

ANEXO 1

MODELO CON LM1 NOMINAL DESESTACIONALIZADO

1.1. Pruebas de Raiz Unitaria

Null Hypothesis: D (LM1) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 2 (Automatic based on AIC, MAXLAG=2)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-13.49001
Test critical values: 1% level	-3.575200
5% level	-3.026000
10% level	-2.736000

*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Date: 09/08/10 Time: 10:53

Sample (adjusted): 1983Q1 2008Q4

Included observations: 104 after adjustments

Item	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-2.555949	0.189470	-13.49001	0.0000
D(GLSRESID(-1))	0.969896	0.149281	6.497104	0.0000
D(GLSRESID(-2))	0.610377	0.079752	7.653422	0.0000
R-squared	0.867909	Mean dependent var		0.000612
Adjusted R-squared	0.865293	S.D. dependent var		0.248301
S.E. of regression	0.091132	Akaike info criterion		-1.924585
Sum squared residuo	0.838816	Schwarz criterion		-1.848304

Log likelihood	103.0784	Hannan-Quinn criterion.	1.893681
Durbin-Watson stat	0.929827		

1.2. Criterios de selección del VAR

VAR Lag Order Selection Criteria

Endogenous variables: LM1SA LPPI LPPA

Exogenous variables: C

Date: 09/08/10 Time: 14:28

Sample: 1982Q1 2008Q4

Included observations: 100

Lag	LogL	LR	FPE	AIC	SC	HQ
0	13.00909	NA	0.000164	-0.200182	-0.122027	-0.168551
1	677.3291	1275.494	3.34e-10	-13.30658	- 12.99396*	-13.18006
2	682.1384	8.945451	3.63e-10	-13.22277	-12.67568	-13.00135
3	696.1073	25.14385	3.29e-10	-13.32215	-12.54059	-13.00584
4	702.5715	11.24780	3.47e-10	-13.27143	-12.25541	-12.86023
5	732.6470	50.52686*	2.29e- 10*	- 13.69294*	-12.44246	- 13.18685*
6	737.8422	8.416133	2.48e-10	-13.61684	-12.13190	-13.01586
7	743.4168	8.696435	2.68e-10	-13.54834	-11.82892	-12.85246
8	744.9180	2.251769	3.15e-10	-13.39836	-11.44448	-12.60759

* 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

1.3. Test de Correlación del VAR

VAR Residual Serial Correlation LM Tests

Null Hypothesis: no serial correlation at lag order h

Date: 09/08/10 Time: 14:29

Sample: 1982Q1 2008Q4

Included observations: 103

Lags	LM-Stat	Prob
1	13.06374	0.1597
2	9.100954	0.4280
3	6.412578	0.6980
4	23.80829	0.0046
5	5.188587	0.8176
6	5.226455	0.8141
7	5.486496	0.7900
8	11.23912	0.2597
9	10.00683	0.3499
10	13.70205	0.1333
11	14.92470	0.0930
12	11.92961	0.2173
13	5.092356	0.8262
14	6.471834	0.6919
15	2.552421	0.9794
16	12.69023	0.1771
17	13.40987	0.1449
18	10.07071	0.3448
19	9.731122	0.3727
20	12.96230	0.1643
21	5.197168	0.8168
22	6.864106	0.6513
23	5.888540	0.7510
24	4.217175	0.8965

Probs from chi-square with 9 df.

1.4. Test de Normalidad

VAR Residual Normality Tests

Orthogonalization: Cholesky (Lutkepohl)

Null Hypothesis: residuals are multivariate normal

Date: 09/08/10 Time: 14:30

Sample: 1982Q1 2008Q4

Included observations: 103

Component	Skewness	Chi-sq	df	Prob.
1	0.158120	0.429199	1	0.5124
2	-0.321082	1.769777	1	0.1834
3	0.496192	4.226536	1	0.0398
Joint		6.425513	3	0.0926

Component	Kurtosis	Chi-sq	df	Prob.
1	2.297004	2.120957	1	0.1453
2	3.240817	0.248885	1	0.6179
3	2.307728	2.056739	1	0.1515
Joint		4.426582	3	0.2189

Component	Jarque-Bera	df	Prob.
1	2.550156	2	0.2794
2	2.018662	2	0.3645
3	6.283276	2	0.0432
Joint	0.85209	6	0.0931

1.5. Test de Heterocedasticidad

VAR Residual Heteroskedasticity Tests: No Cross Terms (only levels and squares)

Date: 09/08/10 Time: 14:30

Sample: 1982Q1 2008Q4

Included observations: 103

Joint test:		
Chi-sq	df	Prob.
200.5307	186	0.2210

Individual components:

	R-squared	F(31,71)	Prob.	Chi-sq(31)	Prob.
res1*res1	0.248001	0.755325	0.8049	25.54414	0.7429
res2*res2	0.371444	1.353460	0.1475	38.25869	0.1732
res3*res3	0.269191	0.843632	0.6947	27.72667	0.6352
res2*res1	0.302768	0.994556	0.4912	31.18509	0.4569
res3*res1	0.352049	1.244393	0.2224	36.26105	0.2366
res3*res2	0.402532	1.543061	0.0677	41.46083	0.0993

Date: 09/08/10 Time: 14:31

Sample (adjusted): 1983Q2 2008Q4

Included observations: 103 after adjustments

Trend assumption: No deterministic trend (restricted constant)

Series: LM1SA LPPI LPPA

Lags interval (in first differences): 1 to 4

1.6. Test de la TRAZA

Unrestricted Cointegration Rank Test (Trace)

Hypothesized				
No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.260552	43.81453	35.19275	0.0046
At most 1	0.070636	12.72388	20.26184	0.3863
At most 2	0.049035	5.178590	9.164546	0.2644

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

1.7. Test del Maximo Valor

Unrestricted Cointegration Rank Test (Maximum Eigen value)

