathrm{I,J} \rangle} + X^{\langle \mathrm{I,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{I},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{I} \right.$$
(16.178)

$$-EXCISE^{\langle \mathrm{J} \rangle} + excise^{\langle \mathrm{J} \rangle} p^{\mathrm{market}\,\langle \mathrm{J} \rangle} \left(D^{\mathrm{GOV}\,\langle \mathrm{J} \rangle} + INV^{\langle \mathrm{J} \rangle} + X^{\langle \mathrm{J,A} \rangle} + X^{\langle \mathrm{J,B} \rangle} + X^{\langle \mathrm{J,C} \rangle} + X^{\langle \mathrm{J,D} \rangle} + X^{\langle \mathrm{J,E} \rangle} + X^{\langle \mathrm{J,F} \rangle} + X^{\langle \mathrm{J,G} \rangle} + X^{\langle \mathrm{J,H} \rangle} + X^{\langle \mathrm{J,I} \rangle} + X^{\langle \mathrm{J,J} \rangle} + X^{\langle \mathrm{J,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{J},01 \rangle} + scale^{\langle 02 \right.$$
(16.179)

$$-EXCISE^{\langle \mathrm{K} \rangle} + excise^{\langle \mathrm{K} \rangle} p^{\mathrm{market}\,\langle \mathrm{K} \rangle} \left(D^{\mathrm{GOV}\,\langle \mathrm{K} \rangle} + INV^{\langle \mathrm{K} \rangle} + X^{\langle \mathrm{K,A} \rangle} + X^{\langle \mathrm{K,B} \rangle} + X^{\langle \mathrm{K,C} \rangle} + X^{\langle \mathrm{K,D} \rangle} + X^{\langle \mathrm{K,E} \rangle} + X^{\langle \mathrm{K,F} \rangle} + X^{\langle \mathrm{K,G} \rangle} + X^{\langle \mathrm{K,H} \rangle} + X^{\langle \mathrm{K,I} \rangle} + X^{\langle \mathrm{K,J} \rangle} + X^{\langle \mathrm{K,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{K},01 \rangle} \right.$$
(16.180)

$$-EXPORT^{\mathrm{ROW}\,\langle \mathrm{eu} \rangle} + p^{\mathrm{for}\,\langle \mathrm{eu} \rangle} \left(EXP^{\langle \mathrm{eu,A} \rangle} + EXP^{\langle \mathrm{eu,B} \rangle} + EXP^{\langle \mathrm{eu,C} \rangle} + EXP^{\langle \mathrm{eu,D} \rangle} + EXP^{\langle \mathrm{eu,E} \rangle} + EXP^{\langle \mathrm{eu,F} \rangle} + EXP^{\langle \mathrm{eu,G} \rangle} + EXP^{\langle \mathrm{eu,H} \rangle} + EXP^{\langle \mathrm{eu,I} \rangle} + EXP^{\langle \mathrm{eu,J} \rangle} + EXP^{\langle \mathrm{eu,K} \rangle} \right) = 0$$
(16.181)

$$-EXPORT^{\mathrm{ROW}\,\langle \mathrm{neu} \rangle} + p^{\mathrm{for}\,\langle \mathrm{neu} \rangle} \left(EXP^{\langle \mathrm{neu,A} \rangle} + EXP^{\langle \mathrm{neu,B} \rangle} + EXP^{\langle \mathrm{neu,C} \rangle} + EXP^{\langle \mathrm{neu,D} \rangle} + EXP^{\langle \mathrm{neu,E} \rangle} + EXP^{\langle \mathrm{neu,F} \rangle} + EXP^{\langle \mathrm{neu,G} \rangle} + EXP^{\langle \mathrm{neu,H} \rangle} + EXP^{\langle \mathrm{neu,I} \rangle} + EXP^{\langle \mathrm{neu,J} \rangle} + EXP^{\langle \mathrm{ne} \right.$$
(16.182)

$$-IMPORT^{\langle \mathrm{A} \rangle} + \theta^{\mathrm{imp}\,\langle \mathrm{A} \rangle} \left(\alpha^{\mathrm{imp}\,\langle \mathrm{eu,A} \rangle} \left(am^{\mathrm{imp}\,\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,A} \rangle} \right)^{\sigma^{\mathrm{imp}\,\langle \mathrm{A} \rangle} - 1 \left(-1 + \sigma^{\mathrm{imp}\,\langle \mathrm{A} \rangle} \right)} + \alpha^{\mathrm{imp}\,\langle \mathrm{neu,A} \rangle} \left(am^{\mathrm{imp}\,\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,A} \rangle} \right)^{\sigma^{\mathrm{imp}\,\langle \mathrm{A} \rangle} - 1 \left(-1 + \sigma^{\mathrm{imp}\,\langle \mathrm{A} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\,\langle \mathrm{A} \rangle} \left(-1 + \sigma^{\mathrm{imp}\,\langle \mathrm{A} \rangle} \right)^{-1}} = 0$$
(16.183)

$$-IMPORT^{\langle \mathrm{B} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{B} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,B} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,B} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{B} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{B} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,B} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,B} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{B} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{B} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{B} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{B} \rangle} \right)^{-1}} = 0 \tag{16.184}$$

$$-IMPORT^{\langle \mathrm{C} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{C} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,C} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,C} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{C} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{C} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,C} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,C} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{C} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{C} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{C} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{C} \rangle} \right)^{-1}} = 0 \tag{16.185}$$

$$-IMPORT^{\langle \mathrm{D} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{D} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,D} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,D} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{D} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{D} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,D} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,D} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{D} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{D} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{D} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{D} \rangle} \right)^{-1}} = 0 \tag{16.186}$$

$$-IMPORT^{\langle \mathrm{E} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{E} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,E} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,E} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{E} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{E} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,E} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,E} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{E} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{E} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{E} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{E} \rangle} \right)^{-1}} = 0 \tag{16.187}$$

$$-IMPORT^{\langle \mathrm{F} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{F} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,F} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,F} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{F} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{F} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,F} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,F} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{F} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{F} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{F} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{F} \rangle} \right)^{-1}} = 0 \tag{16.188}$$

$$-IMPORT^{\langle \mathrm{G} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{G} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,G} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,G} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{G} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{G} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,G} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,G} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{G} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{G} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{G} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{G} \rangle} \right)^{-1}} = 0 \tag{16.189}$$

$$-IMPORT^{\langle \mathrm{H} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{H} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,H} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,H} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{H} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{H} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,H} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,H} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{H} \rangle - 1} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{H} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{H} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{H} \rangle} \right)^{-1}} = 0 \tag{16.190}$$

$$-IMPORT^{\langle \mathrm{I} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{I} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,I} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,I} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{I} \rangle} - 1 \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{I} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,I} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,I} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{I} \rangle} - 1 \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{I} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{I} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{I} \rangle} \right)^{-1}} = 0 \tag{16.191}$$

$$-IMPORT^{\langle \mathrm{J} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{J} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,J} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,J} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{J} \rangle} - 1 \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{J} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,J} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,J} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{J} \rangle} - 1 \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{J} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{J} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{J} \rangle} \right)^{-1}} = 0 \tag{16.192}$$

$$-IMPORT^{\langle \mathrm{K} \rangle} + \theta^{\mathrm{imp}\langle \mathrm{K} \rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,K} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu} \rangle} IMP^{\langle \mathrm{eu,K} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{K} \rangle} - 1 \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{K} \rangle} \right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,K} \rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu} \rangle} IMP^{\langle \mathrm{neu,K} \rangle} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{K} \rangle} - 1 \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{K} \rangle} \right)} \right)^{\sigma^{\mathrm{imp}\langle \mathrm{K} \rangle} \left(-1 + \sigma^{\mathrm{imp}\langle \mathrm{K} \rangle} \right)^{-1}} = 0 \tag{16.193}$$

$$-IMPORT^{\mathrm{ROW}\langle \mathrm{eu} \rangle} + p^{\mathrm{for}\langle \mathrm{eu} \rangle} ex^{\mathrm{rate}\langle \mathrm{eu} \rangle} \left(IMP^{\langle \mathrm{eu,A} \rangle} + IMP^{\langle \mathrm{eu,B} \rangle} + IMP^{\langle \mathrm{eu,C} \rangle} + IMP^{\langle \mathrm{eu,D} \rangle} + IMP^{\langle \mathrm{eu,E} \rangle} + IMP^{\langle \mathrm{eu,F} \rangle} + IMP^{\langle \mathrm{eu,G} \rangle} + IMP^{\langle \mathrm{eu,H} \rangle} + IMP^{\langle \mathrm{eu,I} \rangle} + IMP^{\langle \mathrm{eu,J} \rangle} + IMP^{\langle \mathrm{eu,K} \rangle} \right) = \tag{16.194}$$

$$-IMPORT^{\mathrm{ROW}\langle \mathrm{neu} \rangle} + p^{\mathrm{for}\langle \mathrm{neu} \rangle} ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \left(IMP^{\langle \mathrm{neu,A} \rangle} + IMP^{\langle \mathrm{neu,B} \rangle} + IMP^{\langle \mathrm{neu,C} \rangle} + IMP^{\langle \mathrm{neu,D} \rangle} + IMP^{\langle \mathrm{neu,E} \rangle} + IMP^{\langle \mathrm{neu,F} \rangle} + IMP^{\langle \mathrm{neu,G} \rangle} + IMP^{\langle \mathrm{neu,H} \rangle} + IMP^{\langle \mathrm{neu,I} \rangle} + IMP^{\langle \mathrm{neu,J} \rangle} + \tag{16.195}$$

$$-SAV^{\langle 01 \rangle} + sav^{\langle 01 \rangle} INC^{\langle 01 \rangle} = 0 \tag{16.196}$$

$$-SAV^{\langle 02 \rangle} + sav^{\langle 02 \rangle} INC^{\langle 02 \rangle} = 0 \tag{16.197}$$

$$-SAV^{\langle 03 \rangle} + sav^{\langle 03 \rangle} INC^{\langle 03 \rangle} = 0 \tag{16.198}$$

$$-SAV^{\langle 04 \rangle} + sav^{\langle 04 \rangle} INC^{\langle 04 \rangle} = 0 \tag{16.199}$$

$$-SAV^{\langle 05 \rangle} + sav^{\langle 05 \rangle} INC^{\langle 05 \rangle} = 0 \tag{16.200}$$

$$-SAV^{\langle 06 \rangle} + sav^{\langle 06 \rangle} INC^{\langle 06 \rangle} = 0 \tag{16.201}$$

$$-SAV^{\langle 07\rangle} + sav^{\langle 07\rangle} INC^{\langle 07\rangle} = 0 \tag{16.202}$$

$$-SAV^{\langle 08\rangle} + sav^{\langle 08\rangle} INC^{\langle 08\rangle} = 0 \tag{16.203}$$

$$-SAV^{\langle 09\rangle} + sav^{\langle 09\rangle} INC^{\langle 09\rangle} = 0 \tag{16.204}$$

$$-SAV^{\langle 10\rangle} + sav^{\langle 10\rangle} INC^{\langle 10\rangle} = 0 \tag{16.205}$$

$$-SUB^{\mathrm{s}\langle \mathrm{A}\rangle} + sub^{\mathrm{rate}\langle \mathrm{A}\rangle} \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,A}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,A}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,A}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,A}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,A}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,A}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,A}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,A}\rangle} + p^{\mathrm{int}\langle \mathrm{I}\rangle} X^{\langle \mathrm{I,A}\rangle} + p^{\mathrm{int}\langle \mathrm{J}\rangle} X^{\langle \mathrm{J,A} \tag{16.206}$$

$$-SUB^{\mathrm{s}\langle \mathrm{B}\rangle} + sub^{\mathrm{rate}\langle \mathrm{B}\rangle} \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,B}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,B}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,B}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,B}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,B}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,B}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,B}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,B}\rangle} + p^{\mathrm{int}\langle \mathrm{I}\rangle} X^{\langle \mathrm{I,B}\rangle} + p^{\mathrm{int}\langle \mathrm{J}\rangle} X^{\langle \mathrm{J,B}\rangle} \tag{16.207}$$

$$-SUB^{\mathrm{s}\langle \mathrm{C}\rangle} + sub^{\mathrm{rate}\langle \mathrm{C}\rangle} \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,C}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,C}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,C}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,C}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,C}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,C}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,C}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,C}\rangle} + p^{\mathrm{int}\langle \mathrm{I}\rangle} X^{\langle \mathrm{I,C}\rangle} + p^{\mathrm{int}\langle \mathrm{J}\rangle} X^{\langle \mathrm{J,C}\rangle} \tag{16.208}$$

$$-SUB^{\mathrm{s}\langle \mathrm{D}\rangle} + sub^{\mathrm{rate}\langle \mathrm{D}\rangle} \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,D}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,D}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,D}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,D}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,D}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,D}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,D}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,D}\rangle} + p^{\mathrm{int}\langle \mathrm{I}\rangle} X^{\langle \mathrm{I,D}\rangle} + p^{\mathrm{int}\langle \mathrm{J}\rangle} X^{\langle \mathrm{J,D} \tag{16.209}$$

$$-SUB^{\mathrm{s}\langle \mathrm{E}\rangle} + sub^{\mathrm{rate}\langle \mathrm{E}\rangle} \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,E}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,E}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,E}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,E}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,E}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,E}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,E}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,E}\rangle} + p^{\mathrm{int}\langle \mathrm{I}\rangle} X^{\langle \mathrm{I,E}\rangle} + p^{\mathrm{int}\langle \mathrm{J}\rangle} X^{\langle \mathrm{J,E}\rangle} \tag{16.210}$$

$$-SUB^{\mathrm{s}\langle \mathrm{F}\rangle} + sub^{\mathrm{rate}\langle \mathrm{F}\rangle} \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,F}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,F}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,F}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,F}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,F}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,F}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,F}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,F}\rangle} + p^{\mathrm{int}\langle \mathrm{I}\rangle} X^{\langle \mathrm{I,F}\rangle} + p^{\mathrm{int}\langle \mathrm{J}\rangle} X^{\langle \mathrm{J,F}\rangle} - \tag{16.211}$$

$$-SUB^{\mathrm{s}\langle \mathrm{G}\rangle} + sub^{\mathrm{rate}\langle \mathrm{G}\rangle} \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,G}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,G}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,G}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,G}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,G}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,G}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,G}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,G}\rangle} + p^{\mathrm{int}\langle \mathrm{I}\rangle} X^{\langle \mathrm{I,G}\rangle} + p^{\mathrm{int}\langle \mathrm{J}\rangle} X^{\langle \mathrm{J,G} \tag{16.212}$$

$$-SUB^{\mathrm{s}\langle \mathrm{H}\rangle} + sub^{\mathrm{rate}\langle \mathrm{H}\rangle} \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,H}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,H}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,H}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,H}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,H}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,H}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,H}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,H}\rangle} + p^{\mathrm{int}\langle \mathrm{I}\rangle} X^{\langle \mathrm{I,H}\rangle} + p^{\mathrm{int}\langle \mathrm{J}\rangle} X^{\langle \mathrm{J,H} \tag{16.213}$$

$$-SUB^{\mathrm{s}\langle \mathrm{I}\rangle}+sub^{\mathrm{rate}\langle \mathrm{I}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,I}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,I}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,I}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,I}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,I}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,I}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,I}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,I}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,I}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,I}\rangle}+p^{\mathrm{int}\langle \mathrm{I}} \tag{16.214}$$

$$-SUB^{\mathrm{s}\langle \mathrm{J}\rangle}+sub^{\mathrm{rate}\langle \mathrm{J}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,J}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,J}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,J}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,J}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,J}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,J}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,J}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,J}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,J}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,J}\rangle}+p^{\mathrm{i}} \tag{16.215}$$

$$-SUB^{\mathrm{s}\langle \mathrm{K}\rangle}+sub^{\mathrm{rate}\langle \mathrm{K}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,K}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,K}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,K}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,K}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,K}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,K}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,K}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,K}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,K}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,K}} \tag{16.216}$$

$$-SUB^{\mathrm{p}\langle \mathrm{A}\rangle}+sub^{\mathrm{p}\langle \mathrm{A}\rangle}ARM^{\langle \mathrm{A}\rangle}=0 \tag{16.217}$$

$$-SUB^{\mathrm{p}\langle \mathrm{B}\rangle}+sub^{\mathrm{p}\langle \mathrm{B}\rangle}ARM^{\langle \mathrm{B}\rangle}=0 \tag{16.218}$$

$$-SUB^{\mathrm{p}\langle \mathrm{C}\rangle}+sub^{\mathrm{p}\langle \mathrm{C}\rangle}ARM^{\langle \mathrm{C}\rangle}=0 \tag{16.219}$$

$$-SUB^{\mathrm{p}\langle \mathrm{D}\rangle}+sub^{\mathrm{p}\langle \mathrm{D}\rangle}ARM^{\langle \mathrm{D}\rangle}=0 \tag{16.220}$$

$$-SUB^{\mathrm{p}\langle \mathrm{E}\rangle}+sub^{\mathrm{p}\langle \mathrm{E}\rangle}ARM^{\langle \mathrm{E}\rangle}=0 \tag{16.221}$$

$$-SUB^{\mathrm{p}\langle \mathrm{F}\rangle}+sub^{\mathrm{p}\langle \mathrm{F}\rangle}ARM^{\langle \mathrm{F}\rangle}=0 \tag{16.222}$$

$$-SUB^{\mathrm{p}\langle \mathrm{G}\rangle}+sub^{\mathrm{p}\langle \mathrm{G}\rangle}ARM^{\langle \mathrm{G}\rangle}=0 \tag{16.223}$$

$$-SUB^{\mathrm{p}\langle \mathrm{H}\rangle}+sub^{\mathrm{p}\langle \mathrm{H}\rangle}ARM^{\langle \mathrm{H}\rangle}=0 \tag{16.224}$$

$$-SUB^{\mathrm{p}\langle \mathrm{I}\rangle}+sub^{\mathrm{p}\langle \mathrm{I}\rangle}ARM^{\langle \mathrm{I}\rangle}=0 \tag{16.225}$$

$$-SUB^{\mathrm{p}\langle \mathrm{J}\rangle}+sub^{\mathrm{p}\langle \mathrm{J}\rangle}ARM^{\langle \mathrm{J}\rangle}=0 \tag{16.226}$$

$$-SUB^{\mathrm{p}\langle \mathrm{K}\rangle}+sub^{\mathrm{p}\langle \mathrm{K}\rangle}ARM^{\langle \mathrm{K}\rangle}=0 \tag{16.227}$$

$$-TAX^{\mathrm{s}\langle \mathrm{A}\rangle}+tax^{\mathrm{rate}\langle \mathrm{A}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,A}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,A}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,A}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,A}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,A}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,A}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,A}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,A}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,A}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,A}} \tag{16.228}$$

$$-TAX^{\mathrm{s}\langle \mathrm{B}\rangle}+tax^{\mathrm{rate}\langle \mathrm{B}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,B}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,B}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,B}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,B}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,B}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,B}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,B}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,B}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,B}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,B}\rangle} \tag{16.229}$$

$$-TAX^{\mathrm{s}\langle \mathrm{C}\rangle}+tax^{\mathrm{rate}\langle \mathrm{C}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,C}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,C}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,C}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,C}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,C}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,C}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,C}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,C}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,C}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,C}\rangle} \tag{16.230}$$

$$-TAX^{\mathrm{s}\langle \mathrm{D}\rangle}+tax^{\mathrm{rate}\langle \mathrm{D}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,D}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,D}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,D}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,D}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,D}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,D}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,D}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,D}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,D}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,D}\rangle} \tag{16.231}$$

$$-TAX^{\mathrm{s}\langle \mathrm{E}\rangle}+tax^{\mathrm{rate}\langle \mathrm{E}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,E}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,E}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,E}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,E}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,E}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,E}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,E}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,E}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,E}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,E}\rangle} \tag{16.232}$$

$$-TAX^{\mathrm{s}\langle \mathrm{F}\rangle}+tax^{\mathrm{rate}\langle \mathrm{F}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,F}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,F}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,F}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,F}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,F}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,F}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,F}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,F}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,F}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,F}\rangle} \tag{16.233}$$

$$-TAX^{\mathrm{s}\langle \mathrm{G}\rangle}+tax^{\mathrm{rate}\langle \mathrm{G}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,G}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,G}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,G}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,G}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,G}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,G}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,G}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,G}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,G}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,G}\rangle} \tag{16.234}$$

$$-TAX^{\mathrm{s}\langle \mathrm{H}\rangle}+tax^{\mathrm{rate}\langle \mathrm{H}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,H}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,H}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,H}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,H}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,H}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,H}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,H}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,H}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,H}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,H}\rangle} \tag{16.235}$$

$$-TAX^{\mathrm{s}\langle \mathrm{I}\rangle}+tax^{\mathrm{rate}\langle \mathrm{I}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,I}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,I}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,I}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,I}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,I}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,I}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,I}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,I}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,I}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,I}\rangle} \tag{16.236}$$

$$-TAX^{\mathrm{s}\langle \mathrm{J}\rangle}+tax^{\mathrm{rate}\langle \mathrm{J}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,J}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,J}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,J}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,J}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,J}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,J}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,J}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,J}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,J}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,J}\rangle} \tag{16.237}$$

$$-TAX^{\mathrm{s}\langle \mathrm{K}\rangle}+tax^{\mathrm{rate}\langle \mathrm{K}\rangle}\left(p^{\mathrm{int}\langle \mathrm{A}\rangle}X^{\langle \mathrm{A,K}\rangle}+p^{\mathrm{int}\langle \mathrm{B}\rangle}X^{\langle \mathrm{B,K}\rangle}+p^{\mathrm{int}\langle \mathrm{C}\rangle}X^{\langle \mathrm{C,K}\rangle}+p^{\mathrm{int}\langle \mathrm{D}\rangle}X^{\langle \mathrm{D,K}\rangle}+p^{\mathrm{int}\langle \mathrm{E}\rangle}X^{\langle \mathrm{E,K}\rangle}+p^{\mathrm{int}\langle \mathrm{F}\rangle}X^{\langle \mathrm{F,K}\rangle}+p^{\mathrm{int}\langle \mathrm{G}\rangle}X^{\langle \mathrm{G,K}\rangle}+p^{\mathrm{int}\langle \mathrm{H}\rangle}X^{\langle \mathrm{H,K}\rangle}+p^{\mathrm{int}\langle \mathrm{I}\rangle}X^{\langle \mathrm{I,K}\rangle}+p^{\mathrm{int}\langle \mathrm{J}\rangle}X^{\langle \mathrm{J,K}\rangle}\right) \tag{16.238}$$

$$-THBANK^{\langle 01\rangle}+\alpha h^{\mathrm{b}\langle 01\rangle}INC^{\langle 01\rangle}=0 \tag{16.239}$$

$$-THBANK^{\langle 02\rangle}+\alpha h^{\mathrm{b}\langle 02\rangle}INC^{\langle 02\rangle}=0 \tag{16.240}$$

$$-THBANK^{\langle 03\rangle}+\alpha h^{\mathrm{b}\langle 03\rangle}INC^{\langle 03\rangle}=0 \tag{16.241}$$

$$-THBANK^{\langle 04\rangle}+\alpha h^{\mathrm{b}\langle 04\rangle}INC^{\langle 04\rangle}=0 \tag{16.242}$$

$$-THBANK^{\langle 05\rangle}+\alpha h^{\mathrm{b}\langle 05\rangle}INC^{\langle 05\rangle}=0 \tag{16.243}$$

$$-THBANK^{\langle 06\rangle}+\alpha h^{\mathrm{b}\langle 06\rangle}INC^{\langle 06\rangle}=0 \tag{16.244}$$

$$-THBANK^{\langle 07\rangle}+\alpha h^{\mathrm{b}\langle 07\rangle}INC^{\langle 07\rangle}=0 \tag{16.245}$$

$$-THBANK^{\langle 08\rangle}+\alpha h^{\mathrm{b}\langle 08\rangle}INC^{\langle 08\rangle}=0 \tag{16.246}$$

$$-THBANK^{\langle 09\rangle}+\alpha h^{\mathrm{b}\langle 09\rangle}INC^{\langle 09\rangle}=0 \tag{16.247}$$

$$-THBANK^{\langle 10\rangle}+\alpha h^{\mathrm{b}\langle 10\rangle}INC^{\langle 10\rangle}=0 \tag{16.248}$$

$$-TROWFIRM^{\langle \mathrm{eu}\rangle}+t^{\mathrm{rf}\langle \mathrm{eu}\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}=0 \tag{16.249}$$

$$-TROWFIRM^{\langle \mathrm{neu}\rangle}+t^{\mathrm{rf}\langle \mathrm{neu}\rangle}EXP^{\mathrm{ROW}\langle \mathrm{neu}\rangle}=0 \tag{16.250}$$

$$-TROWBANK^{\langle \mathrm{eu}\rangle}+t^{\mathrm{rb}\langle \mathrm{eu}\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}=0 \tag{16.251}$$

$$-TROWBANK^{\langle \mathrm{neu}\rangle}+t^{\mathrm{rb}\langle \mathrm{neu}\rangle}EXP^{\mathrm{ROW}\langle \mathrm{neu}\rangle}=0 \tag{16.252}$$

$$-TROWGOV^{\langle \mathrm{eu} \rangle} + t^{\mathrm{rg}\langle \mathrm{eu} \rangle} EXP^{\mathrm{ROW}\langle \mathrm{eu} \rangle} = 0 \tag{16.253}$$

$$-TROWGOV^{\langle \mathrm{neu} \rangle} + t^{\mathrm{rg}\langle \mathrm{neu} \rangle} EXP^{\mathrm{ROW}\langle \mathrm{neu} \rangle} = 0 \tag{16.254}$$

$$U^{\langle 01 \rangle} - \left(\alpha^{\mathrm{u}\langle 01 \rangle} DEM^{\langle 01 \rangle \omega^{\mathrm{u}\langle 01 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 01 \rangle}\right) LEIS^{\langle 01 \rangle \omega^{\mathrm{u}\langle 01 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 01 \rangle}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)^{-1}} = 0 \tag{16.255}$$

$$U^{\langle 02 \rangle} - \left(\alpha^{\mathrm{u}\langle 02 \rangle} DEM^{\langle 02 \rangle \omega^{\mathrm{u}\langle 02 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 02 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 02 \rangle}\right) LEIS^{\langle 02 \rangle \omega^{\mathrm{u}\langle 02 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 02 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 02 \rangle}\left(-1+\omega^{\mathrm{u}\langle 02 \rangle}\right)^{-1}} = 0 \tag{16.256}$$

$$U^{\langle 03 \rangle} - \left(\alpha^{\mathrm{u}\langle 03 \rangle} DEM^{\langle 03 \rangle \omega^{\mathrm{u}\langle 03 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 03 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 03 \rangle}\right) LEIS^{\langle 03 \rangle \omega^{\mathrm{u}\langle 03 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 03 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 03 \rangle}\left(-1+\omega^{\mathrm{u}\langle 03 \rangle}\right)^{-1}} = 0 \tag{16.257}$$

$$U^{\langle 04 \rangle} - \left(\alpha^{\mathrm{u}\langle 04 \rangle} DEM^{\langle 04 \rangle \omega^{\mathrm{u}\langle 04 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 04 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 04 \rangle}\right) LEIS^{\langle 04 \rangle \omega^{\mathrm{u}\langle 04 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 04 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 04 \rangle}\left(-1+\omega^{\mathrm{u}\langle 04 \rangle}\right)^{-1}} = 0 \tag{16.258}$$

$$U^{\langle 05 \rangle} - \left(\alpha^{\mathrm{u}\langle 05 \rangle} DEM^{\langle 05 \rangle \omega^{\mathrm{u}\langle 05 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 05 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 05 \rangle}\right) LEIS^{\langle 05 \rangle \omega^{\mathrm{u}\langle 05 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 05 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 05 \rangle}\left(-1+\omega^{\mathrm{u}\langle 05 \rangle}\right)^{-1}} = 0 \tag{16.259}$$

$$U^{\langle 06 \rangle} - \left(\alpha^{\mathrm{u}\langle 06 \rangle} DEM^{\langle 06 \rangle \omega^{\mathrm{u}\langle 06 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 06 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 06 \rangle}\right) LEIS^{\langle 06 \rangle \omega^{\mathrm{u}\langle 06 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 06 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 06 \rangle}\left(-1+\omega^{\mathrm{u}\langle 06 \rangle}\right)^{-1}} = 0 \tag{16.260}$$

$$U^{\langle 07 \rangle} - \left(\alpha^{\mathrm{u}\langle 07 \rangle} DEM^{\langle 07 \rangle \omega^{\mathrm{u}\langle 07 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 07 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 07 \rangle}\right) LEIS^{\langle 07 \rangle \omega^{\mathrm{u}\langle 07 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 07 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 07 \rangle}\left(-1+\omega^{\mathrm{u}\langle 07 \rangle}\right)^{-1}} = 0 \tag{16.261}$$

$$U^{\langle 08 \rangle} - \left(\alpha^{\mathrm{u}\langle 08 \rangle} DEM^{\langle 08 \rangle \omega^{\mathrm{u}\langle 08 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 08 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 08 \rangle}\right) LEIS^{\langle 08 \rangle \omega^{\mathrm{u}\langle 08 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 08 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 08 \rangle}\left(-1+\omega^{\mathrm{u}\langle 08 \rangle}\right)^{-1}} = 0 \tag{16.262}$$

$$U^{\langle 09 \rangle} - \left(\alpha^{\mathrm{u}\langle 09 \rangle} DEM^{\langle 09 \rangle \omega^{\mathrm{u}\langle 09 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 09 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 09 \rangle}\right) LEIS^{\langle 09 \rangle \omega^{\mathrm{u}\langle 09 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 09 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 09 \rangle}\left(-1+\omega^{\mathrm{u}\langle 09 \rangle}\right)^{-1}} = 0 \tag{16.263}$$

$$U^{\langle 10 \rangle} - \left(\alpha^{\mathrm{u}\langle 10 \rangle} DEM^{\langle 10 \rangle \omega^{\mathrm{u}\langle 10 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 10 \rangle}\right)} + \left(1-\alpha^{\mathrm{u}\langle 10 \rangle}\right) LEIS^{\langle 10 \rangle \omega^{\mathrm{u}\langle 10 \rangle - 1}\left(-1+\omega^{\mathrm{u}\langle 10 \rangle}\right)} \right)^{\omega^{\mathrm{u}\langle 10 \rangle}\left(-1+\omega^{\mathrm{u}\langle 10 \rangle}\right)^{-1}} = 0 \tag{16.264}$$

