

Autocorrelations of Changes in CPI Inflation 1953-71

Changes in CPI Inflation
 Sample: 1953:01 1971:07
 Included observations: 223

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
**** . **** .		1	-0.625	-0.625	88.411 0.000
. ** ** .		2	0.214	-0.291	98.795 0.000
* . ** .		3	-0.103	-0.202	101.23 0.000
. . * .		4	0.040	-0.148	101.60 0.000
. . * .		5	-0.043	-0.159	102.04 0.000
. . * .		6	0.054	-0.085	102.70 0.000
* . ** .		7	-0.117	-0.223	105.89 0.000
. * ** .		8	0.090	-0.223	107.76 0.000
. . . .		9	0.036	-0.046	108.06 0.000
. . . .		10	-0.030	0.012	108.28 0.000
* . ** .		11	-0.102	-0.224	110.76 0.000
. * * .		12	0.158	-0.114	116.67 0.000

Autocorrelations of CPI Inflation (SA) 1953-71

Changes in CPI Inflation
 Sample: 1953:01 1971:07
 Included observations: 223

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
. ** . **		1	0.228	0.228	11.781 0.001
. *** . **		2	0.331	0.294	36.631 0.000
. * . *		3	0.192	0.082	45.026 0.000
. ** . **		4	0.315	0.206	67.755 0.000
. ** . *		5	0.270	0.151	84.516 0.000
. *** . *		6	0.350	0.196	112.87 0.000
. ** . *		7	0.246	0.071	126.91 0.000
. ** . *		8	0.320	0.129	150.79 0.000
. ** . *		9	0.260	0.080	166.58 0.000
. *** . *		10	0.353	0.151	195.97 0.000
. ** . .		11	0.218	-0.003	207.20 0.000
. ** . .		12	0.215	-0.056	218.15 0.000

Autocorrelations of Changes in CPI Inflation (SA) 1953-71

Changes in CPI Inflation
Sample: 1953:01 1971:07
Included observations: 223

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
**** .	**** .	1	-0.569	-0.569	73.123 0.000
. .	**.	2	0.158	-0.245	78.782 0.000
* .	** .	3	-0.167	-0.306	85.150 0.000
. .	** .	4	0.106	-0.218	87.746 0.000
* .	** .	5	-0.078	-0.237	89.137 0.000
. .	* .	6	0.117	-0.100	92.276 0.000
* .	* .	7	-0.114	-0.151	95.293 0.000
. .	* .	8	0.084	-0.098	96.957 0.000
* .	* .	9	-0.097	-0.164	99.174 0.000
. .	. .	10	0.143	-0.017	103.97 0.000
* .	. .	11	-0.082	0.032	105.57 0.000
. .	. .	12	0.019	0.014	105.65 0.000

Autocorrelations of Tbill Yield 1953-71

Nominal Tbill Yield
Sample: 1953:01 1971:07
Included observations: 223

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
. *****	. *****	1	0.966	0.966	211.04 0.000
. *****	. **	2	0.948	0.212	415.01 0.000
. *****	. *	3	0.931	0.066	612.60 0.000
. *****	. .	4	0.913	-0.004	803.40 0.000
. *****	* .	5	0.887	-0.130	984.42 0.000
. *****	* .	6	0.857	-0.135	1154.3 0.000
. *****	. .	7	0.830	-0.031	1314.5 0.000
. *****	. *	8	0.812	0.134	1468.4 0.000
. *****	* .	9	0.782	-0.100	1611.9 0.000
. *****	* .	10	0.751	-0.078	1744.9 0.000
. *****	. .	11	0.725	0.019	1869.3 0.000
. *****	. *	12	0.709	0.164	1989.0 0.000