Hypothesized				
No. of CE(s)	Eigen value	Statistic Max - Eigen	0.05 Critical Value	Prob.**
None *	0.260552	31.09065	22.29962	0.0023
At most 1	0.070636	7.545292	15.89210	0.6028
At most 2	0.049035	5.178590	9.164546	0.2644

Max- Eigen value test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

1.8. Cointegración

Unrestricted Cointegrating Coefficients (normalized by $b^*S11*b=I$):

LM1SA	LPPI	LPPA	C
-		-	
4.145097	21.33620	16.02785	18.36323
0.644165	-	9.941395	6.963785
3.749945	7.843225	12.24012	16.38057

Unrestricted Adjustment Coefficients (alpha):

D(LM1SA)	0.013508	0.002451	0.000418
D(LPPI)	-	0.003401	-
D(LPPA)	0.003060	-1.92E-05	-
			0.006898

1 Cointegrating Equation(s): Log likelihood 744.1836

Normalized cointegrating coefficients (standard error in parentheses)

LM1SA	LPPI	LPPA	C
1.000000	-		-
	5.147335	3.866701	4.430109
	(1.00766)	(0.95785)	(0.42243)

Adjustment coefficients (standard error in parentheses)

D(LM1SA)	-
	0.055992 (0.01076)
D(LPPI)	0.007493 (0.00615)
	-
D(LPPA)	0.012686 (0.01380)

2 Cointegrating Equation(s): Log likelihood 747.9562

Normalized cointegrating coefficients (standard error in parentheses)

LM1SA	LPPI	LPPA	C
1.000000	0.000000	-	-
		0.352202 (0.31784)	9.989274 (1.93403)
0.000000	1.000000	-	-
		0.819629 (0.05977)	1.080008 (0.36368)

Adjustment coefficients (standard error in parentheses)

D(LM1SA)	-	
	0.054413 (0.01083)	0.257805 (0.06375)
D(LPPI)	0.009683 (0.00604)	- (0.03551)
	-	
D(LPPA)	0.012698 (0.01396)	0.065535 (0.08215)

Vector Error Correction Estimates

Date: 09/08/10 Time: 14:32

Sample (adjusted): 1983Q2 2008Q4

Included observations: 103 after adjustments

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1
LM1SA(-1)	1.000000
LPPI(-1)	-5.147335
	(1.00766)
	[-5.10823]
LPPA(-1)	3.866701
	(0.95785)
	[4.03684]
C	-4.430109
	(0.42243)
	[-10.4871]

Error Correction:	D(LM1SA)	D(LPPI)	D(LPPA)
CointEq1	-0.055992	0.007493	-0.012686
	(0.01076)	(0.00615)	(0.01380)
	[-5.20380]	[1.21903]	[-0.91946]
D(LM1SA(-1))	-0.020061	0.005414	-0.095339
	(0.09985)	(0.05704)	(0.12803)
	[-0.20092]	[0.09493]	[-0.74468]
D(LM1SA(-2))	0.216965	0.075038	-0.083580
	(0.09747)	(0.05568)	(0.12498)
	[2.22594]	[1.34769]	[-0.66874]
D(LM1SA(-3))	-0.087216	0.136490	0.319237
	(0.09343)	(0.05337)	(0.11980)
	[-0.93350]	[2.55741]	[2.66478]
D(LM1SA(-4))	-0.143226	-0.061654	-0.046869
	(0.09476)	(0.05413)	(0.12150)
	[-1.51148]	[-1.13900]	[-0.38574]
D(LPPI(-1))	-0.314909	0.147539	0.264533
	(0.16807)	(0.09601)	(0.21551)
	[-1.87367]	[1.53673]	[1.22749]
D(LPPI(-2))	-0.407137	0.141624	-0.428071
	(0.16351)	(0.09341)	(0.20967)
	[-2.48991]	[1.51622]	[-2.04169]
D(LPPI(-3))	-0.219513	-0.010984	0.017139
	(0.17592)	(0.10049)	(0.22557)
	[-1.24781]	[-0.10931]	[0.07598]
D(LPPI(-4))	-0.044923	0.719306	0.611109
	(0.17449)	(0.09967)	(0.22373)
	[-0.25746]	[7.21663]	[2.73142]
D(LPPA(-1))	0.108157	0.012684	0.040349
	(0.08948)	(0.05111)	(0.11473)
	[1.20873]	[0.24816]	[0.35167]

D(LPPA(-2))	0.242686	-0.048950	-0.053827
	(0.08463)	(0.04835)	(0.10852)
	[2.86749]	[-1.01249]	[-0.49600]
D(LPPA(-3))	0.082366	0.045477	-0.078956
	(0.08827)	(0.05042)	(0.11319)
	[0.93309]	[0.90189]	[-0.69758]
D(LPPA(-4))	0.038727	1.81E-05	0.134309
	(0.08574)	(0.04898)	(0.10994)
	[0.45168]	[0.00037]	[1.22166]
R-squared	0.361157	0.684783	0.405969
Adj. R-squared	0.275978	0.642754	0.326765
Sum sq. resids	0.062463	0.020383	0.102698
S.E. equation	0.026345	0.015049	0.033780
F-statistic	4.239971	16.29310	5.125607
Log likelihood	235.3566	293.0310	209.7499
Akaike AIC	-4.317603	-5.437495	-3.820386
Schwarz SC	-3.985065	-5.104957	-3.487848
Mean dependent	0.048116	0.034319	0.036592
S.D. dependent	0.030961	0.025178	0.041170

1.9. PRUEBA DE NEUTRALIDAD MONETARIA Y EXOGENEIDAD

Vector Error Correction Estimates

Date: 09/22/10 Time: 14:56

Sample (adjusted): 1983Q2 2008Q4

Included observations: 103 after adjustments

Standard errors in () & t-statistics in []

Cointegration Restrictions:

$$B(1,1)=-1$$

$$B(1,2)=1$$

$$B(1,3)=1$$

$$A(1,1)=0$$

Convergence achieved after 6 iterations.