$$-VAT^{\langle \mathrm{A} \rangle} + vat^{\langle \mathrm{A} \rangle} p^{\mathrm{market}\langle \mathrm{A} \rangle} \left(1+excise^{\langle \mathrm{A} \rangle}\right) \left(D^{\mathrm{GOV}\langle \mathrm{A} \rangle} + INV^{\langle \mathrm{A} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{A},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{A},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{A},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{A},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{A},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{A},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{A} \rangle}$$
(16.265)

$$-VAT^{\langle \mathrm{B} \rangle} + vat^{\langle \mathrm{B} \rangle} p^{\mathrm{market}\,\langle \mathrm{B} \rangle} \left(1 + excise^{\langle \mathrm{B} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{B} \rangle} + INV^{\langle \mathrm{B} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{B},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{B},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{B},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{B},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{B},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{B},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{B},} \tag{16.266}$$

$$-VAT^{\langle \mathrm{C} \rangle} + vat^{\langle \mathrm{C} \rangle} p^{\mathrm{market}\,\langle \mathrm{C} \rangle} \left(1 + excise^{\langle \mathrm{C} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{C} \rangle} + INV^{\langle \mathrm{C} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{C},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{C},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{C},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{C},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{C},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{C},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{C} \rangle} \tag{16.267}$$

$$-VAT^{\langle \mathrm{D} \rangle} + vat^{\langle \mathrm{D} \rangle} p^{\mathrm{market}\,\langle \mathrm{D} \rangle} \left(1 + excise^{\langle \mathrm{D} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{D} \rangle} + INV^{\langle \mathrm{D} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{D},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{D},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{D},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{D},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{D},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{D},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{D} \rangle} \tag{16.268}$$

$$-VAT^{\langle \mathrm{E} \rangle} + vat^{\langle \mathrm{E} \rangle} p^{\mathrm{market}\,\langle \mathrm{E} \rangle} \left(1 + excise^{\langle \mathrm{E} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{E} \rangle} + INV^{\langle \mathrm{E} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{E},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{E},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{E},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{E},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{E},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{E},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{E},0} \tag{16.269}$$

$$-VAT^{\langle \mathrm{F} \rangle} + vat^{\langle \mathrm{F} \rangle} p^{\mathrm{market}\,\langle \mathrm{F} \rangle} \left(1 + excise^{\langle \mathrm{F} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{F} \rangle} + INV^{\langle \mathrm{F} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{F},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{F},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{F},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{F},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{F},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{F},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{F},0} \tag{16.270}$$

$$-VAT^{\langle \mathrm{G} \rangle} + vat^{\langle \mathrm{G} \rangle} p^{\mathrm{market}\,\langle \mathrm{G} \rangle} \left(1 + excise^{\langle \mathrm{G} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{G} \rangle} + INV^{\langle \mathrm{G} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{G},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{G},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{G},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{G},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{G},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{G},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle} \tag{16.271}$$

$$-VAT^{\langle \mathrm{H} \rangle} + vat^{\langle \mathrm{H} \rangle} p^{\mathrm{market}\,\langle \mathrm{H} \rangle} \left(1 + excise^{\langle \mathrm{H} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{H} \rangle} + INV^{\langle \mathrm{H} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{H},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{H},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{H},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{H},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{H},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{H},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{H}} \tag{16.272}$$

$$-VAT^{\langle \mathrm{I} \rangle} + vat^{\langle \mathrm{I} \rangle} p^{\mathrm{market}\,\langle \mathrm{I} \rangle} \left(1 + excise^{\langle \mathrm{I} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{I} \rangle} + INV^{\langle \mathrm{I} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{I},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{I},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{I},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{I},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{I},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{I},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{I},07 \rangle} + scal \tag{16.273}$$

$$-VAT^{\langle \mathrm{J} \rangle} + vat^{\langle \mathrm{J} \rangle} p^{\mathrm{market}\,\langle \mathrm{J} \rangle} \left(1 + excise^{\langle \mathrm{J} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{J} \rangle} + INV^{\langle \mathrm{J} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{J},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{J},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{J},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{J},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{J},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{J},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle \mathrm{J},07 \rangle} + \tag{16.274}$$

$$-VAT^{\langle \mathrm{K} \rangle} + vat^{\langle \mathrm{K} \rangle} p^{\mathrm{market}\,\langle \mathrm{K} \rangle} \left(1 + excise^{\langle \mathrm{K} \rangle}\right) \Big(D^{\mathrm{GOV}\,\langle \mathrm{K} \rangle} + INV^{\langle \mathrm{K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{K},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{K},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{K},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{K},04 \rangle} + scale^{\langle 05 \rangle} D^{\langle \mathrm{K},05 \rangle} + scale^{\langle 06 \rangle} D^{\langle \mathrm{K},06 \rangle} + scale^{\langle 07 \rangle} D^{\langle} \tag{16.275}$$

$$-X^{\langle \mathrm{A,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.276}$$

$$-X^{\langle \mathrm{A,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.277}$$

$$-X^{\langle \mathrm{A,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.278}$$

$$-X^{\langle \mathrm{A,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.279}$$

$$-X^{\langle \mathrm{A,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.280}$$

$$-X^{\langle \mathrm{A,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.281}$$

$$-X^{\langle \mathrm{A,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.282}$$

$$-X^{\langle \mathrm{A,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.283}$$

$$-X^{\langle \mathrm{A,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.284}$$

$$-X^{\langle \mathrm{A,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.285}$$

$$-X^{\langle \mathrm{A,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{A,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.286}$$

$$-X^{\langle \mathrm{B,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.287}$$

$$-X^{\langle \mathrm{B,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.288}$$

$$-X^{\langle \mathrm{B,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.289}$$

$$-X^{\langle \mathrm{B,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.290}$$

$$-X^{\langle \mathrm{B,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.291}$$

$$-X^{\langle \mathrm{B,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.292}$$

$$-X^{\langle \mathrm{B,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.293}$$

$$-X^{\langle \mathrm{B,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.294}$$

$$-X^{\langle \mathrm{B,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.295}$$

$$-X^{\langle \mathrm{B,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.296}$$

$$-X^{\langle \mathrm{B,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{B,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.297}$$

$$-X^{\langle \mathrm{C,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.298}$$

$$-X^{\langle \mathrm{C,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.299}$$

$$-X^{\langle \mathrm{C,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.300}$$

$$-X^{\langle \mathrm{C,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.301}$$

$$-X^{\langle \mathrm{C,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.302}$$

$$-X^{\langle \mathrm{C,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.303}$$

$$-X^{\langle \mathrm{C,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.304}$$

$$-X^{\langle \mathrm{C,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.305}$$

$$-X^{\langle \mathrm{C,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.306}$$

$$-X^{\langle \mathrm{C,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.307}$$

$$-X^{\langle \mathrm{C,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{C,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.308}$$

$$-X^{\langle \mathrm{D,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.309}$$

$$-X^{\langle \mathrm{D,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.310}$$

$$-X^{\langle \mathrm{D,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.311}$$

$$-X^{\langle \mathrm{D,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.312}$$

$$-X^{\langle \mathrm{D,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.313}$$

$$-X^{\langle \mathrm{D,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.314}$$

$$-X^{\langle \mathrm{D,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.315}$$

$$-X^{\langle \mathrm{D,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.316}$$

$$-X^{\langle \mathrm{D,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.317}$$

$$-X^{\langle \mathrm{D,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.318}$$

$$-X^{\langle \mathrm{D,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{D,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.319}$$

$$-X^{\langle \mathrm{E,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.320}$$

$$-X^{\langle \mathrm{E,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.321}$$

$$-X^{\langle \mathrm{E,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.322}$$

$$-X^{\langle \mathrm{E,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.323}$$

$$-X^{\langle \mathrm{E,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.324}$$

$$-X^{\langle \mathrm{E,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.325}$$

$$-X^{\langle \mathrm{E,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.326}$$

$$-X^{\langle \mathrm{E,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.327}$$

$$-X^{\langle \mathrm{E,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.328}$$

$$-X^{\langle \mathrm{E,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.329}$$

$$-X^{\langle \mathrm{E,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{E,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.330}$$

$$-X^{\langle \mathrm{F,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.331}$$

$$-X^{\langle \mathrm{F,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.332}$$

$$-X^{\langle \mathrm{F,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.333}$$

$$-X^{\langle \mathrm{F,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.334}$$

$$-X^{\langle \mathrm{F,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.335}$$

$$-X^{\langle \mathrm{F,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.336}$$

$$-X^{\langle \mathrm{F,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.337}$$

$$-X^{\langle \mathrm{F,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.338}$$

$$-X^{\langle \mathrm{F,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.339}$$

$$-X^{\langle \mathrm{F,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.340}$$

$$-X^{\langle \mathrm{F,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{F,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.341}$$

$$-X^{\langle \mathrm{G,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.342}$$

$$-X^{\langle \mathrm{G,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.343}$$

$$-X^{\langle \mathrm{G,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.344}$$

$$-X^{\langle \mathrm{G,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.345}$$

$$-X^{\langle \mathrm{G,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.346}$$

$$-X^{\langle \mathrm{G,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.347}$$

$$-X^{\langle \mathrm{G,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.348}$$

$$-X^{\langle \mathrm{G,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.349}$$

$$-X^{\langle \mathrm{G,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.350}$$

$$-X^{\langle \mathrm{G,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.351}$$

$$-X^{\langle \mathrm{G,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{G,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.352}$$

$$-X^{\langle \mathrm{H,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.353}$$

$$-X^{\langle \mathrm{H,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.354}$$

$$-X^{\langle \mathrm{H,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.355}$$

$$-X^{\langle \mathrm{H,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.356}$$

$$-X^{\langle \mathrm{H,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.357}$$

$$-X^{\langle \mathrm{H,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.358}$$

$$-X^{\langle \mathrm{H,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.359}$$

$$-X^{\langle \mathrm{H,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.360}$$

$$-X^{\langle \mathrm{H,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.361}$$

$$-X^{\langle \mathrm{H,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.362}$$

$$-X^{\langle \mathrm{H,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{H,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.363}$$

$$-X^{\langle \mathrm{I,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.364}$$

$$-X^{\langle \mathrm{I,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.365}$$

$$-X^{\langle \mathrm{I,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.366}$$

$$-X^{\langle \mathrm{I,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.367}$$

$$-X^{\langle \mathrm{I,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.368}$$

$$-X^{\langle \mathrm{I,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.369}$$

$$-X^{\langle \mathrm{I,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.370}$$

$$-X^{\langle \mathrm{I,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.371}$$

$$-X^{\langle \mathrm{I,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.372}$$

$$-X^{\langle \mathrm{I,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.373}$$

$$-X^{\langle \mathrm{I,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{I,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.374}$$

$$-X^{\langle \mathrm{J,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.375}$$

$$-X^{\langle \mathrm{J,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.376}$$

$$-X^{\langle \mathrm{J,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.377}$$

$$-X^{\langle \mathrm{J,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.378}$$

$$-X^{\langle \mathrm{J,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.379}$$

$$-X^{\langle \mathrm{J,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.380}$$

$$-X^{\langle \mathrm{J,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.381}$$

$$-X^{\langle \mathrm{J,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.382}$$

$$-X^{\langle \mathrm{J,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.383}$$

$$-X^{\langle \mathrm{J,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.384}$$

$$-X^{\langle \mathrm{J,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{J,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.385}$$

$$-X^{\langle \mathrm{K,A} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,A} \rangle} Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.386}$$

$$-X^{\langle \mathrm{K,B} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,B} \rangle} Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.387}$$

$$-X^{\langle \mathrm{K,C} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,C} \rangle} Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.388}$$

$$-X^{\langle \mathrm{K,D} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,D} \rangle} Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.389}$$

$$-X^{\langle \mathrm{K,E} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,E} \rangle} Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.390}$$

$$-X^{\langle \mathrm{K,F} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,F} \rangle} Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.391}$$

$$-X^{\langle \mathrm{K,G} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,G} \rangle} Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.392}$$

$$-X^{\langle \mathrm{K,H} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,H} \rangle} Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.393}$$

$$-X^{\langle \mathrm{K,I} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,I} \rangle} Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.394}$$

$$-X^{\langle \mathrm{K,J} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,J} \rangle} Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.395}$$

$$-X^{\langle \mathrm{K,K} \rangle} + \beta^{\mathrm{x}\langle \mathrm{K,K} \rangle} Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.396}$$

$$-Y^{\langle \mathrm{A} \rangle} + Y^{\mathrm{VA}\langle \mathrm{A} \rangle} = 0 \tag{16.397}$$

$$-Y^{\langle \mathrm{A} \rangle} + \theta^{\mathrm{y}\langle \mathrm{A} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{A} \rangle} Y^{\mathrm{HOME}\langle \mathrm{A} \rangle {\sigma^{\mathrm{f^{prod}}\langle \mathrm{A} \rangle}}^{-1} \left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{A} \rangle}\right)} + \alpha^{\mathrm{prod^e}\langle \mathrm{A} \rangle} EXPORT^{\langle \mathrm{A} \rangle {\sigma^{\mathrm{f^{prod}}\langle \mathrm{A} \rangle}}^{-1} \left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{A} \rangle}\right)} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{A} \rangle} \left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{A} \rangle}\right)^{-1}} = 0 \tag{16.398}$$

$$-Y^{\langle \mathrm{B} \rangle} + Y^{\mathrm{VA}\langle \mathrm{B} \rangle} = 0 \tag{16.399}$$

$$-Y^{\langle \mathrm{B} \rangle} + \theta^{\mathrm{y}\langle \mathrm{B} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{B} \rangle} Y^{\mathrm{HOME}\langle \mathrm{B} \rangle {\sigma^{\mathrm{f^{prod}}\langle \mathrm{B} \rangle}}^{-1} \left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{B} \rangle}\right)} + \alpha^{\mathrm{prod^e}\langle \mathrm{B} \rangle} EXPORT^{\langle \mathrm{B} \rangle {\sigma^{\mathrm{f^{prod}}\langle \mathrm{B} \rangle}}^{-1} \left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{B} \rangle}\right)} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{B} \rangle} \left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{B} \rangle}\right)^{-1}} = 0 \tag{16.400}$$

$$-Y^{\langle \mathrm{C} \rangle} + Y^{\mathrm{VA}\langle \mathrm{C} \rangle} = 0 \tag{16.401}$$

$$-Y^{\langle \mathrm{C} \rangle} + \theta^{\mathrm{y}\langle \mathrm{C} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{C} \rangle} Y^{\mathrm{HOME}\langle \mathrm{C} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{C} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{C} \rangle}\right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{C} \rangle} EXPORT^{\langle \mathrm{C} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{C} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{C} \rangle}\right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{C} \rangle}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{C} \rangle}\right)^{-1}} = 0 \tag{16.402}$$

$$-Y^{\langle \mathrm{D} \rangle} + Y^{\mathrm{VA}\langle \mathrm{D} \rangle} = 0 \tag{16.403}$$

$$-Y^{\langle \mathrm{D} \rangle} + \theta^{\mathrm{y}\langle \mathrm{D} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{D} \rangle} Y^{\mathrm{HOME}\langle \mathrm{D} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{D} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{D} \rangle}\right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{D} \rangle} EXPORT^{\langle \mathrm{D} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{D} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{D} \rangle}\right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{D} \rangle}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{D} \rangle}\right)^{-1}} = 0 \tag{16.404}$$

$$-Y^{\langle \mathrm{E} \rangle} + Y^{\mathrm{VA}\langle \mathrm{E} \rangle} = 0 \tag{16.405}$$

$$-Y^{\langle \mathrm{E} \rangle} + \theta^{\mathrm{y}\langle \mathrm{E} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{E} \rangle} Y^{\mathrm{HOME}\langle \mathrm{E} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{E} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{E} \rangle}\right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{E} \rangle} EXPORT^{\langle \mathrm{E} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{E} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{E} \rangle}\right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{E} \rangle}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{E} \rangle}\right)^{-1}} = 0 \tag{16.406}$$

$$-Y^{\langle \mathrm{F} \rangle} + Y^{\mathrm{VA}\langle \mathrm{F} \rangle} = 0 \tag{16.407}$$

$$-Y^{\langle \mathrm{F} \rangle} + \theta^{\mathrm{y}\langle \mathrm{F} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{F} \rangle} Y^{\mathrm{HOME}\langle \mathrm{F} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{F} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{F} \rangle}\right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{F} \rangle} EXPORT^{\langle \mathrm{F} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{F} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{F} \rangle}\right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{F} \rangle}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{F} \rangle}\right)^{-1}} = 0 \tag{16.408}$$

$$-Y^{\langle \mathrm{G} \rangle} + Y^{\mathrm{VA}\langle \mathrm{G} \rangle} = 0 \tag{16.409}$$

$$-Y^{\langle \mathrm{G} \rangle} + \theta^{\mathrm{y}\langle \mathrm{G} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{G} \rangle} Y^{\mathrm{HOME}\langle \mathrm{G} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{G} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{G} \rangle}\right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{G} \rangle} EXPORT^{\langle \mathrm{G} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{G} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{G} \rangle}\right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{G} \rangle}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{G} \rangle}\right)^{-1}} = 0 \tag{16.410}$$

$$-Y^{\langle \mathrm{H} \rangle} + Y^{\mathrm{VA}\langle \mathrm{H} \rangle} = 0 \tag{16.411}$$

$$-Y^{\langle \mathrm{H} \rangle} + \theta^{\mathrm{y}\langle \mathrm{H} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{H} \rangle} Y^{\mathrm{HOME}\langle \mathrm{H} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{H} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{H} \rangle}\right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{H} \rangle} EXPORT^{\langle \mathrm{H} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{H} \rangle - 1}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{H} \rangle}\right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{H} \rangle}\left(1+\sigma^{\mathrm{f^{prod}}\langle \mathrm{H} \rangle}\right)^{-1}} = 0 \tag{16.412}$$

$$-Y^{\langle \mathrm{I} \rangle} + Y^{\mathrm{VA}\langle \mathrm{I} \rangle} = 0 \tag{16.413}$$

$$-Y^{\langle \mathrm{I} \rangle} + \theta^{\mathrm{y}\langle \mathrm{I} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{I} \rangle} Y^{\mathrm{HOME}\langle \mathrm{I} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{I} \rangle} - 1 \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{I} \rangle} \right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{I} \rangle} EXPORT^{\langle \mathrm{I} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{I} \rangle} - 1 \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{I} \rangle} \right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{I} \rangle} \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{I} \rangle} \right)^{-1}} = 0 \tag{16.414}$$

$$-Y^{\langle \mathrm{J} \rangle} + Y^{\mathrm{VA}\langle \mathrm{J} \rangle} = 0 \tag{16.415}$$

$$-Y^{\langle \mathrm{J} \rangle} + \theta^{\mathrm{y}\langle \mathrm{J} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{J} \rangle} Y^{\mathrm{HOME}\langle \mathrm{J} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{J} \rangle} - 1 \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{J} \rangle} \right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{J} \rangle} EXPORT^{\langle \mathrm{J} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{J} \rangle} - 1 \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{J} \rangle} \right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{J} \rangle} \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{J} \rangle} \right)^{-1}} = 0 \tag{16.416}$$

$$-Y^{\langle \mathrm{K} \rangle} + Y^{\mathrm{VA}\langle \mathrm{K} \rangle} = 0 \tag{16.417}$$

$$-Y^{\langle \mathrm{K} \rangle} + \theta^{\mathrm{y}\langle \mathrm{K} \rangle} \left(\alpha^{\mathrm{prod^h}\langle \mathrm{K} \rangle} Y^{\mathrm{HOME}\langle \mathrm{K} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{K} \rangle} - 1 \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{K} \rangle} \right)}} + \alpha^{\mathrm{prod^e}\langle \mathrm{K} \rangle} EXPORT^{\langle \mathrm{K} \rangle^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{K} \rangle} - 1 \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{K} \rangle} \right)}} \right)^{\sigma^{\mathrm{f^{prod}}\langle \mathrm{K} \rangle} \left(1 + \sigma^{\mathrm{f^{prod}}\langle \mathrm{K} \rangle} \right)^{-1}} = 0 \tag{16.418}$$

$$-Y^{\mathrm{VA}\langle \mathrm{A} \rangle} + Y^{\mathrm{INT}\langle \mathrm{A} \rangle} = 0 \tag{16.419}$$

$$-Y^{\mathrm{VA}\langle \mathrm{A} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{A} \rangle} K^{\langle \mathrm{A} \rangle^{\beta^{\mathrm{k}\langle \mathrm{A} \rangle}}} L^{\langle \mathrm{A} \rangle^{\beta^{\mathrm{l}\langle \mathrm{A} \rangle}}} = 0 \tag{16.420}$$

$$-Y^{\mathrm{VA}\langle \mathrm{B} \rangle} + Y^{\mathrm{INT}\langle \mathrm{B} \rangle} = 0 \tag{16.421}$$

$$-Y^{\mathrm{VA}\langle \mathrm{B} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{B} \rangle} K^{\langle \mathrm{B} \rangle^{\beta^{\mathrm{k}\langle \mathrm{B} \rangle}}} L^{\langle \mathrm{B} \rangle^{\beta^{\mathrm{l}\langle \mathrm{B} \rangle}}} = 0 \tag{16.422}$$

$$-Y^{\mathrm{VA}\langle \mathrm{C} \rangle} + Y^{\mathrm{INT}\langle \mathrm{C} \rangle} = 0 \tag{16.423}$$

$$-Y^{\mathrm{VA}\langle \mathrm{C} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{C} \rangle} K^{\langle \mathrm{C} \rangle^{\beta^{\mathrm{k}\langle \mathrm{C} \rangle}}} L^{\langle \mathrm{C} \rangle^{\beta^{\mathrm{l}\langle \mathrm{C} \rangle}}} = 0 \tag{16.424}$$

$$-Y^{\mathrm{VA}\langle \mathrm{D} \rangle} + Y^{\mathrm{INT}\langle \mathrm{D} \rangle} = 0 \tag{16.425}$$

$$-Y^{\mathrm{VA}\langle \mathrm{D} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{D} \rangle} K^{\langle \mathrm{D} \rangle^{\beta^{\mathrm{k}\langle \mathrm{D} \rangle}}} L^{\langle \mathrm{D} \rangle^{\beta^{\mathrm{l}\langle \mathrm{D} \rangle}}} = 0 \tag{16.426}$$

$$-Y^{\mathrm{VA}\langle \mathrm{E} \rangle} + Y^{\mathrm{INT}\langle \mathrm{E} \rangle} = 0 \tag{16.427}$$

$$-Y^{\mathrm{VA}\langle \mathrm{E} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{E} \rangle} {K^{\langle \mathrm{E} \rangle}}^{\beta^{\mathrm{k}\langle \mathrm{E} \rangle}} {L^{\langle \mathrm{E} \rangle}}^{\beta^{\mathrm{l}\langle \mathrm{E} \rangle}} = 0 \tag{16.428}$$

$$-Y^{\mathrm{VA}\langle \mathrm{F} \rangle} + Y^{\mathrm{INT}\langle \mathrm{F} \rangle} = 0 \tag{16.429}$$

$$-Y^{\mathrm{VA}\langle \mathrm{F} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{F} \rangle} {K^{\langle \mathrm{F} \rangle}}^{\beta^{\mathrm{k}\langle \mathrm{F} \rangle}} {L^{\langle \mathrm{F} \rangle}}^{\beta^{\mathrm{l}\langle \mathrm{F} \rangle}} = 0 \tag{16.430}$$

$$-Y^{\mathrm{VA}\langle \mathrm{G} \rangle} + Y^{\mathrm{INT}\langle \mathrm{G} \rangle} = 0 \tag{16.431}$$

$$-Y^{\mathrm{VA}\langle \mathrm{G} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{G} \rangle} {K^{\langle \mathrm{G} \rangle}}^{\beta^{\mathrm{k}\langle \mathrm{G} \rangle}} {L^{\langle \mathrm{G} \rangle}}^{\beta^{\mathrm{l}\langle \mathrm{G} \rangle}} = 0 \tag{16.432}$$

$$-Y^{\mathrm{VA}\langle \mathrm{H} \rangle} + Y^{\mathrm{INT}\langle \mathrm{H} \rangle} = 0 \tag{16.433}$$

$$-Y^{\mathrm{VA}\langle \mathrm{H} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{H} \rangle} {K^{\langle \mathrm{H} \rangle}}^{\beta^{\mathrm{k}\langle \mathrm{H} \rangle}} {L^{\langle \mathrm{H} \rangle}}^{\beta^{\mathrm{l}\langle \mathrm{H} \rangle}} = 0 \tag{16.434}$$

$$-Y^{\mathrm{VA}\langle \mathrm{I} \rangle} + Y^{\mathrm{INT}\langle \mathrm{I} \rangle} = 0 \tag{16.435}$$

$$-Y^{\mathrm{VA}\langle \mathrm{I} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{I} \rangle} {K^{\langle \mathrm{I} \rangle}}^{\beta^{\mathrm{k}\langle \mathrm{I} \rangle}} {L^{\langle \mathrm{I} \rangle}}^{\beta^{\mathrm{l}\langle \mathrm{I} \rangle}} = 0 \tag{16.436}$$

$$-Y^{\mathrm{VA}\langle \mathrm{J} \rangle} + Y^{\mathrm{INT}\langle \mathrm{J} \rangle} = 0 \tag{16.437}$$

$$-Y^{\mathrm{VA}\langle \mathrm{J} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{J} \rangle} {K^{\langle \mathrm{J} \rangle}}^{\beta^{\mathrm{k}\langle \mathrm{J} \rangle}} {L^{\langle \mathrm{J} \rangle}}^{\beta^{\mathrm{l}\langle \mathrm{J} \rangle}} = 0 \tag{16.438}$$

$$-Y^{\mathrm{VA}\langle \mathrm{K} \rangle} + Y^{\mathrm{INT}\langle \mathrm{K} \rangle} = 0 \tag{16.439}$$

$$-Y^{\mathrm{VA}\langle \mathrm{K} \rangle} + \gamma^{\mathrm{yva}\langle \mathrm{K} \rangle} {K^{\langle \mathrm{K} \rangle}}^{\beta^{\mathrm{k}\langle \mathrm{K} \rangle}} {L^{\langle \mathrm{K} \rangle}}^{\beta^{\mathrm{l}\langle \mathrm{K} \rangle}} = 0 \tag{16.440}$$

$$k^{\mathrm{total}^{\mathrm{data}}} o\!u\!x^{\langle 01 \rangle} - s\!c\!a\!l\!e^{\langle 01 \rangle} K^{\langle 01 \rangle} = 0 \tag{16.441}$$

$$k^{\mathrm{total}^{\mathrm{data}}} o\!u\!x^{\langle 02 \rangle} - s\!c\!a\!l\!e^{\langle 02 \rangle} K^{\langle 02 \rangle} = 0 \tag{16.442}$$

$$k^{\mathrm{total}^{\mathrm{data}}} ouc^{\langle 03 \rangle} - scale^{\langle 03 \rangle} K^{\langle 03 \rangle} = 0 \tag{16.443}$$

$$k^{\mathrm{total}^{\mathrm{data}}} ouc^{\langle 04 \rangle} - scale^{\langle 04 \rangle} K^{\langle 04 \rangle} = 0 \tag{16.444}$$

$$k^{\mathrm{total}^{\mathrm{data}}} ouc^{\langle 05 \rangle} - scale^{\langle 05 \rangle} K^{\langle 05 \rangle} = 0 \tag{16.445}$$

$$k^{\mathrm{total}^{\mathrm{data}}} ouc^{\langle 06 \rangle} - scale^{\langle 06 \rangle} K^{\langle 06 \rangle} = 0 \tag{16.446}$$

$$k^{\mathrm{total}^{\mathrm{data}}} ouc^{\langle 07 \rangle} - scale^{\langle 07 \rangle} K^{\langle 07 \rangle} = 0 \tag{16.447}$$

$$k^{\mathrm{total}^{\mathrm{data}}} ouc^{\langle 08 \rangle} - scale^{\langle 08 \rangle} K^{\langle 08 \rangle} = 0 \tag{16.448}$$

$$k^{\mathrm{total}^{\mathrm{data}}} ouc^{\langle 09 \rangle} - scale^{\langle 09 \rangle} K^{\langle 09 \rangle} = 0 \tag{16.449}$$

$$k^{\mathrm{total}^{\mathrm{data}}} ouc^{\langle 10 \rangle} - scale^{\langle 10 \rangle} K^{\langle 10 \rangle} = 0 \tag{16.450}$$

$$inv^{\langle \mathrm{A} \rangle} INV - p^{\mathrm{cons}\,\langle \mathrm{A} \rangle} INV^{\langle \mathrm{A} \rangle} = 0 \tag{16.451}$$

$$inv^{\langle \mathrm{B} \rangle} INV - p^{\mathrm{cons}\,\langle \mathrm{B} \rangle} INV^{\langle \mathrm{B} \rangle} = 0 \tag{16.452}$$

$$inv^{\langle \mathrm{C} \rangle} INV - p^{\mathrm{cons}\,\langle \mathrm{C} \rangle} INV^{\langle \mathrm{C} \rangle} = 0 \tag{16.453}$$

$$inv^{\langle \mathrm{D} \rangle} INV - p^{\mathrm{cons}\,\langle \mathrm{D} \rangle} INV^{\langle \mathrm{D} \rangle} = 0 \tag{16.454}$$

$$inv^{\langle \mathrm{E} \rangle} INV - p^{\mathrm{cons}\,\langle \mathrm{E} \rangle} INV^{\langle \mathrm{E} \rangle} = 0 \tag{16.455}$$

$$inv^{\langle \mathrm{F} \rangle} INV - p^{\mathrm{cons}\,\langle \mathrm{F} \rangle} INV^{\langle \mathrm{F} \rangle} = 0 \tag{16.456}$$

$$inv^{\langle \mathrm{G} \rangle} INV - p^{\mathrm{cons}\,\langle \mathrm{G} \rangle} INV^{\langle \mathrm{G} \rangle} = 0 \tag{16.457}$$

$$inv^{\langle \mathrm{H} \rangle} INV - p^{\mathrm{cons}\,\langle \mathrm{H} \rangle} INV^{\langle \mathrm{H} \rangle} = 0 \tag{16.458}$$

$$inv^{\langle \mathrm{I} \rangle} INV - p^{\mathrm{cons}\langle \mathrm{I} \rangle} INV^{\langle \mathrm{I} \rangle} = 0 \tag{16.459}$$

$$inv^{\langle \mathrm{J} \rangle} INV - p^{\mathrm{cons}\langle \mathrm{J} \rangle} INV^{\langle \mathrm{J} \rangle} = 0 \tag{16.460}$$

