

**THE IMPACT OF CAPITAL STRUCTURE ON ISLAMIC
BANKS PERFORMANCE: EVIDENCE FROM GULF
COOPERATION COUNCIL (GCC) COUNTRIES**

By

ABDESSLAM MENACER



UUM
Universiti Utara Malaysia

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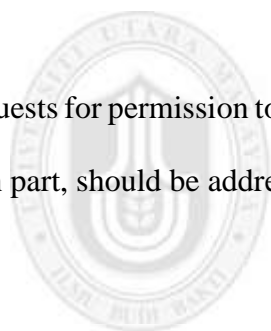
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ABSTRACT

Many past studies on capital structure were on conventional financial firms; research on Islamic banks (IBs) on the topic is almost silent. The extant scant literature on IBs capital structure has explored on theoretical grounds, while empirical investigation is still in the infancy stage. Accordingly, it is evident that based on the Islamic profit and loss trade-off perspective, theoretical hypotheses and empirical findings provide a novel addition to the capital structure literature for IBs. Using a panel-corrected standard error model, this study examines the effect of capital structure on the performance of 25 full-fledged IBs in GCC countries over the period 2005-2017. To investigate the reverse causality between performance and capital structure, Granger causality has also been used. Overall, the results show that there is a significant impact of capital structure on the performance of IBs. More specifically, long term debt has a negative and significant impact, while debt ratio, equity ratio, and financial leverage have positive significant impact on IBs' performance. The Granger Causality Test shows that the effect of capital structure on bank performance cannot be completely determined due to the mixed results. In terms of theories, the study finds evidence to support the Pecking Order Theory, Trade-off Theory, and Causality Theory. The results are also robust when excluding the periods of the global financial crisis and Arab Spring. The findings of this study have major policy implications. Long-term debt should be kept at a low amount to increase bank performance since the lower the long-term debt the higher the bank performance. IBs need to maintain higher equity as they will provide more durability and strengthen their financial position and ability to deal with financial risks. The level of financial leverage committed by the IBs should depend on their flexibility in adjusting their debt value and earning power.

Keywords: Capital structure; Islamic banks; Performance; Causality; GCC.

ABSTRAK

Banyak kajian-kajian lepas berkenaan struktur modal berkait di firma kewangan konvensional; penyelidikan ke atas bank-bank Islam terhadap topik ini adalah sedikit. Terdapat beberapa sorotan kajian berkenaan struktur modal bank-bank Islam telah diterokai secara teori, manakala siasatan empirikal masih dalam peringkat awal. Oleh itu, berdasarkan keseimbangan perdagangan untung rugi dalam perspektif Islam, hipotesis teori dan penemuan empirikal dapat memberikan input baru terhadap sorotan kajian struktur modal untuk bank-bank Islam. Dengan menggunakan model kesilapan piawai yang diperbetulkan oleh panel, kajian ini mengkaji kesan struktur modal terhadap prestasi 25 IB penuh di negara-negara GCC sepanjang tempoh 2005-2017. Untuk mengkaji sebab-akibat hubungan antara prestasi dan struktur modal, teknik *Granger causality* digunakan dalam kajian ini. Secara keseluruhan, keputusan menunjukkan bahawa terdapat kesan yang besar dalam struktur modal kepada prestasi bank-bank Islam. Khususnya, hutang jangka panjang mempunyai kesan yang negatif dan signifikan, manakala nisbah hutang, nisbah ekuiti, dan leveraj kewangan mempunyai kesan yang besar dan positif kepada prestasi bank-bank Islam. Ujian *Granger causality* menunjukkan kesan struktur modal terhadap prestasi bank tidak boleh ditentukan kerana hasil dapatan kajian adalah pelbagai. Dari segi teori, hasil dapatan kajian ini dapat menyokong teori *Pecking order*, teori *Trade-off*, dan teori *Causality*. Hasil keputusan kajian ini juga didapati kukuh apabila tempoh kajian ini tidak termasuk tempoh masa krisis kewangan global dan Arab Spring. Hasil kajian ini mempunyai implikasi yang besar terhadap pembinaan polisi. Hutang jangka panjang perlu disimpan pada jumlah yang rendah untuk meningkatkan prestasi bank kerana didapati hutang jangka panjang yang lebih rendah dapat meningkatkan prestasi bank dengan lebih tinggi. Bank-bank Islam perlu mengekalkan ekuiti yang lebih tinggi sebagai daya tahan dan mengukuhkan kedudukan kewangan mereka serta keupayaan untuk menangani risiko kewangan. Tahap leveraj kewangan yang dilakukan oleh bank-bank Islam perlu bergantung kepada fleksibiliti mereka dalam menyesuaikan nilai hutang mereka dan memperkukuhkan kedudukan.

Kata kunci: struktur modal; bank-bank Islam; prestasi; causality; GCC.