Restrictions identify all cointegrating vectors

LR test for binding restrictions (rank = 1):

Chi-square(3)	25.47850
Probability	0.000012
Cointegrating Eq:	CointEq1
LM1SA(-1)	-1.000000
LPPI(-1)	1.000000
LPPA(-1)	1.000000
C	-0.080750
	(0.78480)
	[-0.10289]

Error Correction:	D(LM1SA)	D(LPPI)	D(LPPA)
CointEq1	0.000000	-0.004805	-0.007232
	(0.00000)	(0.00231)	(0.00520)
	[NA]	[-2.07993]	[-1.38947]
D(LM1SA(-1))	0.178447	-0.030922	-0.063415
	(0.10496)	(0.05185)	(0.11742)
	[1.70013]	[-0.59638]	[-0.54008]
D(LM1SA(-2))	0.385477	0.047210	-0.052451
	(0.10457)	(0.05165)	(0.11698)
	[3.68647]	[0.91398]	[-0.44839]
D(LM1SA(-3))	0.021365	0.122434	0.344469
	(0.10370)	(0.05122)	(0.11600)
	[0.20603]	[2.39016]	[2.96946]
D(LM1SA(-4))	-0.033528	-0.070426	-0.014126
	(0.10546)	(0.05210)	(0.11798)
	[-0.31791]	[-1.35180]	[-0.11973]
D(LPPI(-1))	0.008326	0.067907	0.289186
	(0.17914)	(0.08849)	(0.20040)
	[0.04648]	[0.76737]	[1.44301]
D(LPPI(-2))	-0.113908	0.070107	-0.404740
	(0.17580)	(0.08684)	(0.19667)
	[-0.64793]	[0.80727]	[-2.05796]
D(LPPI(-3))	0.232333	-0.098576	0.083284
	(0.17414)	(0.08602)	(0.19481)
	[1.33415]	[-1.14592]	[0.42751]
D(LPPI(-4))	0.386677	0.635818	0.674529
	(0.17473)	(0.08631)	(0.19546)
	[2.21305]	[7.36651]	[3.45090]
D(LPPA(-1))	-0.050343	0.032167	0.002132
	(0.09587)	(0.04736)	(0.10725)
	[-0.52510]	[0.67921]	[0.01988]
D(LPPA(-2))	0.135708	-0.034234	-0.077529
	(0.09346)	(0.04617)	(0.10455)
	[1.45204]	[-0.74151]	[-0.74153]
D(LPPA(-3))	-0.079103	0.064455	-0.119049
	(0.09422)	(0.04655)	(0.10541)
	[-0.83951]	[1.38478]	[-1.12941]
D(LPPA(-4))	-0.060540	0.010041	0.107464
	(0.09530)	(0.04708)	(0.10661)
	[-0.63528]	[0.21329]	[1.00803]
R-squared	0.171933	0.694458	0.413914
Adj. R-squared	0.061524	0.653719	0.335769
Sum sq. resids	0.080965	0.019757	0.101325
S.E. equation	0.029993	0.014816	0.033553
F-statistic	1.557239	17.04651	5.296757
Log likelihood	221.9957	294.6365	210.4433
Akaike AIC	-4.058168	-5.468669	-3.833851
Schwarz SC	-3.725630	-5.136131	-3.501313
Mean dependent	0.048116	0.034319	0.036592
S.D. dependent	0.030961	0.025178	0.041170
Determinant resid covariance (dof adj.)		2.04E-10	
Determinant resid covariance		1.36E-10	

Log likelihood	731.4443	
Akaike information criterion	-13.36785	
Schwarz criterion	-12.26792	
Determinant resid covariance (dof adj.)	1.59E-10	
Determinant resid covariance	1.06E-10	
Log likelihood	744.1836	
Akaike information criterion	-13.61522	
Schwarz criterion	-12.51528	

1.10 RESPUESTAS DE CORTO PLAZO DE LAS VARIABLES LM1SA, LPPA y LPPI ANTE SHOCK IGUAL A LA DESVIACIÓN ESTANDAR

Response of LPPI:			
Period	LPPI	LPPA	LM1SA
1	0.014952	0.000000	0.001707
2	0.017012	0.001336	0.002337
3	0.018753	0.000784	0.004580
4	0.018699	0.002878	0.008576
5	0.029327	0.003282	0.009235
6	0.031477	0.005342	0.010132
7	0.033823	0.004350	0.010969
8	0.034047	0.005738	0.013434
9	0.042148	0.005389	0.014357
10	0.044551	0.006745	0.015146
11	0.047359	0.005802	0.016149
12	0.047985	0.006702	0.018077
13	0.054339	0.006281	0.019067
14	0.056832	0.007206	0.019883
15	0.059856	0.006427	0.020747
16	0.060884	0.007002	0.022328
17	0.066057	0.006570	0.023296
18	0.068580	0.007209	0.024171
19	0.071674	0.006592	0.025001
20	0.073038	0.006986	0.026360
21	0.077388	0.006603	0.027312
22	0.079893	0.007058	0.028209
23	0.082956	0.006582	0.029024
24	0.084578	0.006858	0.030222

Response of LM1SA:			
Period	LPPI	LPPA	LM1SA
1	0.000000	0.000000	0.026345
2	-0.001519	-0.003474	0.024023
3	-0.003491	-0.002376	0.028536
4	-0.003493	-0.007202	0.023949
5	-0.002617	-0.011298	0.019068
6	-0.000898	-0.018249	0.017803
7	0.000980	-0.023258	0.016182
8	0.004140	-0.027588	0.017486
9	0.007170	-0.030650	0.017800
10	0.010205	-0.033228	0.018654
11	0.013018	-0.035269	0.019353
12	0.016634	-0.037016	0.019971
13	0.020187	-0.038396	0.020722
14	0.023760	-0.039691	0.021506
15	0.027086	-0.040653	0.022597
16	0.030898	-0.041493	0.023707
17	0.034602	-0.042048	0.024841
18	0.038294	-0.042601	0.025974
19	0.041737	-0.042978	0.027184
20	0.045486	-0.043346	0.028390
21	0.049137	-0.043573	0.029578
22	0.052787	-0.043839	0.030756
23	0.056224	-0.044010	0.031985
24	0.059853	-0.044199	0.033204