$$inv^{\langle \mathrm{K} \rangle} INV - p^{\mathrm{cons}\langle \mathrm{K} \rangle} INV^{\langle \mathrm{K} \rangle} = 0 \tag{16.461}$$

$$owf^{\langle 01 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 01 \rangle} TFIRMH^{\langle 01 \rangle} = 0 \tag{16.462}$$

$$owf^{\langle 02 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 02 \rangle} TFIRMH^{\langle 02 \rangle} = 0 \tag{16.463}$$

$$owf^{\langle 03 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 03 \rangle} TFIRMH^{\langle 03 \rangle} = 0 \tag{16.464}$$

$$owf^{\langle 04 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 04 \rangle} TFIRMH^{\langle 04 \rangle} = 0 \tag{16.465}$$

$$owf^{\langle 05 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 05 \rangle} TFIRMH^{\langle 05 \rangle} = 0 \tag{16.466}$$

$$owf^{\langle 06 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 06 \rangle} TFIRMH^{\langle 06 \rangle} = 0 \tag{16.467}$$

$$owf^{\langle 07 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 07 \rangle} TFIRMH^{\langle 07 \rangle} = 0 \tag{16.468}$$

$$owf^{\langle 08 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 08 \rangle} TFIRMH^{\langle 08 \rangle} = 0 \tag{16.469}$$

$$owf^{\langle 09 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 09 \rangle} TFIRMH^{\langle 09 \rangle} = 0 \tag{16.470}$$

$$owf^{\langle 10 \rangle} INC^{\mathrm{FIRM}} - scale^{\langle 10 \rangle} TFIRMH^{\langle 10 \rangle} = 0 \tag{16.471}$$

$$owf^{\langle \mathrm{eu} \rangle} INC^{\mathrm{FIRM}} - ex^{\mathrm{rate}\langle \mathrm{eu} \rangle} TFIRMROW^{\langle \mathrm{eu} \rangle} = 0 \tag{16.472}$$

$$owf^{\langle \mathrm{neu} \rangle} INC^{\mathrm{FIRM}} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} TFIRMROW^{\langle \mathrm{neu} \rangle} = 0 \tag{16.473}$$

$$owh^{\mathrm{r}\langle 01,\mathrm{eu} \rangle} INC^{\langle 01 \rangle} - ex^{\mathrm{rate}\langle \mathrm{eu} \rangle} THROW^{\langle 01,\mathrm{eu} \rangle} = 0 \tag{16.474}$$

$$auth^{\mathrm{r}\langle 01,\mathrm{neu}\rangle} INC^{\langle 01\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 01,\mathrm{neu}\rangle} = 0 \tag{16.475}$$

$$auth^{\mathrm{r}\langle 02,\mathrm{eu}\rangle} INC^{\langle 02\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 02,\mathrm{eu}\rangle} = 0 \tag{16.476}$$

$$auth^{\mathrm{r}\langle 02,\mathrm{neu}\rangle} INC^{\langle 02\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 02,\mathrm{neu}\rangle} = 0 \tag{16.477}$$

$$auth^{\mathrm{r}\langle 03,\mathrm{eu}\rangle} INC^{\langle 03\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 03,\mathrm{eu}\rangle} = 0 \tag{16.478}$$

$$auth^{\mathrm{r}\langle 03,\mathrm{neu}\rangle} INC^{\langle 03\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 03,\mathrm{neu}\rangle} = 0 \tag{16.479}$$

$$auth^{\mathrm{r}\langle 04,\mathrm{eu}\rangle} INC^{\langle 04\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 04,\mathrm{eu}\rangle} = 0 \tag{16.480}$$

$$auth^{\mathrm{r}\langle 04,\mathrm{neu}\rangle} INC^{\langle 04\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 04,\mathrm{neu}\rangle} = 0 \tag{16.481}$$

$$auth^{\mathrm{r}\langle 05,\mathrm{eu}\rangle} INC^{\langle 05\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 05,\mathrm{eu}\rangle} = 0 \tag{16.482}$$

$$auth^{\mathrm{r}\langle 05,\mathrm{neu}\rangle} INC^{\langle 05\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 05,\mathrm{neu}\rangle} = 0 \tag{16.483}$$

$$auth^{\mathrm{r}\langle 06,\mathrm{eu}\rangle} INC^{\langle 06\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 06,\mathrm{eu}\rangle} = 0 \tag{16.484}$$

$$auth^{\mathrm{r}\langle 06,\mathrm{neu}\rangle} INC^{\langle 06\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 06,\mathrm{neu}\rangle} = 0 \tag{16.485}$$

$$auth^{\mathrm{r}\langle 07,\mathrm{eu}\rangle} INC^{\langle 07\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 07,\mathrm{eu}\rangle} = 0 \tag{16.486}$$

$$auth^{\mathrm{r}\langle 07,\mathrm{neu}\rangle} INC^{\langle 07\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 07,\mathrm{neu}\rangle} = 0 \tag{16.487}$$

$$auth^{\mathrm{r}\langle 08,\mathrm{eu}\rangle} INC^{\langle 08\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 08,\mathrm{eu}\rangle} = 0 \tag{16.488}$$

$$auth^{\mathrm{r}\langle 08,\mathrm{neu}\rangle} INC^{\langle 08\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 08,\mathrm{neu}\rangle} = 0 \tag{16.489}$$

$$auth^{\mathrm{r}\langle 09,\mathrm{eu}\rangle} INC^{\langle 09\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 09,\mathrm{eu}\rangle} = 0 \tag{16.490}$$

$$oub^{\mathrm{r}\langle 09,\mathrm{neu}\rangle} INC^{\langle 09\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 09,\mathrm{neu}\rangle} = 0 \tag{16.491}$$

$$oub^{\mathrm{r}\langle 10,\mathrm{eu}\rangle} INC^{\langle 10\rangle} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 10,\mathrm{eu}\rangle} = 0 \tag{16.492}$$

$$oub^{\mathrm{r}\langle 10,\mathrm{neu}\rangle} INC^{\langle 10\rangle} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 10,\mathrm{neu}\rangle} = 0 \tag{16.493}$$

$$oub^{\mathrm{h}\langle 01\rangle} INC^{\mathrm{BANK}} - scale^{\langle 01\rangle} TBANKH^{\langle 01\rangle} = 0 \tag{16.494}$$

$$oub^{\mathrm{h}\langle 02\rangle} INC^{\mathrm{BANK}} - scale^{\langle 02\rangle} TBANKH^{\langle 02\rangle} = 0 \tag{16.495}$$

$$oub^{\mathrm{h}\langle 03\rangle} INC^{\mathrm{BANK}} - scale^{\langle 03\rangle} TBANKH^{\langle 03\rangle} = 0 \tag{16.496}$$

$$oub^{\mathrm{h}\langle 04\rangle} INC^{\mathrm{BANK}} - scale^{\langle 04\rangle} TBANKH^{\langle 04\rangle} = 0 \tag{16.497}$$

$$oub^{\mathrm{h}\langle 05\rangle} INC^{\mathrm{BANK}} - scale^{\langle 05\rangle} TBANKH^{\langle 05\rangle} = 0 \tag{16.498}$$

$$oub^{\mathrm{h}\langle 06\rangle} INC^{\mathrm{BANK}} - scale^{\langle 06\rangle} TBANKH^{\langle 06\rangle} = 0 \tag{16.499}$$

$$oub^{\mathrm{h}\langle 07\rangle} INC^{\mathrm{BANK}} - scale^{\langle 07\rangle} TBANKH^{\langle 07\rangle} = 0 \tag{16.500}$$

$$oub^{\mathrm{h}\langle 08\rangle} INC^{\mathrm{BANK}} - scale^{\langle 08\rangle} TBANKH^{\langle 08\rangle} = 0 \tag{16.501}$$

$$oub^{\mathrm{h}\langle 09\rangle} INC^{\mathrm{BANK}} - scale^{\langle 09\rangle} TBANKH^{\langle 09\rangle} = 0 \tag{16.502}$$

$$oub^{\mathrm{h}\langle 10\rangle} INC^{\mathrm{BANK}} - scale^{\langle 10\rangle} TBANKH^{\langle 10\rangle} = 0 \tag{16.503}$$

$$oub^{\mathrm{r}\langle \mathrm{eu}\rangle} INC^{\mathrm{BANK}} - ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} TBANKROW^{\langle \mathrm{eu}\rangle} = 0 \tag{16.504}$$

$$oub^{\mathrm{r}\langle \mathrm{neu}\rangle} INC^{\mathrm{BANK}} - ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} TBANKROW^{\langle \mathrm{neu}\rangle} = 0 \tag{16.505}$$

$$-scale^{\langle 01\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 01\rangle}+\left(1-\alpha^{\mathrm{u}\langle 01\rangle}\right)LEIS^{\langle 01\rangle^{-1+\omega^{\mathrm{u}\langle 01\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 01\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 01\rangle}DEM^{\langle 01\rangle^{\omega^{\mathrm{u}\langle 01\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 01\rangle}\right)}}}+\left(1-\alpha^{\mathrm{u}\langle 01\rangle}\right)LEIS^{\langle 01\rangle^{\omega^{\mathrm{u}\langle 01\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 01\rangle}\right)}}}\right)^{-1+\omega^{\mathrm{u}\langle 01\rangle}\left(-1+\omega^{\mathrm{u}\langle 01\rangle}\right)^{-1}}=0 \tag{16.506}$$

$$-scale^{\langle 02\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 02\rangle}+\left(1-\alpha^{\mathrm{u}\langle 02\rangle}\right)LEIS^{\langle 02\rangle^{-1+\omega^{\mathrm{u}\langle 02\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 02\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 02\rangle}DEM^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 02\rangle}\right)}}}+\left(1-\alpha^{\mathrm{u}\langle 02\rangle}\right)LEIS^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 02\rangle}\right)}}}\right)^{-1+\omega^{\mathrm{u}\langle 02\rangle}\left(-1+\omega^{\mathrm{u}\langle 02\rangle}\right)^{-1}}=0 \tag{16.507}$$

$$-scale^{\langle 03\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 03\rangle}+\left(1-\alpha^{\mathrm{u}\langle 03\rangle}\right)LEIS^{\langle 03\rangle^{-1+\omega^{\mathrm{u}\langle 03\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 03\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 03\rangle}DEM^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 03\rangle}\right)}}}+\left(1-\alpha^{\mathrm{u}\langle 03\rangle}\right)LEIS^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 03\rangle}\right)}}}\right)^{-1+\omega^{\mathrm{u}\langle 03\rangle}\left(-1+\omega^{\mathrm{u}\langle 03\rangle}\right)^{-1}}=0 \tag{16.508}$$

$$-scale^{\langle 04\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 04\rangle}+\left(1-\alpha^{\mathrm{u}\langle 04\rangle}\right)LEIS^{\langle 04\rangle^{-1+\omega^{\mathrm{u}\langle 04\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 04\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 04\rangle}DEM^{\langle 04\rangle^{\omega^{\mathrm{u}\langle 04\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 04\rangle}\right)}}}+\left(1-\alpha^{\mathrm{u}\langle 04\rangle}\right)LEIS^{\langle 04\rangle^{\omega^{\mathrm{u}\langle 04\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 04\rangle}\right)}}}\right)^{-1+\omega^{\mathrm{u}\langle 04\rangle}\left(-1+\omega^{\mathrm{u}\langle 04\rangle}\right)^{-1}}=0 \tag{16.509}$$

$$-scale^{\langle 05\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 05\rangle}+\left(1-\alpha^{\mathrm{u}\langle 05\rangle}\right)LEIS^{\langle 05\rangle^{-1+\omega^{\mathrm{u}\langle 05\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 05\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 05\rangle}DEM^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 05\rangle}\right)}}}+\left(1-\alpha^{\mathrm{u}\langle 05\rangle}\right)LEIS^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 05\rangle}\right)}}}\right)^{-1+\omega^{\mathrm{u}\langle 05\rangle}\left(-1+\omega^{\mathrm{u}\langle 05\rangle}\right)^{-1}}=0 \tag{16.510}$$

$$-scale^{\langle 06\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 06\rangle}+\left(1-\alpha^{\mathrm{u}\langle 06\rangle}\right)LEIS^{\langle 06\rangle^{-1+\omega^{\mathrm{u}\langle 06\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 06\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 06\rangle}DEM^{\langle 06\rangle^{\omega^{\mathrm{u}\langle 06\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 06\rangle}\right)}}}+\left(1-\alpha^{\mathrm{u}\langle 06\rangle}\right)LEIS^{\langle 06\rangle^{\omega^{\mathrm{u}\langle 06\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 06\rangle}\right)}}}\right)^{-1+\omega^{\mathrm{u}\langle 06\rangle}\left(-1+\omega^{\mathrm{u}\langle 06\rangle}\right)^{-1}}=0 \tag{16.511}$$

$$-scale^{\langle 07\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 07\rangle}+\left(1-\alpha^{\mathrm{u}\langle 07\rangle}\right)LEIS^{\langle 07\rangle^{-1+\omega^{\mathrm{u}\langle 07\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 07\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 07\rangle}DEM^{\langle 07\rangle^{\omega^{\mathrm{u}\langle 07\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 07\rangle}\right)}}}+\left(1-\alpha^{\mathrm{u}\langle 07\rangle}\right)LEIS^{\langle 07\rangle^{\omega^{\mathrm{u}\langle 07\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 07\rangle}\right)}}}\right)^{-1+\omega^{\mathrm{u}\langle 07\rangle}\left(-1+\omega^{\mathrm{u}\langle 07\rangle}\right)^{-1}}=0 \tag{16.512}$$

$$-scale^{\langle 08\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 08\rangle}+\left(1-\alpha^{\mathrm{u}\langle 08\rangle}\right)LEIS^{\langle 08\rangle^{-1+\omega^{\mathrm{u}\langle 08\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 08\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 08\rangle}DEM^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 08\rangle}\right)}}}+\left(1-\alpha^{\mathrm{u}\langle 08\rangle}\right)LEIS^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}\left(-1+\omega^{\mathrm{u}\langle 08\rangle}\right)}}}\right)^{-1+\omega^{\mathrm{u}\langle 08\rangle}\left(-1+\omega^{\mathrm{u}\langle 08\rangle}\right)^{-1}}=0 \tag{16.513}$$

$$-scale^{\langle 09\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 09\rangle}+\left(1-\alpha^{\mathrm{u}\langle 09\rangle}\right)LEIS^{\langle 09\rangle^{-1+\omega^{\mathrm{u}\langle 09\rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 09\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 09\rangle}DEM^{\langle 09\rangle^{\omega^{\mathrm{u}\langle 09\rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 09\rangle}\right)}}+\left(1-\alpha^{\mathrm{u}\langle 09\rangle}\right)LEIS^{\langle 09\rangle^{\omega^{\mathrm{u}\langle 09\rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 09\rangle}\right)}}\right)^{-1+\omega^{\mathrm{u}\langle 09\rangle}\left(-1+\omega^{\mathrm{u}\langle 09\rangle}\right)^{-1}}=0 \tag{16.514}$$

$$-scale^{\langle 10\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 10\rangle}+\left(1-\alpha^{\mathrm{u}\langle 10\rangle}\right)LEIS^{\langle 10\rangle^{-1+\omega^{\mathrm{u}\langle 10\rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 10\rangle}\right)}}\left(\alpha^{\mathrm{u}\langle 10\rangle}DEM^{\langle 10\rangle^{\omega^{\mathrm{u}\langle 10\rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 10\rangle}\right)}}+\left(1-\alpha^{\mathrm{u}\langle 10\rangle}\right)LEIS^{\langle 10\rangle^{\omega^{\mathrm{u}\langle 10\rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 10\rangle}\right)}}\right)^{-1+\omega^{\mathrm{u}\langle 10\rangle}\left(-1+\omega^{\mathrm{u}\langle 10\rangle}\right)^{-1}}=0 \tag{16.515}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},01\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 01\rangle}TROWH^{\langle \mathrm{eu},01\rangle}=0 \tag{16.516}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},02\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 02\rangle}TROWH^{\langle \mathrm{eu},02\rangle}=0 \tag{16.517}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},03\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 03\rangle}TROWH^{\langle \mathrm{eu},03\rangle}=0 \tag{16.518}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},04\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 04\rangle}TROWH^{\langle \mathrm{eu},04\rangle}=0 \tag{16.519}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},05\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 05\rangle}TROWH^{\langle \mathrm{eu},05\rangle}=0 \tag{16.520}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},06\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 06\rangle}TROWH^{\langle \mathrm{eu},06\rangle}=0 \tag{16.521}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},07\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 07\rangle}TROWH^{\langle \mathrm{eu},07\rangle}=0 \tag{16.522}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},08\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 08\rangle}TROWH^{\langle \mathrm{eu},08\rangle}=0 \tag{16.523}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},09\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 09\rangle}TROWH^{\langle \mathrm{eu},09\rangle}=0 \tag{16.524}$$

$$t^{\mathrm{rh}\langle \mathrm{eu},10\rangle}EXP^{\mathrm{ROW}\langle \mathrm{eu}\rangle}-scale^{\langle 10\rangle}TROWH^{\langle \mathrm{eu},10\rangle}=0 \tag{16.525}$$

$$t^{\mathrm{rh}\langle \mathrm{neu},01\rangle}EXP^{\mathrm{ROW}\langle \mathrm{neu}\rangle}-scale^{\langle 01\rangle}TROWH^{\langle \mathrm{neu},01\rangle}=0 \tag{16.526}$$

$$t^{\mathrm{rh}\langle \mathrm{neu},02\rangle}EXP^{\mathrm{ROW}\langle \mathrm{neu}\rangle}-scale^{\langle 02\rangle}TROWH^{\langle \mathrm{neu},02\rangle}=0 \tag{16.527}$$

$$t^{\mathrm{rh}\,\langle \mathrm{neu},03\rangle} EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - scale^{\langle 03\rangle} TROWH^{\langle \mathrm{neu},03\rangle} = 0 \tag{16.528}$$

$$t^{\mathrm{rh}\,\langle \mathrm{neu},04\rangle} EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - scale^{\langle 04\rangle} TROWH^{\langle \mathrm{neu},04\rangle} = 0 \tag{16.529}$$

$$t^{\mathrm{rh}\,\langle \mathrm{neu},05\rangle} EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - scale^{\langle 05\rangle} TROWH^{\langle \mathrm{neu},05\rangle} = 0 \tag{16.530}$$

$$t^{\mathrm{rh}\,\langle \mathrm{neu},06\rangle} EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - scale^{\langle 06\rangle} TROWH^{\langle \mathrm{neu},06\rangle} = 0 \tag{16.531}$$

$$t^{\mathrm{rh}\,\langle \mathrm{neu},07\rangle} EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - scale^{\langle 07\rangle} TROWH^{\langle \mathrm{neu},07\rangle} = 0 \tag{16.532}$$

$$t^{\mathrm{rh}\,\langle \mathrm{neu},08\rangle} EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - scale^{\langle 08\rangle} TROWH^{\langle \mathrm{neu},08\rangle} = 0 \tag{16.533}$$

$$t^{\mathrm{rh}\,\langle \mathrm{neu},09\rangle} EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - scale^{\langle 09\rangle} TROWH^{\langle \mathrm{neu},09\rangle} = 0 \tag{16.534}$$

$$t^{\mathrm{rh}\,\langle \mathrm{neu},10\rangle} EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - scale^{\langle 10\rangle} TROWH^{\langle \mathrm{neu},10\rangle} = 0 \tag{16.535}$$

$$ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{12}\,\langle 01\rangle} - ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{11}\,\langle 01,\mathrm{eu}\rangle} = 0 \tag{16.536}$$

$$ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{12}\,\langle 02\rangle} - ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{11}\,\langle 02,\mathrm{eu}\rangle} = 0 \tag{16.537}$$

$$ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{12}\,\langle 03\rangle} - ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{11}\,\langle 03,\mathrm{eu}\rangle} = 0 \tag{16.538}$$

$$ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{12}\,\langle 04\rangle} - ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{11}\,\langle 04,\mathrm{eu}\rangle} = 0 \tag{16.539}$$

$$ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{12}\,\langle 05\rangle} - ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{11}\,\langle 05,\mathrm{eu}\rangle} = 0 \tag{16.540}$$

$$ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{12}\,\langle 06\rangle} - ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{11}\,\langle 06,\mathrm{eu}\rangle} = 0 \tag{16.541}$$

$$ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{12}\,\langle 07\rangle} - ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{11}\,\langle 07,\mathrm{eu}\rangle} = 0 \tag{16.542}$$

$$ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{12}\,\langle 08\rangle} - ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \lambda^{\mathrm{CONSUMER}^{11}\,\langle 08,\mathrm{eu}\rangle} = 0 \tag{16.543}$$

$$ex^{\mathrm{rate}\langle \mathrm{eu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 09 \rangle} - ex^{\mathrm{rate}\langle \mathrm{eu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 09,\mathrm{eu} \rangle} = 0 \tag{16.544}$$

$$ex^{\mathrm{rate}\langle \mathrm{eu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 10 \rangle} - ex^{\mathrm{rate}\langle \mathrm{eu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 10,\mathrm{eu} \rangle} = 0 \tag{16.545}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 01 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 01,\mathrm{neu} \rangle} = 0 \tag{16.546}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 02 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 02,\mathrm{neu} \rangle} = 0 \tag{16.547}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 03 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 03,\mathrm{neu} \rangle} = 0 \tag{16.548}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 04 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 04,\mathrm{neu} \rangle} = 0 \tag{16.549}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 05 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 05,\mathrm{neu} \rangle} = 0 \tag{16.550}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 06 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 06,\mathrm{neu} \rangle} = 0 \tag{16.551}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 07 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 07,\mathrm{neu} \rangle} = 0 \tag{16.552}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 08 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 08,\mathrm{neu} \rangle} = 0 \tag{16.553}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 09 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 09,\mathrm{neu} \rangle} = 0 \tag{16.554}$$

$$ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{12}\langle 10 \rangle} - ex^{\mathrm{rate}\langle \mathrm{neu} \rangle} \lambda^{\mathrm{CONSUMER}^{11}\langle 10,\mathrm{neu} \rangle} = 0 \tag{16.555}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 01 \rangle} p^{\mathrm{cons}\langle \mathrm{A} \rangle} + \alpha^{\langle \mathrm{A},01 \rangle} \alpha^{\mathrm{u}\langle 01 \rangle} \theta^{\mathrm{dem}\langle 01 \rangle} D^{\langle \mathrm{A},01 \rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01 \rangle^{-1+\omega^{\mathrm{u}\langle 01 \rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)}} \left(\alpha^{\mathrm{u}\langle 01 \rangle} DEM^{\langle 01 \rangle^{\omega^{\mathrm{u}\langle 01 \rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)}} + \left(1-\alpha^{\mathrm{u}\langle 01 \rangle}\right) LEIS^{\langle 01 \rangle^{\omega^{\mathrm{u}\langle 01 \rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)}} \right)^{\gamma}$$
(16.556)

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 01 \rangle} p^{\mathrm{cons}\langle \mathrm{B} \rangle} + \alpha^{\langle \mathrm{B},01 \rangle} \alpha^{\mathrm{u}\langle 01 \rangle} \theta^{\mathrm{dem}\langle 01 \rangle} D^{\langle \mathrm{B},01 \rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01 \rangle^{-1+\omega^{\mathrm{u}\langle 01 \rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)}} \left(\alpha^{\mathrm{u}\langle 01 \rangle} DEM^{\langle 01 \rangle^{\omega^{\mathrm{u}\langle 01 \rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)}} + \left(1-\alpha^{\mathrm{u}\langle 01 \rangle}\right) LEIS^{\langle 01 \rangle^{\omega^{\mathrm{u}\langle 01 \rangle^{-1}}\left(-1+\omega^{\mathrm{u}\langle 01 \rangle}\right)}} \right)^{\gamma}$$
(16.557)