Autocorrelations of Real Tbill Yield 1953-71

Real Tbill Yield
 Sample: 1953:01 1971:07
 Included observations: 223

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
* .	* .	1	-0.105	-0.105	2.4917 0.114
. *	. *	2	0.170	0.160	9.0150 0.011
. .	. .	3	-0.021	0.011	9.1155 0.028
. .	. .	4	-0.003	-0.033	9.1183 0.058
* .	* .	5	-0.063	-0.067	10.033 0.074
. .	. .	6	-0.023	-0.029	10.155 0.118
* .	* .	7	-0.092	-0.079	12.141 0.096
. *	. *	8	0.092	0.089	14.105 0.079
. *	. *	9	0.085	0.135	15.817 0.071
. .	. .	10	0.016	0.003	15.880 0.103
. .	. .	11	0.001	-0.046	15.880 0.146
. **	. **	12	0.205	0.203	25.867 0.011

Autocorrelations of Real Tbill Yield (SA) 1953-71

Real Tbill Yield
 Sample: 1953:01 1971:07
 Included observations: 223

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
* .	* .	1	-0.060	-0.060	0.8096 0.368
. *	. *	2	0.091	0.087	2.6754 0.262
* .	* .	3	-0.083	-0.074	4.2484 0.236
. .	. .	4	0.064	0.049	5.1982 0.268
. .	. .	5	0.004	0.023	5.2015 0.392
. *	. *	6	0.119	0.107	8.4741 0.205
. .	. .	7	-0.037	-0.020	8.7841 0.269
. *	. .	8	0.073	0.053	10.020 0.264
. .	. .	9	0.010	0.035	10.042 0.347
. *	. *	10	0.157	0.138	15.817 0.105
. .	. .	11	-0.014	0.005	15.861 0.146
. .	. .	12	0.023	-0.012	15.983 0.192

Predict Inflation with Tbill Yields 1953-71

LS // Dependent Variable is CPINSA
 Sample: 1953:01 1971:07
 Included observations: 223

Variable	Coefficient	Std. Error	t-Statistic	Prob.			
C	-0.000685	0.000351	-1.952600	0.0521			
INT	0.975248	0.119088	8.189274	0.0000			
R-squared	0.232810		Mean dependent var	0.001890			
Adjusted R-squared	0.229338		S.D. dependent var	0.002641			
S.E. of regression	0.002318		Akaike info criterion	-12.12502			
Sum squared resid	0.001188		Schwarz criterion	-12.09447			
Log likelihood	1037.517		F-statistic	67.06421			
Durbin-Watson stat	2.191567		Prob(F-statistic)	0.000000			

Autocorrelations of Regression Residuals 1953-71

Sample: 1953:01 1971:07
 Included observations: 223

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
* .	* .	1	-0.105	-0.105	2.5008 0.114
. *	. *	2	0.169	0.160	9.0112 0.011
. .	. .	3	-0.021	0.011	9.1130 0.028
. .	. .	4	-0.003	-0.032	9.1153 0.058
* .	* .	5	-0.062	-0.066	10.008 0.075
. .	. .	6	-0.022	-0.028	10.119 0.120
* .	* .	7	-0.091	-0.078	12.060 0.099
. *	. *	8	0.093	0.090	14.077 0.080
. *	. *	9	0.087	0.136	15.833 0.070
. .	. .	10	0.017	0.004	15.902 0.102
. .	. .	11	0.001	-0.045	15.902 0.145
. **	. **	12	0.205	0.204	25.914 0.011

Predict Inflation (SA) with Tbill Yields 1953-71

LS // Dependent Variable is CPISA
 Sample: 1953:01 1971:07
 Included observations: 223

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000658	0.000314	-2.097925	0.0370
INT	0.961056	0.106559	9.019017	0.0000

R-squared	0.269041	Mean dependent var	0.001879
Adjusted R-squared	0.265734	S.D. dependent var	0.002421
S.E. of regression	0.002074	Akaike info criterion	-12.34736
Sum squared resid	0.000951	Schwarz criterion	-12.31681
Log likelihood	1062.308	F-statistic	81.34267
Durbin-Watson stat	2.096143	Prob(F-statistic)	0.000000

