Dans chaque fichier annuel :
mettre ALABUSDGENE, codesbrches.rda
codeszones.rda, partage.rda, RrComp, le WIOT...rda de l'année, l'ouvir et faire tourner le prog ci*dessous

#1° **Building of $\overrightarrow{VA'}$ (LABCOMPLET)**

```
library(xlsx)
matrix(unlist(wiot[2470,6:2413]),nrow=56)-> matVAPAYS
wiot[1,5]->a
aa<-as.character(a)
load("ALABUSDGENE")
load("codesbrches.rda")
load("codeszones.rda")
ALABUSDGENE[,,a-1999]->matLABPAYS
rowSums(matLABPAYS)/rowSums(matVAPAYS)->rapport
rapport*unlist(wiot[2470,2414:2469])->LABROW
cbind(matLABPAYS,LABROW)->matLABCOMPLET
LABCOMPLET<-as.vector(matrix(matLABCOMPLET,ncol=1))
matLABCOMPLET1<-cbind(matLABCOMPLET,rowSums(matLABCOMPLET))
matLABCOMPLET2<-
rbind(matLABCOMPLET1,colSums(matLABCOMPLET1),rep("",times=45),rep("",times=45))
libellVA<-matrix(c(wiot[1:56,2],"","",""),nrow=59)
matLABCOMPLET3<-data.frame(libellVA,matLABCOMPLET2)
colnames(matLABCOMPLET3)<-c("",as.vector(codeszones),"totals")
rownames(matLABCOMPLET3)<-c(as.vector(codesbrches),"totals","millions of USD",
      paste("Year",aa))
```

#2° Determination of $\vec{K}$ (Klab in R language)

```
unlist(wiot[2472,6:2469])->sigma
#We had to transform the vector sigma in  the diagonal matrix diag(sigma) and to invert #diag(sigma)-CI
#but this last matrix is not invertible, so first all we replace all the 0 of sigma by 1
replace(sigma, sigma==0,1)->sigmacor
CI<-as.matrix(wiot[1:2464,6:2469])
Klab<-solve(t(diag(sigmacor)- CI),LABCOMPLET)
```

#3° synthesis and verification

```
CIlab<-diag(Klab)%*%CI
efprix<-wiot[1:2464,2470:2689]
eflab<-diag(Klab)%*%as.matrix(efprix)
sum(CIlab)
sum(eflab)
sigmacorlab<-sigmacor*Klab
sum(CIlab)+sum(eflab)-sum(sigmacorlab)
#must be null
sum(LABCOMPLET)
sum(eflab)-sum(LABCOMPLET)
#must be null
```

#4° determination of $\vec{C}$, $\vec{C}'$, and $\vec{\Pi}$

```
#56 activities, 44 areas producers, 5 types, 44 areas purchasers
Adefprix<- array(as.matrix(efprix), c(56,44,5,44))
#sheet 1 building of the matrix Ctotprix giving the total consumption (by households, NPISH's, #governments)
of each of the 2,464 products measured in prices
Ctotprix<- matrix(1:2464,nrow=56)
for (b in 1:56)
for (p in 1:44)
Ctotprix[b,p]<- sum(Adefprix[b,p,1:3,])
Ctotprix1<-cbind(Ctotprix,rowSums(Ctotprix))
Ctotprix2<-rbind(Ctotprix1,colSums(Ctotprix1),rep("",times=45),rep("",times=45))
Ctotprix3<-data.frame(libellVA,Ctotprix2)
dimnames(Ctotprix3)<-dimnames(matLABCOMPLET3)

#sheet 2  building of the matrix Ctotlab giving the total consumption of each of the 2,464 products
#measured in labour-value
Ctotlab<- Ctotprix
Adeflab<- array(eflab, c(56,44,5,44))
for (b in 1:56)
for (p in 1:44)
Ctotlab[b,p]<- sum(Adeflab[b,p,1:3,])
Ctotlab1<-cbind(Ctotlab,rowSums(Ctotlab))
Ctotlab2<-rbind(Ctotlab1,colSums(Ctotlab1),rep("",times=45),rep("",times=45))
Ctotlab3<-data.frame(libellVA,Ctotlab2)
dimnames(Ctotlab3)<-dimnames(matLABCOMPLET3)

#sheet3 profits on consumption by each activity
Ctotdelta1<- Ctotprix1-Ctotlab1
Ctotdelta2<-rbind(Ctotdelta1,colSums(Ctotdelta1),rep("",times=45),rep("",times=45))
Ctotdelta3<-data.frame(libellVA,Ctotdelta2)
dimnames(Ctotdelta3)<-dimnames(matLABCOMPLET3)
```