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{C}\rangle} + \alpha^{\langle \text{C},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{C},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\text{(16.558)}}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{D}\rangle} + \alpha^{\langle \text{D},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{D},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\text{(16.559)}}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{E},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\text{(16.560)}}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{F}\rangle} + \alpha^{\langle \text{F},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{F},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\text{(16.561)}}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{G},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\text{(16.562)}}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{H}\rangle} + \alpha^{\langle \text{H},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{H},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\text{(16.563)}}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{I}\rangle} + \alpha^{\langle \text{I},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{I},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\text{(16.564)}}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{J}\rangle} + \alpha^{\langle \text{J},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{J},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\text{(16.565)}}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{K}\rangle} + \alpha^{\langle \text{K},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{K},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{\lambda^{\text{CONSUMER}^{12}\langle 01\rangle} p^{\text{cons}\langle \text{K}\rangle} + \alpha^{\langle \text{K},01\rangle} \alpha^{\text{u}\langle 01\rangle} \theta^{\text{dem}\langle 01\rangle} D^{\langle \text{K},01\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 01\rangle^{-1+\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \left(\alpha^{\text{u}\langle 01\rangle} DEM^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} + \left(1 - \alpha^{\text{u}\langle 01\rangle}\right) LEIS^{\langle 01\rangle^{\omega^{\text{u}\langle 01\rangle^{-1}}(-1+\omega^{\text{u}\langle 01\rangle})}} \right)^{-1}} \tag{16.566}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{A}\rangle} + \alpha^{\langle \text{A},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{A},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{A}\rangle} + \alpha^{\langle \text{A},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{A},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{-1}} \tag{16.567}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{B}\rangle} + \alpha^{\langle \text{B},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{B},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{B}\rangle} + \alpha^{\langle \text{B},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{B},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{-1}} \tag{16.568}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{C}\rangle} + \alpha^{\langle \text{C},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{C},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{C}\rangle} + \alpha^{\langle \text{C},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{C},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{-1}} \tag{16.569}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{D}\rangle} + \alpha^{\langle \text{D},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{D},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{D}\rangle} + \alpha^{\langle \text{D},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{D},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{-1}} \tag{16.570}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{E},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{E},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)} \tag{16.571}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{F}\rangle} + \alpha^{\langle \text{F},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{F},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{F}\rangle} + \alpha^{\langle \text{F},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{F},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)} \tag{16.572}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{G},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{\lambda^{\text{CONSUMER}^{12}\langle 02\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},02\rangle} \alpha^{\text{u}\langle 02\rangle} \theta^{\text{dem}\langle 02\rangle} D^{\langle \text{G},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \left(\alpha^{\text{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} + \left(1 - \alpha^{\text{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\text{u}\langle 02\rangle^{-1}}(-1+\omega^{\text{u}\langle 02\rangle})}} \right)^{-1}} \tag{16.573}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 02\rangle} p^{\mathrm{cons}\langle \mathrm{H}\rangle} + \alpha^{\langle \mathrm{H},02\rangle} \alpha^{\mathrm{u}\langle 02\rangle} \theta^{\mathrm{dem}\langle 02\rangle} D^{\langle \mathrm{H},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} \left(\alpha^{\mathrm{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} + \left(1-\alpha^{\mathrm{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} \right)^{\gamma} \tag{16.574}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 02\rangle} p^{\mathrm{cons}\langle \mathrm{I}\rangle} + \alpha^{\langle \mathrm{I},02\rangle} \alpha^{\mathrm{u}\langle 02\rangle} \theta^{\mathrm{dem}\langle 02\rangle} D^{\langle \mathrm{I},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} \left(\alpha^{\mathrm{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} + \left(1-\alpha^{\mathrm{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} \right)^{-} \tag{16.575}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 02\rangle} p^{\mathrm{cons}\langle \mathrm{J}\rangle} + \alpha^{\langle \mathrm{J},02\rangle} \alpha^{\mathrm{u}\langle 02\rangle} \theta^{\mathrm{dem}\langle 02\rangle} D^{\langle \mathrm{J},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} \left(\alpha^{\mathrm{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} + \left(1-\alpha^{\mathrm{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} \right) \tag{16.576}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 02\rangle} p^{\mathrm{cons}\langle \mathrm{K}\rangle} + \alpha^{\langle \mathrm{K},02\rangle} \alpha^{\mathrm{u}\langle 02\rangle} \theta^{\mathrm{dem}\langle 02\rangle} D^{\langle \mathrm{K},02\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 02\rangle^{-1+\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} \left(\alpha^{\mathrm{u}\langle 02\rangle} DEM^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} + \left(1-\alpha^{\mathrm{u}\langle 02\rangle}\right) LEIS^{\langle 02\rangle^{\omega^{\mathrm{u}\langle 02\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 02\rangle})}} \right)^{\gamma} \tag{16.577}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 03\rangle} p^{\mathrm{cons}\langle \mathrm{A}\rangle} + \alpha^{\langle \mathrm{A},03\rangle} \alpha^{\mathrm{u}\langle 03\rangle} \theta^{\mathrm{dem}\langle 03\rangle} D^{\langle \mathrm{A},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} \left(\alpha^{\mathrm{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} + \left(1-\alpha^{\mathrm{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} \right)^{\gamma} \tag{16.578}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 03\rangle} p^{\mathrm{cons}\langle \mathrm{B}\rangle} + \alpha^{\langle \mathrm{B},03\rangle} \alpha^{\mathrm{u}\langle 03\rangle} \theta^{\mathrm{dem}\langle 03\rangle} D^{\langle \mathrm{B},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} \left(\alpha^{\mathrm{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} + \left(1-\alpha^{\mathrm{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} \right)^{\gamma} \tag{16.579}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 03\rangle} p^{\mathrm{cons}\langle \mathrm{C}\rangle} + \alpha^{\langle \mathrm{C},03\rangle} \alpha^{\mathrm{u}\langle 03\rangle} \theta^{\mathrm{dem}\langle 03\rangle} D^{\langle \mathrm{C},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} \left(\alpha^{\mathrm{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} + \left(1-\alpha^{\mathrm{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} \right)^{\gamma} \tag{16.580}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 03\rangle} p^{\mathrm{cons}\langle \mathrm{D}\rangle} + \alpha^{\langle \mathrm{D},03\rangle} \alpha^{\mathrm{u}\langle 03\rangle} \theta^{\mathrm{dem}\langle 03\rangle} D^{\langle \mathrm{D},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} \left(\alpha^{\mathrm{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} + \left(1-\alpha^{\mathrm{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\mathrm{u}\langle 03\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 03\rangle})}} \right)^{\gamma} \tag{16.581}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 03\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},03\rangle} \alpha^{\text{u}\langle 03\rangle} \theta^{\text{dem}\langle 03\rangle} D^{\langle \text{E},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \left(\alpha^{\text{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} + \left(1 - \alpha^{\text{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \right) \tag{16.582}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 03\rangle} p^{\text{cons}\langle \text{F}\rangle} + \alpha^{\langle \text{F},03\rangle} \alpha^{\text{u}\langle 03\rangle} \theta^{\text{dem}\langle 03\rangle} D^{\langle \text{F},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \left(\alpha^{\text{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} + \left(1 - \alpha^{\text{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \right) \tag{16.583}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 03\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},03\rangle} \alpha^{\text{u}\langle 03\rangle} \theta^{\text{dem}\langle 03\rangle} D^{\langle \text{G},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \left(\alpha^{\text{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} + \left(1 - \alpha^{\text{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \right) \tag{16.584}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 03\rangle} p^{\text{cons}\langle \text{H}\rangle} + \alpha^{\langle \text{H},03\rangle} \alpha^{\text{u}\langle 03\rangle} \theta^{\text{dem}\langle 03\rangle} D^{\langle \text{H},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \left(\alpha^{\text{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} + \left(1 - \alpha^{\text{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \right) \tag{16.585}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 03\rangle} p^{\text{cons}\langle \text{I}\rangle} + \alpha^{\langle \text{I},03\rangle} \alpha^{\text{u}\langle 03\rangle} \theta^{\text{dem}\langle 03\rangle} D^{\langle \text{I},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \left(\alpha^{\text{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} + \left(1 - \alpha^{\text{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \right) \tag{16.586}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 03\rangle} p^{\text{cons}\langle \text{J}\rangle} + \alpha^{\langle \text{J},03\rangle} \alpha^{\text{u}\langle 03\rangle} \theta^{\text{dem}\langle 03\rangle} D^{\langle \text{J},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \left(\alpha^{\text{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} + \left(1 - \alpha^{\text{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \right) \tag{16.587}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 03\rangle} p^{\text{cons}\langle \text{K}\rangle} + \alpha^{\langle \text{K},03\rangle} \alpha^{\text{u}\langle 03\rangle} \theta^{\text{dem}\langle 03\rangle} D^{\langle \text{K},03\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 03\rangle^{-1+\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \left(\alpha^{\text{u}\langle 03\rangle} DEM^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} + \left(1 - \alpha^{\text{u}\langle 03\rangle}\right) LEIS^{\langle 03\rangle^{\omega^{\text{u}\langle 03\rangle^{-1}}(-1+\omega^{\text{u}\langle 03\rangle})}} \right) \tag{16.588}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{A}\rangle} + \alpha^{\langle \text{A},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{A},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right) \tag{16.589}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{B}\rangle} + \alpha^{\langle \text{B},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{B},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right)^{\gamma} \tag{16.590}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{C}\rangle} + \alpha^{\langle \text{C},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{C},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right)^{\gamma} \tag{16.591}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{D}\rangle} + \alpha^{\langle \text{D},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{D},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right)^{\gamma} \tag{16.592}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{E},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right)^{\gamma} \tag{16.593}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{F}\rangle} + \alpha^{\langle \text{F},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{F},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right)^{\gamma} \tag{16.594}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{G},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right)^{\gamma} \tag{16.595}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{H}\rangle} + \alpha^{\langle \text{H},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{H},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right)^{\gamma} \tag{16.596}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 04\rangle} p^{\text{cons}\langle \text{I}\rangle} + \alpha^{\langle \text{I},04\rangle} \alpha^{\text{u}\langle 04\rangle} \theta^{\text{dem}\langle 04\rangle} D^{\langle \text{I},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \left(\alpha^{\text{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} + \left(1 - \alpha^{\text{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\text{u}\langle 04\rangle^{-1}}(-1+\omega^{\text{u}\langle 04\rangle})}} \right)^{-} \tag{16.597}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 04\rangle} p^{\mathrm{cons}\langle \mathrm{J}\rangle} + \alpha^{\langle \mathrm{J},04\rangle} \alpha^{\mathrm{u}\langle 04\rangle} \theta^{\mathrm{dem}\langle 04\rangle} D^{\langle \mathrm{J},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\mathrm{u}\langle 04\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 04\rangle})}} \left(\alpha^{\mathrm{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\mathrm{u}\langle 04\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 04\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\mathrm{u}\langle 04\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 04\rangle})}} \right) \tag{16.598}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 04\rangle} p^{\mathrm{cons}\langle \mathrm{K}\rangle} + \alpha^{\langle \mathrm{K},04\rangle} \alpha^{\mathrm{u}\langle 04\rangle} \theta^{\mathrm{dem}\langle 04\rangle} D^{\langle \mathrm{K},04\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 04\rangle^{-1+\omega^{\mathrm{u}\langle 04\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 04\rangle})}} \left(\alpha^{\mathrm{u}\langle 04\rangle} DEM^{\langle 04\rangle^{\omega^{\mathrm{u}\langle 04\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 04\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 04\rangle}\right) LEIS^{\langle 04\rangle^{\omega^{\mathrm{u}\langle 04\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 04\rangle})}} \right) \tag{16.599}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle} p^{\mathrm{cons}\langle \mathrm{A}\rangle} + \alpha^{\langle \mathrm{A},05\rangle} \alpha^{\mathrm{u}\langle 05\rangle} \theta^{\mathrm{dem}\langle 05\rangle} D^{\langle \mathrm{A},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \left(\alpha^{\mathrm{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \right) \tag{16.600}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle} p^{\mathrm{cons}\langle \mathrm{B}\rangle} + \alpha^{\langle \mathrm{B},05\rangle} \alpha^{\mathrm{u}\langle 05\rangle} \theta^{\mathrm{dem}\langle 05\rangle} D^{\langle \mathrm{B},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \left(\alpha^{\mathrm{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \right) \tag{16.601}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle} p^{\mathrm{cons}\langle \mathrm{C}\rangle} + \alpha^{\langle \mathrm{C},05\rangle} \alpha^{\mathrm{u}\langle 05\rangle} \theta^{\mathrm{dem}\langle 05\rangle} D^{\langle \mathrm{C},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \left(\alpha^{\mathrm{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \right) \tag{16.602}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle} p^{\mathrm{cons}\langle \mathrm{D}\rangle} + \alpha^{\langle \mathrm{D},05\rangle} \alpha^{\mathrm{u}\langle 05\rangle} \theta^{\mathrm{dem}\langle 05\rangle} D^{\langle \mathrm{D},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \left(\alpha^{\mathrm{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \right) \tag{16.603}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle} p^{\mathrm{cons}\langle \mathrm{E}\rangle} + \alpha^{\langle \mathrm{E},05\rangle} \alpha^{\mathrm{u}\langle 05\rangle} \theta^{\mathrm{dem}\langle 05\rangle} D^{\langle \mathrm{E},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \left(\alpha^{\mathrm{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \right) \tag{16.604}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle} p^{\mathrm{cons}\langle \mathrm{F}\rangle} + \alpha^{\langle \mathrm{F},05\rangle} \alpha^{\mathrm{u}\langle 05\rangle} \theta^{\mathrm{dem}\langle 05\rangle} D^{\langle \mathrm{F},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \left(\alpha^{\mathrm{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\mathrm{u}\langle 05\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 05\rangle})}} \right) \tag{16.605}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 05\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},05\rangle} \alpha^{\text{u}\langle 05\rangle} \theta^{\text{dem}\langle 05\rangle} D^{\langle \text{G},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} \left(\alpha^{\text{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}}\right)^{\omega} \tag{16.606}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 05\rangle} p^{\text{cons}\langle \text{H}\rangle} + \alpha^{\langle \text{H},05\rangle} \alpha^{\text{u}\langle 05\rangle} \theta^{\text{dem}\langle 05\rangle} D^{\langle \text{H},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} \left(\alpha^{\text{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}}\right)^{\omega} \tag{16.607}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 05\rangle} p^{\text{cons}\langle \text{I}\rangle} + \alpha^{\langle \text{I},05\rangle} \alpha^{\text{u}\langle 05\rangle} \theta^{\text{dem}\langle 05\rangle} D^{\langle \text{I},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} \left(\alpha^{\text{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}}\right)^{-} \tag{16.608}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 05\rangle} p^{\text{cons}\langle \text{J}\rangle} + \alpha^{\langle \text{J},05\rangle} \alpha^{\text{u}\langle 05\rangle} \theta^{\text{dem}\langle 05\rangle} D^{\langle \text{J},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} \left(\alpha^{\text{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}}\right) \tag{16.609}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 05\rangle} p^{\text{cons}\langle \text{K}\rangle} + \alpha^{\langle \text{K},05\rangle} \alpha^{\text{u}\langle 05\rangle} \theta^{\text{dem}\langle 05\rangle} D^{\langle \text{K},05\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 05\rangle^{-1+\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} \left(\alpha^{\text{u}\langle 05\rangle} DEM^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle 05\rangle}\right) LEIS^{\langle 05\rangle^{\omega^{\text{u}\langle 05\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 05\rangle}\right)}}\right)^{\omega} \tag{16.610}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{A}\rangle} + \alpha^{\langle \text{A},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{A},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}}\right)^{\omega} \tag{16.611}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{B}\rangle} + \alpha^{\langle \text{B},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{B},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}}\right)^{\omega} \tag{16.612}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{C}\rangle} + \alpha^{\langle \text{C},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{C},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}} + \left(1-\alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}\left(-1+\omega^{\text{u}\langle 06\rangle}\right)}}\right)^{\omega} \tag{16.613}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{D}\rangle} + \alpha^{\langle \text{D},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{D},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} + \left(1 - \alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \right)^{\gamma} \tag{16.614}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{E},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} + \left(1 - \alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \right) \tag{16.615}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{F}\rangle} + \alpha^{\langle \text{F},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{F},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} + \left(1 - \alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \right) \tag{16.616}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{G},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} + \left(1 - \alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \right)^{\gamma} \tag{16.617}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{H}\rangle} + \alpha^{\langle \text{H},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{H},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} + \left(1 - \alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \right)^{\gamma} \tag{16.618}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{I}\rangle} + \alpha^{\langle \text{I},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{I},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} + \left(1 - \alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \right)^{-} \tag{16.619}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{J}\rangle} + \alpha^{\langle \text{J},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{J},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} + \left(1 - \alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \right) \tag{16.620}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 06\rangle} p^{\text{cons}\langle \text{K}\rangle} + \alpha^{\langle \text{K},06\rangle} \alpha^{\text{u}\langle 06\rangle} \theta^{\text{dem}\langle 06\rangle} D^{\langle \text{K},06\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 06\rangle^{-1+\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \left(\alpha^{\text{u}\langle 06\rangle} DEM^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} + \left(1 - \alpha^{\text{u}\langle 06\rangle}\right) LEIS^{\langle 06\rangle^{\omega^{\text{u}\langle 06\rangle^{-1}}(-1+\omega^{\text{u}\langle 06\rangle})}} \right)^{\gamma} \tag{16.621}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{A}\rangle} + \alpha^{\langle \text{A},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{A},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \right)^{\backslash} \tag{16.622}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{B}\rangle} + \alpha^{\langle \text{B},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{B},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \right)^{\backslash} \tag{16.623}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{C}\rangle} + \alpha^{\langle \text{C},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{C},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \right)^{\backslash} \tag{16.624}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{D}\rangle} + \alpha^{\langle \text{D},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{D},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \right)^{\backslash} \tag{16.625}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{E},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \right) \tag{16.626}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{F}\rangle} + \alpha^{\langle \text{F},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{F},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \right) \tag{16.627}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{G},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \right)^{\backslash} \tag{16.628}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{H}\rangle} + \alpha^{\langle \text{H},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{H},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}}(-1+\omega^{\text{u}\langle 07\rangle})}} \right)^{\backslash} \tag{16.629}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{I}\rangle} + \alpha^{\langle \text{I},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{I},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} \right)^{-} \tag{16.630}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{J}\rangle} + \alpha^{\langle \text{J},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{J},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} \right) \tag{16.631}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 07\rangle} p^{\text{cons}\langle \text{K}\rangle} + \alpha^{\langle \text{K},07\rangle} \alpha^{\text{u}\langle 07\rangle} \theta^{\text{dem}\langle 07\rangle} D^{\langle \text{K},07\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 07\rangle^{-1+\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} \left(\alpha^{\text{u}\langle 07\rangle} DEM^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} + \left(1 - \alpha^{\text{u}\langle 07\rangle}\right) LEIS^{\langle 07\rangle^{\omega^{\text{u}\langle 07\rangle^{-1}(-1+\omega^{\text{u}\langle 07\rangle})}}} \right) \tag{16.632}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 08\rangle} p^{\text{cons}\langle \text{A}\rangle} + \alpha^{\langle \text{A},08\rangle} \alpha^{\text{u}\langle 08\rangle} \theta^{\text{dem}\langle 08\rangle} D^{\langle \text{A},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \left(\alpha^{\text{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} + \left(1 - \alpha^{\text{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \right) \tag{16.633}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 08\rangle} p^{\text{cons}\langle \text{B}\rangle} + \alpha^{\langle \text{B},08\rangle} \alpha^{\text{u}\langle 08\rangle} \theta^{\text{dem}\langle 08\rangle} D^{\langle \text{B},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \left(\alpha^{\text{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} + \left(1 - \alpha^{\text{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \right) \tag{16.634}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 08\rangle} p^{\text{cons}\langle \text{C}\rangle} + \alpha^{\langle \text{C},08\rangle} \alpha^{\text{u}\langle 08\rangle} \theta^{\text{dem}\langle 08\rangle} D^{\langle \text{C},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \left(\alpha^{\text{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} + \left(1 - \alpha^{\text{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \right) \tag{16.635}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 08\rangle} p^{\text{cons}\langle \text{D}\rangle} + \alpha^{\langle \text{D},08\rangle} \alpha^{\text{u}\langle 08\rangle} \theta^{\text{dem}\langle 08\rangle} D^{\langle \text{D},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \left(\alpha^{\text{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} + \left(1 - \alpha^{\text{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \right) \tag{16.636}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 08\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},08\rangle} \alpha^{\text{u}\langle 08\rangle} \theta^{\text{dem}\langle 08\rangle} D^{\langle \text{E},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \left(\alpha^{\text{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} + \left(1 - \alpha^{\text{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\text{u}\langle 08\rangle^{-1}(-1+\omega^{\text{u}\langle 08\rangle})}}} \right) \tag{16.637}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle} p^{\mathrm{cons}\langle \mathrm{F}\rangle} + \alpha^{\langle \mathrm{F},08\rangle} \alpha^{\mathrm{u}\langle 08\rangle} \theta^{\mathrm{dem}\langle 08\rangle} D^{\langle \mathrm{F},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \left(\alpha^{\mathrm{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \right) \tag{16.638}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle} p^{\mathrm{cons}\langle \mathrm{G}\rangle} + \alpha^{\langle \mathrm{G},08\rangle} \alpha^{\mathrm{u}\langle 08\rangle} \theta^{\mathrm{dem}\langle 08\rangle} D^{\langle \mathrm{G},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \left(\alpha^{\mathrm{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \right) \tag{16.639}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle} p^{\mathrm{cons}\langle \mathrm{H}\rangle} + \alpha^{\langle \mathrm{H},08\rangle} \alpha^{\mathrm{u}\langle 08\rangle} \theta^{\mathrm{dem}\langle 08\rangle} D^{\langle \mathrm{H},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \left(\alpha^{\mathrm{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \right) \tag{16.640}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle} p^{\mathrm{cons}\langle \mathrm{I}\rangle} + \alpha^{\langle \mathrm{I},08\rangle} \alpha^{\mathrm{u}\langle 08\rangle} \theta^{\mathrm{dem}\langle 08\rangle} D^{\langle \mathrm{I},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \left(\alpha^{\mathrm{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \right) \tag{16.641}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle} p^{\mathrm{cons}\langle \mathrm{J}\rangle} + \alpha^{\langle \mathrm{J},08\rangle} \alpha^{\mathrm{u}\langle 08\rangle} \theta^{\mathrm{dem}\langle 08\rangle} D^{\langle \mathrm{J},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \left(\alpha^{\mathrm{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \right) \tag{16.642}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle} p^{\mathrm{cons}\langle \mathrm{K}\rangle} + \alpha^{\langle \mathrm{K},08\rangle} \alpha^{\mathrm{u}\langle 08\rangle} \theta^{\mathrm{dem}\langle 08\rangle} D^{\langle \mathrm{K},08\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 08\rangle^{-1+\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \left(\alpha^{\mathrm{u}\langle 08\rangle} DEM^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 08\rangle}\right) LEIS^{\langle 08\rangle^{\omega^{\mathrm{u}\langle 08\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 08\rangle})}} \right) \tag{16.643}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 09\rangle} p^{\mathrm{cons}\langle \mathrm{A}\rangle} + \alpha^{\langle \mathrm{A},09\rangle} \alpha^{\mathrm{u}\langle 09\rangle} \theta^{\mathrm{dem}\langle 09\rangle} D^{\langle \mathrm{A},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\mathrm{u}\langle 09\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 09\rangle})}} \left(\alpha^{\mathrm{u}\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\mathrm{u}\langle 09\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 09\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\mathrm{u}\langle 09\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 09\rangle})}} \right) \tag{16.644}$$

$$\lambda^{\mathrm{CONSUMER}^{12}\langle 09\rangle} p^{\mathrm{cons}\langle \mathrm{B}\rangle} + \alpha^{\langle \mathrm{B},09\rangle} \alpha^{\mathrm{u}\langle 09\rangle} \theta^{\mathrm{dem}\langle 09\rangle} D^{\langle \mathrm{B},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\mathrm{u}\langle 09\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 09\rangle})}} \left(\alpha^{\mathrm{u}\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\mathrm{u}\langle 09\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 09\rangle})}} + \left(1 - \alpha^{\mathrm{u}\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\mathrm{u}\langle 09\rangle^{-1}}(-1+\omega^{\mathrm{u}\langle 09\rangle})}} \right) \tag{16.645}$$

$$\lambda^{\text{CONSUMER}^{12\,\langle 09\rangle}} p^{\text{cons}\,\langle \text{C}\rangle} + \alpha^{\langle \text{C},09\rangle} \alpha^{\text{u}\,\langle 09\rangle} \theta^{\text{dem}\,\langle 09\rangle} D^{\langle \text{C},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \left(\alpha^{\text{u}\,\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\,\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \right)^{\gamma} \tag{16.646}$$

$$\lambda^{\text{CONSUMER}^{12\,\langle 09\rangle}} p^{\text{cons}\,\langle \text{D}\rangle} + \alpha^{\langle \text{D},09\rangle} \alpha^{\text{u}\,\langle 09\rangle} \theta^{\text{dem}\,\langle 09\rangle} D^{\langle \text{D},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \left(\alpha^{\text{u}\,\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\,\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \right)^{\gamma} \tag{16.647}$$

$$\lambda^{\text{CONSUMER}^{12\,\langle 09\rangle}} p^{\text{cons}\,\langle \text{E}\rangle} + \alpha^{\langle \text{E},09\rangle} \alpha^{\text{u}\,\langle 09\rangle} \theta^{\text{dem}\,\langle 09\rangle} D^{\langle \text{E},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \left(\alpha^{\text{u}\,\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\,\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \right) \tag{16.648}$$

$$\lambda^{\text{CONSUMER}^{12\,\langle 09\rangle}} p^{\text{cons}\,\langle \text{F}\rangle} + \alpha^{\langle \text{F},09\rangle} \alpha^{\text{u}\,\langle 09\rangle} \theta^{\text{dem}\,\langle 09\rangle} D^{\langle \text{F},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \left(\alpha^{\text{u}\,\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\,\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \right) \tag{16.649}$$

$$\lambda^{\text{CONSUMER}^{12\,\langle 09\rangle}} p^{\text{cons}\,\langle \text{G}\rangle} + \alpha^{\langle \text{G},09\rangle} \alpha^{\text{u}\,\langle 09\rangle} \theta^{\text{dem}\,\langle 09\rangle} D^{\langle \text{G},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \left(\alpha^{\text{u}\,\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\,\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \right)^{\gamma} \tag{16.650}$$

$$\lambda^{\text{CONSUMER}^{12\,\langle 09\rangle}} p^{\text{cons}\,\langle \text{H}\rangle} + \alpha^{\langle \text{H},09\rangle} \alpha^{\text{u}\,\langle 09\rangle} \theta^{\text{dem}\,\langle 09\rangle} D^{\langle \text{H},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \left(\alpha^{\text{u}\,\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\,\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \right)^{\gamma} \tag{16.651}$$

$$\lambda^{\text{CONSUMER}^{12\,\langle 09\rangle}} p^{\text{cons}\,\langle \text{I}\rangle} + \alpha^{\langle \text{I},09\rangle} \alpha^{\text{u}\,\langle 09\rangle} \theta^{\text{dem}\,\langle 09\rangle} D^{\langle \text{I},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \left(\alpha^{\text{u}\,\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\,\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \right)^{-} \tag{16.652}$$

$$\lambda^{\text{CONSUMER}^{12\,\langle 09\rangle}} p^{\text{cons}\,\langle \text{J}\rangle} + \alpha^{\langle \text{J},09\rangle} \alpha^{\text{u}\,\langle 09\rangle} \theta^{\text{dem}\,\langle 09\rangle} D^{\langle \text{J},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \left(\alpha^{\text{u}\,\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\,\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\,\langle 09\rangle\,-1}(-1+\omega^{\text{u}\,\langle 09\rangle})}} \right) \tag{16.653}$$

$$\lambda^{\text{CONSUMER}^{12}\langle 09\rangle} p^{\text{cons}\langle \text{K}\rangle} + \alpha^{\langle \text{K},09\rangle} \alpha^{\text{u}\langle 09\rangle} \theta^{\text{dem}\langle 09\rangle} D^{\langle \text{K},09\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 09\rangle^{-1+\omega^{\text{u}\langle 09\rangle^{-1}}(-1+\omega^{\text{u}\langle 09\rangle})}} \left(\alpha^{\text{u}\langle 09\rangle} DEM^{\langle 09\rangle^{\omega^{\text{u}\langle 09\rangle^{-1}}(-1+\omega^{\text{u}\langle 09\rangle})}} + \left(1 - \alpha^{\text{u}\langle 09\rangle}\right) LEIS^{\langle 09\rangle^{\omega^{\text{u}\langle 09\rangle^{-1}}(-1+\omega^{\text{u}\langle 09\rangle})}} \right)^{\gamma}$$
(16.654)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{A}\rangle} + \alpha^{\langle \text{A},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{A},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)^{\gamma}$$
(16.655)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{B}\rangle} + \alpha^{\langle \text{B},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{B},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)^{\gamma}$$
(16.656)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{C}\rangle} + \alpha^{\langle \text{C},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{C},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)^{\gamma}$$
(16.657)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{D}\rangle} + \alpha^{\langle \text{D},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{D},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)^{\gamma}$$
(16.658)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{E}\rangle} + \alpha^{\langle \text{E},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{E},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)$$
(16.659)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{F}\rangle} + \alpha^{\langle \text{F},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{F},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)$$
(16.660)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{G}\rangle} + \alpha^{\langle \text{G},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{G},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)^{\gamma}$$
(16.661)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{H}\rangle} + \alpha^{\langle \text{H},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{H},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)^{\gamma}$$
(16.662)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{I}\rangle} + \alpha^{\langle \text{I},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{I},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)^{-}$$
(16.663)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{J}\rangle} + \alpha^{\langle \text{J},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{J},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)$$
(16.664)

$$\lambda^{\text{CONSUMER}^{12}\langle 10\rangle} p^{\text{cons}\langle \text{K}\rangle} + \alpha^{\langle \text{K},10\rangle} \alpha^{\text{u}\langle 10\rangle} \theta^{\text{dem}\langle 10\rangle} D^{\langle \text{K},10\rangle^{-1+\omega^{-1}(-1+\omega)}} DEM^{\langle 10\rangle^{-1+\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \left(\alpha^{\text{u}\langle 10\rangle} DEM^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} + \left(1 - \alpha^{\text{u}\langle 10\rangle}\right) LEIS^{\langle 10\rangle^{\omega^{\text{u}\langle 10\rangle^{-1}}(-1+\omega^{\text{u}\langle 10\rangle})}} \right)^{\gamma}$$
(16.665)

$$-p^{\text{for}\langle \text{eu}\rangle} ex^{\text{rate}\langle \text{eu}\rangle} \left(1 + im^{\text{tax}\langle \text{eu,A}\rangle}\right) + \alpha^{\text{imp}\langle \text{eu,A}\rangle} am^{\text{imp}\langle \text{eu}\rangle} \theta^{\text{imp}\langle \text{A}\rangle} p^{\text{imp}\langle \text{A}\rangle} \left(\alpha^{\text{imp}\langle \text{eu,A}\rangle} \left(am^{\text{imp}\langle \text{eu}\rangle} IMP^{\langle \text{eu,A}\rangle} \right)^{\sigma^{\text{imp}\langle \text{A}\rangle^{-1}}(-1+\sigma^{\text{imp}\langle \text{A}\rangle})} + \alpha^{\text{imp}\langle \text{neu,A}\rangle} \left(am^{\text{imp}\langle \text{neu}\rangle} IMP^{\langle \text{neu,A}\rangle} \right)^{\sigma^{\text{imp}\langle \text{A}\rangle^{-1}}(-1+\sigma^{\text{imp}\langle \text{A}\rangle})} \right)^{\gamma}$$
(16.666)

$$-p^{\text{for}\langle \text{eu}\rangle} ex^{\text{rate}\langle \text{eu}\rangle} \left(1 + im^{\text{tax}\langle \text{eu,B}\rangle}\right) + \alpha^{\text{imp}\langle \text{eu,B}\rangle} am^{\text{imp}\langle \text{eu}\rangle} \theta^{\text{imp}\langle \text{B}\rangle} p^{\text{imp}\langle \text{B}\rangle} \left(\alpha^{\text{imp}\langle \text{eu,B}\rangle} \left(am^{\text{imp}\langle \text{eu}\rangle} IMP^{\langle \text{eu,B}\rangle} \right)^{\sigma^{\text{imp}\langle \text{B}\rangle^{-1}}(-1+\sigma^{\text{imp}\langle \text{B}\rangle})} + \alpha^{\text{imp}\langle \text{neu,B}\rangle} \left(am^{\text{imp}\langle \text{neu}\rangle} IMP^{\langle \text{neu,B}\rangle} \right)^{\sigma^{\text{imp}\langle \text{B}\rangle^{-1}}(-1+\sigma} \right.$$
(16.667)

$$-p^{\text{for}\langle \text{eu}\rangle} ex^{\text{rate}\langle \text{eu}\rangle} \left(1 + im^{\text{tax}\langle \text{eu,C}\rangle}\right) + \alpha^{\text{imp}\langle \text{eu,C}\rangle} am^{\text{imp}\langle \text{eu}\rangle} \theta^{\text{imp}\langle \text{C}\rangle} p^{\text{imp}\langle \text{C}\rangle} \left(\alpha^{\text{imp}\langle \text{eu,C}\rangle} \left(am^{\text{imp}\langle \text{eu}\rangle} IMP^{\langle \text{eu,C}\rangle} \right)^{\sigma^{\text{imp}\langle \text{C}\rangle^{-1}}(-1+\sigma^{\text{imp}\langle \text{C}\rangle})} + \alpha^{\text{imp}\langle \text{neu,C}\rangle} \left(am^{\text{imp}\langle \text{neu}\rangle} IMP^{\langle \text{neu,C}\rangle} \right)^{\sigma^{\text{imp}\langle \text{C}\rangle^{-1}}(-1+\sigma} \right.$$
(16.668)

$$-p^{\text{for}\langle \text{eu}\rangle} ex^{\text{rate}\langle \text{eu}\rangle} \left(1 + im^{\text{tax}\langle \text{eu,D}\rangle}\right) + \alpha^{\text{imp}\langle \text{eu,D}\rangle} am^{\text{imp}\langle \text{eu}\rangle} \theta^{\text{imp}\langle \text{D}\rangle} p^{\text{imp}\langle \text{D}\rangle} \left(\alpha^{\text{imp}\langle \text{eu,D}\rangle} \left(am^{\text{imp}\langle \text{eu}\rangle} IMP^{\langle \text{eu,D}\rangle} \right)^{\sigma^{\text{imp}\langle \text{D}\rangle^{-1}}(-1+\sigma^{\text{imp}\langle \text{D}\rangle})} + \alpha^{\text{imp}\langle \text{neu,D}\rangle} \left(am^{\text{imp}\langle \text{neu}\rangle} IMP^{\langle \text{neu,D}\rangle} \right)^{\sigma^{\text{imp}\langle \text{D}\rangle^{-1}}(-1+\sigma} \right.$$
(16.669)

$$-p^{\text{for}\langle \text{eu} \rangle} ex^{\text{rate}\langle \text{eu} \rangle} \left(1 + im^{\text{tax}\langle \text{eu,E} \rangle}\right) + \alpha^{\text{imp}\langle \text{eu,E} \rangle} am^{\text{imp}\langle \text{eu} \rangle} \theta^{\text{imp}\langle \text{E} \rangle} p^{\text{imp}\langle \text{E} \rangle} \left(\alpha^{\text{imp}\langle \text{eu,E} \rangle} \left(am^{\text{imp}\langle \text{eu} \rangle} IMP^{\langle \text{eu,E} \rangle} \right)^{\sigma^{\text{imp}\langle \text{E} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{E} \rangle}\right)} + \alpha^{\text{imp}\langle \text{neu,E} \rangle} \left(am^{\text{imp}\langle \text{neu} \rangle} IMP^{\langle \text{neu,E} \rangle} \right)^{\sigma^{\text{imp}\langle \text{E} \rangle} - 1 \left(-1 + \sigma^{\text{i}}\right.} \tag{16.670}$$

$$-p^{\text{for}\langle \text{eu} \rangle} ex^{\text{rate}\langle \text{eu} \rangle} \left(1 + im^{\text{tax}\langle \text{eu,F} \rangle}\right) + \alpha^{\text{imp}\langle \text{eu,F} \rangle} am^{\text{imp}\langle \text{eu} \rangle} \theta^{\text{imp}\langle \text{F} \rangle} p^{\text{imp}\langle \text{F} \rangle} \left(\alpha^{\text{imp}\langle \text{eu,F} \rangle} \left(am^{\text{imp}\langle \text{eu} \rangle} IMP^{\langle \text{eu,F} \rangle} \right)^{\sigma^{\text{imp}\langle \text{F} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{F} \rangle}\right)} + \alpha^{\text{imp}\langle \text{neu,F} \rangle} \left(am^{\text{imp}\langle \text{neu} \rangle} IMP^{\langle \text{neu,F} \rangle} \right)^{\sigma^{\text{imp}\langle \text{F} \rangle} - 1 \left(-1 + \sigma^{\text{im}}\right.} \tag{16.671}$$

