Appendix of

Bridging the Gap Between Ox and Gauss using OxGauss

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Table A1: Precompiled functions supported by OxGauss

_fcmptol	delete	lib library	output	save
abs	det	library	outwidth n	saveall
arccos	diagrv	line	pdfn	screen
arcsin	disable	ln	plot x,y	scroll
arctan	dlibrary	load x	plotsym n	shell
arctan2	dllcall	loadf f	pqgwin	show
atan	enable	loadk k	prcsn n	sin
atan2	end/stop	loadm x	print	sinh
cdfchic	erf	loadp p	printdos str	sqrt
cdfchii	errorlog str	loads s	rank	system
cdffc	exp	locate m,n	replay	tan
cdfn	eye	log	rerun	tanh
cdfnc	feq	lowmat	rev	toeplitz
cdfni	floor	lprint	rndcon c	trace new
cdftc	fmod	lpwidth n	rndmod m	trap new
ceil	format	lshow	rndmult a	trunc
cols	gamma	meanc	rndn	use gcgfile
cos	graph	median	rndseed seed	vcx
cosh	hsec	msym str	rndu	vech
create	inv	new	round	xpnd
datalist	invpd	ones	rows	zeros
debug	ismiss	open	run filename	

Table A2: Open source functions supported by OxGauss

balance	corrvc	etstr	keyw	polymult	seekr	upper
band	corrx	exctsmpl	lag1	polyroot	selif	utrisol
bandchol	counts	exec	lagn	printfm	seqa	vals
bandcholsol	countwts	export	lncdfbvn	printfmt	seqm	vcm
bandltsol	crossprd	exportf	lncdfn	prodc	setcnvrt	vec
bandrv	crout	fcheckerr	lncdfn2	putf	setdif	vecr
bandsolpd	croutp	fclearerr	lncdfnc	qnewton	setvmode	vget
base10	csrtype	fflush	lnfact	qprog	shiftr	wait
besselj	cumprodc	fft	lnpdfmvn	qqr	sleep	waitc
bessely	cumsumc	ffti	lnpdfn	qqre	solpd	writer
cdfbeta	cvtos	fftn	loadd	qqrep	sortc	xpnd
cdfbvn	date	fge	lower	qr	sortcc	
cdfchinc	datestr	fgets	lowmat1	qre	sorthc	
cdffnc	datestring	fgetsa	ltrisol	qrep	sorthcc	
cdfgam	datestrymd	fgetsat	lu	qrsol	sortind	
cdfn2	dayinyr	fgetst	lusol	qrtsol	sortindc	
cdftci	delif	fgt	maxc	qtyr	sortmc	
cdftnc	design	files	maxindc	qtyre	sqpsolve	
cdftvn	detl	fle	maxvec	qtyrep	stof	
cdir	dfft	flt	mbesselei	quantile	stop	
changedir	dffti	fne	mbesselei0	qyr	strindx	
chol	dfree	fopen	mbesselei1	qyre	strlen	
choldn	diag	formatcv	mbesseli	qyrep	strput	
cholsol	dos	formatnv	mbesseli0	rankindx	strrindx	
cholup	dotfeq	fputs	mbesseli1	readr	strsect	
chrs	dotfge	fputst	meanc	real	submat	
close	dotfgt	fseek	minc	recode	subscat	
closeall	dotfle	fstrerror	minindc	recserar	substute	
cls	dotflt	ftell	miss	recsercp	sumc	
cmadd	dotfne	ftocv	missex	recserrc	svd	
cmcplx	dstat	ftos	missrv	rfft	svd1	
cmcplx2	dummy	gammaii	moment	rffti	svd2	
cmdiv	dummybr	gausset	ndpchk	rfftip	svdcusv	
cmemult	dummydn	getf	ndpclex	rfftn	svds	
cmimag	eig	getname	ndpcntrl	rfftnp	svdusv	
cminv	eigh	gradp	null1	rfftp	sysstate	
cmmult	eighv	hasimag	ols	rndbeta	system	
cmreal	eigrg	hessp	olsqr	rndgam	tab	
cmsoln	eigrg2	imag	olsqr2	rndnb	tempname	
cmsub	eigrs	import	orth	rndns	time	
cmtrans	eigrs2	indcv	packr	rndp	timestr	
code	eigv	indexcat	parse	rndus	token	
color	end	indices	pause	rndvm	trapchk	
colsf	envget	indices2	pi	rotater	trim	
con	eof	indnv	pinv	rowsf	trimr	
cond	eqsolve	intrsect	polychar	rref	type	
cons	erfc	invswp	polyeval	save	union	
conv	error	iscplx	polyint	saved	uniqindx	
coreleft	etdays	iscplxf	polymake	scalerr	unique	
corrm	ethsec	key	polymat	scalmiss	upmat	