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LIST OF ABBREVIATIONS

GCC	The Gulf Cooperation Council
IB	Islamic Banks
SA	Saudi Arabia
UAE	United Arab Emirates
UK	United Kingdom
IMF	International Monetary Fund
MENA	Middle East and North Africa
SSA	Sub-Saharan Africa
WACC	Weighted Average Cost of Capital
CAAGR	Compound Annual Asset Growth Rate
PCSE	Panel Correlated Standard Errors
IFSB	Islamic Financial Services Board
IFSISR	Islamic Financial Services Industry Stability Report
CAMEL	Capital Adequacy, Asset quality, Management, Earnings, and Liquidity
PSIA	Profit-Sharing Investment Account
WTO	World Trade Organization
GCIBAFI	General Council for Islamic banks and Financial Institutions
BIMB	Bank Islam Malaysia Berhad
PLS	Profit and Loss Sharing
CBB	Central Bank of Bahrain
RDSIB	Requirements for Domestic Systemically Important Banks
SREP	Supervisory Review and Evaluation Process
CCB	Counter Cyclical Buffer
IFRS	International Financial Reporting Standard
CBK	Central Bank of Kuwait
NBK	National Bank of Kuwait
KFH	Kuwait Financial House
HSBC	Hongkong and Shanghai Banking Corporation
CBO	Central Bank of Oman
QCB	Qatar Central Bank
QNB	Qatar National Bank
SAMA	Saudi Arabian Monetary Agency
NCB	National Commercial Bank
CB UAE	Central Bank of the United Arab Emirates
SME	Small and Medium Enterprises
M&M1	Modigliani and Miller (1958)
M&M2	Modigliani and Miller (1963).
EMH	Efficient Market Hypothesis
NSE	Nairobi Securities Exchange
ME	Macro-Economic Variables
CS	Capital Structure
NIM	Net Interest Margin
ROC	Return Capital
ROA	Return on Asset
ROE	Return on Equity
Tobin's Q	Market Value of Shareholders Equity
STD	Short Term Debt
LTD	Long Term Debt

DR	Debt Ratio
FL	Financial Leverage
ER	Equity Ratio
GDP	Gross Domestic Product (Economic Growth)
INF	Inflation
AT	Asset Tangibility
LIQ	Liquidity Ratio
EFF	Bank Efficiency
CRK	Credit Risk
NPL	Non-Performing Loan
SIZE	Bank Size
AGE	Bank Age
Country	Country Dummy
Year	Year Dummy
VIF	Variance Inflation Factor
FEM	Fixed Effect Model
REM	Random Effect Model
PRM	Pooled Regression Model
OLS	Ordinary Least Squares
FGLS	Feasible Generalized Least Squares
ECM	Error Correction Model
STATA	South Texas Art Therapy Association
BLUE	Best Linear Unbiased Estimator
GMM	Generalized Method of Moments
AR	Abnormal Returns
ASR	Annual Stock Returns
ESR	Excess Stock Returns
MVA	Market Value Added
MBV	Market-to-Book Value
DY	Dividend Yield
PER	Price-Earnings Ratio
MC	Market Capitalization
SR	Stock Repurchases
EV	enterprise value
PM	Profit Margin
OP	Operation Profit
EPS	Earnings Per Share
OCF	Operating Cash Flow
ROIC	Return on Invested Capital
SUR	Seemingly Unrelated Regression Method
SEM	Spatial Error Panel Models



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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Banking sector is considered as a significant component of a financial system. It plays a vital role in the economic development of a country. The economy of the country will be affected if the banking system does not perform well that is, the economy will have lower growth if banks cannot perform their functions effectively. Low economic performance will affect banks' profitability and the overall performance in terms of their growth and financial sustainability. Hence, bank performance is considered as one of the key indicators for evaluating the current condition of the banking industry and the economy (Barros, Ferreira, & Williams, 2007; Al-Kayed, Mohd Zain, & Duasa, 2014; Sakti, Tareq, Saiti, & Akhtar, 2017; Saif-Alyousfi, Saha, & Md-Rus, 2017a).

The banking sector's role in allocating capital to the various agents in an economy is not to be undermined. By being financial intermediaries, banks provide a critical and safe link between the savers and lenders (who deposit their money) and the borrowers. In addition, banks have a direct relation with current and future development of a country, which is represented by them providing capital needed for innovation and infrastructure development and creating job opportunities for the human capital development.

The existing banking landscape is denominated by two banking systems; the conventional and Islamic banking systems. While conventional banking was established more than 300 years ago, Islamic banking started functioning in 1970s but

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APPENDICES

APPENDIX -A-

i) Solving Heteroskedasticity and Autocorrelation in Model 1

HETEROSKEDASTICITY

```
. hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of ROA

chi2(1) = 64.63

Prob > chi2 = 0.0000

AUTOCORRELATION

```
. xtserial ROA LTD DR FL ER GDP INF AT LR BE CR Size Age
```

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F(1, 24) = 4.805

Prob > F = 0.0383

ii) Solving Heteroskedasticity and Autocorrelation in Model 2

HETEROSKEDASTICITY

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of ROE

chi2(1) = 34.83

Prob > chi2 = 0.0000

AUTOCORRELATION

