

frbussupport.Rnw: Create Support Files

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0.1 stdver_varinfo

This code creates the varinfo.csv support file, parsing the data from the fixed format text file "frbus_package/mods/stdver_varinfo" into a data.frame.

```
raw = readLines("frbus_package/mods/stdver_varinfo")
```

Here we define the fixed length fields. The only reference to the original file seems to be in the stochsim program, to determine which are stochastic equations. There seems to be information in this file that is not used anywhere. I've made up names for some fields to use until I find better information.

```
flds = c("seq", "vname", "vdesc", "vtype", "vrule", "sector",
         "var7", "stoch", "var8", "var9", "decomp")
start = c(1, 5, 16, 111, 115, 117, 130, 132, 135, 137, 139)
length = c(3, 8, 94, 4, 1, 13, 1, 2, 1, 1, 2)
parse = data.frame(flds, start, length)
rownames(parse) = parse$flds
(parse = subset(parse, select = -c(flds)))
```

##		start	length
##	seq	1	3
##	vname	5	8
##	vdesc	16	94
##	vtype	111	4
##	vrule	115	1
##	sector	117	13
##	var7	130	1
##	stoch	132	2
##	var8	135	1
##	var9	137	1
##	decomp	139	2

Using the field definitions that I created above, I transform the file's information into a data.frame.

```
varinfo = data.frame(lapply(flds,
                           function(x) (trimws(substr(raw, parse[x, "start"],
                                                         sum(c(parse[x, "start"], parse[x, "length"], -1))))))),
                    colnames(varinfo) = flds)
varinfo = varinfo[varinfo$vname != "ZZZBLANK", ]
rownames(varinfo) = as.character(varinfo[, "vname"])
varinfo$seq = as.numeric(as.character(varinfo$seq))
varinfo$var7 = as.numeric(as.character(varinfo$var7))
varinfo$var8 = as.numeric(as.character(varinfo$var8))
varinfo$var9 = as.numeric(as.character(varinfo$var9))
```

```

varinfo$decomp = as.numeric(as.character(varinfo$decomp))
str(varinfo)

## 'data.frame': 508 obs. of  11 variables:
## $ seq   : num  1 2 3 4 5 6 7 8 9 10 ...
## $ vname : Factor w/ 509 levels "CENG","D01Q4",...: 1 2 3 4 5 6 7 8 9 10 ...
## $ vdesc : Factor w/ 507 levels "10-year expected PCE price inflation (Survey of Professional
## $ vtype : Factor w/ 16 levels "", "B", "B.1", "B.2",...: 6 16 16 16 12 12 12 12 12 12 ...
## $ vrule : Factor w/ 2 levels "", "A": 2 1 1 1 1 1 1 1 1 1 ...
## $ sector: Factor w/ 387 levels "", "sector_a.1",...: 69 1 1 1 1 1 1 1 1 1 ...
## $ var7   : num  4 1 1 1 1 1 1 1 1 1 ...
## $ stoch  : Factor w/ 11 levels "", "FN", "GV", "IN",...: 8 7 7 7 7 7 7 7 7 7 ...
## $ var8   : num  1 0 0 0 0 0 0 0 0 0 ...
## $ var9   : num  0 0 0 0 0 0 0 0 0 0 ...
## $ decomp: num  16 27 27 27 14 27 14 14 27 27 ...