#5° Exchanges of IC

```
#sheet 4 profits from selling intermediate consumption
gainsvtesCI<- matrix(rowSums(CI)-rowSums(CIlab),nrow=56)
gainsvtesCI1<-cbind(gainsvtesCI,rowSums(gainsvtesCI))
gainsvtesCI2<-rbind(gainsvtesCI1,colSums(gainsvtesCI1),rep("",times=45),rep("",times=45))
gainsvtesCI3<-data.frame(libellVA,gainsvtesCI2)
dimnames(gainsvtesCI3)<-dimnames(Ctotprix3)


#sheet 5 losses when buying intermediate consumption
pertesachCI<- matrix(colSums(CI)-colSums(CIlab),nrow=56)
pertesachCI1<-cbind(pertesachCI,rowSums(pertesachCI))
pertesachCI2<-rbind(pertesachCI1,colSums(pertesachCI1),rep("",times=45),rep("",times=45))
pertesachCI3<-data.frame(libellVA,pertesachCI2)
dimnames(pertesachCI3)<-dimnames(Ctotprix3)
```

```
#sheet 6 net profits from exchanges of IC
gainsnetsCI1<- gainsvtesCI1- pertesachCI1
gainsnetsCI2<-rbind(gainsnetsCI1,colSums(gainsnetsCI1),rep("",times=45),rep("",times=45))
gainsnetsCI3<-data.frame(libellVA,gainsnetsCI2)
dimnames(gainsnetsCI3)<-dimnames(Ctotprix3)


#sheet7
profitApresEchCI1<-Ctotdelta1+gainsnetsCI1
profitApresEchCI2<-
rbind(profitApresEchCI1,colSums(profitApresEchCI1),rep("",times=45),rep("",times=45))
profitApresEchCI3<-data.frame(libellVA, profitApresEchCI2)
dimnames(profitApresEchCI3)<-dimnames(Ctotprix3)
```

#6° Profits from sales of GFCF ($\vec{I} - \vec{I}'$) (sheet 11)

```
#gainsvtesFBCF is a matrix (56 x 43) giving the profit coming of the sales of GFCF for each #activity
gainsvtesFBCF<-Ctotprix
Adefdeltalab<- Adefprix-Adeflab
for(b in 1:56)
for (p in 1:44)
gainsvtesFBCF[b,p]<- sum(Adefdeltalab[b,p,4,])
gainsvtesFBCF1<-cbind(gainsvtesFBCF, rowSums(gainsvtesFBCF))
gainsvtesFBCF2<-rbind(gainsvtesFBCF1, colSums(gainsvtesFBCF1),rep("",times=45),rep("",times=45))
gainsvtesFBCF3<-data.frame(libellVA,gainsvtesFBCF2)
dimnames(gainsvtesFBCF3)<-dimnames(Ctotprix3)
```

#7° Losses from purchasing of GFCF (sheet 9)

#a) Total losses of each area when buying GFCF

```
pertesAchFBCFparPays<-c(1:44)
for (p in 1:44)
pertesAchFBCFparPays[p]<- sum(Adefdeltalab[,,4,p])
sum(gainsvtesFBCF)-sum(pertesAchFBCFparPays)
#must be null
```

