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Apêndice A: Testes de diagnósticos e estimação

Este apêndice descreve os testes de diagnósticos do modelo estocástico realizados utilizando o pacote Eviews. São eles:

VAR Residual Normality Tests
 Orthogonalization: Cholesky (Lutkepohl)
 H0: residuals are multivariate normal
 Date: 05/29/08 Time: 11:06
 Sample: 1996Q2 2007Q2
 Included observations: 44

Component	Skewness	Chi-sq	df	Prob.
1	0.264753	0.514023	1	0.4734
2	-0.258253	0.489095	1	0.4843
3	0.373866	1.025021	1	0.3113
4	0.601359	2.651970	1	0.1034
5	-0.061608	0.027834	1	0.8675
Joint		4.707943	5	0.4526
Component	Kurtosis	Chi-sq	df	Prob.
1	2.363071	0.743744	1	0.3885
2	2.251011	1.028470	1	0.3105
3	3.238052	0.103893	1	0.7472
4	4.142902	2.394748	1	0.1217
5	2.112829	1.442965	1	0.2297
Joint		5.713819	5	0.3351
Component	Jarque-Bera	df	Prob.	
1	1.257766	2	0.5332	
2	1.517565	2	0.4682	
3	1.128914	2	0.5687	
4	5.046718	2	0.0802	
5	1.470798	2	0.4793	
Joint	10.42176	10	0.4043	

Tabela A 1. Testes de normalidade

VAR Lag Order Selection Criteria

Endogenous variables: X1-0.04 X2-0.11 X3-0.04 X4-0.10 X5-0.14

Exogenous variables: DUMMY1

Date: 05/29/08 Time: 11:13

Sample: 1996Q2 2007Q2

Included observations: 41

Lag	LogL	LR	FPE	AIC	SC	HQ
0	249.0769	NA	4.64e-12	-11.90619	-11.69722	-11.83009
1	311.3638	106.3434	7.61e-13	-13.72506	-12.47123*	-13.26849*
2	338.6265	39.89674*	7.21e-13*	-13.83544	-11.53675	-12.99838
3	355.7474	20.87909	1.23e-12	-13.45109	-10.10754	-12.23355
4	393.1773	36.51696	9.22e-13	-14.05743*	-9.669012	-12.45941

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Tabela A 2. Critérios para a escolha de defasagens