```
. xtserial ROE LTD DR FL ER GDP INF AT LR BE CR Size Age
```

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F(1, 24) = 19.402

Prob > F = 0.0002

iii) Solving Heteroskedasticity and Autocorrelation in Model 3

HETEROSKEDASTICITY

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of TobinsQ

chi2(1) = 385.52

Prob > chi2 = 0.0000

AUTOCORRELATION

. xtserial TobinsQ LTD DR FL ER GDP INF AT LR BE CR Size Age

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F(1, 24) = 6.848

Prob > F = 0.0151



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APPENDIX -B-

i) PCSE regression model 1

. xtpcse ROA LTD DR FL ER GDP INF AT LR BE CR Size Age,
correlation(ar1)

(note: the number of observations per panel, e(n_sigma) = 5,
used to compute the disturbance of covariance matrix e(Sigma)
is less than half of the average number of observations per panel,
e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels	corrected standard errors	(PCSEs)
Group variable: IdBank	Number of obs =	294
Time variable: Year	Number of groups =	25
Panels: correlated (unbalanced)	Obs per group:	
Autocorrelation: common AR(1)	min =	5
Sigma computed by casewise selection	avg =	11.76
	max =	13
Estimated covariances =	325	R-squared = 0.1586
Estimated autocorrelations =	1	Wald chi2(12) = 181.84
Estimated coefficients =	13	Prob > chi2 = 0

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ROA	Panel-corrected					[95% Conf. Interval]	
	Coef.	Std. Err.	z	P> z			
LTD	-.1092701	.0592256	-1.84	0.065	-.2253501	.00681	
DR	-.0020218	.0056967	-0.35	0.723	-.013187	.0091434	
FL	.057776	.0266967	2.16	0.030	.0054515	.1101006	
ER	4.320503	2.115442	2.04	0.041	.1743122	8.466693	
GDP	.0339143	.0746828	0.45	0.650	-.1124613	.1802899	
INF	-.006841	.1474406	-0.05	0.963	-.2958192	.2821372	
AT	-5.473885	2.711681	-2.02	0.044	-10.78868	-.1590877	
LR	-.1602355	.0309466	-5.18	0.000	-.2208898	-.0995813	
BE	-.0318221	.0184878	-1.72	0.085	-.0680575	.0044134	
CR	.417104	.0870624	4.79	0.000	.2464648	.5877432	
Size	1.093579	.3845304	2.84	0.004	.3399137	1.847245	
Age	.0029506	.6090764	0.00	0.996	-1.190817	1.196718	
_cons	-11.78399	4.744332	-2.48	0.013	-21.08271	-2.485273	
rho	.4376222						

ii) PCSE regression model 2

. xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Size Age,
correlation(ar1)
(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])
(note: the number of observations per panel, e(n_sigma) = 5,
used to compute the disturbance of covariance matrix e(Sigma)
is less than half of the average number of observations per panel,
e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors
(PCSEs)

Group variable: IdBank	Number of obs =	294
	Number of groups	
Time variable: Year	=	25
Panels: correlated (unbalanced)	Obs per group:	
Autocorrelation: common AR(1)	min =	5
Sigma computed by casewise selection	avg =	11.76
	max =	13
Estimated covariances =	325	R-squared = 0.227
Estimated autocorrelations =	1	Wald chi2(12) = 117.69
Estimated coefficients =	13	Prob > chi2 = 0

ROE	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.2428962	.1156786	-2.10	0.036	-.4696221	-.0161704
DR	-.061135	.0269978	-2.26	0.024	-.1140497	-.0082203
FL	.1079341	.0663458	1.63	0.104	-.0221013	.2379695
ER	8.104507	3.163604	2.56	0.010	1.903956	14.30506
GDP	.1174778	.1529464	0.77	0.442	-.1822916	.4172472
INF	.1842401	.2266487	0.81	0.416	-.2599832	.6284633
AT	-8.861814	6.758747	-1.31	0.190	-22.10872	4.385087
LR	-.3666519	.1049692	-3.49	0.000	-.5723877	-.1609161
BE	-.1359524	.0395492	-3.44	0.001	-.2134675	-.0584374
CR	.5617406	.2924872	1.92	0.055	-.0115238	1.135005
Size	3.279355	.8029259	4.08	0.000	1.705649	4.853061
Age	3.145308	1.516709	2.07	0.038	.1726131	6.118004
_cons	-37.09071	14.24794	-2.60	0.009	-65.01617	-9.165259
rho	.4505003					

iii) **PCSE regression model 3**

. xtpcse TobinsQ LTD DR FL ER GDP INF AT LR BE CR Size Age,
correlation(ar1)
(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])
(note: the number of observations per panel, e(n_sigma) = 5,
used to compute the disturbance of covariance matrix e(Sigma)
is less than half of the average number of observations per panel,
e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank	Number of obs	=	294
	Number of groups	=	25
Time variable: Year			
Panels: correlated	Obs per group:		
(unbalanced)	min	=	5
Autocorrelation: common AR(1)			
Sigma computed by casewise selection	avg	=	11.76
	max	=	13
Estimated covariances = 325	R-squared	=	0.1972
Estimated autocorrelations = 1	Wald chi2(12)	=	451.75
Estimated coefficients = 13	Prob > chi2	=	0

TobinsQ	Panel-corrected				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
LTD	-.0059788	.0019185	-3.12	0.002	-.009739 -.0022186
DR	.0015378	.0006665	2.31	0.021	.0002314 .0028442
FL	.006921	.0012998	5.32	0.000	.0043734 .0094686
ER	.3189914	.0867588	3.68	0.000	.1489473 .4890356
GDP	-.007054	.0037621	-1.88	0.061	-.0144275 .0003196
INF	-.0002084	.0045321	-0.05	0.963	-.0090912 .0086744