#b) loss of each productive unit when buying GFCF

```
#Due to the accounting rules it is impossible to calculate these losses from “wiot” only.
#I suggest to divide the losses of each area, as they have been calculated between the different #activities of this area by using the matrix (56 x 56) “partage” giving the repartition of 10,000
 #units of product b (varying from 1 to 56) sold as fixed capital between the purchasing activities ba #(varying from 1 to 56)
#getting the object “partage’’
load("partage.rda")
#we get the loss of the activity ba of the area pa when buying the fixed capital b of the area p
achFBCFbrpaysdeltalab<-array(1,dim=c(56,44,44,56))
for(b in 1:56)
```

```
  for (ba in 1:56)
 for(p in 1:44)
  for(pa in 1:44)
 achFBCFbrpaysdeltalab[b,p,pa,ba]<-Adefdeltalab[b,p,4,pa]*partage[b,ba]/10000
#and  the loss of the activity ba of the area pa when buying fixed capital from any productive unit
pertesFBCF<-Ctotprix
for (pa in 1:44)
for (ba in 1:56)
pertesFBCF[ba,pa]<-sum(achFBCFbrpaysdeltalab[,,pa,ba])
pertesFBCF1<-cbind(pertesFBCF, rowSums(pertesFBCF))
pertesFBCF2<-rbind(pertesFBCF1, colSums(pertesFBCF1),rep("",times=45),rep("",times=45))
pertesFBCF3<-data.frame(libellVA,pertesFBCF2)
dimnames(pertesFBCF3)<-dimnames(Ctotprix3)
sum(pertesAchFBCFparPays)-sum(pertesFBCF)
#must be small. It is not null because of approximations in calculations
```

#8°Profits coming from increase of inventories ($\overrightarrow{\Delta S} - \overrightarrow{\Delta S'}$) (sheet 9)

```
gainsStocksProd<-Ctotprix
for(b in 1:56)
 for(p in 1:44)
gainsStocksProd[b,p]<-sum(Adefdeltalab[b,p,5,])
gainsStocksProd1<-cbind(gainsStocksProd, rowSums(gainsStocksProd))
gainsStocksProd2<-rbind(gainsStocksProd1, colSums(gainsStocksProd1),rep("",times=45),rep("",times=45))
gainsStocksProd3<-data.frame(libellVA,gainsStocksProd2)
dimnames(gainsStocksProd3)<-dimnames(Ctotprix3)
```

#9° Displaying of the results in Excel format through package "xlsx"

#a) vectors $\overrightarrow{VA'}$ and $\vec{K}$

```
paste("vectorsVA'andK",aa,"wage-value.xlsx",sep="")->z
write.xlsx(matLABCOMPLET3, file =z, sheetName="vector VA'")
matKlab<-matrix(Klab, nrow=56)
matKlab2<-rbind(matKlab,rep("",times=44))
libellK<-matrix(c(wiot[1:56,2],""),nrow=57)
matKlab3<-data.frame(libellK,matKlab2)
rownames(matKlab3)<-c(as.vector(codesbrches), paste("Year",aa))
colnames(matKlab3)<-c("",as.character(codeszones))
write.xlsx(matKlab3, file =z, sheetName="vector K", append=TRUE)
```