$$-p^{\text{for}\langle \text{eu} \rangle} ex^{\text{rate}\langle \text{eu} \rangle} \left(1 + im^{\text{tax}\langle \text{eu,G} \rangle}\right) + \alpha^{\text{imp}\langle \text{eu,G} \rangle} am^{\text{imp}\langle \text{eu} \rangle} \theta^{\text{imp}\langle \text{G} \rangle} p^{\text{imp}\langle \text{G} \rangle} \left(\alpha^{\text{imp}\langle \text{eu,G} \rangle} \left(am^{\text{imp}\langle \text{eu} \rangle} IMP^{\langle \text{eu,G} \rangle} \right)^{\sigma^{\text{imp}\langle \text{G} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{G} \rangle}\right)} + \alpha^{\text{imp}\langle \text{neu,G} \rangle} \left(am^{\text{imp}\langle \text{neu} \rangle} IMP^{\langle \text{neu,G} \rangle} \right)^{\sigma^{\text{imp}\langle \text{G} \rangle} - 1 \left(-1 + \right.} \tag{16.672}$$

$$-p^{\text{for}\langle \text{eu} \rangle} ex^{\text{rate}\langle \text{eu} \rangle} \left(1 + im^{\text{tax}\langle \text{eu,H} \rangle}\right) + \alpha^{\text{imp}\langle \text{eu,H} \rangle} am^{\text{imp}\langle \text{eu} \rangle} \theta^{\text{imp}\langle \text{H} \rangle} p^{\text{imp}\langle \text{H} \rangle} \left(\alpha^{\text{imp}\langle \text{eu,H} \rangle} \left(am^{\text{imp}\langle \text{eu} \rangle} IMP^{\langle \text{eu,H} \rangle} \right)^{\sigma^{\text{imp}\langle \text{H} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{H} \rangle}\right)} + \alpha^{\text{imp}\langle \text{neu,H} \rangle} \left(am^{\text{imp}\langle \text{neu} \rangle} IMP^{\langle \text{neu,H} \rangle} \right)^{\sigma^{\text{imp}\langle \text{H} \rangle} - 1 \left(-1 + \right.} \tag{16.673}$$

$$-p^{\text{for}\langle \text{eu} \rangle} ex^{\text{rate}\langle \text{eu} \rangle} \left(1 + im^{\text{tax}\langle \text{eu,I} \rangle}\right) + \alpha^{\text{imp}\langle \text{eu,I} \rangle} am^{\text{imp}\langle \text{eu} \rangle} \theta^{\text{imp}\langle \text{I} \rangle} p^{\text{imp}\langle \text{I} \rangle} \left(\alpha^{\text{imp}\langle \text{eu,I} \rangle} \left(am^{\text{imp}\langle \text{eu} \rangle} IMP^{\langle \text{eu,I} \rangle} \right)^{\sigma^{\text{imp}\langle \text{I} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{I} \rangle}\right)} + \alpha^{\text{imp}\langle \text{neu,I} \rangle} \left(am^{\text{imp}\langle \text{neu} \rangle} IMP^{\langle \text{neu,I} \rangle} \right)^{\sigma^{\text{imp}\langle \text{I} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{I} \rangle}\right)} \right) \tag{16.674}$$

$$-p^{\text{for}\langle \text{eu} \rangle} ex^{\text{rate}\langle \text{eu} \rangle} \left(1 + im^{\text{tax}\langle \text{eu,J} \rangle}\right) + \alpha^{\text{imp}\langle \text{eu,J} \rangle} am^{\text{imp}\langle \text{eu} \rangle} \theta^{\text{imp}\langle \text{J} \rangle} p^{\text{imp}\langle \text{J} \rangle} \left(\alpha^{\text{imp}\langle \text{eu,J} \rangle} \left(am^{\text{imp}\langle \text{eu} \rangle} IMP^{\langle \text{eu,J} \rangle} \right)^{\sigma^{\text{imp}\langle \text{J} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{J} \rangle}\right)} + \alpha^{\text{imp}\langle \text{neu,J} \rangle} \left(am^{\text{imp}\langle \text{neu} \rangle} IMP^{\langle \text{neu,J} \rangle} \right)^{\sigma^{\text{imp}\langle \text{J} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{J} \rangle}\right.} \tag{16.675}$$

$$-p^{\text{for}\langle \text{eu} \rangle} ex^{\text{rate}\langle \text{eu} \rangle} \left(1 + im^{\text{tax}\langle \text{eu,K} \rangle}\right) + \alpha^{\text{imp}\langle \text{eu,K} \rangle} am^{\text{imp}\langle \text{eu} \rangle} \theta^{\text{imp}\langle \text{K} \rangle} p^{\text{imp}\langle \text{K} \rangle} \left(\alpha^{\text{imp}\langle \text{eu,K} \rangle} \left(am^{\text{imp}\langle \text{eu} \rangle} IMP^{\langle \text{eu,K} \rangle} \right)^{\sigma^{\text{imp}\langle \text{K} \rangle} - 1 \left(-1 + \sigma^{\text{imp}\langle \text{K} \rangle}\right)} + \alpha^{\text{imp}\langle \text{neu,K} \rangle} \left(am^{\text{imp}\langle \text{neu} \rangle} IMP^{\langle \text{neu,K} \rangle} \right)^{\sigma^{\text{imp}\langle \text{K} \rangle} - 1 \left(-1 + \right.} \tag{16.676}$$

$$-p^{\text{for}\langle\text{neu}\rangle}ex^{\text{rate}\langle\text{neu}\rangle}\left(1+im^{\text{tax}\langle\text{neu,A}\rangle}\right)+\alpha^{\text{imp}\langle\text{neu,A}\rangle}am^{\text{imp}\langle\text{neu}\rangle}\theta^{\text{imp}\langle\text{A}\rangle}p^{\text{imp}\langle\text{A}\rangle}\left(\alpha^{\text{imp}\langle\text{eu,A}\rangle}\left(am^{\text{imp}\langle\text{eu}\rangle}IMP^{\langle\text{eu,A}\rangle}\right)^{\sigma^{\text{imp}\langle\text{A}\rangle}-1\left(-1+\sigma^{\text{imp}\langle\text{A}\rangle}\right)}+\alpha^{\text{imp}\langle\text{neu,A}\rangle}\left(am^{\text{imp}\langle\text{neu}\rangle}IMP^{\langle\text{neu,A}\rangle}\right)^{\sigma^{\text{imp}\langle\text{A}\rangle}-1}\right.$$
(16.677)

$$-p^{\text{for}\langle\text{neu}\rangle}ex^{\text{rate}\langle\text{neu}\rangle}\left(1+im^{\text{tax}\langle\text{neu,B}\rangle}\right)+\alpha^{\text{imp}\langle\text{neu,B}\rangle}am^{\text{imp}\langle\text{neu}\rangle}\theta^{\text{imp}\langle\text{B}\rangle}p^{\text{imp}\langle\text{B}\rangle}\left(\alpha^{\text{imp}\langle\text{eu,B}\rangle}\left(am^{\text{imp}\langle\text{eu}\rangle}IMP^{\langle\text{eu,B}\rangle}\right)^{\sigma^{\text{imp}\langle\text{B}\rangle}-1\left(-1+\sigma^{\text{imp}\langle\text{B}\rangle}\right)}+\alpha^{\text{imp}\langle\text{neu,B}\rangle}\left(am^{\text{imp}\langle\text{neu}\rangle}IMP^{\langle\text{neu,B}\rangle}\right)^{\sigma^{\text{imp}\langle\text{B}\rangle}-1}\right.$$
(16.678)

$$-p^{\text{for}\langle\text{neu}\rangle}ex^{\text{rate}\langle\text{neu}\rangle}\left(1+im^{\text{tax}\langle\text{neu,C}\rangle}\right)+\alpha^{\text{imp}\langle\text{neu,C}\rangle}am^{\text{imp}\langle\text{neu}\rangle}\theta^{\text{imp}\langle\text{C}\rangle}p^{\text{imp}\langle\text{C}\rangle}\left(\alpha^{\text{imp}\langle\text{eu,C}\rangle}\left(am^{\text{imp}\langle\text{eu}\rangle}IMP^{\langle\text{eu,C}\rangle}\right)^{\sigma^{\text{imp}\langle\text{C}\rangle}-1\left(-1+\sigma^{\text{imp}\langle\text{C}\rangle}\right)}+\alpha^{\text{imp}\langle\text{neu,C}\rangle}\left(am^{\text{imp}\langle\text{neu}\rangle}IMP^{\langle\text{neu,C}\rangle}\right)^{\sigma^{\text{imp}\langle\text{C}\rangle}-1}\right.$$
(16.679)

$$-p^{\text{for}\langle\text{neu}\rangle}ex^{\text{rate}\langle\text{neu}\rangle}\left(1+im^{\text{tax}\langle\text{neu,D}\rangle}\right)+\alpha^{\text{imp}\langle\text{neu,D}\rangle}am^{\text{imp}\langle\text{neu}\rangle}\theta^{\text{imp}\langle\text{D}\rangle}p^{\text{imp}\langle\text{D}\rangle}\left(\alpha^{\text{imp}\langle\text{eu,D}\rangle}\left(am^{\text{imp}\langle\text{eu}\rangle}IMP^{\langle\text{eu,D}\rangle}\right)^{\sigma^{\text{imp}\langle\text{D}\rangle}-1\left(-1+\sigma^{\text{imp}\langle\text{D}\rangle}\right)}+\alpha^{\text{imp}\langle\text{neu,D}\rangle}\left(am^{\text{imp}\langle\text{neu}\rangle}IMP^{\langle\text{neu,D}\rangle}\right)^{\sigma^{\text{imp}\langle\text{D}\rangle}-1}\right.$$
(16.680)

$$-p^{\text{for}\langle\text{neu}\rangle}ex^{\text{rate}\langle\text{neu}\rangle}\left(1+im^{\text{tax}\langle\text{neu,E}\rangle}\right)+\alpha^{\text{imp}\langle\text{neu,E}\rangle}am^{\text{imp}\langle\text{neu}\rangle}\theta^{\text{imp}\langle\text{E}\rangle}p^{\text{imp}\langle\text{E}\rangle}\left(\alpha^{\text{imp}\langle\text{eu,E}\rangle}\left(am^{\text{imp}\langle\text{eu}\rangle}IMP^{\langle\text{eu,E}\rangle}\right)^{\sigma^{\text{imp}\langle\text{E}\rangle}-1\left(-1+\sigma^{\text{imp}\langle\text{E}\rangle}\right)}+\alpha^{\text{imp}\langle\text{neu,E}\rangle}\left(am^{\text{imp}\langle\text{neu}\rangle}IMP^{\langle\text{neu,E}\rangle}\right)^{\sigma^{\text{imp}\langle\text{E}\rangle}-1}\right.$$
(16.681)

$$-p^{\text{for}\langle\text{neu}\rangle}ex^{\text{rate}\langle\text{neu}\rangle}\left(1+im^{\text{tax}\langle\text{neu,F}\rangle}\right)+\alpha^{\text{imp}\langle\text{neu,F}\rangle}am^{\text{imp}\langle\text{neu}\rangle}\theta^{\text{imp}\langle\text{F}\rangle}p^{\text{imp}\langle\text{F}\rangle}\left(\alpha^{\text{imp}\langle\text{eu,F}\rangle}\left(am^{\text{imp}\langle\text{eu}\rangle}IMP^{\langle\text{eu,F}\rangle}\right)^{\sigma^{\text{imp}\langle\text{F}\rangle}-1\left(-1+\sigma^{\text{imp}\langle\text{F}\rangle}\right)}+\alpha^{\text{imp}\langle\text{neu,F}\rangle}\left(am^{\text{imp}\langle\text{neu}\rangle}IMP^{\langle\text{neu,F}\rangle}\right)^{\sigma^{\text{imp}\langle\text{F}\rangle}-1}\right.$$
(16.682)

$$-p^{\text{for}\langle\text{neu}\rangle}ex^{\text{rate}\langle\text{neu}\rangle}\left(1+im^{\text{tax}\langle\text{neu,G}\rangle}\right)+\alpha^{\text{imp}\langle\text{neu,G}\rangle}am^{\text{imp}\langle\text{neu}\rangle}\theta^{\text{imp}\langle\text{G}\rangle}p^{\text{imp}\langle\text{G}\rangle}\left(\alpha^{\text{imp}\langle\text{eu,G}\rangle}\left(am^{\text{imp}\langle\text{eu}\rangle}IMP^{\langle\text{eu,G}\rangle}\right)^{\sigma^{\text{imp}\langle\text{G}\rangle}-1\left(-1+\sigma^{\text{imp}\langle\text{G}\rangle}\right)}+\alpha^{\text{imp}\langle\text{neu,G}\rangle}\left(am^{\text{imp}\langle\text{neu}\rangle}IMP^{\langle\text{neu,G}\rangle}\right)^{\sigma^{\text{imp}\langle\text{G}\rangle}-1}\right.$$
(16.683)

$$-p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} \left(1+im^{\mathrm{tax}\langle \mathrm{neu,H}\rangle}\right)+\alpha^{\mathrm{imp}\langle \mathrm{neu,H}\rangle} am^{\mathrm{imp}\langle \mathrm{neu}\rangle} \theta^{\mathrm{imp}\langle \mathrm{H}\rangle} p^{\mathrm{imp}\langle \mathrm{H}\rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,H}\rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,H}\rangle}\right)^{\sigma^{\mathrm{imp}\langle \mathrm{H}\rangle}-1\left(-1+\sigma^{\mathrm{imp}\langle \mathrm{H}\rangle}\right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,H}\rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,H}\rangle}\right)^{\sigma^{\mathrm{imp}\langle \mathrm{H}\rangle}-1} \right. \tag{16.684}$$

$$-p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} \left(1+im^{\mathrm{tax}\langle \mathrm{neu,I}\rangle}\right)+\alpha^{\mathrm{imp}\langle \mathrm{neu,I}\rangle} am^{\mathrm{imp}\langle \mathrm{neu}\rangle} \theta^{\mathrm{imp}\langle \mathrm{I}\rangle} p^{\mathrm{imp}\langle \mathrm{I}\rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,I}\rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,I}\rangle}\right)^{\sigma^{\mathrm{imp}\langle \mathrm{I}\rangle}-1\left(-1+\sigma^{\mathrm{imp}\langle \mathrm{I}\rangle}\right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,I}\rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,I}\rangle}\right)^{\sigma^{\mathrm{imp}\langle \mathrm{I}\rangle}-1\left(-1+\sigma^{\mathrm{im}}\right.} \right. \tag{16.685}$$

$$-p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} \left(1+im^{\mathrm{tax}\langle \mathrm{neu,J}\rangle}\right)+\alpha^{\mathrm{imp}\langle \mathrm{neu,J}\rangle} am^{\mathrm{imp}\langle \mathrm{neu}\rangle} \theta^{\mathrm{imp}\langle \mathrm{J}\rangle} p^{\mathrm{imp}\langle \mathrm{J}\rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,J}\rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,J}\rangle}\right)^{\sigma^{\mathrm{imp}\langle \mathrm{J}\rangle}-1\left(-1+\sigma^{\mathrm{imp}\langle \mathrm{J}\rangle}\right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,J}\rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,J}\rangle}\right)^{\sigma^{\mathrm{imp}\langle \mathrm{J}\rangle}-1\left(-1+\right.} \right. \tag{16.686}$$

$$-p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} \left(1+im^{\mathrm{tax}\langle \mathrm{neu,K}\rangle}\right)+\alpha^{\mathrm{imp}\langle \mathrm{neu,K}\rangle} am^{\mathrm{imp}\langle \mathrm{neu}\rangle} \theta^{\mathrm{imp}\langle \mathrm{K}\rangle} p^{\mathrm{imp}\langle \mathrm{K}\rangle} \left(\alpha^{\mathrm{imp}\langle \mathrm{eu,K}\rangle} \left(am^{\mathrm{imp}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,K}\rangle}\right)^{\sigma^{\mathrm{imp}\langle \mathrm{K}\rangle}-1\left(-1+\sigma^{\mathrm{imp}\langle \mathrm{K}\rangle}\right)} + \alpha^{\mathrm{imp}\langle \mathrm{neu,K}\rangle} \left(am^{\mathrm{imp}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,K}\rangle}\right)^{\sigma^{\mathrm{imp}\langle \mathrm{K}\rangle}-1} \right. \tag{16.687}$$

$$-p^{\mathrm{k}} \left(1+k^{\mathrm{tax}}\right) \left(1-sub^{\mathrm{rate}\langle \mathrm{A}\rangle}+tax^{\mathrm{rate}\langle \mathrm{A}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{A}\rangle} \gamma^{\mathrm{yva}\langle \mathrm{A}\rangle} \left(p^{\langle \mathrm{A}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,A}\rangle} p^{\mathrm{int}\langle \mathrm{A}\rangle} \left(1-sub^{\mathrm{rate}\langle \mathrm{A}\rangle}+tax^{\mathrm{rate}\langle \mathrm{A}\rangle}\right) - \beta^{\mathrm{x}\langle \mathrm{B,A}\rangle} p^{\mathrm{int}\langle \mathrm{B}\rangle} \left(1-sub^{\mathrm{rate}\langle \mathrm{A}\rangle}+tax^{\mathrm{rate}\langle \mathrm{A}\rangle}\right) - \beta^{\mathrm{x}\langle \mathrm{C,A}\rangle} p^{\mathrm{int}\langle \mathrm{C}\rangle} \left(1-sub^{\mathrm{rat}}\right. \right. \tag{16.688}$$

$$-p^{\mathrm{k}} \left(1+k^{\mathrm{tax}}\right) \left(1-sub^{\mathrm{rate}\langle \mathrm{B}\rangle}+tax^{\mathrm{rate}\langle \mathrm{B}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{B}\rangle} \gamma^{\mathrm{yva}\langle \mathrm{B}\rangle} \left(p^{\langle \mathrm{B}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,B}\rangle} p^{\mathrm{int}\langle \mathrm{A}\rangle} \left(1-sub^{\mathrm{rate}\langle \mathrm{B}\rangle}+tax^{\mathrm{rate}\langle \mathrm{B}\rangle}\right) - \beta^{\mathrm{x}\langle \mathrm{B,B}\rangle} p^{\mathrm{int}\langle \mathrm{B}\rangle} \left(1-sub^{\mathrm{rate}\langle \mathrm{B}\rangle}+tax^{\mathrm{rate}\langle \mathrm{B}\rangle}\right) - \beta^{\mathrm{x}\langle \mathrm{C,B}\rangle} p^{\mathrm{int}\langle \mathrm{C}\rangle} \left(1-sub^{\mathrm{rate}}\right. \right. \tag{16.689}$$

$$-p^{\mathrm{k}} \left(1+k^{\mathrm{tax}}\right) \left(1-sub^{\mathrm{rate}\langle \mathrm{C}\rangle}+tax^{\mathrm{rate}\langle \mathrm{C}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{C}\rangle} \gamma^{\mathrm{yva}\langle \mathrm{C}\rangle} \left(p^{\langle \mathrm{C}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,C}\rangle} p^{\mathrm{int}\langle \mathrm{A}\rangle} \left(1-sub^{\mathrm{rate}\langle \mathrm{C}\rangle}+tax^{\mathrm{rate}\langle \mathrm{C}\rangle}\right) - \beta^{\mathrm{x}\langle \mathrm{B,C}\rangle} p^{\mathrm{int}\langle \mathrm{B}\rangle} \left(1-sub^{\mathrm{rate}\langle \mathrm{C}\rangle}+tax^{\mathrm{rate}\langle \mathrm{C}\rangle}\right) - \beta^{\mathrm{x}\langle \mathrm{C,C}\rangle} p^{\mathrm{int}\langle \mathrm{C}\rangle} \left(1-sub^{\mathrm{rate}}\right. \right. \tag{16.690}$$

$$-p^{\mathrm{k}} \left(1+k^{\mathrm{tax}}\right) \left(1-sub^{\mathrm{rate}\langle \mathrm{D}\rangle}+tax^{\mathrm{rate}\langle \mathrm{D}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{D}\rangle} \gamma^{\mathrm{yva}\langle \mathrm{D}\rangle} \left(p^{\langle \mathrm{D}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,D}\rangle} p^{\mathrm{int}\langle \mathrm{A}\rangle} \left(1-sub^{\mathrm{rate}\langle \mathrm{D}\rangle}+tax^{\mathrm{rate}\langle \mathrm{D}\rangle}\right) - \beta^{\mathrm{x}\langle \mathrm{B,D}\rangle} p^{\mathrm{int}\langle \mathrm{B}\rangle} \left(1-sub^{\mathrm{rate}\langle \mathrm{D}\rangle}+tax^{\mathrm{rate}\langle \mathrm{D}\rangle}\right) - \beta^{\mathrm{x}\langle \mathrm{C,D}\rangle} p^{\mathrm{int}\langle \mathrm{C}\rangle} \left(1-sub^{\mathrm{rat}}\right. \right. \tag{16.691}$$

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{E}\rangle}+tax^{\mathrm{rate}\langle \mathrm{E}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{E}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{E}\rangle}\left(p^{\langle \mathrm{E}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,E}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{E}\rangle}+tax^{\mathrm{rate}\langle \mathrm{E}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,E}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{E}\rangle}+tax^{\mathrm{rate}\langle \mathrm{E}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,E}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \right. \tag{16.692}$$

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{F}\rangle}+tax^{\mathrm{rate}\langle \mathrm{F}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{F}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{F}\rangle}\left(p^{\langle \mathrm{F}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,F}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{F}\rangle}+tax^{\mathrm{rate}\langle \mathrm{F}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,F}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{F}\rangle}+tax^{\mathrm{rate}\langle \mathrm{F}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,F}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \right. \tag{16.693}$$

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{G}\rangle}+tax^{\mathrm{rate}\langle \mathrm{G}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{G}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{G}\rangle}\left(p^{\langle \mathrm{G}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,G}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{G}\rangle}+tax^{\mathrm{rate}\langle \mathrm{G}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,G}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{G}\rangle}+tax^{\mathrm{rate}\langle \mathrm{G}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,G}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{ra}}\right. \tag{16.694}$$

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{H}\rangle}+tax^{\mathrm{rate}\langle \mathrm{H}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{H}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{H}\rangle}\left(p^{\langle \mathrm{H}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,H}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{H}\rangle}+tax^{\mathrm{rate}\langle \mathrm{H}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,H}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{H}\rangle}+tax^{\mathrm{rate}\langle \mathrm{H}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,H}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rat}}\right. \tag{16.695}$$

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{I}\rangle}+tax^{\mathrm{rate}\langle \mathrm{I}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{I}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{I}\rangle}\left(p^{\langle \mathrm{I}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,I}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{I}\rangle}+tax^{\mathrm{rate}\langle \mathrm{I}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,I}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{I}\rangle}+tax^{\mathrm{rate}\langle \mathrm{I}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,I}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{I}\rangle}+tax\right. \tag{16.696}$$

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{J}\rangle}+tax^{\mathrm{rate}\langle \mathrm{J}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{J}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{J}\rangle}\left(p^{\langle \mathrm{J}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,J}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{J}\rangle}+tax^{\mathrm{rate}\langle \mathrm{J}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,J}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{J}\rangle}+tax^{\mathrm{rate}\langle \mathrm{J}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,J}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{J}\rangle}+\right. \tag{16.697}$$

$$-p^{\mathrm{k}}\left(1+k^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{K}\rangle}+tax^{\mathrm{rate}\langle \mathrm{K}\rangle}\right)+\beta^{\mathrm{k}\langle \mathrm{K}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{K}\rangle}\left(p^{\langle \mathrm{K}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,K}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{K}\rangle}+tax^{\mathrm{rate}\langle \mathrm{K}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,K}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{K}\rangle}+tax^{\mathrm{rate}\langle \mathrm{K}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,K}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rat}}\right. \tag{16.698}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{A}\rangle}+tax^{\mathrm{rate}\langle \mathrm{A}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{A}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{A}\rangle}\left(p^{\langle \mathrm{A}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,A}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{A}\rangle}+tax^{\mathrm{rate}\langle \mathrm{A}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,A}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{A}\rangle}+tax^{\mathrm{rate}\langle \mathrm{A}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,A}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \right. \tag{16.699}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{B}\rangle}+tax^{\mathrm{rate}\langle \mathrm{B}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{B}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{B}\rangle}\left(p^{\langle \mathrm{B}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,B}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{B}\rangle}+tax^{\mathrm{rate}\langle \mathrm{B}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,B}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{B}\rangle}+tax^{\mathrm{rate}\langle \mathrm{B}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,B}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{B}}\right. \tag{16.700}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{C}\rangle}+tax^{\mathrm{rate}\langle \mathrm{C}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{C}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{C}\rangle}\left(p^{\langle \mathrm{C}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,C}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{C}\rangle}+tax^{\mathrm{rate}\langle \mathrm{C}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,C}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{C}\rangle}+tax^{\mathrm{rate}\langle \mathrm{C}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,C}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{C}\right. \tag{16.701}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{D}\rangle}+tax^{\mathrm{rate}\langle \mathrm{D}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{D}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{D}\rangle}\left(p^{\langle \mathrm{D}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,D}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{D}\rangle}+tax^{\mathrm{rate}\langle \mathrm{D}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,D}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{D}\rangle}+tax^{\mathrm{rate}\langle \mathrm{D}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,D}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\right. \tag{16.702}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{E}\rangle}+tax^{\mathrm{rate}\langle \mathrm{E}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{E}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{E}\rangle}\left(p^{\langle \mathrm{E}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,E}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{E}\rangle}+tax^{\mathrm{rate}\langle \mathrm{E}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,E}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{E}\rangle}+tax^{\mathrm{rate}\langle \mathrm{E}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,E}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{E}\right. \tag{16.703}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{F}\rangle}+tax^{\mathrm{rate}\langle \mathrm{F}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{F}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{F}\rangle}\left(p^{\langle \mathrm{F}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,F}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{F}\rangle}+tax^{\mathrm{rate}\langle \mathrm{F}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,F}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{F}\rangle}+tax^{\mathrm{rate}\langle \mathrm{F}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,F}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{F}\right. \tag{16.704}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{G}\rangle}+tax^{\mathrm{rate}\langle \mathrm{G}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{G}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{G}\rangle}\left(p^{\langle \mathrm{G}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,G}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{G}\rangle}+tax^{\mathrm{rate}\langle \mathrm{G}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,G}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{G}\rangle}+tax^{\mathrm{rate}\langle \mathrm{G}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,G}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\right. \tag{16.705}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{H}\rangle}+tax^{\mathrm{rate}\langle \mathrm{H}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{H}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{H}\rangle}\left(p^{\langle \mathrm{H}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,H}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{H}\rangle}+tax^{\mathrm{rate}\langle \mathrm{H}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,H}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{H}\rangle}+tax^{\mathrm{rate}\langle \mathrm{H}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,H}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\right. \tag{16.706}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{I}\rangle}+tax^{\mathrm{rate}\langle \mathrm{I}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{I}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{I}\rangle}\left(p^{\langle \mathrm{I}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,I}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{I}\rangle}+tax^{\mathrm{rate}\langle \mathrm{I}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,I}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{I}\rangle}+tax^{\mathrm{rate}\langle \mathrm{I}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,I}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{I}\rangle}+tax^{\mathrm{ra}}\right. \tag{16.707}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{J}\rangle}+tax^{\mathrm{rate}\langle \mathrm{J}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{J}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{J}\rangle}\left(p^{\langle \mathrm{J}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,J}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{J}\rangle}+tax^{\mathrm{rate}\langle \mathrm{J}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,J}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{J}\rangle}+tax^{\mathrm{rate}\langle \mathrm{J}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,J}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{J}\rangle}+t\right. \tag{16.708}$$

$$-p^{\mathrm{l}}\left(1+l^{\mathrm{tax}}\right)\left(1-sub^{\mathrm{rate}\langle \mathrm{K}\rangle}+tax^{\mathrm{rate}\langle \mathrm{K}\rangle}\right)+\beta^{\mathrm{l}\langle \mathrm{K}\rangle}\gamma^{\mathrm{yva}\langle \mathrm{K}\rangle}\left(p^{\langle \mathrm{K}\rangle}-\beta^{\mathrm{x}\langle \mathrm{A,K}\rangle}p^{\mathrm{int}\langle \mathrm{A}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{K}\rangle}+tax^{\mathrm{rate}\langle \mathrm{K}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{B,K}\rangle}p^{\mathrm{int}\langle \mathrm{B}\rangle}\left(1-sub^{\mathrm{rate}\langle \mathrm{K}\rangle}+tax^{\mathrm{rate}\langle \mathrm{K}\rangle}\right)-\beta^{\mathrm{x}\langle \mathrm{C,K}\rangle}p^{\mathrm{int}\langle \mathrm{C}\rangle}\left(1-sub^{\mathrm{rate}\right. \tag{16.709}$$

$$-sub^{\mathrm{p}\langle \mathrm{A}\rangle}+p^{\mathrm{arm}\langle \mathrm{A}\rangle}-p^{\mathrm{market}\langle \mathrm{A}\rangle}=0 \tag{16.710}$$

$$-sub^{\mathrm{p}\langle \mathrm{B} \rangle} + p^{\mathrm{arm}\langle \mathrm{B} \rangle} - p^{\mathrm{market}\langle \mathrm{B} \rangle} = 0 \tag{16.711}$$

$$-sub^{\mathrm{p}\langle \mathrm{C} \rangle} + p^{\mathrm{arm}\langle \mathrm{C} \rangle} - p^{\mathrm{market}\langle \mathrm{C} \rangle} = 0 \tag{16.712}$$

$$-sub^{\mathrm{p}\langle \mathrm{D} \rangle} + p^{\mathrm{arm}\langle \mathrm{D} \rangle} - p^{\mathrm{market}\langle \mathrm{D} \rangle} = 0 \tag{16.713}$$

$$-sub^{\mathrm{p}\langle \mathrm{E} \rangle} + p^{\mathrm{arm}\langle \mathrm{E} \rangle} - p^{\mathrm{market}\langle \mathrm{E} \rangle} = 0 \tag{16.714}$$

$$-sub^{\mathrm{p}\langle \mathrm{F} \rangle} + p^{\mathrm{arm}\langle \mathrm{F} \rangle} - p^{\mathrm{market}\langle \mathrm{F} \rangle} = 0 \tag{16.715}$$