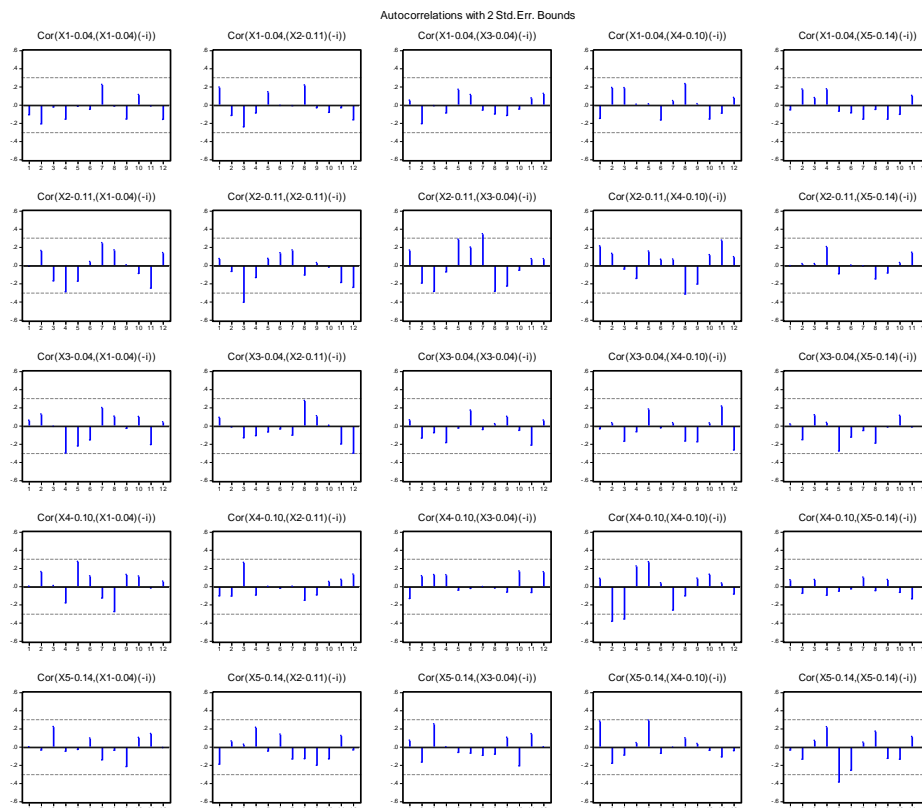


Figura A 1. Correlograma

VAR Residual Serial Correlation LM Tests

H0: no serial correlation at lag order h

Date: 05/29/08 Time: 11:21

Sample: 1996Q2 2007Q2

Included observations: 44

Lags	LM-Stat	Prob
1	46.76944	0.0052
2	32.57312	0.1421
3	29.51903	0.2428
4	23.98112	0.5205
5	37.79575	0.0484
6	17.61537	0.8583
7	22.78966	0.5898
8	37.12698	0.0562
9	22.80507	0.5889
10	15.89880	0.9178
11	20.18159	0.7372
12	27.08200	0.3518

Probs from chi-square with 25 df.

Tabela A 3. Teste LM

	X ₁	X ₂	X ₃	X ₄	X ₅
X ₁	0,0018855	0,0003465	0,0008809	0,0002845	0,0000837
X ₂	0,0003465	0,0019268	0,0015547	0,0000203	0,0001228
X ₃	0,0008809	0,0015547	0,0081728	0,0000263	0,0032965
X ₄	0,0002845	0,0000203	0,0000263	0,0006825	0,0005307
X ₅	0,0000837	0,0001228	0,0032965	0,0005307	0,0360307

Tabela A 4. Matriz de variâncias e covariâncias dos resíduos (Σ)

Vector Autoregression Estimates
 Date: 01/16/08 Time: 17:00
 Sample (adjusted): 1996Q3 2007Q2
 Included observations: 44 after adjustments
 Standard errors in () & t-statistics in []

	X1-0.04	X2-0.11	X3-0.04	X4-0.10	X5-0.14
X1(-1)-0.04	-0.148696 (0.15288) [-0.97266]	-0.422790 (0.15454) [-2.73583]	0.040368 (0.31828) [0.12683]	-0.008872 (0.09198) [-0.09646]	-0.431145 (0.66828) [-0.64516]
X2(-1)-0.11	-0.185559 (0.13395) [-1.38526]	0.114880 (0.13541) [0.84839]	-0.176425 (0.27888) [-0.63261]	-0.078176 (0.08059) [-0.97000]	0.612786 (0.58556) [1.04650]
X3(-1)-0.04	-0.045314 (0.07164) [-0.63252]	0.064160 (0.07242) [0.88594]	0.418518 (0.14915) [2.80600]	0.067767 (0.04310) [1.57221]	-0.139294 (0.31317) [-0.44479]
X4(-1)-0.10	-0.229618 (0.17779) [-1.29154]	-0.919097 (0.17972) [-5.11405]	0.176557 (0.37014) [0.47700]	0.657944 (0.10697) [6.15098]	0.066837 (0.77717) [0.08600]
X5(-1)-0.14	0.086285 (0.03676) [2.34710]	0.030370 (0.03716) [0.81722]	-0.174167 (0.07654) [-2.27559]	-0.088930 (0.02212) [-4.02068]	0.140459 (0.16070) [0.87403]
DUMMY1	-0.005198 (0.02044) [-0.25437]	0.040466 (0.02066) [1.95886]	-0.035506 (0.04255) [-0.83455]	0.033293 (0.01230) [2.70783]	-0.022069 (0.08933) [-0.24704]
R-squared	0.221419	0.161970	0.267869	0.726326	-0.067228
Adj. R-squared	0.118974	0.051702	0.171536	0.690317	-0.207653
Sum sq. resids	0.071650	0.073218	0.310567	0.025937	1.369165
S.E. equation	0.043423	0.043895	0.090404	0.026125	0.189817
F-statistic	2.161345	1.468883	2.780651	20.17029	-0.478747
Log likelihood	78.81001	78.33392	46.54473	101.1651	13.90645
Akaike AIC	-3.309546	-3.287905	-1.842942	-4.325687	-0.359384
Schwarz SC	-3.066247	-3.044607	-1.599644	-4.082388	-0.116086
Mean dependent	-0.013253	-0.075235	0.049865	0.084688	-0.080483
S.D. dependent	0.046262	0.045076	0.099323	0.046947	0.172729
Determinant resid covariance (dof adj.)		5.13E-13			
Determinant resid covariance		2.46E-13			
Log likelihood		326.5464			
Akaike information criterion		-13.47938			
Schwarz criterion		-12.26289			

Tabela A 5. Estimação do modelo