#b) profit formation

```
paste("OS'sFormation.Year",aa,".xlsx",sep="")->pf
write.xlsx(Ctotprix3, file =pf, sheetName="1. vector C")
write.xlsx(Ctotlab3, file =pf, sheetName="2. vector C'", append=TRUE)
write.xlsx(Ctotdelta3, file =pf, sheetName="3. vector Pi", append=TRUE)
write.xlsx(gainsvtesCI3, file =pf, sheetName="4. Earnings from IC", append=TRUE)
write.xlsx(pertesachCI3, file =pf, sheetName="5. Losses from IC", append=TRUE)
write.xlsx(gainsnetsCI3, file =pf,sheetName="6. Net earnings from IC", append=TRUE)
write.xlsx(profitApresEchCI3, file =pf, sheetName="7. Margins after IC exchanges", append=TRUE)
```

```
write.xlsx(gainsvtesFBCF3, file =pf, sheetName="8. Earnings from GFCF", append=TRUE)
write.xlsx(gainsStocksProd3, file =pf, sheetName="9. Margins from inventories", append=TRUE)
AccountingProfit1<- profitApresEchCI1+gainsvtesFBCF1+gainsStocksProd1
AccountingProfit2<-rbind(AccountingProfit1,colSums(AccountingProfit1),rep("",times=45),rep("",times=45))
AccountingProfit3<-data.frame(libellVA,AccountingProfit2)
rownames(AccountingProfit3)<-rownames(Ctotprix3)
colnames(AccountingProfit3)<-colnames(Ctotprix3)
write.xlsx(AccountingProfit3, file =pf, sheetName="10. Accounting OS's", append=TRUE)
write.xlsx(pertesFBCF3, file =pf, sheetName="11. Losses from GFCF", append=TRUE)
netFBCF1<- gainsvtesFBCF1-pertesFBCF1
netFBCF2<- rbind(netFBCF1,colSums(netFBCF1),rep("",times=45),rep("",times=45))
netFBCF3<-data.frame(libellVA,netFBCF2)
dimnames( netFBCF3)<-dimnames(Ctotprix3)
write.xlsx(netFBCF3, file =pf, sheetName="12. Net Earnings from GFCF", append=TRUE)
FinalProfitsValue1<- profitApresEchCI1+gainsvtesFBCF1-pertesFBCF1
FinalProfitsValue2<-rbind(FinalProfitsValue1,colSums(FinalProfitsValue1),rep("",times=45),rep("",times=45))
FinalProfitsValue3<-data.frame(libellVA,FinalProfitsValue2)
dimnames(FinalProfitsValue3)<-dimnames(Ctotprix3)
write.xlsx(FinalProfitsValue3, file =pf, sheetName="13. OS's in Value", append=TRUE)



W<-loadWorkbook(pf)
sheetW<-getSheets(W)
for (m in 1:13)
{setColumnWidth(sheetW[[m]],2,50)
 createFreezePane(sheetW[[m]],2,3)}
saveWorkbook(W,file=pf)


V<-loadWorkbook(z)
sheetV<-getSheets(V)
for (n in 1:2)
{setColumnWidth(sheetV[[n]],2,50)
 createFreezePane(sheetV[[n]],2,3)}
saveWorkbook(V,file=z)
```

#1° **Building of $\overrightarrow{VA}$ (REVCOMPLET)**

```
load("RrComp")
matREVCOMPLET<- matLABCOMPLET+RrComp[,,a-1999]
REVCOMPLET<-as.vector(matrix(matREVCOMPLET,ncol=1))
matREVCOMPLET1<-cbind(matREVCOMPLET,rowSums(matREVCOMPLET))
matREVCOMPLET2<-
rbind(matREVCOMPLET1,colSums(matREVCOMPLET1),rep("",times=45),rep("",times=45))
libellVA<-matrix(c(wiot[1:56,2],"","",""),nrow=59)
matREVCOMPLET3<-data.frame(libellVA,matREVCOMPLET2)
colnames(matREVCOMPLET3)<-c("",as.vector(codeszones),"totals")
rownames(matREVCOMPLET3)<-c(as.vector(codesbrches),"totals","millions of USD",
      paste("Year",aa))
```

#2° Determination of $\vec{K}$ (Krev in R language)

```
unlist(wiot[2472,6:2469])->sigma
#We had to transform the vector sigma in  the diagonal matrix diag(sigma) and to invert #diag(sigma)-CI
#but this last matrix is not invertible, so first all we replace all the 0 of sigma by 1
replace(sigma, sigma==0,1)->sigmacor
CI<-as.matrix(wiot[1:2464,6:2469])
Krev<-solve(t(diag(sigmacor)- CI),REVCOMPLET)
```

#3° synthesis and verification

```
CIrev<-diag(Krev)%*%CI
efprix<-wiot[1:2464,2470:2689]
efrev<-diag(Krev)%*%as.matrix(efprix)
sum(CIrev)
sum(efrev)
sigmacorrev<-sigmacor*Krev
sum(CIrev)+sum(efrev)-sum(sigmacorrev)
#must be null
sum(REVCOMPLET)
sum(efrev)-sum(REVCOMPLET)
#must be null
```