Response of LPPA:			
Period	LPPI	LPPA	LM1SA
1		0.032061	0.002515
	0.010337		
2		0.031782	0.000210
	0.015179		
3		0.029302	-0.002725
	0.009492		
4		0.024797	0.005679
	0.009139		
5		0.028213	0.005909
	0.019347		
6		0.029049	0.006745
	0.025358		
7		0.027561	0.006061
	0.022075		
8		0.025928	0.008520
	0.021685		
9		0.025667	0.009406
	0.029486		
10		0.025391	0.008881

	0.035470		
11	0.034904	0.024219	0.009594
12	0.035395	0.023274	0.011601
13	0.041408	0.023161	0.012961
14	0.046778	0.023086	0.013123
15	0.047722	0.022489	0.013840
16	0.048860	0.021966	0.015528
17	0.053661	0.021929	0.016808
18	0.058409	0.021948	0.017319
19	0.060225	0.021611	0.018106
20	0.061834	0.021296	0.019563
21	0.065832	0.021287	0.020815
22	0.070028	0.021341	0.021519
23	0.072307	0.021152	0.022344
24	0.074234	0.020947	0.023615

Cholesky Ordering: LM1SA LPPI LPPA

**1.10. RESPUESTAS ACUMILADAS DE LARGO PLAZO DE LAS VARIABLES
LM1SA, LPPA y LPPI ANTE SHOCK IGUAL A LA DESVIACIÓN
ESTANDAR**

Accumulated Response of LM1SA:			
Period	LPPI	LPPA	LM1SA
1	0.000000	0.000000	0.026345
2	-0.001519	-0.003474	0.050367
3	-0.005010	-0.005849	0.078903
4	-0.008503	-0.013051	0.102852
5	-0.011121	-0.024349	0.121920
6	-0.012018	-0.042598	0.139723
7	-0.011038	-0.065856	0.155905
8	-0.006899	-0.093444	0.173391
9	0.000272	-0.124094	0.191191
10	0.010476	-0.157323	0.209845
11	0.023494	-0.192592	0.229197
12	0.040128	-0.229608	0.249168
13	0.060315	-0.268004	0.269890
14	0.084075	-0.307695	0.291396
15	0.111161	-0.348348	0.313993
16	0.142059	-0.389841	0.337700
17	0.176661	-0.431889	0.362541
18	0.214955	-0.474490	0.388516
19	0.256691	-0.517469	0.415700
20	0.302177	-0.560815	0.444090
21	0.351314	-0.604388	0.473668
22	0.404101	-0.648227	0.504424
23	0.460325	-0.692237	0.536409
24	0.520178	-0.736436	0.569613

Accumulated Response of LPPI:			
Period	LPPI	LPPA	LM1SA
1	0.014952	0.000000	0.001707
2	0.031964	0.001336	0.004044
3	0.050717	0.002120	0.008624
4	0.069416	0.004998	0.017200
5	0.098742	0.008280	0.026435
6	0.130219	0.013623	0.036567
7	0.164042	0.017972	0.047536
8	0.198089	0.023710	0.060970
9	0.240237	0.029099	0.075326
10	0.284788	0.035844	0.090472
11	0.332146	0.041646	0.106621
12	0.380131	0.048348	0.124698
13	0.434470	0.054629	0.143765
14	0.491302	0.061835	0.163648
15	0.551158	0.068262	0.184394
16	0.612042	0.075264	0.206723
17	0.678099	0.081834	0.230018
18	0.746680	0.089043	0.254189
19	0.818353	0.095635	0.279190
20	0.891391	0.102621	0.305550
21	0.968779	0.109224	0.332862
22	1.048672	0.116282	0.361071
23	1.131628	0.122864	0.390095
24	1.216205	0.129722	0.420317

Accumulated Response of LPPA:			
Period	LPPI	LPPA	LM1SA
1	0.010337	0.032061	0.002515
2	0.025516	0.063843	0.002726
3	0.035008	0.093145	8.55E-07
4	0.044147	0.117942	0.005680
5	0.063494	0.146155	0.011589
6	0.088853	0.175205	0.018335
7	0.110928	0.202766	0.024395
8	0.132613	0.228694	0.032915
9	0.162099	0.254360	0.042322
10	0.197569	0.279751	0.051202
11	0.232473	0.303970	0.060796
12	0.267868	0.327245	0.072397
13	0.309276	0.350406	0.085358
14	0.356054	0.373492	0.098481
15	0.403776	0.395981	0.112321
16	0.452635	0.417946	0.127849
17	0.506297	0.439876	0.144657
18	0.564705	0.461823	0.161976
19	0.624930	0.483434	0.180082
20	0.686764	0.504730	0.199645
21	0.752596	0.526017	0.220460
22	0.822624	0.547357	0.241979
23	0.894931	0.568509	0.264324
24	0.969165	0.589456	0.287939

Cholesky Ordering: LM1SA LPPI LPPA

ANEXO 2

MODELO CON M3 NOMINAL DESESTACIONALIZADO

2.1. Pruebas de Raiz Unitaria

Null Hypothesis: D(LM3) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 1 (Automatic based on AIC, MAXLAG=2)

	t-Statistic
Elliott-Rothenberg-Stock DF-GLS test statistic	-4.847976
Test critical values: 1% level	-3.574000
5% level	-3.025000
10% level	-2.735000

*Elliott-Rothenberg-Stock (1996, Table 1)

DF-GLS Test Equation on GLS Detrended Residuals

Dependent Variable: D(GLSRESID)