Table A3: Functions not supported by OxGauss (under Ox 3.3)

cdfbvn2	filesa	makevars	sortd	vnamecv
cdfbvn2e	getnr	medit	spline1d	vput
cdfmvn	getpath	mergeby	spline2d	vread
complex	header	mergevar	stdc	vtypecv
conj	hess	momentd	tocart	
csrcol	importf	nametype	topolar	
csrlin	intgrat2	nextn	typecv	
editm	intgrat3	nextnevn	typef	
eigcg	intquad1	null	varget	
eigcg2	intquad2	optn	vargetl	
eigch	intquad3	optnevn	varput	
eigch2	intrleav	quantiled	varputl	
fftm	intsimp	schtoc	vartype	
fftmi	lncdfbvn2	schur	vartypef	
fileinfo	lncdfmvn	setvars	vlist	

Table A4: List of codes associated to papers

1. HAMILTON, J. (1994): *State-Space Models*, in Handbook of Econometrics, Volume 4, 3039–3080, edited by R.F. Engle and D., McFadden, Amsterdam: North Holland.
2. HAMILTON, J. (1996): "The Daily Market for Federal Funds", *Journal of Political Economy*, pp. 26–56.
3. HAMILTON, J. (1996): "Specification Testing in Markov-Switching Time-Series Models", *Journal of Econometrics*, 70, 127–157.
4. HAMILTON, J., and C. ENGLE (1990): "Long Swings in the Exchange Rate: Are They in the Data and Do Markets Know It?", *American Economic Review*, pp. 689–713.
5. HAMILTON, J., and O. JORDA (2002): "A Model for the Federal Funds Rate Target", *Journal of Political Economy*, 110, 1135–1167.
6. HAMILTON, J., and G. LIN (1996): "Stock Market Volatility and the Business Cycle", *Journal of Applied Econometrics*, 11, 573–593.
7. HAMILTON, J., and G. PEREZ-QUIROS (1996): "What Do the Leading Indicators Lead?", *Journal of Business*, 69, 27–49.
8. HAMILTON, J., and R. SUSMEL (1994): "Autoregressive Conditional Heteroskedasticity and Changes in Regime", *Journal of Econometrics*, 64, 307–333.
9. Bauwens, L. M. Lubrano (1998): Bayesian Inference on GARCH models using the Gibbs Sampler, *The Econometrics Journal*, 1, C23-C46.
10. Hansen, B. (1992): "Tests for Parameter Instability in Regressions with I(1) Processes", *Journal of Business and Economic Statistics*, 10, 321-335.
11. Hansen, B. (1992): "Testing for Parameter Instability in Linear Models", *Journal of Policy Modeling*, 14, 517-533.
12. Hansen, B. (1992): "The likelihood Ratio Test under Non-standard Conditions: Testing the Markov Switching Model of GNP", *Journal of Applied Econometrics*, 7, S61-S82.
13. Hansen, B. (1994): "Autoregressive Conditional Density Estimation", *International Economic Review*, 35, 705-730.
14. Hansen, B. (1996): "Inference when a Nuisance Parameter is not Identified under the Null Hypothesis", *Econometrica*, 64, 413-430.
15. Hansen, B. and A. Gregory (1996): "Residual-based Tests for Cointegration in Models with Regime Shifts", *Journal of Econometrics*, 70, 99-126.
16. Hansen, B. (1997): "Approximate Asymptotic p-values for Structural Change Tests", *Journal of Business and Economic Statistics*, 15, 60-67.
17. Hansen, B. (1997): "Inference in TAR Models", *Studies in Nonlinear Dynamics and Econometrics*, 2, 1-14.
18. Hansen, B. (1999): "Testing for Linearity", *Journal of Economic Surveys*, 13, 551-576.
19. Hansen, B. (2000): "Sample Splitting and Threshold Estimation", *Econometrica*, 68, 575-603.
20. Hansen, B. (2000): "Testing for Structural Change in Conditional Models", *Journal of Econometrics*, 97, 93-115.
21. Hansen, B. and M. Caner (2000): "Threshold Autoregression with a Unit Root", *Econometrica*, 69, 1555-1596.
22. Hansen, B., D. Cox and E. Jimenez: "How Responsive are Private Transfers to Income? Evidence from a Laissez-faire Economy", forthcoming in *Journal of the Public Economics*.
23. Hansen, B. and B. Seo (2002): "Testing for Threshold Cointegration", *Journal of Econometrics*, 110, 293-318.
24. Hansen, B. (2001): "The New Econometrics of Structural Change: Dating Changes in U.S. Labor Productivity", *Journal of Economic Perspectives*, 15, 117-128.
25. Hansen, B.: "Recounts from Undervotes: Evidence from the 2000 Presidential Election", forthcoming in *Journal of the American Statistical Association*.
26. Kim, C.-J. and C. Nelson (1999): *State-Space Models with Regime Switching: Classical and Gibbs-Sampling Approaches with Applications*, The MIT Press.
27. Yang, L. and R. Tschernig (1999): "Multivariate Bandwidth Selection for Local Linear Regression", *Journal of the Royal Statistical Society, Series B*, 61, 793-815.