#4° determination of $\vec{C}$, $\vec{C}'$, and $\vec{\Pi}$

```
#56 activities, 44 areas producers, 5 types, 44 areas purchasers
Adefprix<- array(as.matrix(efprix), c(56,44,5,44))
#sheet 1 building of the matrix Ctotprix giving the total consumption (by households, NPISH's, #governments)
of each of the 2,464 products measured in prices
Ctotprix<- matrix(1:2464,nrow=56)
for (b in 1:56)
for (p in 1:44)
Ctotprix[b,p]<- sum(Adefprix[b,p,1:3,])
Ctotprix1<-cbind(Ctotprix,rowSums(Ctotprix))
Ctotprix2<-rbind(Ctotprix1,colSums(Ctotprix1),rep("",times=45),rep("",times=45))
Ctotprix3<-data.frame(libellVA,Ctotprix2)
dimnames(Ctotprix3)<-dimnames(matREVCOMPLET3)

#sheet 2  building of the matrix Ctotrev giving the total consumption of each of the 2,464 products
#measured in income-value
Ctotrev<- Ctotprix
Adefrev<- array(efrev, c(56,44,5,44))
for (b in 1:56)
for (p in 1:44)
Ctotrev[b,p]<- sum(Adefrev[b,p,1:3,])
Ctotrev1<-cbind(Ctotrev,rowSums(Ctotrev))
Ctotrev2<-rbind(Ctotrev1,colSums(Ctotrev1),rep("",times=45),rep("",times=45))
Ctotrev3<-data.frame(libellVA,Ctotrev2)
dimnames(Ctotrev3)<-dimnames(matREVCOMPLET3)
```

```
#sheet3 profits on consumption by each activity
Ctotdeltarev1<- Ctotprix1-Ctotrev1
Ctotdeltarev2<-rbind(Ctotdeltarev1,colSums(Ctotdeltarev1),rep("",times=45),rep("",times=45))
Ctotdeltarev3<-data.frame(libellVA,Ctotdeltarev2)
dimnames(Ctotdeltarev3)<-dimnames(matREVCOMPLET3)
```

#5° Exchanges of IC

```
#sheet 4 profits from selling intermediate consumption
gainsvtesCIrev<- matrix(rowSums(CI)-rowSums(CIrev),nrow=56)
gainsvtesCIrev1<-cbind(gainsvtesCIrev,rowSums(gainsvtesCIrev))
gainsvtesCIrev2<-rbind(gainsvtesCIrev1,colSums(gainsvtesCIrev1),rep("",times=45),rep("",times=45))
gainsvtesCIrev3<-data.frame(libellVA,gainsvtesCIrev2)
dimnames(gainsvtesCIrev3)<-dimnames(Ctotprix3)
```

```
#sheet 5 losses when buying intermediate consumption
pertesachCIrev<- matrix(colSums(CI)-colSums(CIrev),nrow=56)
pertesachCIrev1<-cbind(pertesachCIrev,rowSums(pertesachCIrev))
pertesachCIrev2<-rbind(pertesachCIrev1,colSums(pertesachCIrev1),rep("",times=45),rep("",times=45))
pertesachCIrev3<-data.frame(libellVA,pertesachCIrev2)
dimnames(pertesachCIrev3)<-dimnames(Ctotprix3)
```

```
#sheet 6 net profits from exchanges of IC
gainsnetsCIrev1<- gainsvtesCIrev1- pertesachCIrev1
gainsnetsCIrev2<-rbind(gainsnetsCIrev1,colSums(gainsnetsCIrev1),rep("",times=45),rep("",times=45))
gainsnetsCIrev3<-data.frame(libellVA,gainsnetsCIrev2)
dimnames(gainsnetsCIrev3)<-dimnames(Ctotprix3)
```

```
#sheet7
profitApresEchCIrev1<-Ctotdeltarev1+gainsnetsCIrev1
profitApresEchCIrev2<-
rbind(profitApresEchCIrev1,colSums(profitApresEchCIrev1),rep("",times=45),rep("",times=45))
profitApresEchCIrev3<-data.frame(libellVA, profitApresEchCIrev2)
dimnames(profitApresEchCIrev3)<-dimnames(Ctotprix3)
```