AT	-.3785142	.1189601	-3.18	0.001	-.6116717 -.1453568
LR	-.0052148	.0013733	-3.80	0.000	-.0079065 -.0025232
BE	-.0116103	.000918	-12.65	0.000	-.0134096 -.0098111
CR	.0046237	.0044462	1.04	0.298	-.0040908 .0133381
Size	.0104884	.0261945	0.40	0.689	-.040852 .0618287
Age	-.003554	.0321285	-0.11	0.912	-.0665247 .0594167
_cons	1.755186	.4338318	4.05	0.000	.9048911 2.60548
rho	.4946273				

APPENDIX -C-

i) Winsor Model 1

xtpcse ROA_w LTD_w DR_w FL_w ER_w GDP_w INF_w AT_w BE_w CR_w
 Size_w Age_w , correlation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 252

Time variable: Year Number of groups = 25

Panels: correlated (unbalanced) Obs per group:

Autocorrelation: common AR(1) min = 5

Sigma computed by casewise selection avg = 10.08

max = 11

Estimated covariances = 325 R-squared = 0.0980

Estimated autocorrelations = 1 Wald chi2(11) = 40.40

Estimated coefficients = 12 Prob > chi2 = 0.0000

ROA_w	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD_w	-.0882017	.0498838	-1.77	0.077	-.1859721	.0095687
DR_w	.005614	.0051906	1.08	0.279	-.0045594	.0157874
FL_w	.052695	.0277835	1.90	0.058	-.0017596	.1071497
ER_w	3.38641	1.64759	2.06	0.040	.1571924	6.615627
GDP_w	.0492507	.0506124	0.97	0.331	-.0499477	.1484492
INF_w	.0093123	.1121725	0.08	0.934	-.2105418	.2291664
AT_w	-5.077842	2.269733	-2.24	0.025	-9.526436	-.6292478
BE_w	-.0196308	.0134933	-1.45	0.146	-.0460773	.0068156
CR_w	.1759135	.0767886	2.29	0.022	.0254106	.3264163
Size_w	1.117079	.3060497	3.65	0.000	.5172324	1.716925
Age_w	.3943776	.4795547	0.82	0.411	-.5455323	1.334288
_cons	-14.64849	5.267355	-2.78	0.005	-24.97232	-4.324669
rho	.5220451					

ii) Winsor model 2

xtpcse ROE_w LTD_w DR_w FL_w ER_w GDP_w INF_w AT_w BE_w CR_w
Size_w Age_w , correlation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 252
Time variable: Year Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 10.08
 max = 11
Estimated covariances = 325 R-squared = 0.1827
Estimated autocorrelations = 1 Wald chi2(11) = 145.67
Estimated coefficients = 12 Prob > chi2 = 0.0000

ROE_w	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf.	Interval]
LTD_w	-.2207529	.1063617	-2.08	0.038	-.429218	-.0122879
DR_w	-.0392834	.028089	-1.40	0.162	-.0943367	.01577
FL_w	.0928642	.0732023	1.27	0.205	-.0506096	.2363381
ER_w	7.130338	3.067404	2.32	0.020	1.118336	13.14234
GDP_w	.2134565	.1383422	1.54	0.123	-.0576891	.4846022
INF_w	.2969907	.3231179	0.92	0.358	-.3363086	.9302901
AT_w	-7.954275	7.291499	-1.09	0.275	-22.24535	6.336801
BE_w	-.1302881	.0311152	-4.19	0.000	-.1912727	-.0693035
CR_w	.108586	.221167	0.49	0.623	-.3248933	.5420652
Size_w	3.599521	.7189181	5.01	0.000	2.190467	5.008575
Age_w	3.422773	1.386261	2.47	0.014	.7057505	6.139795
_cons	-47.03332	13.38639	-3.51	0.000	-73.27016	-20.79648
rho	.4723465					

iii) **Winsor model 3**

xtpcse TobinsQ_w LTD_w DR_w FL_w ER_w GDP_w INF_w AT_w BE_w CR_w
Size_w Age_w , correlation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 252
Time variable: Year Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 10.08
 max = 11
Estimated covariances = 325 R-squared = 0.3924
Estimated autocorrelations = 1 Wald chi2(11) = 282.39
Estimated coefficients = 12 Prob > chi2 = 0.0000

TobinsQ_w	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD_w	-.0046302	.0017314	-2.67	0.007	-.0080236	-.0012367
DR_w	.0018121	.0007161	2.53	0.011	.0004085	.0032157
FL_w	.0008702	.0012093	0.72	0.472	-.0015	.0032403
ER_w	.2705302	.0746964	3.62	0.000	.1241279	.4169325
GDP_w	-.0008362	.0039884	-0.21	0.834	-.0086533	.0069809
INF_w	-.0087619	.0099335	-0.88	0.378	-.0282313	.0107074
AT_w	-.2699003	.1303805	-2.07	0.038	-.5254413	-.0143593
BE_w	-.0083839	.001046	-8.02	0.000	-.010434	-.0063338
CR_w	.0004204	.0039804	0.11	0.916	-.0073811	.0082219
Size_w	.0311714	.0248962	1.25	0.211	-.0176242	.079967
Age_w	-.0092861	.0289847	-0.32	0.749	-.0660951	.0475229
_cons	1.198443	.4602537	2.60	0.009	.2963622	2.100524
rho	.6132414					

APPENDIX -D-

i) Year dummy for model 1

xtpsc ROA LTD DR FL ER GDP INF AT LR BE CR Size Age i.Year ,
correlation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 252

Time variable: Year Number of groups = 25

Panels: correlated (unbalanced) Obs per group:

Autocorrelation: common AR(1) min = 5

Sigma computed by casewise selection avg = 10.08

max = 11

Estimated covariances = 325 R-squared = 0.2153

Estimated autocorrelations = 1 Wald chi2(23) = 6982.95

Estimated coefficients = 24 Prob > chi2 = 0.0000

ROA	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.0806269	.0602863	-1.34	0.181	-.1987858 .037532	
DR	.007164	.0058088	1.23	0.217	-.0042211 .0185491	
FL	.059837	.0303097	1.97	0.048	.0004311 .1192428	
ER	3.842458	2.265559	1.70	0.090	-.5979554 8.282872	
GDP	-.0310784	.1019281	-0.30	0.760	-.2308538 .168697	
INF	-.1197634	.1955481	-0.61	0.540	-.5030307 .2635039	
AT	-5.951954	2.852935	-2.09	0.037	-11.5436 -.3603039	
LR	-.1152952	.0268795	-4.29	0.000	-.167978 -.0626123	