Table A5: Outputs obtained by running *multband.tes* (see reference 27 in Table A4) under OxGauss (left) and Gauss 3.2 (right)

```
Ox version 3.30 (Windows) (C) J.A. Doornik, 1994-2003
hdrot_ll: chosen block: 2.0000000 1.0000000
Results from bandrot.g
h_ROT
     0.051626512
     0.051626512
hd_ROT
     0.044616931
     0.064029894
B_hat          0.23183482
Cm_hat
       5535.4077        477.33950
       477.33950        1305.0202
C_hat           7795.1069
hdrot_ll: chosen block: 2.0000000 1.0000000
hcdrotlp: chosen block: 2.0000000 1.0000000
hcdrotlp: Blamu
       78617.709       -3421.7567
      -4919.6541        80.592526

Results from bandpi.g
h_PI
     0.076176271
     0.076176271
hd_PI
     0.082851089
     0.064612911
Bd_hat         0.37280023
hd_ROT
     0.044616931
     0.064029894
C_hat           1227.6312
hC_ROT         0.18391889
Cm_hat
       458.95790        18.900462
       18.900462        1240.7565
hCd_ROT
      0.16024143       0.17575527
      0.17575527       0.37881573
```

```
hdrot_ll: chosen block: 2.0000000 1.0000000
Results from bandrot.g
h_ROT
     0.051626512
     0.051626512
hd_ROT
     0.044616919
     0.064029901
B_hat          0.23183482
Cm_hat
       5535.4077        477.33950
       477.33950        1305.0202
C_hat           7795.1069
hdrot_ll: chosen block: 2.0000000 1.0000000
hcdrotlp: chosen block: 2.0000000 1.0000000
hcdrotlp: Blamu
       78617.709       -3421.7567
      -4919.6541        80.592526

Results from bandpi.g
h_PI
     0.076176271
     0.076176271
hd_PI
     0.082851007
     0.064612978
Bd_hat         0.37280024
hd_ROT
     0.044616919
     0.064029901
C_hat           1227.6312
hC_ROT         0.18391889
Cm_hat
       458.95789        18.900464
       18.900464        1240.7565
hCd_ROT
      0.16024143       0.17575527
      0.17575527       0.37881573
```