#6° Profits from sales of GFCF ($\vec{I} - \vec{I}'$) (sheet 11)

```
#gainsvtesFBCFrev is a matrix (56 x 43) giving the profit coming of the sales of GFCF for each #activity
gainsvtesFBCFrev<-Ctotprix
Adefdeltarev<- Adefprix-Adefrev
for(b in 1:56)
for (p in 1:44)
gainsvtesFBCFrev[b,p]<- sum(Adefdeltarev[b,p,4,])
gainsvtesFBCFrev1<-cbind(gainsvtesFBCFrev, rowSums(gainsvtesFBCFrev))
```

```
gainsvtesFBCFrev2<-rbind(gainsvtesFBCFrev1,
        colSums(gainsvtesFBCFrev1),rep("",times=45),rep("",times=45))
gainsvtesFBCFrev3<-data.frame(libellVA,gainsvtesFBCFrev2)
dimnames(gainsvtesFBCFrev3)<-dimnames(Ctotprix3)
```

#7° Losses from purchasing of GFCF (sheet 9)

#a) Total losses of each area when buying GFCF

```
pertesAchFBCFparPaysrev<-c(1:44)
for (p in 1:44)
pertesAchFBCFparPaysrev[p]<- sum(Adefdeltarev[,,4,p])
sum(gainsvtesFBCFrev)-sum(pertesAchFBCFparPaysrev)
#must be null
```

#b) loss of each productive unit when buying GFCF

```
#Due to the accounting rules it is impossible to calculate these losses from "wiot" only.
#I suggest to divide the losses of each area, as they have been calculated between the different #activities of this area by using the matrix (56 x 56) "partage" giving the repartition of 10,000
 #units of product b (varying from 1 to 56) sold as fixed capital between the purchasing activities ba #(varying from 1 to 56)
#getting the object "partage''
#we get the loss of the activity ba of the area pa when buying the fixed capital b of the area p
achFBCFbrpaysdeltarev<-array(1,dim=c(56,44,44,56))
for(b in 1:56)
  for (ba in 1:56)
 for(p in 1:44)
  for(pa in 1:44)
 achFBCFbrpaysdeltarev[b,p,pa,ba]<-Adefdeltarev[b,p,4,pa]*partage[b,ba]/10000
#and  the loss of the activity ba of the area pa when buying fixed capital from any productive unit
pertesFBCFrev<-Ctotprix
for (pa in 1:44)
for (ba in 1:56)
pertesFBCFrev[ba,pa]<-sum(achFBCFbrpaysdeltarev[,,pa,ba])
pertesFBCFrev1<-cbind(pertesFBCFrev, rowSums(pertesFBCFrev))
pertesFBCFrev2<-rbind(pertesFBCFrev1, colSums(pertesFBCFrev1),rep("",times=45),rep("",times=45))
pertesFBCFrev3<-data.frame(libellVA,pertesFBCFrev2)
dimnames(pertesFBCFrev3)<-dimnames(Ctotprix3)
sum(pertesAchFBCFparPaysrev)-sum(pertesFBCFrev)
#must be small. It is not null because of approximations in calculations
```

#8°Profits coming from increase of inventories ($\overrightarrow{\Delta \mathbf{S}} - \overrightarrow{\Delta \mathbf{S}'}$) (sheet 9)

```
gainsStocksProdrev<-Ctotprix
for(b in 1:56)
 for(p in 1:44)
gainsStocksProdrev[b,p]<-sum(Adefdeltarev[b,p,5,])
gainsStocksProdrev1<-cbind(gainsStocksProdrev, rowSums(gainsStocksProdrev))
gainsStocksProdrev2<-rbind(gainsStocksProdrev1,
        colSums(gainsStocksProdrev1),rep("",times=45),rep("",times=45))
gainsStocksProdrev3<-data.frame(libellVA,gainsStocksProdrev2)
dimnames(gainsStocksProdrev3)<-dimnames(Ctotprix3)
```