$$-sub^{\mathrm{p}\langle \mathrm{G} \rangle} + p^{\mathrm{arm}\langle \mathrm{G} \rangle} - p^{\mathrm{market}\langle \mathrm{G} \rangle} = 0 \tag{16.716}$$

$$-sub^{\mathrm{p}\langle \mathrm{H} \rangle} + p^{\mathrm{arm}\langle \mathrm{H} \rangle} - p^{\mathrm{market}\langle \mathrm{H} \rangle} = 0 \tag{16.717}$$

$$-sub^{\mathrm{p}\langle \mathrm{I} \rangle} + p^{\mathrm{arm}\langle \mathrm{I} \rangle} - p^{\mathrm{market}\langle \mathrm{I} \rangle} = 0 \tag{16.718}$$

$$-sub^{\mathrm{p}\langle \mathrm{J} \rangle} + p^{\mathrm{arm}\langle \mathrm{J} \rangle} - p^{\mathrm{market}\langle \mathrm{J} \rangle} = 0 \tag{16.719}$$

$$-sub^{\mathrm{p}\langle \mathrm{K} \rangle} + p^{\mathrm{arm}\langle \mathrm{K} \rangle} - p^{\mathrm{market}\langle \mathrm{K} \rangle} = 0 \tag{16.720}$$

$$tgovh^{\mathrm{data}\langle 01 \rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 01 \rangle} - scale^{\langle 01 \rangle} TGOVH^{\langle 01 \rangle} = 0 \tag{16.721}$$

$$tgovh^{\mathrm{data}\langle 02 \rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 02 \rangle} - scale^{\langle 02 \rangle} TGOVH^{\langle 02 \rangle} = 0 \tag{16.722}$$

$$tgovh^{\mathrm{data}\langle 03 \rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 03 \rangle} - scale^{\langle 03 \rangle} TGOVH^{\langle 03 \rangle} = 0 \tag{16.723}$$

$$tgovh^{\mathrm{data}\langle 04 \rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 04 \rangle} - scale^{\langle 04 \rangle} TGOVH^{\langle 04 \rangle} = 0 \tag{16.724}$$

$$tgovh^{\mathrm{data}\langle 05 \rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 05 \rangle} - scale^{\langle 05 \rangle} TGOVH^{\langle 05 \rangle} = 0 \tag{16.725}$$

$$tgovh^{\mathrm{data}\langle 06 \rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 06 \rangle} - scale^{\langle 06 \rangle} TGOVH^{\langle 06 \rangle} = 0 \tag{16.726}$$

$$tgovh^{\mathrm{data}\langle 07\rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 07\rangle} - scale^{\langle 07\rangle} TGOVH^{\langle 07\rangle} = 0 \tag{16.727}$$

$$tgovh^{\mathrm{data}\langle 08\rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 08\rangle} - scale^{\langle 08\rangle} TGOVH^{\langle 08\rangle} = 0 \tag{16.728}$$

$$tgovh^{\mathrm{data}\langle 09\rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 09\rangle} - scale^{\langle 09\rangle} TGOVH^{\langle 09\rangle} = 0 \tag{16.729}$$

$$tgovh^{\mathrm{data}\langle 10\rangle} + tgovh^{\mathrm{data}^{\mathrm{extra}}\langle 10\rangle} - scale^{\langle 10\rangle} TGOVH^{\langle 10\rangle} = 0 \tag{16.730}$$

$$BANKTAX - CIT + FIRMTAX = 0 \tag{16.731}$$

$$EXP^{\mathrm{GOV}} - INC^{\mathrm{GOV}} + SAV^{\mathrm{GOV}} = 0 \tag{16.732}$$

$$INC^{\mathrm{FIRM}} - SAV^{\mathrm{FIRM}} - TRAN^{\mathrm{FIRM}} = 0 \tag{16.733}$$

$$INC^{\mathrm{BANK}} - SAV^{\mathrm{BANK}} - TRAN^{\mathrm{BANK}} = 0 \tag{16.734}$$

$$K^{\mathrm{TAX}} + L^{\mathrm{TAX}} - SOCTAX = 0 \tag{16.735}$$

$$-TROWGOV + TROWGOV^{\langle \mathrm{eu}\rangle} + TROWGOV^{\langle \mathrm{neu}\rangle} = 0 \tag{16.736}$$

$$\pi^{\langle \mathrm{A}\rangle} - p^{\langle \mathrm{A}\rangle} Y^{\langle \mathrm{A}\rangle} + \left(1 - sub^{\mathrm{rate}\langle \mathrm{A}\rangle} + tax^{\mathrm{rate}\langle \mathrm{A}\rangle}\right) \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,A}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,A}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,A}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,A}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,A}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,A}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,A}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,A}\rangle} + p^{\mathrm{int}} \tag{16.737}$$

$$\pi^{\langle \mathrm{B}\rangle} - p^{\langle \mathrm{B}\rangle} Y^{\langle \mathrm{B}\rangle} + \left(1 - sub^{\mathrm{rate}\langle \mathrm{B}\rangle} + tax^{\mathrm{rate}\langle \mathrm{B}\rangle}\right) \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,B}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,B}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,B}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,B}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,B}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,B}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,B}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,B}\rangle} + p^{\mathrm{int}} \tag{16.738}$$

$$\pi^{\langle \mathrm{C}\rangle} - p^{\langle \mathrm{C}\rangle} Y^{\langle \mathrm{C}\rangle} + \left(1 - sub^{\mathrm{rate}\langle \mathrm{C}\rangle} + tax^{\mathrm{rate}\langle \mathrm{C}\rangle}\right) \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,C}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,C}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,C}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,C}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,C}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,C}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,C}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,C}\rangle} + p^{\mathrm{int}} \tag{16.739}$$

$$\pi^{\langle \mathrm{D}\rangle} - p^{\langle \mathrm{D}\rangle} Y^{\langle \mathrm{D}\rangle} + \left(1 - sub^{\mathrm{rate}\langle \mathrm{D}\rangle} + tax^{\mathrm{rate}\langle \mathrm{D}\rangle}\right) \left(p^{\mathrm{int}\langle \mathrm{A}\rangle} X^{\langle \mathrm{A,D}\rangle} + p^{\mathrm{int}\langle \mathrm{B}\rangle} X^{\langle \mathrm{B,D}\rangle} + p^{\mathrm{int}\langle \mathrm{C}\rangle} X^{\langle \mathrm{C,D}\rangle} + p^{\mathrm{int}\langle \mathrm{D}\rangle} X^{\langle \mathrm{D,D}\rangle} + p^{\mathrm{int}\langle \mathrm{E}\rangle} X^{\langle \mathrm{E,D}\rangle} + p^{\mathrm{int}\langle \mathrm{F}\rangle} X^{\langle \mathrm{F,D}\rangle} + p^{\mathrm{int}\langle \mathrm{G}\rangle} X^{\langle \mathrm{G,D}\rangle} + p^{\mathrm{int}\langle \mathrm{H}\rangle} X^{\langle \mathrm{H,D}\rangle} + p^{\mathrm{int}} \tag{16.740}$$

$$\pi^{\langle \mathrm{E} \rangle} - p^{\langle \mathrm{E} \rangle} Y^{\langle \mathrm{E} \rangle} + \left(1 - sub^{\mathrm{rate}\,\langle \mathrm{E} \rangle} + tax^{\mathrm{rate}\,\langle \mathrm{E} \rangle}\right) \left(p^{\mathrm{int}\,\langle \mathrm{A} \rangle} X^{\langle \mathrm{A,E} \rangle} + p^{\mathrm{int}\,\langle \mathrm{B} \rangle} X^{\langle \mathrm{B,E} \rangle} + p^{\mathrm{int}\,\langle \mathrm{C} \rangle} X^{\langle \mathrm{C,E} \rangle} + p^{\mathrm{int}\,\langle \mathrm{D} \rangle} X^{\langle \mathrm{D,E} \rangle} + p^{\mathrm{int}\,\langle \mathrm{E} \rangle} X^{\langle \mathrm{E,E} \rangle} + p^{\mathrm{int}\,\langle \mathrm{F} \rangle} X^{\langle \mathrm{F,E} \rangle} + p^{\mathrm{int}\,\langle \mathrm{G} \rangle} X^{\langle \mathrm{G,E} \rangle} + p^{\mathrm{int}\,\langle \mathrm{H} \rangle} X^{\langle \mathrm{H,E} \rangle} + p^{\mathrm{int}\,\langle \mathrm{I} \rangle} \tag{16.741}$$

$$\pi^{\langle \mathrm{F} \rangle} - p^{\langle \mathrm{F} \rangle} Y^{\langle \mathrm{F} \rangle} + \left(1 - sub^{\mathrm{rate}\,\langle \mathrm{F} \rangle} + tax^{\mathrm{rate}\,\langle \mathrm{F} \rangle}\right) \left(p^{\mathrm{int}\,\langle \mathrm{A} \rangle} X^{\langle \mathrm{A,F} \rangle} + p^{\mathrm{int}\,\langle \mathrm{B} \rangle} X^{\langle \mathrm{B,F} \rangle} + p^{\mathrm{int}\,\langle \mathrm{C} \rangle} X^{\langle \mathrm{C,F} \rangle} + p^{\mathrm{int}\,\langle \mathrm{D} \rangle} X^{\langle \mathrm{D,F} \rangle} + p^{\mathrm{int}\,\langle \mathrm{E} \rangle} X^{\langle \mathrm{E,F} \rangle} + p^{\mathrm{int}\,\langle \mathrm{F} \rangle} X^{\langle \mathrm{F,F} \rangle} + p^{\mathrm{int}\,\langle \mathrm{G} \rangle} X^{\langle \mathrm{G,F} \rangle} + p^{\mathrm{int}\,\langle \mathrm{H} \rangle} X^{\langle \mathrm{H,F} \rangle} + p^{\mathrm{int}\,\langle \mathrm{I} \rangle} \tag{16.742}$$

$$\pi^{\langle \mathrm{G} \rangle} - p^{\langle \mathrm{G} \rangle} Y^{\langle \mathrm{G} \rangle} + \left(1 - sub^{\mathrm{rate}\,\langle \mathrm{G} \rangle} + tax^{\mathrm{rate}\,\langle \mathrm{G} \rangle}\right) \left(p^{\mathrm{int}\,\langle \mathrm{A} \rangle} X^{\langle \mathrm{A,G} \rangle} + p^{\mathrm{int}\,\langle \mathrm{B} \rangle} X^{\langle \mathrm{B,G} \rangle} + p^{\mathrm{int}\,\langle \mathrm{C} \rangle} X^{\langle \mathrm{C,G} \rangle} + p^{\mathrm{int}\,\langle \mathrm{D} \rangle} X^{\langle \mathrm{D,G} \rangle} + p^{\mathrm{int}\,\langle \mathrm{E} \rangle} X^{\langle \mathrm{E,G} \rangle} + p^{\mathrm{int}\,\langle \mathrm{F} \rangle} X^{\langle \mathrm{F,G} \rangle} + p^{\mathrm{int}\,\langle \mathrm{G} \rangle} X^{\langle \mathrm{G,G} \rangle} + p^{\mathrm{int}\,\langle \mathrm{H} \rangle} X^{\langle \mathrm{H,G} \rangle} + p^{\mathrm{in}} \tag{16.743}$$

$$\pi^{\langle \mathrm{H} \rangle} - p^{\langle \mathrm{H} \rangle} Y^{\langle \mathrm{H} \rangle} + \left(1 - sub^{\mathrm{rate}\,\langle \mathrm{H} \rangle} + tax^{\mathrm{rate}\,\langle \mathrm{H} \rangle}\right) \left(p^{\mathrm{int}\,\langle \mathrm{A} \rangle} X^{\langle \mathrm{A,H} \rangle} + p^{\mathrm{int}\,\langle \mathrm{B} \rangle} X^{\langle \mathrm{B,H} \rangle} + p^{\mathrm{int}\,\langle \mathrm{C} \rangle} X^{\langle \mathrm{C,H} \rangle} + p^{\mathrm{int}\,\langle \mathrm{D} \rangle} X^{\langle \mathrm{D,H} \rangle} + p^{\mathrm{int}\,\langle \mathrm{E} \rangle} X^{\langle \mathrm{E,H} \rangle} + p^{\mathrm{int}\,\langle \mathrm{F} \rangle} X^{\langle \mathrm{F,H} \rangle} + p^{\mathrm{int}\,\langle \mathrm{G} \rangle} X^{\langle \mathrm{G,H} \rangle} + p^{\mathrm{int}\,\langle \mathrm{H} \rangle} X^{\langle \mathrm{H,H} \rangle} + p^{\mathrm{int}} \tag{16.744}$$

$$\pi^{\langle \mathrm{I} \rangle} - p^{\langle \mathrm{I} \rangle} Y^{\langle \mathrm{I} \rangle} + \left(1 - sub^{\mathrm{rate}\,\langle \mathrm{I} \rangle} + tax^{\mathrm{rate}\,\langle \mathrm{I} \rangle}\right) \left(p^{\mathrm{int}\,\langle \mathrm{A} \rangle} X^{\langle \mathrm{A,I} \rangle} + p^{\mathrm{int}\,\langle \mathrm{B} \rangle} X^{\langle \mathrm{B,I} \rangle} + p^{\mathrm{int}\,\langle \mathrm{C} \rangle} X^{\langle \mathrm{C,I} \rangle} + p^{\mathrm{int}\,\langle \mathrm{D} \rangle} X^{\langle \mathrm{D,I} \rangle} + p^{\mathrm{int}\,\langle \mathrm{E} \rangle} X^{\langle \mathrm{E,I} \rangle} + p^{\mathrm{int}\,\langle \mathrm{F} \rangle} X^{\langle \mathrm{F,I} \rangle} + p^{\mathrm{int}\,\langle \mathrm{G} \rangle} X^{\langle \mathrm{G,I} \rangle} + p^{\mathrm{int}\,\langle \mathrm{H} \rangle} X^{\langle \mathrm{H,I} \rangle} + p^{\mathrm{int}\,\langle \mathrm{I} \rangle} X^{\langle \mathrm{I,I} \rangle} \tag{16.745}$$

$$\pi^{\langle \mathrm{J} \rangle} - p^{\langle \mathrm{J} \rangle} Y^{\langle \mathrm{J} \rangle} + \left(1 - sub^{\mathrm{rate}\,\langle \mathrm{J} \rangle} + tax^{\mathrm{rate}\,\langle \mathrm{J} \rangle}\right) \left(p^{\mathrm{int}\,\langle \mathrm{A} \rangle} X^{\langle \mathrm{A,J} \rangle} + p^{\mathrm{int}\,\langle \mathrm{B} \rangle} X^{\langle \mathrm{B,J} \rangle} + p^{\mathrm{int}\,\langle \mathrm{C} \rangle} X^{\langle \mathrm{C,J} \rangle} + p^{\mathrm{int}\,\langle \mathrm{D} \rangle} X^{\langle \mathrm{D,J} \rangle} + p^{\mathrm{int}\,\langle \mathrm{E} \rangle} X^{\langle \mathrm{E,J} \rangle} + p^{\mathrm{int}\,\langle \mathrm{F} \rangle} X^{\langle \mathrm{F,J} \rangle} + p^{\mathrm{int}\,\langle \mathrm{G} \rangle} X^{\langle \mathrm{G,J} \rangle} + p^{\mathrm{int}\,\langle \mathrm{H} \rangle} X^{\langle \mathrm{H,J} \rangle} + p^{\mathrm{int}\,\langle \mathrm{I} \rangle} X^{\langle} \tag{16.746}$$

$$\pi^{\langle \mathrm{K} \rangle} - p^{\langle \mathrm{K} \rangle} Y^{\langle \mathrm{K} \rangle} + \left(1 - sub^{\mathrm{rate}\,\langle \mathrm{K} \rangle} + tax^{\mathrm{rate}\,\langle \mathrm{K} \rangle}\right) \left(p^{\mathrm{int}\,\langle \mathrm{A} \rangle} X^{\langle \mathrm{A,K} \rangle} + p^{\mathrm{int}\,\langle \mathrm{B} \rangle} X^{\langle \mathrm{B,K} \rangle} + p^{\mathrm{int}\,\langle \mathrm{C} \rangle} X^{\langle \mathrm{C,K} \rangle} + p^{\mathrm{int}\,\langle \mathrm{D} \rangle} X^{\langle \mathrm{D,K} \rangle} + p^{\mathrm{int}\,\langle \mathrm{E} \rangle} X^{\langle \mathrm{E,K} \rangle} + p^{\mathrm{int}\,\langle \mathrm{F} \rangle} X^{\langle \mathrm{F,K} \rangle} + p^{\mathrm{int}\,\langle \mathrm{G} \rangle} X^{\langle \mathrm{G,K} \rangle} + p^{\mathrm{int}\,\langle \mathrm{H} \rangle} X^{\langle \mathrm{H,K} \rangle} + p^{\mathrm{in}} \tag{16.747}$$

$$BTINC^{\langle 01 \rangle} - INC^{\langle 01 \rangle} - pit^{\mathrm{tax}\,\langle 01 \rangle} PIT^{\mathrm{base}\,\langle 01 \rangle} = 0 \tag{16.748}$$

$$BTINC^{\langle 02 \rangle} - INC^{\langle 02 \rangle} - pit^{\mathrm{tax}\,\langle 02 \rangle} PIT^{\mathrm{base}\,\langle 02 \rangle} = 0 \tag{16.749}$$

$$BTINC^{\langle 03 \rangle} - INC^{\langle 03 \rangle} - pit^{\mathrm{tax}\,\langle 03 \rangle} PIT^{\mathrm{base}\,\langle 03 \rangle} = 0 \tag{16.750}$$

$$BTINC^{\langle 04 \rangle} - INC^{\langle 04 \rangle} - pit^{\mathrm{tax}\,\langle 04 \rangle} PIT^{\mathrm{base}\,\langle 04 \rangle} = 0 \tag{16.751}$$

$$BTINC^{\langle 05 \rangle} - INC^{\langle 05 \rangle} - pit^{\mathrm{tax}\,\langle 05 \rangle} PIT^{\mathrm{base}\,\langle 05 \rangle} = 0 \tag{16.752}$$

$$BTINC^{\langle 06\rangle} - INC^{\langle 06\rangle} - pit^{\mathrm{tax}\langle 06\rangle} PIT^{\mathrm{base}\langle 06\rangle} = 0 \tag{16.753}$$

$$BTINC^{\langle 07\rangle} - INC^{\langle 07\rangle} - pit^{\mathrm{tax}\langle 07\rangle} PIT^{\mathrm{base}\langle 07\rangle} = 0 \tag{16.754}$$

$$BTINC^{\langle 08\rangle} - INC^{\langle 08\rangle} - pit^{\mathrm{tax}\langle 08\rangle} PIT^{\mathrm{base}\langle 08\rangle} = 0 \tag{16.755}$$

$$BTINC^{\langle 09\rangle} - INC^{\langle 09\rangle} - pit^{\mathrm{tax}\langle 09\rangle} PIT^{\mathrm{base}\langle 09\rangle} = 0 \tag{16.756}$$

$$BTINC^{\langle 10\rangle} - INC^{\langle 10\rangle} - pit^{\mathrm{tax}\langle 10\rangle} PIT^{\mathrm{base}\langle 10\rangle} = 0 \tag{16.757}$$

$$EXCISE^{\langle \mathrm{A}\rangle} - TAX^{\mathrm{p}\langle \mathrm{A}\rangle} + VAT^{\langle \mathrm{A}\rangle} = 0 \tag{16.758}$$

$$EXCISE^{\langle \mathrm{B}\rangle} - TAX^{\mathrm{p}\langle \mathrm{B}\rangle} + VAT^{\langle \mathrm{B}\rangle} = 0 \tag{16.759}$$

$$EXCISE^{\langle \mathrm{C}\rangle} - TAX^{\mathrm{p}\langle \mathrm{C}\rangle} + VAT^{\langle \mathrm{C}\rangle} = 0 \tag{16.760}$$

$$EXCISE^{\langle \mathrm{D}\rangle} - TAX^{\mathrm{p}\langle \mathrm{D}\rangle} + VAT^{\langle \mathrm{D}\rangle} = 0 \tag{16.761}$$

$$EXCISE^{\langle \mathrm{E}\rangle} - TAX^{\mathrm{p}\langle \mathrm{E}\rangle} + VAT^{\langle \mathrm{E}\rangle} = 0 \tag{16.762}$$

$$EXCISE^{\langle \mathrm{F}\rangle} - TAX^{\mathrm{p}\langle \mathrm{F}\rangle} + VAT^{\langle \mathrm{F}\rangle} = 0 \tag{16.763}$$

$$EXCISE^{\langle \mathrm{G}\rangle} - TAX^{\mathrm{p}\langle \mathrm{G}\rangle} + VAT^{\langle \mathrm{G}\rangle} = 0 \tag{16.764}$$

$$EXCISE^{\langle \mathrm{H}\rangle} - TAX^{\mathrm{p}\langle \mathrm{H}\rangle} + VAT^{\langle \mathrm{H}\rangle} = 0 \tag{16.765}$$

$$EXCISE^{\langle \mathrm{I}\rangle} - TAX^{\mathrm{p}\langle \mathrm{I}\rangle} + VAT^{\langle \mathrm{I}\rangle} = 0 \tag{16.766}$$

$$EXCISE^{\langle \mathrm{J}\rangle} - TAX^{\mathrm{p}\langle \mathrm{J}\rangle} + VAT^{\langle \mathrm{J}\rangle} = 0 \tag{16.767}$$

$$EXCISE^{\langle \mathrm{K}\rangle} - TAX^{\mathrm{p}\langle \mathrm{K}\rangle} + VAT^{\langle \mathrm{K}\rangle} = 0 \tag{16.768}$$

$$-EXP^{\mathrm{ROW}\,\langle \mathrm{eu}\rangle} + EXPORT^{\mathrm{ROW}\,\langle \mathrm{eu}\rangle} + TRAN^{\langle \mathrm{eu}\rangle} = 0 \tag{16.769}$$

$$EXP^{\mathrm{ROW}\,\langle \mathrm{eu}\rangle} - INC^{\mathrm{ROW}\,\langle \mathrm{eu}\rangle} + SAV^{\langle \mathrm{eu}\rangle} = 0 \tag{16.770}$$

$$-EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} + EXPORT^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} + TRAN^{\langle \mathrm{neu}\rangle} = 0 \tag{16.771}$$

$$EXP^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - INC^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} + SAV^{\langle \mathrm{neu}\rangle} = 0 \tag{16.772}$$

$$IMPORT^{\mathrm{ROW}\,\langle \mathrm{eu}\rangle} - INC^{\mathrm{ROW}\,\langle \mathrm{eu}\rangle} + ex^{\mathrm{rate}\,\langle \mathrm{eu}\rangle} \left(TBANKROW^{\langle \mathrm{eu}\rangle} + TFIRMROW^{\langle \mathrm{eu}\rangle} + TGOVROW^{\langle \mathrm{eu}\rangle} + scale^{\langle 01\rangle} THROW^{\langle 01,\mathrm{eu}\rangle} + scale^{\langle 02\rangle} THROW^{\langle 02,\mathrm{eu}\rangle} + scale^{\langle 03\rangle} THROW^{\langle 03,\mathrm{eu}\rangle} + scale^{\langle 04\rangle} T \right. \tag{16.773}$$

$$IMPORT^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} - INC^{\mathrm{ROW}\,\langle \mathrm{neu}\rangle} + ex^{\mathrm{rate}\,\langle \mathrm{neu}\rangle} \left(TBANKROW^{\langle \mathrm{neu}\rangle} + TFIRMROW^{\langle \mathrm{neu}\rangle} + TGOVROW^{\langle \mathrm{neu}\rangle} + scale^{\langle 01\rangle} THROW^{\langle 01,\mathrm{neu}\rangle} + scale^{\langle 02\rangle} THROW^{\langle 02,\mathrm{neu}\rangle} + scale^{\langle 03\rangle} THROW^{\langle 03,\mathrm{neu}\rangle} + \right. \tag{16.774}$$

$$L^{\langle 01\rangle} - LL^{\langle 01\rangle} + UNEMP^{\langle 01\rangle} = 0 \tag{16.775}$$

$$L^{\langle 02\rangle} - LL^{\langle 02\rangle} + UNEMP^{\langle 02\rangle} = 0 \tag{16.776}$$

$$L^{\langle 03\rangle} - LL^{\langle 03\rangle} + UNEMP^{\langle 03\rangle} = 0 \tag{16.777}$$

$$L^{\langle 04\rangle} - LL^{\langle 04\rangle} + UNEMP^{\langle 04\rangle} = 0 \tag{16.778}$$

$$L^{\langle 05\rangle} - LL^{\langle 05\rangle} + UNEMP^{\langle 05\rangle} = 0 \tag{16.779}$$

$$L^{\langle 06\rangle} - LL^{\langle 06\rangle} + UNEMP^{\langle 06\rangle} = 0 \tag{16.780}$$

$$L^{\langle 07\rangle} - LL^{\langle 07\rangle} + UNEMP^{\langle 07\rangle} = 0 \tag{16.781}$$

$$L^{\langle 08\rangle} - LL^{\langle 08\rangle} + UNEMP^{\langle 08\rangle} = 0 \tag{16.782}$$

$$L^{\langle 09\rangle} - LL^{\langle 09\rangle} + UNEMP^{\langle 09\rangle} = 0 \tag{16.783}$$

$$L^{\langle 10\rangle} - LL^{\langle 10\rangle} + UNEMP^{\langle 10\rangle} = 0 \tag{16.784}$$

$$-scale^{\langle 01\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 01\rangle} + p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 01\rangle} + ouh^{\mathrm{b}\langle 01\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 01\rangle} + ouh^{\mathrm{r}\langle 01,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 01,\mathrm{eu}\rangle} + ouh^{\mathrm{r}\langle 01,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 01,\mathrm{neu}\rangle} - pit^{\mathrm{tax}\langle 01\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 01\rangle}\right. \tag{16.785}$$

$$-scale^{\langle 02\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 02\rangle} + p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 02\rangle} + ouh^{\mathrm{b}\langle 02\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 02\rangle} + ouh^{\mathrm{r}\langle 02,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 02,\mathrm{eu}\rangle} + ouh^{\mathrm{r}\langle 02,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 02,\mathrm{neu}\rangle} - pit^{\mathrm{tax}\langle 02\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 02\rangle}\right. \tag{16.786}$$

$$-scale^{\langle 03\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 03\rangle} + p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 03\rangle} + ouh^{\mathrm{b}\langle 03\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 03\rangle} + ouh^{\mathrm{r}\langle 03,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 03,\mathrm{eu}\rangle} + ouh^{\mathrm{r}\langle 03,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 03,\mathrm{neu}\rangle} - pit^{\mathrm{tax}\langle 03\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 03\rangle}\right. \tag{16.787}$$

$$-scale^{\langle 04\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 04\rangle} + p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 04\rangle} + ouh^{\mathrm{b}\langle 04\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 04\rangle} + ouh^{\mathrm{r}\langle 04,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 04,\mathrm{eu}\rangle} + ouh^{\mathrm{r}\langle 04,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 04,\mathrm{neu}\rangle} - pit^{\mathrm{tax}\langle 04\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 04\rangle}\right. \tag{16.788}$$

$$-scale^{\langle 05\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 05\rangle} + p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle} + ouh^{\mathrm{b}\langle 05\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle} + ouh^{\mathrm{r}\langle 05,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 05,\mathrm{eu}\rangle} + ouh^{\mathrm{r}\langle 05,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 05,\mathrm{neu}\rangle} - pit^{\mathrm{tax}\langle 05\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 05\rangle}\right. \tag{16.789}$$

$$-scale^{\langle 06\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 06\rangle} + p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 06\rangle} + ouh^{\mathrm{b}\langle 06\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 06\rangle} + ouh^{\mathrm{r}\langle 06,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 06,\mathrm{eu}\rangle} + ouh^{\mathrm{r}\langle 06,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 06,\mathrm{neu}\rangle} - pit^{\mathrm{tax}\langle 06\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 06\rangle}\right. \tag{16.790}$$

$$-scale^{\langle 07\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 07\rangle} + p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 07\rangle} + ouh^{\mathrm{b}\langle 07\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 07\rangle} + ouh^{\mathrm{r}\langle 07,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 07,\mathrm{eu}\rangle} + ouh^{\mathrm{r}\langle 07,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 07,\mathrm{neu}\rangle} - pit^{\mathrm{tax}\langle 07\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 07\rangle}\right. \tag{16.791}$$

$$-scale^{\langle 08\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 08\rangle} + p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle} + ouh^{\mathrm{b}\langle 08\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle} + ouh^{\mathrm{r}\langle 08,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 08,\mathrm{eu}\rangle} + ouh^{\mathrm{r}\langle 08,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 08,\mathrm{neu}\rangle} - pit^{\mathrm{tax}\langle 08\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 08\rangle}\right. \tag{16.792}$$

$$-scale^{\langle 09\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 09\rangle}+p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 09\rangle}+outh^{\mathrm{b}\langle 09\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 09\rangle}+outh^{\mathrm{r}\langle 09,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 09,\mathrm{eu}\rangle}+outh^{\mathrm{r}\langle 09,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 09,\mathrm{neu}\rangle}-pit^{\mathrm{tax}\langle 09\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 09\rangle}\right.\right. \tag{16.793}$$

$$-scale^{\langle 10\rangle}\lambda^{\mathrm{CONSUMER}^{1}\langle 10\rangle}+p^{\mathrm{l}}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 10\rangle}+outh^{\mathrm{b}\langle 10\rangle}\lambda^{\mathrm{CONSUMER}^{12}\langle 10\rangle}+outh^{\mathrm{r}\langle 10,\mathrm{eu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 10,\mathrm{eu}\rangle}+outh^{\mathrm{r}\langle 10,\mathrm{neu}\rangle}\lambda^{\mathrm{CONSUMER}^{11}\langle 10,\mathrm{neu}\rangle}-pit^{\mathrm{tax}\langle 10\rangle}\left(-\lambda^{\mathrm{CONSUMER}^{12}\langle 10\rangle}\right.\right. \tag{16.794}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 01\rangle}-PIT^{\mathrm{base}\langle 01\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 01\rangle}=0 \tag{16.795}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 02\rangle}-PIT^{\mathrm{base}\langle 02\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 02\rangle}=0 \tag{16.796}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 03\rangle}-PIT^{\mathrm{base}\langle 03\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 03\rangle}=0 \tag{16.797}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 04\rangle}-PIT^{\mathrm{base}\langle 04\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 04\rangle}=0 \tag{16.798}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 05\rangle}-PIT^{\mathrm{base}\langle 05\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 05\rangle}=0 \tag{16.799}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 06\rangle}-PIT^{\mathrm{base}\langle 06\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 06\rangle}=0 \tag{16.800}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 07\rangle}-PIT^{\mathrm{base}\langle 07\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 07\rangle}=0 \tag{16.801}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 08\rangle}-PIT^{\mathrm{base}\langle 08\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 08\rangle}=0 \tag{16.802}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 09\rangle}-PIT^{\mathrm{base}\langle 09\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 09\rangle}=0 \tag{16.803}$$