Autocorrelations of Regression Residuals (SA) 1953-71

Sample: 1953:01 1971:07
 Included observations: 223

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
* .	* .	1	-0.060	-0.060	0.8084 0.369
. *	. *	2	0.091	0.087	2.6746 0.263
* .	* .	3	-0.084	-0.074	4.2657 0.234
. .	. .	4	0.065	0.050	5.2363 0.264
. .	. .	5	0.005	0.024	5.2416 0.387
. *	. *	6	0.120	0.108	8.5864 0.198
. .	. .	7	-0.034	-0.018	8.8616 0.263
. *	. .	8	0.075	0.055	10.172 0.253
. .	. .	9	0.011	0.037	10.202 0.334
. *	. *	10	0.158	0.140	16.096 0.097
. .	. .	11	-0.012	0.006	16.132 0.136
. .	. .	12	0.023	-0.012	16.254 0.180

**Specification Check:
Include Lagged Inflation with Tbill Yields
1953-71**

LS // Dependent Variable is CPINSA
Sample: 1953:01 1971:07
Included observations: 223

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000731	0.000352	-2.076544	0.0390
INT	1.053114	0.133440	7.892031	0.0000
CPINSA(-1)	-0.084814	0.065951	-1.286022	0.1998

R-squared	0.238534	Mean dependent var	0.001890
Adjusted R-squared	0.231612	S.D. dependent var	0.002641
S.E. of regression	0.002315	Akaike info criterion	-12.12355
Sum squared resid	0.001179	Schwarz criterion	-12.07771
Log likelihood	1038.352	F-statistic	34.45824
Durbin-Watson stat	1.991274	Prob(F-statistic)	0.000000

**Specification Check:
Include Lagged Inflation (SA) with Tbill Yields
1953-71**

LS // Dependent Variable is CPISA
Sample: 1953:01 1971:07
Included observations: 223

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000679	0.000317	-2.144081	0.0331
INT	0.993727	0.123693	8.033822	0.0000
CPISA(-1)	-0.034849	0.066677	-0.522646	0.6017

R-squared	0.269948	Mean dependent var	0.001879
Adjusted R-squared	0.263311	S.D. dependent var	0.002421
S.E. of regression	0.002078	Akaike info criterion	-12.33964
Sum squared resid	0.000950	Schwarz criterion	-12.29380
Log likelihood	1062.446	F-statistic	40.67415
Durbin-Watson stat	2.019900	Prob(F-statistic)	0.000000

ARIMA(0,1,1) Model for CPI Inflation

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LS // Dependent Variable is DCPI
Sample: 1953:01 1971:07
Included observations: 223
Convergence achieved after 9 iterations

Variable      Coefficient Std. Error t-Statistic Prob.

C              1.87E-05   1.18E-05   1.594223   0.1123
MA(1)         -0.931025    0.024633  -37.79658   0.0000

R-squared                0.523740      Mean dependent var      1.10E-05
Adjusted R-squared       0.521585      S.D. dependent var      0.003442
S.E. of regression       0.002381      Akaike info criterion   -12.07191
Sum squared resid        0.001252      Schwarz criterion       -12.04135
Log likelihood           1031.594      F-statistic             243.0324
Durbin-Watson stat       2.238623      Prob(F-statistic)      0.000000

Inverted MA Roots          .93
    
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Autocorrelations of ARIMA Residuals 1953-71

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Sample: 1953:01 1971:07
Included observations: 223
Q-statistic probabilities adjusted for 1 ARMA term(s)

Autocorrelation Partial Correlation      AC      PAC      Q-Stat      Prob

*|.      |      |      |      |      |      |
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ARIMA(0,1,1) Model for CPI Inflation

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LS // Dependent Variable is DCPISA
Sample: 1953:01 1971:07
Included observations: 223
Convergence achieved after 8 iterations

Variable      Coefficient Std. Error t-Statistic Prob.