```

I haven't figured out what most of the varinfo fields are used for but we can examine the values.

```

varinfo$vname

##      [1] CENG      D01Q4      D2002      D2003      D69        D79A       D8095
##      [8] D81        D83        D86        D87        DCON       DDOCKM     DDOCKX
##     [15] DELRFF     DEUC       DFMPRR     DFPDBT     DFPEX      DFPSRP     DGLPRD
##     [22] DMPALT     DMPEX      DMPGEN     DMPINTAY   DMPRR      DMPSTB     DMPTAY
##     [29] DMPTLR     DMPTLR     DMPTMAX    DMPTPI     DMPTR      DMPTRSH    DPADJ
##     [36] DPGAP      DRSTAR     EC         ECD        ECH        ECNIA      ECNIAN
##     [43] ECO        EGF        EGFI       EGFIN      EGFI       EGFL       EGFLN
##     [50] EGFLT      EGFN       EGFO       EGFO       EGFO       EGPDIN     EGS
##     [57] EGS        EGSIN      EGSIT      EGSL       EGSLN      EGSLT      EGSN
##     [64] EGSO       EGSON      EGSOT      EH         EHN        EI         EIN
##     [71] EM         EMN        EMO        EMON       EMP        EMPN       EMPT
##     [78] EPD        EPDN       EPI        EPIN       EPS        EPSN       EX
##     [85] EXN        FCBN       FCBRN      FGDP       FGDPT      FNICN      FNILN
##     [92] FNIN       FNIRN      FPC        FPCM       FPI10      FPI10T     FPIC
##     [99] FPITRG     FPX        FPM        FPXR       FPXRR      FPXRR      FRL10
##    [106] FRS10      FRSTAR     FTCIN      FXGAP      FYNICN     FYNILN     FYNIN
##    [113] GFDBTN     GFDRT      GFINTN     GFS        GFSN       GFSRPN     GFSRT
##    [120] GFSUB      GFSUBN     GFT        GFTN       GFTRD      GFTRT      GSDBTN
##    [127] GSDRT      GSINTN     GSSRPN     GSSRT      GSSUB      GSSUBN     GST
##    [134] GSTN       GSTRD      GSTRT      HGEMP      HGGDP      HGGDPT     HGPCDR
##    [141] HGPDR      HGPIR      HGPKIR     HGPPSR     HGVPD      HGVPI      HGVPS
##    [148] HGX        HGYNID     HKS        HKSR       HLEPT      HLPDRT     HMFPT
##    [155] HQLFPR     HQLWW      HUQPCT     HUXB       HXBT       JCCACN     JCCAN
##    [162] JKCD       JRCD       JRH        JRPD       JRPI       JRPS       JYGFEN
##    [169] JYGFGN     JYGSEN     JYGSGN     JYNCN      KCD        KH         KI