$$-pit^{\mathrm{free}}+BTINC^{\langle 10\rangle}-PIT^{\mathrm{base}\langle 10\rangle}-\alpha ip^{\mathrm{l}}L^{\langle 10\rangle}=0 \tag{16.804}$$

$$DEM^{\mathrm{GOV}}-EXP^{\mathrm{GOV}}+SUB+TRAN^{\mathrm{GOV}}=0 \tag{16.805}$$

$$-BTINC^{\langle 01\rangle}+TINSTH^{\langle 01\rangle}+p^{\mathrm{k}}K^{\langle 01\rangle}+p^{\mathrm{l}}L^{\langle 01\rangle}=0 \tag{16.806}$$

$$-BTINC^{\langle 02\rangle} + TINSTH^{\langle 02\rangle} + p^{\mathrm{k}} K^{\langle 02\rangle} + p^{\mathrm{l}} L^{\langle 02\rangle} = 0 \tag{16.807}$$

$$-BTINC^{\langle 03\rangle} + TINSTH^{\langle 03\rangle} + p^{\mathrm{k}} K^{\langle 03\rangle} + p^{\mathrm{l}} L^{\langle 03\rangle} = 0 \tag{16.808}$$

$$-BTINC^{\langle 04\rangle} + TINSTH^{\langle 04\rangle} + p^{\mathrm{k}} K^{\langle 04\rangle} + p^{\mathrm{l}} L^{\langle 04\rangle} = 0 \tag{16.809}$$

$$-BTINC^{\langle 05\rangle} + TINSTH^{\langle 05\rangle} + p^{\mathrm{k}} K^{\langle 05\rangle} + p^{\mathrm{l}} L^{\langle 05\rangle} = 0 \tag{16.810}$$

$$-BTINC^{\langle 06\rangle} + TINSTH^{\langle 06\rangle} + p^{\mathrm{k}} K^{\langle 06\rangle} + p^{\mathrm{l}} L^{\langle 06\rangle} = 0 \tag{16.811}$$

$$-BTINC^{\langle 07\rangle} + TINSTH^{\langle 07\rangle} + p^{\mathrm{k}} K^{\langle 07\rangle} + p^{\mathrm{l}} L^{\langle 07\rangle} = 0 \tag{16.812}$$

$$-BTINC^{\langle 08\rangle} + TINSTH^{\langle 08\rangle} + p^{\mathrm{k}} K^{\langle 08\rangle} + p^{\mathrm{l}} L^{\langle 08\rangle} = 0 \tag{16.813}$$

$$-BTINC^{\langle 09\rangle} + TINSTH^{\langle 09\rangle} + p^{\mathrm{k}} K^{\langle 09\rangle} + p^{\mathrm{l}} L^{\langle 09\rangle} = 0 \tag{16.814}$$

$$-BTINC^{\langle 10\rangle} + TINSTH^{\langle 10\rangle} + p^{\mathrm{k}} K^{\langle 10\rangle} + p^{\mathrm{l}} L^{\langle 10\rangle} = 0 \tag{16.815}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{A}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,A}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,A}\rangle} - p^{\mathrm{exp}\langle \mathrm{A}\rangle} EXPORT^{\langle \mathrm{A}\rangle} = 0 \tag{16.816}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{B}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,B}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,B}\rangle} - p^{\mathrm{exp}\langle \mathrm{B}\rangle} EXPORT^{\langle \mathrm{B}\rangle} = 0 \tag{16.817}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{C}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,C}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,C}\rangle} - p^{\mathrm{exp}\langle \mathrm{C}\rangle} EXPORT^{\langle \mathrm{C}\rangle} = 0 \tag{16.818}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{D}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,D}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,D}\rangle} - p^{\mathrm{exp}\langle \mathrm{D}\rangle} EXPORT^{\langle \mathrm{D}\rangle} = 0 \tag{16.819}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{E}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,E}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,E}\rangle} - p^{\mathrm{exp}\langle \mathrm{E}\rangle} EXPORT^{\langle \mathrm{E}\rangle} = 0 \tag{16.820}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{F}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,F}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,F}\rangle} - p^{\mathrm{exp}\langle \mathrm{F}\rangle} EXPORT^{\langle \mathrm{F}\rangle} = 0 \tag{16.821}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{G}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,G}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,G}\rangle} - p^{\mathrm{exp}\langle \mathrm{G}\rangle} EXPORT^{\langle \mathrm{G}\rangle} = 0 \tag{16.822}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{H}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,H}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,H}\rangle} - p^{\mathrm{exp}\langle \mathrm{H}\rangle} EXPORT^{\langle \mathrm{H}\rangle} = 0 \tag{16.823}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{I}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,I}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,I}\rangle} - p^{\mathrm{exp}\langle \mathrm{I}\rangle} EXPORT^{\langle \mathrm{I}\rangle} = 0 \tag{16.824}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{J}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,J}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,J}\rangle} - p^{\mathrm{exp}\langle \mathrm{J}\rangle} EXPORT^{\langle \mathrm{J}\rangle} = 0 \tag{16.825}$$

$$\Pi^{\mathrm{EXP}\langle \mathrm{K}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} EXP^{\langle \mathrm{eu,K}\rangle} + p^{\mathrm{for}\langle \mathrm{neu}\rangle} EXP^{\langle \mathrm{neu,K}\rangle} - p^{\mathrm{exp}\langle \mathrm{K}\rangle} EXPORT^{\langle \mathrm{K}\rangle} = 0 \tag{16.826}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{A}\rangle} - p^{\langle \mathrm{A}\rangle} Y^{\langle \mathrm{A}\rangle} + p^{\mathrm{exp}\langle \mathrm{A}\rangle} EXPORT^{\langle \mathrm{A}\rangle} + p^{\mathrm{home}\langle \mathrm{A}\rangle} Y^{\mathrm{HOME}\langle \mathrm{A}\rangle} = 0 \tag{16.827}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{B}\rangle} - p^{\langle \mathrm{B}\rangle} Y^{\langle \mathrm{B}\rangle} + p^{\mathrm{exp}\langle \mathrm{B}\rangle} EXPORT^{\langle \mathrm{B}\rangle} + p^{\mathrm{home}\langle \mathrm{B}\rangle} Y^{\mathrm{HOME}\langle \mathrm{B}\rangle} = 0 \tag{16.828}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{C}\rangle} - p^{\langle \mathrm{C}\rangle} Y^{\langle \mathrm{C}\rangle} + p^{\mathrm{exp}\langle \mathrm{C}\rangle} EXPORT^{\langle \mathrm{C}\rangle} + p^{\mathrm{home}\langle \mathrm{C}\rangle} Y^{\mathrm{HOME}\langle \mathrm{C}\rangle} = 0 \tag{16.829}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{D}\rangle} - p^{\langle \mathrm{D}\rangle} Y^{\langle \mathrm{D}\rangle} + p^{\mathrm{exp}\langle \mathrm{D}\rangle} EXPORT^{\langle \mathrm{D}\rangle} + p^{\mathrm{home}\langle \mathrm{D}\rangle} Y^{\mathrm{HOME}\langle \mathrm{D}\rangle} = 0 \tag{16.830}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{E}\rangle} - p^{\langle \mathrm{E}\rangle} Y^{\langle \mathrm{E}\rangle} + p^{\mathrm{exp}\langle \mathrm{E}\rangle} EXPORT^{\langle \mathrm{E}\rangle} + p^{\mathrm{home}\langle \mathrm{E}\rangle} Y^{\mathrm{HOME}\langle \mathrm{E}\rangle} = 0 \tag{16.831}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{F}\rangle} - p^{\langle \mathrm{F}\rangle} Y^{\langle \mathrm{F}\rangle} + p^{\mathrm{exp}\langle \mathrm{F}\rangle} EXPORT^{\langle \mathrm{F}\rangle} + p^{\mathrm{home}\langle \mathrm{F}\rangle} Y^{\mathrm{HOME}\langle \mathrm{F}\rangle} = 0 \tag{16.832}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{G}\rangle} - p^{\langle \mathrm{G}\rangle} Y^{\langle \mathrm{G}\rangle} + p^{\mathrm{exp}\langle \mathrm{G}\rangle} EXPORT^{\langle \mathrm{G}\rangle} + p^{\mathrm{home}\langle \mathrm{G}\rangle} Y^{\mathrm{HOME}\langle \mathrm{G}\rangle} = 0 \tag{16.833}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{H}\rangle} - p^{\langle \mathrm{H}\rangle} Y^{\langle \mathrm{H}\rangle} + p^{\mathrm{exp}\langle \mathrm{H}\rangle} EXPORT^{\langle \mathrm{H}\rangle} + p^{\mathrm{home}\langle \mathrm{H}\rangle} Y^{\mathrm{HOME}\langle \mathrm{H}\rangle} = 0 \tag{16.834}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{I}\rangle} - p^{\langle \mathrm{I}\rangle} Y^{\langle \mathrm{I}\rangle} + p^{\mathrm{exp}\langle \mathrm{I}\rangle} EXPORT^{\langle \mathrm{I}\rangle} + p^{\mathrm{home}\langle \mathrm{I}\rangle} Y^{\mathrm{HOME}\langle \mathrm{I}\rangle} = 0 \tag{16.835}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{J}\rangle} - p^{\langle \mathrm{J}\rangle} Y^{\langle \mathrm{J}\rangle} + p^{\mathrm{exp}\langle \mathrm{J}\rangle} EXPORT^{\langle \mathrm{J}\rangle} + p^{\mathrm{home}\langle \mathrm{J}\rangle} Y^{\mathrm{HOME}\langle \mathrm{J}\rangle} = 0 \tag{16.836}$$

$$\Pi^{\mathrm{Y}\langle \mathrm{K}\rangle} - p^{\langle \mathrm{K}\rangle} Y^{\langle \mathrm{K}\rangle} + p^{\mathrm{exp}\langle \mathrm{K}\rangle} EXPORT^{\langle \mathrm{K}\rangle} + p^{\mathrm{home}\langle \mathrm{K}\rangle} Y^{\mathrm{HOME}\langle \mathrm{K}\rangle} = 0 \tag{16.837}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{A}\rangle} - p^{\mathrm{imp}\langle \mathrm{A}\rangle} IMPORT^{\langle \mathrm{A}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,A}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,A}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,A}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,A}\rangle}\right) = 0 \tag{16.838}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{B}\rangle} - p^{\mathrm{imp}\langle \mathrm{B}\rangle} IMPORT^{\langle \mathrm{B}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,B}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,B}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,B}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,B}\rangle}\right) = 0 \tag{16.839}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{C}\rangle} - p^{\mathrm{imp}\langle \mathrm{C}\rangle} IMPORT^{\langle \mathrm{C}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,C}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,C}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,C}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,C}\rangle}\right) = 0 \tag{16.840}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{D}\rangle} - p^{\mathrm{imp}\langle \mathrm{D}\rangle} IMPORT^{\langle \mathrm{D}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,D}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,D}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,D}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,D}\rangle}\right) = 0 \tag{16.841}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{E}\rangle} - p^{\mathrm{imp}\langle \mathrm{E}\rangle} IMPORT^{\langle \mathrm{E}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,E}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,E}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,E}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,E}\rangle}\right) = 0 \tag{16.842}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{F}\rangle} - p^{\mathrm{imp}\langle \mathrm{F}\rangle} IMPORT^{\langle \mathrm{F}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,F}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,F}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,F}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,F}\rangle}\right) = 0 \tag{16.843}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{G}\rangle} - p^{\mathrm{imp}\langle \mathrm{G}\rangle} IMPORT^{\langle \mathrm{G}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,G}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,G}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,G}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,G}\rangle}\right) = 0 \tag{16.844}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{H}\rangle} - p^{\mathrm{imp}\langle \mathrm{H}\rangle} IMPORT^{\langle \mathrm{H}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,H}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,H}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,H}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,H}\rangle}\right) = 0 \tag{16.845}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{I}\rangle} - p^{\mathrm{imp}\langle \mathrm{I}\rangle} IMPORT^{\langle \mathrm{I}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,I}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,I}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,I}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,I}\rangle}\right) = 0 \tag{16.846}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{J}\rangle} - p^{\mathrm{imp}\langle \mathrm{J}\rangle} IMPORT^{\langle \mathrm{J}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,J}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,J}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,J}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,J}\rangle}\right) = 0 \tag{16.847}$$

$$\Pi^{\mathrm{IMP}\langle \mathrm{K}\rangle} - p^{\mathrm{imp}\langle \mathrm{K}\rangle} IMPORT^{\langle \mathrm{K}\rangle} + p^{\mathrm{for}\langle \mathrm{eu}\rangle} ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} IMP^{\langle \mathrm{eu,K}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{eu,K}\rangle}\right) + p^{\mathrm{for}\langle \mathrm{neu}\rangle} ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} IMP^{\langle \mathrm{neu,K}\rangle} \left(1 + im^{\mathrm{tax}\langle \mathrm{neu,K}\rangle}\right) = 0 \tag{16.848}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{A}\rangle} + p^{\mathrm{home}\langle \mathrm{A}\rangle} Y^{\mathrm{HOME}\langle \mathrm{A}\rangle} + p^{\mathrm{imp}\langle \mathrm{A}\rangle} IMPORT^{\langle \mathrm{A}\rangle} - p^{\mathrm{arm}\langle \mathrm{A}\rangle} ARM^{\langle \mathrm{A}\rangle} = 0 \tag{16.849}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{B}\rangle} + p^{\mathrm{home}\langle \mathrm{B}\rangle} Y^{\mathrm{HOME}\langle \mathrm{B}\rangle} + p^{\mathrm{imp}\langle \mathrm{B}\rangle} IMPORT^{\langle \mathrm{B}\rangle} - p^{\mathrm{arm}\langle \mathrm{B}\rangle} ARM^{\langle \mathrm{B}\rangle} = 0 \tag{16.850}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{C}\rangle} + p^{\mathrm{home}\langle \mathrm{C}\rangle} Y^{\mathrm{HOME}\langle \mathrm{C}\rangle} + p^{\mathrm{imp}\langle \mathrm{C}\rangle} IMPORT^{\langle \mathrm{C}\rangle} - p^{\mathrm{arm}\langle \mathrm{C}\rangle} ARM^{\langle \mathrm{C}\rangle} = 0 \tag{16.851}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{D}\rangle} + p^{\mathrm{home}\langle \mathrm{D}\rangle} Y^{\mathrm{HOME}\langle \mathrm{D}\rangle} + p^{\mathrm{imp}\langle \mathrm{D}\rangle} IMPORT^{\langle \mathrm{D}\rangle} - p^{\mathrm{arm}\langle \mathrm{D}\rangle} ARM^{\langle \mathrm{D}\rangle} = 0 \tag{16.852}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{E}\rangle} + p^{\mathrm{home}\langle \mathrm{E}\rangle} Y^{\mathrm{HOME}\langle \mathrm{E}\rangle} + p^{\mathrm{imp}\langle \mathrm{E}\rangle} IMPORT^{\langle \mathrm{E}\rangle} - p^{\mathrm{arm}\langle \mathrm{E}\rangle} ARM^{\langle \mathrm{E}\rangle} = 0 \tag{16.853}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{F}\rangle} + p^{\mathrm{home}\langle \mathrm{F}\rangle} Y^{\mathrm{HOME}\langle \mathrm{F}\rangle} + p^{\mathrm{imp}\langle \mathrm{F}\rangle} IMPORT^{\langle \mathrm{F}\rangle} - p^{\mathrm{arm}\langle \mathrm{F}\rangle} ARM^{\langle \mathrm{F}\rangle} = 0 \tag{16.854}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{G}\rangle} + p^{\mathrm{home}\langle \mathrm{G}\rangle} Y^{\mathrm{HOME}\langle \mathrm{G}\rangle} + p^{\mathrm{imp}\langle \mathrm{G}\rangle} IMPORT^{\langle \mathrm{G}\rangle} - p^{\mathrm{arm}\langle \mathrm{G}\rangle} ARM^{\langle \mathrm{G}\rangle} = 0 \tag{16.855}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{H}\rangle} + p^{\mathrm{home}\langle \mathrm{H}\rangle} Y^{\mathrm{HOME}\langle \mathrm{H}\rangle} + p^{\mathrm{imp}\langle \mathrm{H}\rangle} IMPORT^{\langle \mathrm{H}\rangle} - p^{\mathrm{arm}\langle \mathrm{H}\rangle} ARM^{\langle \mathrm{H}\rangle} = 0 \tag{16.856}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{I}\rangle} + p^{\mathrm{home}\langle \mathrm{I}\rangle} Y^{\mathrm{HOME}\langle \mathrm{I}\rangle} + p^{\mathrm{imp}\langle \mathrm{I}\rangle} IMPORT^{\langle \mathrm{I}\rangle} - p^{\mathrm{arm}\langle \mathrm{I}\rangle} ARM^{\langle \mathrm{I}\rangle} = 0 \tag{16.857}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{J}\rangle} + p^{\mathrm{home}\langle \mathrm{J}\rangle} Y^{\mathrm{HOME}\langle \mathrm{J}\rangle} + p^{\mathrm{imp}\langle \mathrm{J}\rangle} IMPORT^{\langle \mathrm{J}\rangle} - p^{\mathrm{arm}\langle \mathrm{J}\rangle} ARM^{\langle \mathrm{J}\rangle} = 0 \tag{16.858}$$

$$\Pi^{\mathrm{ARM}\langle \mathrm{K}\rangle} + p^{\mathrm{home}\langle \mathrm{K}\rangle} Y^{\mathrm{HOME}\langle \mathrm{K}\rangle} + p^{\mathrm{imp}\langle \mathrm{K}\rangle} IMPORT^{\langle \mathrm{K}\rangle} - p^{\mathrm{arm}\langle \mathrm{K}\rangle} ARM^{\langle \mathrm{K}\rangle} = 0 \tag{16.859}$$

$$THBANK^{\langle 01\rangle} - TRAN^{\langle 01\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 01,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 01,\mathrm{neu}\rangle} = 0 \tag{16.860}$$

$$THBANK^{\langle 02\rangle} - TRAN^{\langle 02\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 02,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 02,\mathrm{neu}\rangle} = 0 \tag{16.861}$$

$$THBANK^{\langle 03\rangle} - TRAN^{\langle 03\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 03,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 03,\mathrm{neu}\rangle} = 0 \tag{16.862}$$

$$THBANK^{\langle 04\rangle} - TRAN^{\langle 04\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 04,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 04,\mathrm{neu}\rangle} = 0 \tag{16.863}$$

$$THBANK^{\langle 05\rangle} - TRAN^{\langle 05\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 05,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 05,\mathrm{neu}\rangle} = 0 \tag{16.864}$$

$$THBANK^{\langle 06\rangle} - TRAN^{\langle 06\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 06,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 06,\mathrm{neu}\rangle} = 0 \tag{16.865}$$

$$THBANK^{\langle 07\rangle} - TRAN^{\langle 07\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 07,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 07,\mathrm{neu}\rangle} = 0 \tag{16.866}$$

$$THBANK^{\langle 08\rangle} - TRAN^{\langle 08\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 08,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 08,\mathrm{neu}\rangle} = 0 \tag{16.867}$$

$$THBANK^{\langle 09\rangle} - TRAN^{\langle 09\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 09,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 09,\mathrm{neu}\rangle} = 0 \tag{16.868}$$

$$THBANK^{\langle 10\rangle} - TRAN^{\langle 10\rangle} + ex^{\mathrm{rate}\langle \mathrm{eu}\rangle} THROW^{\langle 10,\mathrm{eu}\rangle} + ex^{\mathrm{rate}\langle \mathrm{neu}\rangle} THROW^{\langle 10,\mathrm{neu}\rangle} = 0 \tag{16.869}$$

$$TBANKH^{\langle 01\rangle} + TFIRMH^{\langle 01\rangle} + TGOVH^{\langle 01\rangle} - TINSTH^{\langle 01\rangle} + TROWH^{\langle \mathrm{eu},01\rangle} + TROWH^{\langle \mathrm{neu},01\rangle} = 0 \tag{16.870}$$

$$TBANKH^{\langle 02\rangle} + TFIRMH^{\langle 02\rangle} + TGOVH^{\langle 02\rangle} - TINSTH^{\langle 02\rangle} + TROWH^{\langle \mathrm{eu},02\rangle} + TROWH^{\langle \mathrm{neu},02\rangle} = 0 \tag{16.871}$$

$$TBANKH^{\langle 03\rangle} + TFIRMH^{\langle 03\rangle} + TGOVH^{\langle 03\rangle} - TINSTH^{\langle 03\rangle} + TROWH^{\langle \mathrm{eu},03\rangle} + TROWH^{\langle \mathrm{neu},03\rangle} = 0 \tag{16.872}$$

$$TBANKH^{\langle 04\rangle} + TFIRMH^{\langle 04\rangle} + TGOVH^{\langle 04\rangle} - TINSTH^{\langle 04\rangle} + TROWH^{\langle \mathrm{eu},04\rangle} + TROWH^{\langle \mathrm{neu},04\rangle} = 0 \tag{16.873}$$

$$TBANKH^{\langle 05\rangle} + TFIRMH^{\langle 05\rangle} + TGOVH^{\langle 05\rangle} - TINSTH^{\langle 05\rangle} + TROWH^{\langle \mathrm{eu},05\rangle} + TROWH^{\langle \mathrm{neu},05\rangle} = 0 \tag{16.874}$$

$$TBANKH^{\langle 06\rangle} + TFIRMH^{\langle 06\rangle} + TGOVH^{\langle 06\rangle} - TINSTH^{\langle 06\rangle} + TROWH^{\langle \mathrm{eu},06\rangle} + TROWH^{\langle \mathrm{neu},06\rangle} = 0 \tag{16.875}$$

$$TBANKH^{\langle 07\rangle} + TFIRMH^{\langle 07\rangle} + TGOVH^{\langle 07\rangle} - TINSTH^{\langle 07\rangle} + TROWH^{\langle \mathrm{eu},07\rangle} + TROWH^{\langle \mathrm{neu},07\rangle} = 0 \tag{16.876}$$

$$TBANKH^{\langle 08\rangle} + TFIRMH^{\langle 08\rangle} + TGOVH^{\langle 08\rangle} - TINSTH^{\langle 08\rangle} + TROWH^{\langle \mathrm{eu},08\rangle} + TROWH^{\langle \mathrm{neu},08\rangle} = 0 \tag{16.877}$$

$$TBANKH^{\langle 09\rangle} + TFIRMH^{\langle 09\rangle} + TGOVH^{\langle 09\rangle} - TINSTH^{\langle 09\rangle} + TROWH^{\langle \mathrm{eu},09\rangle} + TROWH^{\langle \mathrm{neu},09\rangle} = 0 \tag{16.878}$$

$$TBANKH^{\langle 10\rangle} + TFIRMH^{\langle 10\rangle} + TGOVH^{\langle 10\rangle} - TINSTH^{\langle 10\rangle} + TROWH^{\langle \mathrm{eu},10\rangle} + TROWH^{\langle \mathrm{neu},10\rangle} = 0 \tag{16.879}$$

$$-BTINC^{\mathrm{FIRM}} + PROFIT + TBANKFIRM + TGOVFIRM + TROWFIRM^{\langle \mathrm{eu}\rangle} + TROWFIRM^{\langle \mathrm{neu}\rangle} + p^{\mathrm{k}} K^{\mathrm{FIRM}} = 0 \tag{16.880}$$

$$CIT + EXCISE + IMTAX - INC^{\mathrm{GOV}} + PIT + SOCTAX + STAX + TROWGOV + VAT = 0 \tag{16.881}$$

$$-LS + scale^{\langle 01\rangle} L^{\langle 01\rangle} + scale^{\langle 02\rangle} L^{\langle 02\rangle} + scale^{\langle 03\rangle} L^{\langle 03\rangle} + scale^{\langle 04\rangle} L^{\langle 04\rangle} + scale^{\langle 05\rangle} L^{\langle 05\rangle} + scale^{\langle 06\rangle} L^{\langle 06\rangle} + scale^{\langle 07\rangle} L^{\langle 07\rangle} + scale^{\langle 08\rangle} L^{\langle 08\rangle} + scale^{\langle 09\rangle} L^{\langle 09\rangle} + scale^{\langle 10\rangle} L^{\langle 10\rangle} = 0 \tag{16.882}$$

$$-PIT + pit^{\mathrm{tax}\langle 01\rangle} scale^{\langle 01\rangle} PIT^{\mathrm{base}\langle 01\rangle} + pit^{\mathrm{tax}\langle 02\rangle} scale^{\langle 02\rangle} PIT^{\mathrm{base}\langle 02\rangle} + pit^{\mathrm{tax}\langle 03\rangle} scale^{\langle 03\rangle} PIT^{\mathrm{base}\langle 03\rangle} + pit^{\mathrm{tax}\langle 04\rangle} scale^{\langle 04\rangle} PIT^{\mathrm{base}\langle 04\rangle} + pit^{\mathrm{tax}\langle 05\rangle} scale^{\langle 05\rangle} PIT^{\mathrm{base}\langle 05\rangle} + pit^{\mathrm{tax}\langle 06\rangle} scale^{\langle 06\rangle} PIT^{\mathrm{base}\langle 06\rangle} + pit^{\mathrm{ta}} \tag{16.883}$$

$$-DEM^{\mathrm{GOV}} + p^{\mathrm{cons}\langle \mathrm{A}\rangle} D^{\mathrm{GOV}\langle \mathrm{A}\rangle} + p^{\mathrm{cons}\langle \mathrm{B}\rangle} D^{\mathrm{GOV}\langle \mathrm{B}\rangle} + p^{\mathrm{cons}\langle \mathrm{C}\rangle} D^{\mathrm{GOV}\langle \mathrm{C}\rangle} + p^{\mathrm{cons}\langle \mathrm{D}\rangle} D^{\mathrm{GOV}\langle \mathrm{D}\rangle} + p^{\mathrm{cons}\langle \mathrm{E}\rangle} D^{\mathrm{GOV}\langle \mathrm{E}\rangle} + p^{\mathrm{cons}\langle \mathrm{F}\rangle} D^{\mathrm{GOV}\langle \mathrm{F}\rangle} + p^{\mathrm{cons}\langle \mathrm{G}\rangle} D^{\mathrm{GOV}\langle \mathrm{G}\rangle} + p^{\mathrm{cons}\langle \mathrm{H}\rangle} D^{\mathrm{GOV}\langle \mathrm{H}\rangle} + p^{\mathrm{cons}\langle \mathrm{I}\rangle} D^{\mathrm{GOV}\langle \mathrm{I}\rangle} \tag{16.884}$$

$$-EXCISE + EXCISE^{\langle \mathrm{A} \rangle} + EXCISE^{\langle \mathrm{B} \rangle} + EXCISE^{\langle \mathrm{C} \rangle} + EXCISE^{\langle \mathrm{D} \rangle} + EXCISE^{\langle \mathrm{E} \rangle} + EXCISE^{\langle \mathrm{F} \rangle} + EXCISE^{\langle \mathrm{G} \rangle} + EXCISE^{\langle \mathrm{H} \rangle} + EXCISE^{\langle \mathrm{I} \rangle} + EXCISE^{\langle \mathrm{J} \rangle} + EXCISE^{\langle \mathrm{K} \rangle} = 0 \tag{16.885}$$

$$-KS + K^{\langle \mathrm{A} \rangle} + K^{\langle \mathrm{B} \rangle} + K^{\langle \mathrm{C} \rangle} + K^{\langle \mathrm{D} \rangle} + K^{\langle \mathrm{E} \rangle} + K^{\langle \mathrm{F} \rangle} + K^{\langle \mathrm{G} \rangle} + K^{\langle \mathrm{H} \rangle} + K^{\langle \mathrm{I} \rangle} + K^{\langle \mathrm{J} \rangle} + K^{\langle \mathrm{K} \rangle} = 0 \tag{16.886}$$

$$-PROFIT + \pi^{\langle \mathrm{A} \rangle} + \pi^{\langle \mathrm{B} \rangle} + \pi^{\langle \mathrm{C} \rangle} + \pi^{\langle \mathrm{D} \rangle} + \pi^{\langle \mathrm{E} \rangle} + \pi^{\langle \mathrm{F} \rangle} + \pi^{\langle \mathrm{G} \rangle} + \pi^{\langle \mathrm{H} \rangle} + \pi^{\langle \mathrm{I} \rangle} + \pi^{\langle \mathrm{J} \rangle} + \pi^{\langle \mathrm{K} \rangle} = 0 \tag{16.887}$$

$$-STAX + TAX^{\mathrm{s}\langle \mathrm{A} \rangle} + TAX^{\mathrm{s}\langle \mathrm{B} \rangle} + TAX^{\mathrm{s}\langle \mathrm{C} \rangle} + TAX^{\mathrm{s}\langle \mathrm{D} \rangle} + TAX^{\mathrm{s}\langle \mathrm{E} \rangle} + TAX^{\mathrm{s}\langle \mathrm{F} \rangle} + TAX^{\mathrm{s}\langle \mathrm{G} \rangle} + TAX^{\mathrm{s}\langle \mathrm{H} \rangle} + TAX^{\mathrm{s}\langle \mathrm{I} \rangle} + TAX^{\mathrm{s}\langle \mathrm{J} \rangle} + TAX^{\mathrm{s}\langle \mathrm{K} \rangle} = 0 \tag{16.888}$$

$$-VAT + VAT^{\langle \mathrm{A} \rangle} + VAT^{\langle \mathrm{B} \rangle} + VAT^{\langle \mathrm{C} \rangle} + VAT^{\langle \mathrm{D} \rangle} + VAT^{\langle \mathrm{E} \rangle} + VAT^{\langle \mathrm{F} \rangle} + VAT^{\langle \mathrm{G} \rangle} + VAT^{\langle \mathrm{H} \rangle} + VAT^{\langle \mathrm{I} \rangle} + VAT^{\langle \mathrm{J} \rangle} + VAT^{\langle \mathrm{K} \rangle} = 0 \tag{16.889}$$