Method: Least Squares

Date: 09/08/10 Time: 11:00

Sample (adjusted): 1982Q4 2008Q4

Included observations: 105 after adjustments

Item	Coefficient	Std. Error	t-Statistic	Prob.
GLSRESID(-1)	-0.625347	0.128991	-4.847976	0.0000
D(GLSRESID(-1))	-0.375999	0.090923	-4.135357	0.0001
R-squared	0.574333	Mean dependent var		0.000947
Adjusted R-squared	0.570200	S.D. dependent var		0.050569
S.E. of regression	0.033153	Akaike info criterion		-3.956512
Sum squared residuo	0.113209	Schwarz criterion		-3.905960
Log likelihood	209.7169	Hannan-Quinn criterion.		-3.936027
Durbin-Watson stat	1.902942			

2.2. Criterios de selección del VAR

VAR Lag Order Selection Criteria

Endogenous variables: LM3SA LPPI LPPA

Exogenous variables: C

Date: 09/08/10 Time: 14:04

Sample: 1982Q1 2008Q4

Included observations: 100

Lag	LogL	LR	FPE	AIC	SC	HQ
0	48.36618	NA	8.10e-05	-0.907324	-0.829168	-0.875693
1	694.7700	1241.095	2.36e-10	-13.65540	-13.34278	-13.52888
2	717.3988	42.08945	1.79e-10	-13.92798	-13.38089*	-13.70656
3	732.5981	27.35880	1.59e-10	-14.05196	-13.27041	-13.73565
4	735.5569	5.148281	1.80e-10	-13.93114	-12.91512	-13.51994
5	767.3432	53.40096	1.14e-10	-14.38686	-13.13638	-13.88077
6	783.6610	26.43485*	9.93e-11*	-14.53322*	-13.04827	-13.93223*
7	791.4942	12.21982	1.02e-10	-14.50988	-12.79047	-13.81401
8	795.7515	6.385923	1.14e-10	-14.41503	-12.46115	-13.62426

* 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

2.3. Test de Correlación

VAR Residual Serial Correlation LM Tests

Null Hypothesis: no serial correlation at lag order h

Date: 09/08/10 Time: 14:08

Sample: 1982Q1 2008Q4

Included observations: 102

Lags	LM-Stat	Prob
1	13.35742	0.1471
2	3.875068	0.9194
3	6.337141	0.7058
4	27.69937	0.0011
5	10.71998	0.2954
6	10.30957	0.3260
7	11.26130	0.2582
8	3.669355	0.9318
9	7.216824	0.6146
10	1.967881	0.9920
11	6.219943	0.7177
12	9.744016	0.3716
13	7.561120	0.5789
14	7.177295	0.6187
15	6.399977	0.6993
16	7.884614	0.5458
17	13.36083	0.1469
18	15.40128	0.0805
19	2.494653	0.9810
20	11.70109	0.2307
21	9.858903	0.3620
22	3.073464	0.9613
23	7.467074	0.5886
24	11.26712	0.2578

Probs from chi-square with 9 df.

2.4. Test de Normalidad

VAR Residual Normality Tests

Orthogonalization: Cholesky (Lutkepohl)

Null Hypothesis: residuals are multivariate normal

Date: 09/08/10 Time: 14:09

Sample: 1982Q1 2008Q4

Included observations: 102

Component	Skewness	Chi-sq	df	Prob.
1	0.186487	0.591215	1	0.4419
2	-0.049456	0.041580	1	0.8384
3	0.348578	2.065611	1	0.1507
Joint		2.698406	3	0.4405

Component	Kurtosis	Chi-sq	df	Prob.
1	2.332969	1.890951	1	0.1691
2	2.193542	2.764089	1	0.0964
3	1.845685	5.662887	1	0.0173
Joint		10.31793	3	0.0160

Component	Jarque-Bera	df	Prob.
1	2.482166	2	0.2891
2	2.805669	2	0.2459
3	7.728499	2	0.0210
Joint	13.01633	6	0.0428

2.5. Test Heterocedasticidad

VAR Residual Heteroskedasticity Tests: No Cross Terms (only levels and squares)

Date: 09/08/10 Time: 14:10

Sample: 1982Q1 2008Q4

Included observations: 102

Joint test:		
Chi-sq	df	Prob.
230.0843	216	0.2434

Individual components:

Dependent	R-squared	F(36,65)	Prob.	Chi-sq(36)	Prob.
res1*res1	0.422925	1.323250	0.1616	43.13834	0.1925
res2*res2	0.349879	0.971707	0.5274	35.68769	0.4833
res3*res3	0.444784	1.446434	0.0973	45.36800	0.1362
res2*res1	0.243070	0.579812	0.9609	24.79316	0.9206
res3*res1	0.362010	1.024511	0.4561	36.92497	0.4260
res3*res2	0.441263	1.425936	0.1061	45.00878	0.1443

Date: 09/08/10 Time: 14:13

Sample (adjusted): 1983Q3 2008Q4

Included observations: 102 after adjustments

Trend assumption: No deterministic trend (restricted constant)

Series: LM3SA LPPI LPPA

Lags interval (in first differences): 1 to 5

2.6. Test de la Traza

Unrestricted Cointegration Rank Test (Trace)

Hypothesized				
No. of CE(s)	Eigen value	Statistic Trace	0.05 Critical Value	Prob.**
None *	0.156794	35.69227	35.19275	0.0441
At most 1	0.115326	18.29684	20.26184	0.0911
At most 2	0.055259	5.798142	9.164546	0.2069

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

2.7. Test del Maximo Valor

Unrestricted Cointegration Rank Test (Maximum Eigen value)

Hypothesized				
No. of CE(s)	Eigen value	Statistic Maximo Valor	0.05 Critical Value	Prob.**
None	0.156794	17.39543	22.29962	0.2104
At most 1	0.115326	12.49869	15.89210	0.1589
At most 2	0.055259	5.798142	9.164546	0.2069

Max-eigenvalue test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

2.8. Cointegración

Unrestricted Cointegrating Coefficients (normalized by $b'S11*b=I$):