```

##	[176]	KPD	KPI	KPS	KS	LEF	LEFT	LEH
##	[183]	LEO	LEP	LEPPOT	LES	LEST	LEUC	LF
##	[190]	LFPR	LHP	LPRDT	LQUALT	LUR	LURBLS	LURNAT
##	[197]	LURTRSH	LWW	MEI	MEP	MFPT	N16	PCDR
##	[204]	PCENG	PCENGR	PCER	PCFR	PCFRT	PCHR	PCNIA
##	[211]	PCOR	PCPI	PCPIX	PCSTAR	PCXFE	PGDP	PGFIR
##	[218]	PGFL	PGFOR	PGSIR	PGSL	PGSOR	PHOUSE	PHR
##	[225]	PIC4	PICNGR	PICNIA	PICX4	PICXFE	PIECI	PIGDP
##	[232]	PIPL	PIPXNC	PITARG	PITRSH	PKIR	PKPDR	PL
##	[239]	PLMIN	PLMINR	PMO	PMP	POIL	POILR	POILRT
##	[246]	PPDR	PPIR	PPSR	PTR	PWSTAR	PXB	PXG
##	[253]	PXNC	PXP	PXR	QEC	QECD	QECO	QEH
##	[260]	QEPD	QEPI	QEPS	QKIR	QLEOR	QLEP	QLF
##	[267]	QLFPR	QLHP	QLWW	QPCNIA	QPL	QPMO	QPXG
##	[274]	QPXNC	QXPX	QYNIDN	RBBB	RBBBE	RBBBP	RCAR
##	[281]	RCCD	RCCH	RCGAIN	REQ	REQP	RFF	RFFALT
##	[288]	RFFE	RFFFIX	RFFGEN	RFFINTAY	RFFMIN	RFFRULE	RFFTAY
##	[295]	RFFTLR	RFNICT	RFRS10	RFYNIC	RFYNIL	RG10	RG10E
##	[302]	RG10P	RG30	RG30E	RG30P	RG5	RG5E	RG5P
##	[309]	RGFINT	RGW	RME	RPD	RRFFE	RRFIX	RRMET
##	[316]	RRTR	RSPNIA	RSTAR	RTB	RTBE	RTINV	RTPD
##	[323]	RTPI	RTPS	RTR	T47	TAPDAD	TAPDD	TAPDDP
##	[330]	TAPDS	TAPDT	TAPSAD	TAPSDA	TAPSSL	TFCIN	TFDIV
##	[337]	TFIBN	TFPN	TFSIN	TRFCI	TRFCIM	TRFIB	TRFP
##	[344]	TRFPM	TRFPT	TRFPTX	TRFSI	TRSCI	TRSCIT	TRSIB
##	[351]	TRSIBT	TRSP	TRSP	TRSP	TRSP	TRSSI	TRSSIT
##	[358]	TRYH	TSCIN	TSIBN	TSPN	TSSIN	UCES	UCFS
##	[365]	UEMOT	UEMP	UFCBR	UFNIR	UFPCM	UFPXM	UFTCIN
##	[372]	UGFDBT	UGSDBT	UGSINT	UGSSUB	UJCCA	UJCCAC	UJYGFE
##	[379]	UJYGFG	UJYGSE	UJYGSG	ULEF	ULES	UPCPI	UPCPIX
##	[386]	UPGFL	UPGSL	UPKPD	UPMP	UPXB	UQPCT	UVEOA
##	[393]	UVPD	UVPI	UVPS	UXBT	UXENG	UYD	UYHI
##	[400]	UYHLN	UYHPTN	UYHSN	UYHTN	UYL	UYNI	UYNICP
##	[407]	UYP	UYSEN	VEO	VEOA	VPD	VPI	VPS
##	[414]	WDNFCN	WPO	WPON	WPS	WPSN	XB	XBN
##	[421]	XBO	XBT	XENG	XFS	XFSN	XG	XGAP
##	[428]	XGAP2	XGDE	XGDEN	XGDI	XGDIN	XGDO	XGDP
##	[435]	XGDPN	XGDPT	XGDPTN	XGN	XGO	XGPOT	XP
##	[442]	XPN	YCSN	YDN	YGFSN	YGSSN	YH	YHGAP
##	[449]	YHIBN	YHIN	YHL	YHLN	YHP	YHPCD	YHPGAP
##	[456]	YHPNTN	YHPSHR	YHPTN	YHSHR	YHSN	YHT	YHTGAP
##	[463]	YHTN	YHTSHR	YKIN	YKPDN	YKPSN	YMSDN	YNICPN
##	[470]	YNIDN	YNIIN	YNILN	YNIN	YNISEN	YPN	ZDIVGR
##	[477]	ZECD	ZECO	ZEH	ZGAP05	ZGAP10	ZGAP30	ZGAPC2
##	[484]	ZLHP	ZPI10	ZPI10F	ZPI5	ZPIB5	ZPIC30	ZPIC58

```
## [491] ZPICXFE ZPIECI ZRFF10 ZRFF30 ZRFF5 ZVPD ZVPI
## [498] ZVPS ZXBD ZXBI ZXBS ZYH ZYHP ZYHPST
## [505] ZYHST ZYHT ZYHTST ZYNID
## 509 Levels: CENG D01Q4 D2002 D2003 D69 D79A D8095 D81 D83 D86 D87 ... ZZZBLANK

table(varinfo$vttype)

##
##      B B.1 B.2 B.3 B.4 B.6 B.7   I I.3 X.1 X.2 X.3 X.4 X.5 X.7
##    0 54 12  1  1 73  1  4 239  1  3 72 34  6  1  6

table(varinfo$vrule)

##
##      A
## 126 382

str(varinfo$sector)

## Factor w/ 387 levels "", "sector_a.1",...: 69 1 1 1 1 1 1 1 1 1 ...

summary(varinfo$var7)

##      Min. 1st Qu.  Median      Mean 3rd Qu.     Max.    NA's
##      1.0      1.0      4.0      2.7      4.0      5.0      4

table(varinfo$var7)