BE	-.024167	.0218529	-1.11	0.269	-.066998 .0186639	
CR	.3833416	.0838133	4.57	0.000	.2190705 .5476127	
Size	1.324351	.3396984	3.90	0.000	.6585549 1.990148	
Age	.0743359	.5957229	0.12	0.901	-1.093259 1.241931	
Year						
2006	.4275262	.6467102	0.66	0.509	-.8400025 1.695055	
2007	-2.065441	1.844601	-1.12	0.263	-5.680794 1.549911	
2009	-5.011804	1.158078	-4.33	0.000	-7.281595 -2.742014	
2010	-5.679852	.8642214	-6.57	0.000	-7.373695 -3.986009	
2011	-3.530076	.8459887	-4.17	0.000	-5.188183 -1.871968	
2012	-3.3312	.9019854	-3.69	0.000	-5.099059 -1.563342	
2013	-3.306934	.8019706	-4.12	0.000	-4.878767 -1.7351	
2014	-2.988916	.7840804	-3.81	0.000	-4.525686 -1.452147	
2015	-3.572393	.8251519	-4.33	0.000	-5.189661 -1.955125	
2016	-1.311146	.8441383	-1.55	0.120	-2.965626 .3433351	
2017	-2.676234	.9649622	-2.77	0.006	-4.567525 -.7849428	
_cons	-13.07762	5.226649	-2.50	0.012	-23.32166 -2.833575	
rho	.5106943					

ii) Year dummy for model 2

xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Size Age i.Year , correlation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 252
 Time variable: Year Number of groups = 25
 Panels: correlated (unbalanced) Obs per group:
 Autocorrelation: common AR(1) min = 5
 Sigma computed by casewise selection avg = 10.08
 max = 11
 Estimated covariances = 325 R-squared = 0.3116
 Estimated autocorrelations = 1 Wald chi2(23) = 31857.97
 Estimated coefficients = 24 Prob > chi2 = 0.0000

ROE	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.171091	.1171207	-1.46	0.144	-.4006433	.0584612
DR	-.0442295	.030544	-1.45	0.148	-.1040947	.0156356
FL	.0862411	.0824877	1.05	0.296	-.0754318	.247914
ER	8.475997	3.155386	2.69	0.007	2.291554	14.66044
GDP	.0027202	.1862431	0.01	0.988	-.3623095	.3677499
INF	-.1979469	.3271142	-0.61	0.545	-.839079	.4431852
AT	-8.427045	7.859312	-1.07	0.284	-23.83101	6.976924
LR	-.2405929	.0931433	-2.58	0.010	-.4231504	-.0580353
BE	-.1020268	.0375227	-2.72	0.007	-.1755698	-.0284837
CR	.4861254	.2862619	1.70	0.089	-.0749375	1.047188
Size	4.728478	.6275388	7.53	0.000	3.498525	5.958431
Age	2.826868	1.483181	1.91	0.057	-.0801142	5.733849
Year						
2006	-1.571506	1.552348	-1.01	0.311	-4.614052	1.471041
2007	-5.459993	3.618737	-1.51	0.131	-12.55259	1.632601
2009	-18.46767	2.392006	-7.72	0.000	-23.15591	-13.77942
2010	-21.1642	1.912124	-11.07	0.000	-24.9119	-17.41651
2011	-16.33268	1.77684	-9.19	0.000	-19.81522	-12.85014
2012	-15.48502	1.992734	-7.77	0.000	-19.39071	-11.57933
2013	-13.75716	1.859413	-7.40	0.000	-17.40155	-10.11278
2014	-14.47291	1.806108	-8.01	0.000	-18.01281	-10.933
2015	-14.44413	1.909485	-7.56	0.000	-18.18665	-10.70161
2016	-9.535085	1.887767	-5.05	0.000	-13.23504	-5.835129
2017	-12.28122	2.210035	-5.56	0.000	-16.61281	-7.949632
_cons	-51.11949	14.0018	-3.65	0.000	-78.56252	-23.67646
rho	.4617613					

iii) Year dummy for model 3

xtpcse TobinsQ LTD DR FL ER GDP INF AT LR BE CR Size Age i.Year , correlation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 252
Time variable: Year Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 10.08
 max = 11
Estimated covariances = 325 R-squared = 0.2901
Estimated autocorrelations = 1 Wald chi2(23) = 389703.96
Estimated coefficients = 24 Prob > chi2 = 0.0000

TobinsQ	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.0038521	.0016442	-2.34	0.019	-.0070747	-.0006294
DR	.0017367	.0009759	1.78	0.075	-.0001761	.0036495
FL	.003864	.0013905	2.78	0.005	.0011387	.0065893
ER	.4063002	.122241	3.32	0.001	.1667121	.6458882
GDP	-.0022538	.0067152	-0.34	0.737	-.0154153	.0109078
INF	-.0249804	.0135289	-1.85	0.065	-.0514965	.0015356
AT	-.4666295	.1345549	-3.47	0.001	-.7303522	-.2029068
LR	-.0034439	.0012145	-2.84	0.005	-.0058243	-.0010635
BE	-.0085777	.0010739	-7.99	0.000	-.0106826	-.0064728
CR	.0002025	.0042037	0.05	0.962	-.0080365	.0084416
Size	.0739349	.0427006	1.73	0.083	-.0097567	.1576264
Age	-.0476732	.0351964	-1.35	0.176	-.1166568	.0213103
Year						
2006	-.4301049	.0285527	-15.06	0.000	-.4860672	-.3741426
2007	-.0041304	.1157072	-0.04	0.972	-.2309124	.2226517
2009	-.542731	.0750709	-7.23	0.000	-.6898673	-.3955947
2010	-.5003185	.0575414	-8.69	0.000	-.6130977	-.3875394
2011	-.5262938	.0514234	-10.23	0.000	-.6270818	-.4255059
2012	-.57057	.0550867	-10.36	0.000	-.6785379	-.4626021
2013	-.4497387	.0592417	-7.59	0.000	-.5658503	-.3336272
2014	-.4600884	.0625489	-7.36	0.000	-.582682	-.3374948
2015	-.543594	.0632334	-8.60	0.000	-.6675293	-.4196588
2016	-.5390554	.0663178	-8.13	0.000	-.6690358	-.4090749
2017	-.5414753	.0744247	-7.28	0.000	-.6873451	-.3956055
_cons	1.223996	.6620875	1.85	0.065	-.0736718	2.521664
rho	.4015493					

APPENDIX -E-

i) Country dummy for model 1

xtpcse ROA LTD DR FL ER GDP INF AT LR BE CR Size Age BahrainDummy
KuwaitDummy OmanDummy QatarDummy SADummy UAEDummy, correlation
> (ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

note: QatarDummy omitted because of collinearity

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