LM3SA	LPPI	LPPA	C
-		-	
0.455980	15.37912	14.99405	5.157481
7.766055	21.01301	29.12349	50.08953
7.399566	0.167912	10.14239	34.20946

Unrestricted Adjustment Coefficients (alpha):

D(LM3SA)	0.006381	0.001545	-	0.001482
D(LPPI)	0.002274	0.001340	-	0.002748
D(LPPA)	0.002454	0.008183	-	0.003991

1 Cointegrating Equation(s): Log likelihood 788.7572

Normalized cointegrating coefficients (standard error in parentheses)

LM3SA	LPPI	LPPA	C
1.000000	-		-
	33.72759	32.88311	11.31075
	(12.1554)	(11.5653)	(5.75517)

Adjustment coefficients (standard error in parentheses)

D(LM3SA)	-
	0.002910 (0.00082)
D(LPPI)	-
	0.001037 (0.00066)
D(LPPA)	-
	0.001119 (0.00148)

2 Cointegrating Equation(s): Log likelihood 795.0065

Normalized cointegrating coefficients (standard error in parentheses)

LM3SA	LPPI	LPPA	C
1.000000	0.000000	-	-
		1.029506	6.810806
		(0.08122)	(0.49487)
0.000000	1.000000	-	-
		1.005486	0.133420
		(0.02266)	(0.13804)

Adjustment coefficients (standard error in parentheses)

(LM3SA)	0.009088	0.130602
	(0.01396)	(0.04674)
D(LPPI)	-	-
	0.011447	0.006804
	(0.01120)	(0.03749)
D(LPPA)	0.062433	0.209702
	(0.02423)	(0.08111)

Vector Error Correction Estimates

Date: 09/08/10 Time: 14:17

Sample (adjusted): 1983Q3 2008Q4

Included observations: 102 after adjustments

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1
LM3SA(-1)	1.000000
LPPI(-1)	-33.72759
	(12.1554)
	[-2.77469]
LPPA(-1)	32.88311
	(11.5653)
	[2.84326]
C	-11.31075
	(5.75517)
	[-1.96532]

Error Correction:	D(LM3SA)	D(LPPI)	D(LPPA)
CointEq1	-0.002910	-0.001037	-0.001119
	(0.00082)	(0.00066)	(0.00148)
	[-3.54031]	[-1.57150]	[-0.75811]
D(LM3SA(-1))	0.244227	-0.204318	-0.019598
	(0.09856)	(0.07912)	(0.17702)
	[2.47795]	[-2.58240]	[-0.11071]
D(LM3SA(-2))	0.224980	0.151703	0.332147
	(0.10376)	(0.08329)	(0.18636)
	[2.16824]	[1.82128]	[1.78226]
D(LM3SA(-3))	-0.086204	0.007433	0.192977
	(0.10526)	(0.08450)	(0.18905)
	[-0.81899]	[0.08797]	[1.02078]
D(LM3SA(-4))	-0.045673	-0.081103	-0.285706
	(0.10026)	(0.08048)	(0.18007)
	[-0.45554]	[-1.00769]	[-1.58660]
D(LM3SA(-5))	0.368844	0.179852	0.153234
	(0.09416)	(0.07559)	(0.16912)
	[3.91713]	[2.37937]	[0.90606]
D(LPPI(-1))	-0.211004	0.199682	0.417879
	(0.13785)	(0.11066)	(0.24758)
	[-1.53072]	[1.80453]	[1.68785]
D(LPPI(-2))	-0.164696	0.038510	-0.244186
	(0.11942)	(0.09587)	(0.21449)
	[-1.37909]	[0.40170]	[-1.13843]
D(LPPI(-3))	-0.066892	-0.089732	0.034156
	(0.11541)	(0.09265)	(0.20729)
	[-0.57959]	[-0.96852]	[0.16477]
D(LPPI(-4))	-0.104863	0.645757	0.655209
	(0.11291)	(0.09064)	(0.20280)
	[-0.92872]	[7.12445]	[3.23087]
D(LPPI(-5))	-0.000267	-0.263282	-0.034072
	(0.13872)	(0.11136)	(0.24915)
	[-0.00193]	[-2.36426]	[-0.13675]
D(LPPA(-1))	0.089898	0.072571	-0.000522
	(0.06437)	(0.05167)	(0.11562)
	[1.39654]	[1.40439]	[-0.00452]
D(LPPA(-2))	0.104664	-0.019292	-0.165292
	(0.06409)	(0.05145)	(0.11511)
	[1.63310]	[-0.37499]	[-1.43597]
D(LPPA(-3))	0.074557	0.069513	-0.172164
	(0.06281)	(0.05042)	(0.11281)
	[1.18704]	[1.37868]	[-1.52615]

D(LPPA(-4))	0.051814	0.022262	0.053025
	(0.06229)	(0.05000)	(0.11187)
	[0.83186]	[0.44524]	[0.47399]
D(LPPA(-5))	0.030065	0.010490	-0.237150
	(0.06177)	(0.04958)	(0.11094)
	[0.48674]	[0.21156]	[-2.13765]
R-squared	0.639226	0.715690	0.439881
Adj. R-squared	0.576300	0.666101	0.342186
Sum sq. resids	0.028500	0.018366	0.091937
S.E. equation	0.018204	0.014613	0.032696
F-statistic	10.15841	14.43242	4.502589
Log likelihood	272.5925	295.0031	212.8611
Akaike AIC	-5.031225	-5.470650	-3.860022
Schwarz SC	-4.619465	-5.058889	-3.448262
Mean dependent	0.051861	0.034240	0.035680
S.D. dependent	0.027967	0.025290	0.040313
Determinant resid covariance (dof adj.)		6.43E-11	
Determinant resid covariance		3.85E-11	
Log likelihood		788.7572	
Akaike information criterion		-14.44622	
Schwarz criterion		-13.10800	

2.9. PRUEBA DE NEUTRALIDAD MONETARIA Y EXOGENEIDAD

Vector Error Correction Estimates

Date: 09/22/10 Time: 12:04

Sample (adjusted): 1983Q3 2008Q4

Included observations: 102 after adjustments

Standard errors in () & t-statistics in []

Cointegration Restrictions:

$$B(1,2)=1$$

$$B(1,3)=1$$

$$B(1,1)=-1$$

$$A(1,1)=0$$

Convergence achieved after 5 iterations.