C              1.71E-05   1.31E-05   1.300824   0.1947
MA(1)         -0.912742    0.027953  -32.65229   0.0000

R-squared                0.494696      Mean dependent var      1.11E-05
Adjusted R-squared       0.492410      S.D. dependent var      0.002994
S.E. of regression       0.002133      Akaike info criterion   -12.29159
Sum squared resid        0.001005      Schwarz criterion       -12.26103
Log likelihood            1056.089      F-statistic              216.3607
Durbin-Watson stat       2.145596      Prob(F-statistic)       0.000000

Inverted MA Roots          .91
    
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Autocorrelations of ARIMA Residuals (SA) 1953-71

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Sample: 1953:01 1971:07
Included observations: 223
Q-statistic probabilities adjusted for 1 ARMA term(s)

Autocorrelation Partial Correlation      AC      PAC      Q-Stat      Prob

*|.      |      |      |      |      |      |
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Composite Regression & ARIMA Model 1953-71

LS // Dependent Variable is CPINSA
Sample: 1953:01 1971:07
Included observations: 223

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000650	0.000350	-1.855334	0.0649
PCPI	0.320735	0.202325	1.585250	0.1143
INT	0.732438	0.193768	3.779968	0.0002
R-squared	0.241474	Mean dependent var	0.001890	
Adjusted R-squared	0.234579	S.D. dependent var	0.002641	
S.E. of regression	0.002310	Akaike info criterion	-12.12741	
Sum squared resid	0.001174	Schwarz criterion	-12.08158	
Log likelihood	1038.783	F-statistic	35.01818	
Durbin-Watson stat	2.265642	Prob(F-statistic)	0.000000	

Composite Regression & ARIMA Model (SA) 1953-71

LS // Dependent Variable is CPISA
Sample: 1953:01 1971:07
Included observations: 223

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.000720	0.000300	-2.398204	0.0173
PCPISA	-0.276322	0.059407	-4.651333	0.0000
INT	1.182267	0.112459	10.51291	0.0000
R-squared	0.334488	Mean dependent var	0.001879	
Adjusted R-squared	0.328438	S.D. dependent var	0.002421	
S.E. of regression	0.001984	Akaike info criterion	-12.43219	
Sum squared resid	0.000866	Schwarz criterion	-12.38636	
Log likelihood	1072.766	F-statistic	55.28629	
Durbin-Watson stat	1.833437	Prob(F-statistic)	0.000000	

Combined Regression & ARIMA Model 1953-71

LS // Dependent Variable is DCPI
 Sample: 1953:01 1971:07
 Included observations: 223
 Convergence achieved after 25 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.			
C	6.89E-08	5.01E-06	0.013772	0.9890			
DINT	0.975651	0.234783	4.155544	0.0000			
MA(1)	-0.989949	0.000716	-1381.738	0.0000			
R-squared	0.545290		Mean dependent var	1.10E-05			
Adjusted R-squared	0.541156		S.D. dependent var	0.003442			
S.E. of regression	0.002331		Akaike info criterion	-12.10924			
Sum squared resid	0.001196		Schwarz criterion	-12.06341			
Log likelihood	1036.757		F-statistic	131.9124			
Durbin-Watson stat	2.198857		Prob(F-statistic)	0.000000			
Inverted MA Roots	.99						

Combined Regression & ARIMA Model (SA) 1953-71

LS // Dependent Variable is DCPISA
 Sample: 1953:01 1971:07
 Included observations: 223
 Convergence achieved after 11 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.			
C	3.02E-06	7.13E-06	0.423678	0.6722			
DINT	0.882490	0.223448	3.949423	0.0001			
MA(1)	-0.961988	0.018639	-51.61117	0.0000			
R-squared	0.519604		Mean dependent var	1.11E-05			
Adjusted R-squared	0.515237		S.D. dependent var	0.002994			
S.E. of regression	0.002084		Akaike info criterion	-12.33317			
Sum squared resid	0.000956		Schwarz criterion	-12.28733			
Log likelihood	1061.725		F-statistic	118.9778			
Durbin-Watson stat	2.163623		Prob(F-statistic)	0.000000			
Inverted MA Roots	.96						

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