```
Group variable: IdBank          Number of obs = 252
Time variable: Year            Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 10.08
max = 11
Estimated covariances = 325      R-squared = 0.2416
Estimated autocorrelations = 1      Wald chi2(17) = 573.67
Estimated coefficients = 18      Prob > chi2 = 0.0000
```

ROA	Panel-corrected				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
LTD	-.0625195	.047413	-1.32	0.187	-.1554474 .0304083
DR	.0069382	.005929	1.17	0.242	-.0046824 .0185588
FL	.0574499	.0242792	2.37	0.018	.0098637 .1050362
ER	3.613381	1.671968	2.16	0.031	.3363842 6.890378
GDP	-.0102963	.0757917	-0.14	0.892	-.1588452 .1382526
INF	.0409262	.2039089	0.20	0.841	-.3587279 .4405804
AT	-4.246298	2.295852	-1.85	0.064	-8.746084 .2534889
LR	-.160437	.0357691	-4.49	0.000	-.2305432 -.0903308
BE	-.0125602	.0184117	-0.68	0.495	-.0486466 .0235262
CR	.3835647	.0726333	5.28	0.000	.2412061 .5259232
Size	1.181256	.4018423	2.94	0.003	.3936594 1.968852
Age	-.1351003	.5622509	-0.24	0.810	-1.237092 .9668912
BahrainDummy	-.5583142	2.448069	-0.23	0.820	-5.356441 4.239813
KuwaitDummy	-4.579415	2.281036	-2.01	0.045	-9.050164 -.1086656
OmanDummy	-10.08654	3.182136	-3.17	0.002	-16.32341 -3.849665
QatarDummy	0	(omitted)			
SADummy	-2.336822	2.345986	-1.00	0.319	-6.934871 2.261227
UAEDummy	-2.430022	2.425686	-1.00	0.316	-7.18428 2.324236
_cons	-13.19282	5.416008	-2.44	0.015	-23.808 -2.577643
rho	.4160084				

ii) Country dummy for model 2

xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Size Age BahrainDummy
KuwaitDummy OmanDummy QatarDummy SADummy UAEDummy, correlation
> (ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

note: QatarDummy omitted because of collinearity

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable:	IdBank	Number of obs	=	252	
Time variable:	Year	Number of groups	=	25	
Panels:	correlated (unbalanced)	Obs per group:			
Autocorrelation:	common AR(1)	min	=	5	
Sigma computed by casewise selection		avg	=	10.08	
		max	=	11	
Estimated covariances	=	325	R-squared	=	0.2315
Estimated autocorrelations	=	1	Wald chi2(17)	=	1170.55
Estimated coefficients	=	18	Prob > chi2	=	0.0000

ROE	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.1223797	.0858779	-1.43	0.154	-.2906972	.0459378
DR	-.0507618	.0322503	-1.57	0.115	-.1139713	.0124476
FL	.0698051	.0680732	1.03	0.305	-.0636159	.2032261
ER	.959264	3.48877	0.27	0.783	-5.878599	7.797127
GDP	.0987389	.1692681	0.58	0.560	-.2330204	.4304982
INF	.0283888	.3724872	0.08	0.939	-.7016728	.7584504
AT	-1.554615	7.835619	-0.20	0.843	-16.91215	13.80292
LR	-.2981864	.1334019	-2.24	0.025	-.5596494	-.0367234
BE	-.0855242	.0626368	-1.37	0.172	-.2082901	.0372418
CR	.5352801	.2812569	1.90	0.057	-.0159734	1.086534
Size	1.343665	1.158537	1.16	0.246	-.9270261	3.614357
Age	3.24172	1.587733	2.04	0.041	.1298196	6.35362
BahrainDummy	-6.667345	7.164201	-0.93	0.352	-20.70892	7.37423
KuwaitDummy	-7.883298	6.005604	-1.31	0.189	-19.65407	3.887469
OmanDummy	-24.58891	6.305944	-3.90	0.000	-36.94834	-12.22949
QatarDummy	0	(omitted)				
SADummy	1.647333	5.485295	0.30	0.764	-9.103648	12.39831
UAEDummy	-3.026901	6.344459	-0.48	0.633	-15.46181	9.40801
_cons	-7.149847	24.75078	-0.29	0.773	-55.66048	41.36079
rho	.5078906					

iii) Country dummy for model 3