Restrictions identify all cointegrating vectors

LR test for binding restrictions (rank = 1):

Chi-square(3)	8.084284
Probability	0.044302
Cointegrating Eq:	CointEq1
LM3SA(-1)	-1.000000
LPPI(-1)	1.000000
LPPA(-1)	1.000000
C	0.836034
	(0.43710)
	[1.91270]

Error Correction:	D(LM3SA)	D(LPPI)	D(LPPA)
CointEq1	0.000000	-0.007863	0.000678
	(0.00000)	(0.00297)	(0.00672)
	[NA]	[-2.64391]	[0.10086]
D(LM3SA(-1))	0.337143	-0.200714	0.019933
	(0.10173)	(0.07469)	(0.17182)
	[3.31396]	[-2.68732]	[0.11601]
D(LM3SA(-2))	0.275681	0.141626	0.355266
	(0.11036)	(0.08102)	(0.18639)
	[2.49811]	[1.74806]	[1.90608]
D(LM3SA(-3))	-0.062338	0.004725	0.203598
	(0.11217)	(0.08235)	(0.18945)
	[-0.55575]	[0.05737]	[1.07469]
D(LM3SA(-4))	-0.056357	-0.085595	-0.289727
	(0.10693)	(0.07850)	(0.18060)
	[-0.52706]	[-1.09035]	[-1.60427]
D(LM3SA(-5))	0.347277	0.164983	0.145864
	(0.10041)	(0.07371)	(0.16958)
	[3.45870]	[2.23813]	[0.86013]
D(LPPI(-1))	-0.109074	0.184430	0.463715
	(0.14550)	(0.10682)	(0.24575)
	[-0.74963]	[1.72649]	[1.88693]

D(LPPI(-2))	-0.018154	0.042930	-0.181678
	(0.12041)	(0.08840)	(0.20337)
	[-0.15077]	[0.48562]	[-0.89334]
D(LPPI(-3))	0.047831	-0.086448	0.083115
	(0.11875)	(0.08718)	(0.20057)
	[0.40278]	[-0.99157]	[0.41440]
D(LPPI(-4))	0.017360	0.650159	0.707252
	(0.11529)	(0.08464)	(0.19473)
	[0.15057]	[7.68105]	[3.63202]
D(LPPI(-5))	0.113229	-0.223088	0.009611
	(0.14400)	(0.10572)	(0.24320)
	[0.78633]	[-2.11025]	[0.03952]
D(LPPA(-1))	0.014310	0.054408	-0.030722
	(0.06458)	(0.04741)	(0.10908)
	[0.22159]	[1.14754]	[-0.28166]
D(LPPA(-2))	0.031841	-0.033974	-0.194750
	(0.06458)	(0.04741)	(0.10908)
	[0.49302]	[-0.71653]	[-1.78541]
D(LPPA(-3))	0.014392	0.055621	-0.196274
	(0.06438)	(0.04727)	(0.10874)
	[0.22354]	[1.17678]	[-1.80507]
D(LPPA(-4))	-0.001599	0.011703	0.031393
	(0.06438)	(0.04727)	(0.10874)
	[-0.02484]	[0.24758]	[0.28869]
D(LPPA(-5))	-0.020058	-0.001763	-0.257149
	(0.06406)	(0.04703)	(0.10819)
	[-0.31314]	[-0.03749]	[-2.37692]
R-squared	0.589295	0.729288	0.436150
Adj. R-squared	0.517661	0.682071	0.337804
Sum sq. resids	0.032444	0.017487	0.092549
S.E. equation	0.019423	0.014260	0.032805

F-statistic	8.226406	15.44538	4.434854
Log likelihood	265.9818	297.5027	212.5225
Akaike AIC	-4.901603	-5.519661	-3.853383
Schwarz SC	-4.489843	-5.107900	-3.441622
Mean dependent	0.051861	0.034240	0.035680
S.D. dependent	0.027967	0.025290	0.040313
Determinant resid covariance (dof adj.)	6.91E-11		
Determinant resid covariance	4.14E-11		
Log likelihood	784.7150		
Akaike information criterion	-14.36696		
Schwarz criterion	-13.02874		

2.10. RESPUESTAS DE CORTO PLAZO DE LAS VARIABLES LM3SA, LPPA y LPPI ANTE SHOCK IGUAL A LA DESVIACIÓN ESTANDAR

Response of LM3SA:			
Period	LM3SA	LPPA	LPPI
1	0.019423	0.000000	0.000000
2	0.026090	0.000430	- 0.001389
3	0.034279	0.001365	- 0.001989
4	0.037791	0.002228	- 0.001754
5	0.039728	0.002419	- 0.001353
6	0.047297	0.001773	- 0.000527

7	0.051556	0.001713	- 0.000287
8	0.057329	0.001860	0.000665
9	0.060821	0.002401	0.001328
10	0.063737	0.002712	0.002120
11	0.067991	0.002977	0.002840
12	0.071196	0.003056	0.003760
13	0.075151	0.003178	0.004514
14	0.078208	0.003257	0.005215
15	0.081011	0.003457	0.005799
16	0.083950	0.003548	0.006638
17	0.086523	0.003698	0.007229
18	0.089410	0.003723	0.007842
19	0.091947	0.003847	0.008275
20	0.094364	0.003893	0.008881
21	0.096708	0.003990	0.009304
22	0.098898	0.003991	0.009731
23	0.101146	0.004046	0.010035
24	0.103223	0.004043	0.010448