##
##      1  2  3  4  5
## 201 25  3 274  1

table(varinfo$stoch)

##
##      FN  GV  IN  IS  LB  NO  OT  PR  RW  ST
##    0 12 15  4 10  7 437 10  9  2  2

table(varinfo$var8)

##
##      0  1  2  7
## 413 90  1  1

table(varinfo$var9)

##
##      0  1  2  3  4
## 370 24 80 21 10
```

```
table(varinfo$decomp)
```

```
##
```

```
##  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
## 30  2 33  5  5  4 12  4  7  7 11  3 24 49 34  8  8 30  2 11 16 53 44 26 17
## 26 27 28 29
## 32 18 12  1
```

```
table(varinfo$svtype,varinfo$stoch)
```

```
##
```

```
##           FN  GV  IN  IS  LB  NO  OT  PR  RW  ST
##           0   0   0   0   0   0   0   0   0   0
## B           0   0   0   0   0   6  46   0   0   0   2
## B.1         0   3   5   0   0   0   2   0   2   0   0
## B.2         0   0   0   0   0   0   1   0   0   0   0
## B.3         0   0   0   0   0   0   1   0   0   0   0
## B.4         0   9  10   4  10   0  21  10   7   2   0
## B.6         0   0   0   0   0   0   1   0   0   0   0
## B.7         0   0   0   0   0   1   3   0   0   0   0
## I           0   0   0   0   0   0 239   0   0   0   0
## I.3         0   0   0   0   0   0   1   0   0   0   0
## X.1         0   0   0   0   0   0   3   0   0   0   0
## X.2         0   0   0   0   0   0  72   0   0   0   0
## X.3         0   0   0   0   0   0  34   0   0   0   0
## X.4         0   0   0   0   0   0   6   0   0   0   0
## X.5         0   0   0   0   0   0   1   0   0   0   0
## X.7         0   0   0   0   0   0   6   0   0   0   0
```

```
table(varinfo$var7,varinfo$var9)
```

```
##
```

```
##           0   1   2   3   4
## 1 201   0   0   0   0
## 2   4   0  21   0   0
## 3   2   0   0   1   0
## 4 161  24  59  20  10
## 5   1   0   0   0   0
```

```
table(varinfo$var7,varinfo$stoch)
```

```
##
```

```
##           FN  GV  IN  IS  LB  NO  OT  PR  RW  ST
## 1   0  10   9   0   0   5 173   0   2   1   1
## 2   0   2   0   0   0   0  23   0   0   0   0
## 3   0   0   0   0   0   0   3   0   0   0   0
## 4   0   0   6   4  10   2 233  10   7   1   1
## 5   0   0   0   0   0   0   1   0   0   0   0
```

```
table(varinfo$var8,varinfo$stoch)

##
##      FN  GV  IN  IS  LB  NO  OT  PR  RW  ST
##  0   0  12   9   0   0   5 383   0   2   1   1
##  1   0   0   6   3  10   2  50  10   7   1   1
##  2   0   0   0   0   0   0   1   0   0   0   0
##  7   0   0   0   1   0   0   0   0   0   0   0

table(varinfo$var9,varinfo$stoch)

##
##      FN  GV  IN  IS  LB  NO  OT  PR  RW  ST
##  0   0  12  15   4  10   7 299  10   9   2   2
##  1   0   0   0   0   0   0  24   0   0   0   0
##  2   0   0   0   0   0   0  80   0   0   0   0
##  3   0   0   0   0   0   0  21   0   0   0   0
##  4   0   0   0   0   0   0  10   0   0   0   0
```

Here we create the support file from the data.frame.

```
write.csv(varinfo,"support/varinfo.csv")
```

0.2 Chunks

0.3 Index