#9° Displaying of the results in Excel format through package "xlsx"
#a) vectors $\overrightarrow{VA'}$ and $\vec{K}$

```
paste("vectorsVA'andK",aa,"income-value.xlsx",sep="")->z
write.xlsx(matREVCOMPLET3, file =z, sheetName="vector VA'")
matKrev<-matrix(Krev, nrow=56)
matKrev2<-rbind(matKrev,rep("",times=44))
libellK<-matrix(c(wiot[1:56,2],""),nrow=57)
matKrev3<-data.frame(libellK,matKrev2)

rownames(matKrev3)<-c(as.vector(codesbrches), paste("Year",aa))
colnames(matKrev3)<-c("",as.character(codeszones))
write.xlsx(matKrev3, file =z, sheetName="vector K", append=TRUE)
```

#b) profit formation

```
paste("Profit'sFormation.Year",aa,".xlsx",sep="")->pf
write.xlsx(Ctotprix3, file =pf, sheetName="1. vector C")
write.xlsx(Ctotrev3, file =pf, sheetName="2. vector C'", append=TRUE)
write.xlsx(Ctotdeltarev3, file =pf, sheetName="3. vector Pi", append=TRUE)
write.xlsx(gainsvtesCIrev3, file =pf, sheetName="4. Earnings from IC", append=TRUE)
write.xlsx(pertesachCIrev3, file =pf, sheetName="5. Losses from IC", append=TRUE)
write.xlsx(gainsnetsCIrev3, file =pf,sheetName="6. Net earnings from IC", append=TRUE)
write.xlsx(profitApresEchCIrev3, file =pf, sheetName="7. Margins after IC exchanges", append=TRUE)
write.xlsx(gainsvtesFBCFrev3, file =pf, sheetName="8. Earnings from GFCF", append=TRUE)
write.xlsx(gainsStocksProdrev3, file =pf, sheetName="9. Margins from inventories", append=TRUE)
AccountingProfitrev1<- profitApresEchCIrev1+gainsvtesFBCFrev1+gainsStocksProdrev1
AccountingProfitrev2<-
        rbind(AccountingProfitrev1,colSums(AccountingProfitrev1),rep("",times=45),rep("",times=45))
AccountingProfitrev3<-data.frame(libellVA,AccountingProfitrev2)
dimnames(AccountingProfitrev3)<-dimnames(Ctotprix3)
write.xlsx(AccountingProfitrev3, file =pf, sheetName="10. Accounting Profits", append=TRUE)
write.xlsx(pertesFBCFrev3, file =pf, sheetName="11. Losses from GFCF", append=TRUE)
netFBCFrev1<- gainsvtesFBCFrev1-pertesFBCFrev1
netFBCFrev2<- rbind(netFBCFrev1,colSums(netFBCFrev1),rep("",times=45),rep("",times=45))
netFBCFrev3<-data.frame(libellVA,netFBCFrev2)
dimnames( netFBCFrev3)<-dimnames(Ctotprix3)
write.xlsx(netFBCFrev3, file =pf, sheetName="12. Net Earnings from GFCF", append=TRUE)
FinalProfitsValuerev1<- profitApresEchCIrev1+gainsvtesFBCFrev1-pertesFBCFrev1
FinalProfitsValuerev2<-
        rbind(FinalProfitsValuerev1,colSums(FinalProfitsValuerev1),rep("",times=45),rep("",times=45))
FinalProfitsValuerev3<-data.frame(libellVA,FinalProfitsValuerev2)
dimnames(FinalProfitsValuerev3)<-dimnames(Ctotprix3)
write.xlsx(FinalProfitsValuerev3, file =pf, sheetName="13. Profits in Value", append=TRUE)

W<-loadWorkbook(pf)
sheetW<-getSheets(W)
for (m in 1:13)
{setColumnWidth(sheetW[[m]],2,50)
```

```
 createFreezePane(sheetW[[m]],2,3)}
saveWorkbook(W,file=pf)


V<-loadWorkbook(z)
sheetV<-getSheets(V)
for (n in 1:2)
{setColumnWidth(sheetV[[n]],2,50)
 createFreezePane(sheetV[[n]],2,3)}
saveWorkbook(V,file=z)
```