```
xtpcse TobinsQ LTD DR FL ER GDP INF AT LR BE CR Size Age BahrainDummy
KuwaitDummy OmanDummy QatarDummy SADummy UAEDummy, correla
> tion(ar1)
```

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

note: QatarDummy omitted because of collinearity

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

```
Group variable: IdBank          Number of obs   =    252
Time variable:  Year           Number of groups =    25
Panels:         correlated (unbalanced)  Obs per group:
Autocorrelation: common AR(1)          min =      5
Sigma computed by casewise selection    avg =    10.08
                                         max =     11
Estimated covariances =    325      R-squared =    0.3177
Estimated autocorrelations =    1      Wald chi2(17) =    659.37
Estimated coefficients =    18      Prob > chi2 =    0.0000
```

TobinsQ	Panel-corrected					[95% Conf. Interval]
	Coef.	Std. Err.	z	P> z		
LTD	-.0046239	.0022641	-2.04	0.041	-.0090615	-.0001862
DR	.0013031	.0007683	1.70	0.090	-.0002027	.0028089
FL	.0049749	.0015101	3.29	0.001	.0020152	.0079347
ER	-.0397978	.105284	-0.38	0.705	-.2461506	.1665549
GDP	.0000364	.0046209	0.01	0.994	-.0090205	.0090932
INF	-.0319662	.0127135	-2.51	0.012	-.0568842	-.0070482
AT	-.3888298	.1637957	-2.37	0.018	-.7098635	-.0677961
LR	-.0035013	.0016513	-2.12	0.034	-.0067379	-.0002647
BE	-.0088168	.0012613	-6.99	0.000	-.0112889	-.0063448
CR	.012358	.0050049	2.47	0.014	.0025487	.0221674
Size	-.0802983	.0287247	-2.80	0.005	-.1365976	-.023999
Age	-.0495511	.0303357	-1.63	0.102	-.109008	.0099058
BahrainDummy	-.4952595	.1701664	-2.91	0.004	-.8287795	-.1617395
KuwaitDummy	-.1596155	.1537854	-1.04	0.299	-.4610292	.1417983
OmanDummy	-.4728302	.2231769	-2.12	0.034	-.9102488	-.0354115
QatarDummy	0 (omitted)					
SADummy	.2678196	.2150479	1.25	0.213	-.1536665	.6893056
UAEDummy	-.3714201	.1415005	-2.62	0.009	-.6487559	-.0940843
_cons	3.811691	.5717981	6.67	0.000	2.690988	4.932395
rho	.6139908					

APPENDIX -F-

i) Year and country dummy for model 1

xtpcse ROA LTD DR FL ER GDP INF AT LR BE CR Size Age i.Year
 BahrainDummy KuwaitDummy OmanDummy QatarDummy SADummy
 UAEDummy, corr
 > elation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

note: UAEDummy omitted because of collinearity

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