Response of LPPA:			
	LM3SA	LPPA	LPPI
Period			
1	0.006247	0.030029	0.011636
2	0.006308	0.029127	0.017907
3	0.010532	0.023984	0.014274
4	0.016585	0.017830	0.011544
5	0.013926	0.021359	0.020667
6	0.011531	0.016807	0.025965
7	0.012013	0.017325	0.022364
8	0.015935	0.018039	0.020561
9	0.017968	0.021193	0.026953
10	0.018913	0.020277	0.029209
11	0.021864	0.020185	0.025467
12	0.024082	0.019452	0.023830
13	0.024938	0.019983	0.028122
14	0.025915	0.019290	0.029285
15	0.028186	0.018922	0.026394
16	0.030692	0.018733	0.025180
17	0.031795	0.019327	0.027932
18	0.033004	0.019172	0.028340
19	0.035083	0.018692	0.026063
20	0.037135	0.018468	0.025059
21	0.038392	0.018646	0.026844
22	0.039530	0.018471	0.026867
23	0.041327	0.018013	0.025114
24	0.043077	0.017910	0.024300

Period			
1	- 0.000269	0.000000	0.014257
2	- 0.003772	0.001398	0.017316
3	- 0.003040	0.000263	0.018429
4	- 0.002854	0.001228	0.017421
5	- 0.003385	0.001207	0.026367
6	- 0.002871	0.002196	0.026814
7	- 0.001737	0.000492	0.026477
8	0.000122	0.001294	0.024428
9	0.000322	0.000822	0.029972
10	0.000918	0.001526	0.029046
11	0.002875	- 0.000102	0.028339
12	0.004610	0.000615	0.026021
13	0.005729	-5.35E- 05	0.029605
14	0.006683	0.000509	0.028091
15	0.008513	- 0.000889	0.027321
16	0.010311	- 0.000317	0.025133
17	0.011448	- 0.001048	0.027486
18	0.012702	- 0.000631	0.025833
19	0.014404	- 0.001815	0.025147
20	0.016049	- 0.001355	0.023191
21	0.017248	- 0.002051	0.024763
22	0.018465	- 0.001724	0.023148
23	0.020066	- 0.002723	0.022591
24	0.021543	- 0.002363	0.020885

Cholesky Ordering: LM3SA LPPI LPPA

**2.11. RESPUESTAS ACUMILADAS DE LARGO PLAZO DE LAS VARIABLES
LM3SA, LPPA y LPPI ANTE SHOCK IGUAL A LA DESVIACIÓN ESTANDAR**

Accumulated Response of LM3SA:			
Period	LM3SA	LPPA	LPPI
1	0.019423	0.000000	0.000000
2	0.045513	0.000430	-0.001389
3	0.079793	0.001795	-0.003378
4	0.117584	0.004023	-0.005132
5	0.157312	0.006441	-0.006485
6	0.204608	0.008214	-0.007012
7	0.256164	0.009927	-0.007299
8	0.313494	0.011787	-0.006633
9	0.374315	0.014188	-0.005305
10	0.438052	0.016900	-0.003185
11	0.506042	0.019877	-0.000345
12	0.577239	0.022933	0.003415
13	0.652390	0.026111	0.007929
14	0.730598	0.029368	0.013144
15	0.811609	0.032825	0.018943
16	0.895560	0.036373	0.025582
17	0.982082	0.040071	0.032811
18	1.071493	0.043794	0.040653
19	1.163439	0.047641	0.048928
20	1.257804	0.051534	0.057810
21	1.354512	0.055524	0.067114
22	1.453410	0.059515	0.076844
23	1.554556	0.063561	0.086880
24	1.657779	0.067604	0.097327

Accumulated Response of LPPA:			
Period	LM3SA	LPPA	LPPI
1	0.006247	0.030029	0.011636
2	0.012555	0.059156	0.029542
3	0.023087	0.083139	0.043816
4	0.039673	0.100970	0.055360
5	0.053598	0.122328	0.076026
6	0.065130	0.139135	0.101992
7	0.077143	0.156461	0.124355
8	0.093078	0.174499	0.144917
9	0.111045	0.195692	0.171870
10	0.129958	0.215969	0.201079
11	0.151822	0.236154	0.226545
12	0.175904	0.255606	0.250376
13	0.200841	0.275589	0.278498
14	0.226756	0.294879	0.307783
15	0.254942	0.313801	0.334177
16	0.285634	0.332534	0.359356
17	0.317429	0.351862	0.387288
18	0.350433	0.371034	0.415629
19	0.385516	0.389725	0.441691
20	0.422651	0.408194	0.466751
21	0.461042	0.426840	0.493595
22	0.500572	0.445311	0.520462
23	0.541900	0.463325	0.545576
24	0.584976	0.481234	0.569876

Accumulated Response of LPPI:			
Period	LM3SA	LPPA	LPPI
1	-0.000269	0.000000	0.014257
2	-0.004041	0.001398	0.031573
3	-0.007081	0.001661	0.050002
4	-0.009936	0.002889	0.067423
5	-0.013321	0.004096	0.093790
6	-0.016192	0.006292	0.120604
7	-0.017929	0.006784	0.147080
8	-0.017807	0.008079	0.171508
9	-0.017485	0.008901	0.201480
10	-0.016567	0.010427	0.230525
11	-0.013692	0.010324	0.258864
12	-0.009082	0.010940	0.284886
13	-0.003353	0.010886	0.314491
14	0.003329	0.011395	0.342582
15	0.011842	0.010505	0.369903
16	0.022153	0.010188	0.395036
17	0.033601	0.009141	0.422522
18	0.046303	0.008510	0.448355
19	0.060707	0.006695	0.473502
20	0.076755	0.005340	0.496693
21	0.094003	0.003288	0.521456
22	0.112468	0.001564	0.544604
23	0.132534	-0.001159	0.567195
24	0.154077	-0.003522	0.588080

Cholesky Ordering: LM3SA LPPI LPPA