$$TBANKFIRM - TRAN^{\mathrm{BANK}} + scale^{\langle 01 \rangle} TBANKH^{\langle 01 \rangle} + scale^{\langle 02 \rangle} TBANKH^{\langle 02 \rangle} + scale^{\langle 03 \rangle} TBANKH^{\langle 03 \rangle} + scale^{\langle 04 \rangle} TBANKH^{\langle 04 \rangle} + scale^{\langle 05 \rangle} TBANKH^{\langle 05 \rangle} + scale^{\langle 06 \rangle} TBANKH^{\langle 06 \rangle} + scale^{\langle 07 \rangle} TBANKH^{\langle 0} \tag{16.890}$$

$$TFIRMBANK - TRAN^{\mathrm{FIRM}} + scale^{\langle 01 \rangle} TFIRMH^{\langle 01 \rangle} + scale^{\langle 02 \rangle} TFIRMH^{\langle 02 \rangle} + scale^{\langle 03 \rangle} TFIRMH^{\langle 03 \rangle} + scale^{\langle 04 \rangle} TFIRMH^{\langle 04 \rangle} + scale^{\langle 05 \rangle} TFIRMH^{\langle 05 \rangle} + scale^{\langle 06 \rangle} TFIRMH^{\langle 06 \rangle} + scale^{\langle 07 \rangle} TFIRMH^{\langle 07 \rangle} + s \tag{16.891}$$

$$-INC^{\langle 01 \rangle} + SAV^{\langle 01 \rangle} + TRAN^{\langle 01 \rangle} + p^{\mathrm{cons}\langle \mathrm{A} \rangle} D^{\langle \mathrm{A},01 \rangle} + p^{\mathrm{cons}\langle \mathrm{B} \rangle} D^{\langle \mathrm{B},01 \rangle} + p^{\mathrm{cons}\langle \mathrm{C} \rangle} D^{\langle \mathrm{C},01 \rangle} + p^{\mathrm{cons}\langle \mathrm{D} \rangle} D^{\langle \mathrm{D},01 \rangle} + p^{\mathrm{cons}\langle \mathrm{E} \rangle} D^{\langle \mathrm{E},01 \rangle} + p^{\mathrm{cons}\langle \mathrm{F} \rangle} D^{\langle \mathrm{F},01 \rangle} + p^{\mathrm{cons}\langle \mathrm{G} \rangle} D^{\langle \mathrm{G},01 \rangle} + p^{\mathrm{cons}\langle \mathrm{H} \rangle} D^{\langle \mathrm{H},01 \rangle} + p^{\mathrm{cons}\langle \mathrm{I} \rangle} D^{\langle \mathrm{I},0} \tag{16.892}$$

$$-INC^{\langle 02 \rangle} + SAV^{\langle 02 \rangle} + TRAN^{\langle 02 \rangle} + p^{\mathrm{cons}\langle \mathrm{A} \rangle} D^{\langle \mathrm{A},02 \rangle} + p^{\mathrm{cons}\langle \mathrm{B} \rangle} D^{\langle \mathrm{B},02 \rangle} + p^{\mathrm{cons}\langle \mathrm{C} \rangle} D^{\langle \mathrm{C},02 \rangle} + p^{\mathrm{cons}\langle \mathrm{D} \rangle} D^{\langle \mathrm{D},02 \rangle} + p^{\mathrm{cons}\langle \mathrm{E} \rangle} D^{\langle \mathrm{E},02 \rangle} + p^{\mathrm{cons}\langle \mathrm{F} \rangle} D^{\langle \mathrm{F},02 \rangle} + p^{\mathrm{cons}\langle \mathrm{G} \rangle} D^{\langle \mathrm{G},02 \rangle} + p^{\mathrm{cons}\langle \mathrm{H} \rangle} D^{\langle \mathrm{H},02 \rangle} + p^{\mathrm{cons}\langle \mathrm{I} \rangle} D^{\langle \mathrm{I},0} \tag{16.893}$$

$$-INC^{\langle 03 \rangle} + SAV^{\langle 03 \rangle} + TRAN^{\langle 03 \rangle} + p^{\mathrm{cons}\langle \mathrm{A} \rangle} D^{\langle \mathrm{A},03 \rangle} + p^{\mathrm{cons}\langle \mathrm{B} \rangle} D^{\langle \mathrm{B},03 \rangle} + p^{\mathrm{cons}\langle \mathrm{C} \rangle} D^{\langle \mathrm{C},03 \rangle} + p^{\mathrm{cons}\langle \mathrm{D} \rangle} D^{\langle \mathrm{D},03 \rangle} + p^{\mathrm{cons}\langle \mathrm{E} \rangle} D^{\langle \mathrm{E},03 \rangle} + p^{\mathrm{cons}\langle \mathrm{F} \rangle} D^{\langle \mathrm{F},03 \rangle} + p^{\mathrm{cons}\langle \mathrm{G} \rangle} D^{\langle \mathrm{G},03 \rangle} + p^{\mathrm{cons}\langle \mathrm{H} \rangle} D^{\langle \mathrm{H},03 \rangle} + p^{\mathrm{cons}\langle \mathrm{I} \rangle} D^{\langle \mathrm{I},0} \tag{16.894}$$

$$-INC^{\langle 04 \rangle} + SAV^{\langle 04 \rangle} + TRAN^{\langle 04 \rangle} + p^{\mathrm{cons}\langle \mathrm{A} \rangle} D^{\langle \mathrm{A},04 \rangle} + p^{\mathrm{cons}\langle \mathrm{B} \rangle} D^{\langle \mathrm{B},04 \rangle} + p^{\mathrm{cons}\langle \mathrm{C} \rangle} D^{\langle \mathrm{C},04 \rangle} + p^{\mathrm{cons}\langle \mathrm{D} \rangle} D^{\langle \mathrm{D},04 \rangle} + p^{\mathrm{cons}\langle \mathrm{E} \rangle} D^{\langle \mathrm{E},04 \rangle} + p^{\mathrm{cons}\langle \mathrm{F} \rangle} D^{\langle \mathrm{F},04 \rangle} + p^{\mathrm{cons}\langle \mathrm{G} \rangle} D^{\langle \mathrm{G},04 \rangle} + p^{\mathrm{cons}\langle \mathrm{H} \rangle} D^{\langle \mathrm{H},04 \rangle} + p^{\mathrm{cons}\langle \mathrm{I} \rangle} D^{\langle \mathrm{I},0} \tag{16.895}$$

$$-INC^{\langle 05 \rangle} + SAV^{\langle 05 \rangle} + TRAN^{\langle 05 \rangle} + p^{\mathrm{cons}\langle \mathrm{A} \rangle} D^{\langle \mathrm{A},05 \rangle} + p^{\mathrm{cons}\langle \mathrm{B} \rangle} D^{\langle \mathrm{B},05 \rangle} + p^{\mathrm{cons}\langle \mathrm{C} \rangle} D^{\langle \mathrm{C},05 \rangle} + p^{\mathrm{cons}\langle \mathrm{D} \rangle} D^{\langle \mathrm{D},05 \rangle} + p^{\mathrm{cons}\langle \mathrm{E} \rangle} D^{\langle \mathrm{E},05 \rangle} + p^{\mathrm{cons}\langle \mathrm{F} \rangle} D^{\langle \mathrm{F},05 \rangle} + p^{\mathrm{cons}\langle \mathrm{G} \rangle} D^{\langle \mathrm{G},05 \rangle} + p^{\mathrm{cons}\langle \mathrm{H} \rangle} D^{\langle \mathrm{H},05 \rangle} + p^{\mathrm{cons}\langle \mathrm{I} \rangle} D^{\langle \mathrm{I},0} \tag{16.896}$$

$$-INC^{\langle 06\rangle}+SAV^{\langle 06\rangle}+TRAN^{\langle 06\rangle}+p^{\mathrm{cons}\langle \mathrm{A}\rangle}D^{\langle \mathrm{A},06\rangle}+p^{\mathrm{cons}\langle \mathrm{B}\rangle}D^{\langle \mathrm{B},06\rangle}+p^{\mathrm{cons}\langle \mathrm{C}\rangle}D^{\langle \mathrm{C},06\rangle}+p^{\mathrm{cons}\langle \mathrm{D}\rangle}D^{\langle \mathrm{D},06\rangle}+p^{\mathrm{cons}\langle \mathrm{E}\rangle}D^{\langle \mathrm{E},06\rangle}+p^{\mathrm{cons}\langle \mathrm{F}\rangle}D^{\langle \mathrm{F},06\rangle}+p^{\mathrm{cons}\langle \mathrm{G}\rangle}D^{\langle \mathrm{G},06\rangle}+p^{\mathrm{cons}\langle \mathrm{H}\rangle}D^{\langle \mathrm{H},06\rangle}+p^{\mathrm{cons}\langle \mathrm{I}\rangle}D^{\langle \mathrm{I},0} \tag{16.897}$$

$$-INC^{\langle 07\rangle}+SAV^{\langle 07\rangle}+TRAN^{\langle 07\rangle}+p^{\mathrm{cons}\langle \mathrm{A}\rangle}D^{\langle \mathrm{A},07\rangle}+p^{\mathrm{cons}\langle \mathrm{B}\rangle}D^{\langle \mathrm{B},07\rangle}+p^{\mathrm{cons}\langle \mathrm{C}\rangle}D^{\langle \mathrm{C},07\rangle}+p^{\mathrm{cons}\langle \mathrm{D}\rangle}D^{\langle \mathrm{D},07\rangle}+p^{\mathrm{cons}\langle \mathrm{E}\rangle}D^{\langle \mathrm{E},07\rangle}+p^{\mathrm{cons}\langle \mathrm{F}\rangle}D^{\langle \mathrm{F},07\rangle}+p^{\mathrm{cons}\langle \mathrm{G}\rangle}D^{\langle \mathrm{G},07\rangle}+p^{\mathrm{cons}\langle \mathrm{H}\rangle}D^{\langle \mathrm{H},07\rangle}+p^{\mathrm{cons}\langle \mathrm{I}\rangle}D^{\langle \mathrm{I},0} \tag{16.898}$$

$$-INC^{\langle 08\rangle}+SAV^{\langle 08\rangle}+TRAN^{\langle 08\rangle}+p^{\mathrm{cons}\langle \mathrm{A}\rangle}D^{\langle \mathrm{A},08\rangle}+p^{\mathrm{cons}\langle \mathrm{B}\rangle}D^{\langle \mathrm{B},08\rangle}+p^{\mathrm{cons}\langle \mathrm{C}\rangle}D^{\langle \mathrm{C},08\rangle}+p^{\mathrm{cons}\langle \mathrm{D}\rangle}D^{\langle \mathrm{D},08\rangle}+p^{\mathrm{cons}\langle \mathrm{E}\rangle}D^{\langle \mathrm{E},08\rangle}+p^{\mathrm{cons}\langle \mathrm{F}\rangle}D^{\langle \mathrm{F},08\rangle}+p^{\mathrm{cons}\langle \mathrm{G}\rangle}D^{\langle \mathrm{G},08\rangle}+p^{\mathrm{cons}\langle \mathrm{H}\rangle}D^{\langle \mathrm{H},08\rangle}+p^{\mathrm{cons}\langle \mathrm{I}\rangle}D^{\langle \mathrm{I},0} \tag{16.899}$$

$$-INC^{\langle 09\rangle}+SAV^{\langle 09\rangle}+TRAN^{\langle 09\rangle}+p^{\mathrm{cons}\langle \mathrm{A}\rangle}D^{\langle \mathrm{A},09\rangle}+p^{\mathrm{cons}\langle \mathrm{B}\rangle}D^{\langle \mathrm{B},09\rangle}+p^{\mathrm{cons}\langle \mathrm{C}\rangle}D^{\langle \mathrm{C},09\rangle}+p^{\mathrm{cons}\langle \mathrm{D}\rangle}D^{\langle \mathrm{D},09\rangle}+p^{\mathrm{cons}\langle \mathrm{E}\rangle}D^{\langle \mathrm{E},09\rangle}+p^{\mathrm{cons}\langle \mathrm{F}\rangle}D^{\langle \mathrm{F},09\rangle}+p^{\mathrm{cons}\langle \mathrm{G}\rangle}D^{\langle \mathrm{G},09\rangle}+p^{\mathrm{cons}\langle \mathrm{H}\rangle}D^{\langle \mathrm{H},09\rangle}+p^{\mathrm{cons}\langle \mathrm{I}\rangle}D^{\langle \mathrm{I},0} \tag{16.900}$$

$$-INC^{\langle 10\rangle}+SAV^{\langle 10\rangle}+TRAN^{\langle 10\rangle}+p^{\mathrm{cons}\langle \mathrm{A}\rangle}D^{\langle \mathrm{A},10\rangle}+p^{\mathrm{cons}\langle \mathrm{B}\rangle}D^{\langle \mathrm{B},10\rangle}+p^{\mathrm{cons}\langle \mathrm{C}\rangle}D^{\langle \mathrm{C},10\rangle}+p^{\mathrm{cons}\langle \mathrm{D}\rangle}D^{\langle \mathrm{D},10\rangle}+p^{\mathrm{cons}\langle \mathrm{E}\rangle}D^{\langle \mathrm{E},10\rangle}+p^{\mathrm{cons}\langle \mathrm{F}\rangle}D^{\langle \mathrm{F},10\rangle}+p^{\mathrm{cons}\langle \mathrm{G}\rangle}D^{\langle \mathrm{G},10\rangle}+p^{\mathrm{cons}\langle \mathrm{H}\rangle}D^{\langle \mathrm{H},10\rangle}+p^{\mathrm{cons}\langle \mathrm{I}\rangle}D^{\langle \mathrm{I},1} \tag{16.901}$$

$$-TRAN^{\langle \mathrm{eu}\rangle}+TROWFIRM^{\langle \mathrm{eu}\rangle}+TROWBANK^{\langle \mathrm{eu}\rangle}+TROWGOV^{\langle \mathrm{eu}\rangle}+scale^{\langle 01\rangle}TROWH^{\langle \mathrm{eu},01\rangle}+scale^{\langle 02\rangle}TROWH^{\langle \mathrm{eu},02\rangle}+scale^{\langle 03\rangle}TROWH^{\langle \mathrm{eu},03\rangle}+scale^{\langle 04\rangle}TROWH^{\langle \mathrm{eu},04\rangle}+scale^{\langle 05\rangle}TROWH^{\langle \mathrm{eu},05\rangle} \tag{16.902}$$

$$-TRAN^{\langle \mathrm{neu}\rangle}+TROWFIRM^{\langle \mathrm{neu}\rangle}+TROWBANK^{\langle \mathrm{neu}\rangle}+TROWGOV^{\langle \mathrm{neu}\rangle}+scale^{\langle 01\rangle}TROWH^{\langle \mathrm{neu},01\rangle}+scale^{\langle 02\rangle}TROWH^{\langle \mathrm{neu},02\rangle}+scale^{\langle 03\rangle}TROWH^{\langle \mathrm{neu},03\rangle}+scale^{\langle 04\rangle}TROWH^{\langle \mathrm{neu},04\rangle}+scale^{\langle 05\rangle}TROW \tag{16.903}$$

$$TGOVFIRM+TGOVBANK-TRAN^{\mathrm{GOV}}+scale^{\langle 01\rangle}TGOVH^{\langle 01\rangle}+scale^{\langle 02\rangle}TGOVH^{\langle 02\rangle}+scale^{\langle 03\rangle}TGOVH^{\langle 03\rangle}+scale^{\langle 04\rangle}TGOVH^{\langle 04\rangle}+scale^{\langle 05\rangle}TGOVH^{\langle 05\rangle}+scale^{\langle 06\rangle}TGOVH^{\langle 06\rangle}+scale^{\langle 07\rangle}TGOVH^{\langle 07\rangle} \tag{16.904}$$

$$-BTINC^{\mathrm{BANK}}+TFIRMBANK+TGOVBANK+TROWBANK^{\langle \mathrm{eu}\rangle}+TROWBANK^{\langle \mathrm{neu}\rangle}+scale^{\langle 01\rangle}THBANK^{\langle 01\rangle}+scale^{\langle 02\rangle}THBANK^{\langle 02\rangle}+scale^{\langle 03\rangle}THBANK^{\langle 03\rangle}+scale^{\langle 04\rangle}THBANK^{\langle 04\rangle}+scale^{\langle 05\rangle} \tag{16.905}$$

$$-SAV+SAV^{\mathrm{FIRM}}+SAV^{\mathrm{BANK}}+SAV^{\mathrm{GOV}}+SAV^{\langle \mathrm{eu}\rangle}+SAV^{\langle \mathrm{neu}\rangle}+scale^{\langle 01\rangle}SAV^{\langle 01\rangle}+scale^{\langle 02\rangle}SAV^{\langle 02\rangle}+scale^{\langle 03\rangle}SAV^{\langle 03\rangle}+scale^{\langle 04\rangle}SAV^{\langle 04\rangle}+scale^{\langle 05\rangle}SAV^{\langle 05\rangle}+scale^{\langle 06\rangle}SAV^{\langle 06\rangle}+scale^{\langle 07\rangle}SAV^{\langle 07\rangle}+s \tag{16.906}$$

$$-L^{\langle \mathrm{A}\rangle}-L^{\langle \mathrm{B}\rangle}-L^{\langle \mathrm{C}\rangle}-L^{\langle \mathrm{D}\rangle}-L^{\langle \mathrm{E}\rangle}-L^{\langle \mathrm{F}\rangle}-L^{\langle \mathrm{G}\rangle}-L^{\langle \mathrm{H}\rangle}-L^{\langle \mathrm{I}\rangle}-L^{\langle \mathrm{J}\rangle}-L^{\langle \mathrm{K}\rangle}+scale^{\langle 01\rangle}L^{\langle 01\rangle}+scale^{\langle 02\rangle}L^{\langle 02\rangle}+scale^{\langle 03\rangle}L^{\langle 03\rangle}+scale^{\langle 04\rangle}L^{\langle 04\rangle}+scale^{\langle 05\rangle}L^{\langle 05\rangle}+scale^{\langle 06\rangle}L^{\langle 06\rangle}+scale^{\langle 07\rangle}L^{\langle 07\rangle}+scale^{\langle 08\rangle}L^{\langle 08\rangle} \tag{16.907}$$

$$-IMTAX+im^{\mathrm{tax}\langle \mathrm{eu,A}\rangle}p^{\mathrm{for}\langle \mathrm{eu}\rangle}ex^{\mathrm{rate}\langle \mathrm{eu}\rangle}IMP^{\langle \mathrm{eu,A}\rangle}+im^{\mathrm{tax}\langle \mathrm{eu,B}\rangle}p^{\mathrm{for}\langle \mathrm{eu}\rangle}ex^{\mathrm{rate}\langle \mathrm{eu}\rangle}IMP^{\langle \mathrm{eu,B}\rangle}+im^{\mathrm{tax}\langle \mathrm{eu,C}\rangle}p^{\mathrm{for}\langle \mathrm{eu}\rangle}ex^{\mathrm{rate}\langle \mathrm{eu}\rangle}IMP^{\langle \mathrm{eu,C}\rangle}+im^{\mathrm{tax}\langle \mathrm{eu,D}\rangle}p^{\mathrm{for}\langle \mathrm{eu}\rangle}ex^{\mathrm{rate}\langle \mathrm{eu}\rangle}IMP^{\langle \mathrm{eu,D}\rangle}+im^{\mathrm{tax}\langle \mathrm{eu,E}\rangle}p^{\mathrm{for}\langle \mathrm{e}} \tag{16.908}$$

$$-SUB+SUB^{\mathrm{s}\langle \mathrm{A}\rangle}+SUB^{\mathrm{s}\langle \mathrm{B}\rangle}+SUB^{\mathrm{s}\langle \mathrm{C}\rangle}+SUB^{\mathrm{s}\langle \mathrm{D}\rangle}+SUB^{\mathrm{s}\langle \mathrm{E}\rangle}+SUB^{\mathrm{s}\langle \mathrm{F}\rangle}+SUB^{\mathrm{s}\langle \mathrm{G}\rangle}+SUB^{\mathrm{s}\langle \mathrm{H}\rangle}+SUB^{\mathrm{s}\langle \mathrm{I}\rangle}+SUB^{\mathrm{s}\langle \mathrm{J}\rangle}+SUB^{\mathrm{s}\langle \mathrm{K}\rangle}+SUB^{\mathrm{p}\langle \mathrm{A}\rangle}+SUB^{\mathrm{p}\langle \mathrm{B}\rangle}+SUB^{\mathrm{p}\langle \mathrm{C}\rangle}+SUB^{\mathrm{p}\langle \mathrm{D}\rangle}+SUB^{\mathrm{p}\langle \mathrm{E}\rangle}+SUB^{\mathrm{p}\langle \mathrm{F}\rangle}+ \tag{16.909}$$

$$-ARM^{\langle \mathrm{A}\rangle}+D^{\mathrm{GOV}\langle \mathrm{A}\rangle}+INV^{\langle \mathrm{A}\rangle}+X^{\langle \mathrm{A,A}\rangle}+X^{\langle \mathrm{A,B}\rangle}+X^{\langle \mathrm{A,C}\rangle}+X^{\langle \mathrm{A,D}\rangle}+X^{\langle \mathrm{A,E}\rangle}+X^{\langle \mathrm{A,F}\rangle}+X^{\langle \mathrm{A,G}\rangle}+X^{\langle \mathrm{A,H}\rangle}+X^{\langle \mathrm{A,I}\rangle}+X^{\langle \mathrm{A,J}\rangle}+X^{\langle \mathrm{A,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{A},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{A},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{A},03\rangle}+scale \tag{16.910}$$

$$-ARM^{\langle \mathrm{B}\rangle}+D^{\mathrm{GOV}\langle \mathrm{B}\rangle}+INV^{\langle \mathrm{B}\rangle}+X^{\langle \mathrm{B,A}\rangle}+X^{\langle \mathrm{B,B}\rangle}+X^{\langle \mathrm{B,C}\rangle}+X^{\langle \mathrm{B,D}\rangle}+X^{\langle \mathrm{B,E}\rangle}+X^{\langle \mathrm{B,F}\rangle}+X^{\langle \mathrm{B,G}\rangle}+X^{\langle \mathrm{B,H}\rangle}+X^{\langle \mathrm{B,I}\rangle}+X^{\langle \mathrm{B,J}\rangle}+X^{\langle \mathrm{B,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{B},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{B},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{B},03\rangle}+scale^{\langle} \tag{16.911}$$

$$-ARM^{\langle \mathrm{C}\rangle}+D^{\mathrm{GOV}\langle \mathrm{C}\rangle}+INV^{\langle \mathrm{C}\rangle}+X^{\langle \mathrm{C,A}\rangle}+X^{\langle \mathrm{C,B}\rangle}+X^{\langle \mathrm{C,C}\rangle}+X^{\langle \mathrm{C,D}\rangle}+X^{\langle \mathrm{C,E}\rangle}+X^{\langle \mathrm{C,F}\rangle}+X^{\langle \mathrm{C,G}\rangle}+X^{\langle \mathrm{C,H}\rangle}+X^{\langle \mathrm{C,I}\rangle}+X^{\langle \mathrm{C,J}\rangle}+X^{\langle \mathrm{C,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{C},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{C},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{C},03\rangle}+scale \tag{16.912}$$

$$-ARM^{\langle \mathrm{D}\rangle}+D^{\mathrm{GOV}\langle \mathrm{D}\rangle}+INV^{\langle \mathrm{D}\rangle}+X^{\langle \mathrm{D,A}\rangle}+X^{\langle \mathrm{D,B}\rangle}+X^{\langle \mathrm{D,C}\rangle}+X^{\langle \mathrm{D,D}\rangle}+X^{\langle \mathrm{D,E}\rangle}+X^{\langle \mathrm{D,F}\rangle}+X^{\langle \mathrm{D,G}\rangle}+X^{\langle \mathrm{D,H}\rangle}+X^{\langle \mathrm{D,I}\rangle}+X^{\langle \mathrm{D,J}\rangle}+X^{\langle \mathrm{D,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{D},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{D},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{D},03\rangle}+scal \tag{16.913}$$

$$-ARM^{\langle \mathrm{E}\rangle}+D^{\mathrm{GOV}\langle \mathrm{E}\rangle}+INV^{\langle \mathrm{E}\rangle}+X^{\langle \mathrm{E,A}\rangle}+X^{\langle \mathrm{E,B}\rangle}+X^{\langle \mathrm{E,C}\rangle}+X^{\langle \mathrm{E,D}\rangle}+X^{\langle \mathrm{E,E}\rangle}+X^{\langle \mathrm{E,F}\rangle}+X^{\langle \mathrm{E,G}\rangle}+X^{\langle \mathrm{E,H}\rangle}+X^{\langle \mathrm{E,I}\rangle}+X^{\langle \mathrm{E,J}\rangle}+X^{\langle \mathrm{E,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{E},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{E},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{E},03\rangle}+scale^{\langle 0} \tag{16.914}$$

$$-ARM^{\langle \mathrm{F}\rangle}+D^{\mathrm{GOV}\langle \mathrm{F}\rangle}+INV^{\langle \mathrm{F}\rangle}+X^{\langle \mathrm{F,A}\rangle}+X^{\langle \mathrm{F,B}\rangle}+X^{\langle \mathrm{F,C}\rangle}+X^{\langle \mathrm{F,D}\rangle}+X^{\langle \mathrm{F,E}\rangle}+X^{\langle \mathrm{F,F}\rangle}+X^{\langle \mathrm{F,G}\rangle}+X^{\langle \mathrm{F,H}\rangle}+X^{\langle \mathrm{F,I}\rangle}+X^{\langle \mathrm{F,J}\rangle}+X^{\langle \mathrm{F,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{F},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{F},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{F},03\rangle}+scale^{\langle 04} \tag{16.915}$$

$$-ARM^{\langle \mathrm{G}\rangle}+D^{\mathrm{GOV}\langle \mathrm{G}\rangle}+INV^{\langle \mathrm{G}\rangle}+X^{\langle \mathrm{G,A}\rangle}+X^{\langle \mathrm{G,B}\rangle}+X^{\langle \mathrm{G,C}\rangle}+X^{\langle \mathrm{G,D}\rangle}+X^{\langle \mathrm{G,E}\rangle}+X^{\langle \mathrm{G,F}\rangle}+X^{\langle \mathrm{G,G}\rangle}+X^{\langle \mathrm{G,H}\rangle}+X^{\langle \mathrm{G,I}\rangle}+X^{\langle \mathrm{G,J}\rangle}+X^{\langle \mathrm{G,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{G},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{G},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{G},03\rangle}+sca \tag{16.916}$$

$$-ARM^{\langle \mathrm{H}\rangle}+D^{\mathrm{GOV}\langle \mathrm{H}\rangle}+INV^{\langle \mathrm{H}\rangle}+X^{\langle \mathrm{H,A}\rangle}+X^{\langle \mathrm{H,B}\rangle}+X^{\langle \mathrm{H,C}\rangle}+X^{\langle \mathrm{H,D}\rangle}+X^{\langle \mathrm{H,E}\rangle}+X^{\langle \mathrm{H,F}\rangle}+X^{\langle \mathrm{H,G}\rangle}+X^{\langle \mathrm{H,H}\rangle}+X^{\langle \mathrm{H,I}\rangle}+X^{\langle \mathrm{H,J}\rangle}+X^{\langle \mathrm{H,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{H},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{H},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{H},03\rangle}+scale \tag{16.917}$$

$$-ARM^{\langle \mathrm{I}\rangle}+D^{\mathrm{GOV}\langle \mathrm{I}\rangle}+INV^{\langle \mathrm{I}\rangle}+X^{\langle \mathrm{I,A}\rangle}+X^{\langle \mathrm{I,B}\rangle}+X^{\langle \mathrm{I,C}\rangle}+X^{\langle \mathrm{I,D}\rangle}+X^{\langle \mathrm{I,E}\rangle}+X^{\langle \mathrm{I,F}\rangle}+X^{\langle \mathrm{I,G}\rangle}+X^{\langle \mathrm{I,H}\rangle}+X^{\langle \mathrm{I,I}\rangle}+X^{\langle \mathrm{I,J}\rangle}+X^{\langle \mathrm{I,K}\rangle}+scale^{\langle 01\rangle}D^{\langle \mathrm{I},01\rangle}+scale^{\langle 02\rangle}D^{\langle \mathrm{I},02\rangle}+scale^{\langle 03\rangle}D^{\langle \mathrm{I},03\rangle}+scale^{\langle 04\rangle}D^{\langle \mathrm{I},04\rangle}+ \tag{16.918}$$

$$-ARM^{\langle \mathrm{J} \rangle} + D^{\mathrm{GOV}\,\langle \mathrm{J} \rangle} + INV^{\langle \mathrm{J} \rangle} + X^{\langle \mathrm{J,A} \rangle} + X^{\langle \mathrm{J,B} \rangle} + X^{\langle \mathrm{J,C} \rangle} + X^{\langle \mathrm{J,D} \rangle} + X^{\langle \mathrm{J,E} \rangle} + X^{\langle \mathrm{J,F} \rangle} + X^{\langle \mathrm{J,G} \rangle} + X^{\langle \mathrm{J,H} \rangle} + X^{\langle \mathrm{J,I} \rangle} + X^{\langle \mathrm{J,J} \rangle} + X^{\langle \mathrm{J,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{J},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{J},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{J},03 \rangle} + scale^{\langle 04 \rangle} D^{\langle \mathrm{J}} \tag{16.919}$$

$$-ARM^{\langle \mathrm{K} \rangle} + D^{\mathrm{GOV}\,\langle \mathrm{K} \rangle} + INV^{\langle \mathrm{K} \rangle} + X^{\langle \mathrm{K,A} \rangle} + X^{\langle \mathrm{K,B} \rangle} + X^{\langle \mathrm{K,C} \rangle} + X^{\langle \mathrm{K,D} \rangle} + X^{\langle \mathrm{K,E} \rangle} + X^{\langle \mathrm{K,F} \rangle} + X^{\langle \mathrm{K,G} \rangle} + X^{\langle \mathrm{K,H} \rangle} + X^{\langle \mathrm{K,I} \rangle} + X^{\langle \mathrm{K,J} \rangle} + X^{\langle \mathrm{K,K} \rangle} + scale^{\langle 01 \rangle} D^{\langle \mathrm{K},01 \rangle} + scale^{\langle 02 \rangle} D^{\langle \mathrm{K},02 \rangle} + scale^{\langle 03 \rangle} D^{\langle \mathrm{K},03 \rangle} + sca \tag{16.920}$$