```

Group variable: IdBank          Number of obs = 252
Time variable: Year            Number of groups = 25
Panels: correlated (unbalanced)  Obs per group:
Autocorrelation: common AR(1)    min = 5
Sigma computed by casewise selection  avg = 10.08
                                  max = 11

Estimated covariances = 325      R-squared = 0.3129
Estimated autocorrelations = 1    Wald chi2(29) = 356070.94
Estimated coefficients = 29       Prob > chi2 = 0.0000
    
```

ROA	Panel-corrected		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
LTD	-.0288772	.0473706	-0.61	0.542	-.1217218	.0639674
DR	.0050956	.0062415	0.82	0.414	-.0071375	.0173286
FL	.0490033	.0228715	2.14	0.032	.004176	.0938307
ER	2.882339	1.81408	1.59	0.112	-.6731933	6.437871
GDP	-.1166243	.0992338	-1.18	0.240	-.311119	.0778704
INF	-.1327938	.2122221	-0.63	0.531	-.5487416	.283154
AT	-2.721138	2.271129	-1.20	0.231	-7.172468	1.730193
LR	-.1344423	.0370855	-3.63	0.000	-.2071285	-.0617561
BE	.0399576	.0193133	2.07	0.039	.0021043	.0778109
CR	.3472251	.0773309	4.49	0.000	.1956592	.4987909
Size	1.716254	.469089	3.66	0.000	.7968568	2.635652
Age	-.3683768	.59243	-0.62	0.534	-1.529518	.7927646
Year						
2006	.1159167	.6029149	0.19	0.848	-1.065775	1.297608
2007	-1.66585	2.269604	-0.73	0.463	-6.114192	2.782493
2009	-7.298343	1.256956	-5.81	0.000	-9.761932	-4.834753
2010	-7.221726	.9033187	-7.99	0.000	-8.992198	-5.451254
2011	-4.774624	.8365039	-5.71	0.000	-6.414142	-3.135107
2012	-4.700408	.9022816	-5.21	0.000	-6.468848	-2.931969
2013	-4.449703	.9387011	-4.74	0.000	-6.289523	-2.609883
2014	-4.134914	.9546618	-4.33	0.000	-6.006017	-2.263812
2015	-4.734022	.9605807	-4.93	0.000	-6.616726	-2.851319
2016	-2.473875	1.007424	-2.46	0.014	-4.448388	-.4993607
2017	-3.762213	1.127548	-3.34	0.001	-5.972167	-1.552259
BahrainDummy	-21.11174	7.630149	-2.77	0.006	-36.06656	-6.156922
KuwaitDummy	-25.81079	7.977996	-3.24	0.001	-41.44738	-10.17421
OmanDummy	-31.05773	7.280337	-4.27	0.000	-45.32693	-16.78853
QatarDummy	-17.01244	6.741158	-2.52	0.012	-30.22487	-3.800017
SADummy	-23.22628	8.101744	-2.87	0.004	-39.10541	-7.347153
UAEDummy	-23.78327	8.181084	-2.91	0.004	-39.8179	-7.748642
_cons	0	(omitted)				
rho	.5277325					

ii) Year and country dummy for model 2

```
xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Size Age i.Year
BahrainDummy KuwaitDummy OmanDummy QatarDummy SADummy
UAEDummy, corr
> elation(ar1)
```

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

note: UAEDummy omitted because of collinearity

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

```
Group variable: IdBank          Number of obs = 252
Time variable:  Year           Number of groups = 25
Panels:         correlated (unbalanced)  Obs per group:
Autocorrelation: common AR(1)          min = 5
Sigma computed by casewise selection    avg = 10.08
                                         max = 11
```

```
Estimated covariances = 325      R-squared = 0.3509
Estimated autocorrelations = 1    Wald chi2(28) = 65490.10
Estimated coefficients = 29       Prob > chi2 = 0.0000
```

ROE	Panel-corrected				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
LTD	-.0773497	.0922495	-0.84	0.402	-.2581553 .1034559
DR	-.0513601	.0316244	-1.62	0.104	-.1133429 .0106226
FL	.0576786	.0686116	0.84	0.401	-.0767977 .1921549
ER	1.605863	3.501356	0.46	0.646	-5.256669 8.468394
GDP	-.1139509	.1915358	-0.59	0.552	-.4893542 .2614523
INF	-.3499412	.337245	-1.04	0.299	-1.010929 .3110469
AT	-.6268395	7.292734	-0.09	0.932	-14.92033 13.66666
LR	-.2360397	.1188421	-1.99	0.047	-.468966 -.0031135
BE	.0194933	.0570817	0.34	0.733	-.0923849 .1313714
CR	.4792268	.2608728	1.84	0.066	-.0320744 .990528
Size	3.347076	1.385234	2.42	0.016	.6320666 6.062086
Age	2.070933	1.495837	1.38	0.166	-.8608538 5.002719
Year					
2006	-1.079033	1.395816	-0.77	0.439	-3.814782 1.656716
2007	-3.381681	3.808672	-0.89	0.375	-10.84654 4.083178
2009	-20.87551	2.892124	-7.22	0.000	-26.54396 -15.20705
2010	-22.54209	2.334579	-9.66	0.000	-27.11778 -17.96664
2011	-17.16982	2.119689	-8.10	0.000	-21.32434 -13.01531
2012	-16.16011	2.317545	-6.97	0.000	-20.70242 -11.61781
2013	-13.85834	2.512144	-5.52	0.000	-18.78206 -8.934632
2014	-14.23988	2.573408	-5.53	0.000	-19.28366 -9.196091
2015	-14.11691	2.674363	-5.28	0.000	-19.35856 -8.875256
2016	-9.061072	2.774306	-3.27	0.001	-14.49861 -3.623531
2017	-11.4643	2.986706	-3.84	0.000	-17.31814 -5.610461
BahrainDummy	-13.26997	6.519318	-2.04	0.042	-26.0476 -.4923452
KuwaitDummy	-16.3681	5.743484	-2.85	0.004	-27.62512 -5.111074
OmanDummy	-31.28384	5.726463	-5.46	0.000	-42.5075 -20.06018
QatarDummy	0	(omitted)			
SADummy	-6.713942	5.501737	-1.22	0.222	-17.49715 4.069264
UAEDummy	-12.07195	6.594059	-1.83	0.067	-24.99607 .8521666
_cons	-23.07212	26.71208	-0.86	0.388	-75.42683 29.28259
rho	.4918288				

ii) **Effect of Financial Crises for model 2**

xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Size Age, correlation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 252
 Time variable: Year Number of groups = 25
 Panels: correlated (unbalanced) Obs per group:
 Autocorrelation: common AR(1) min = 5
 Sigma computed by casewise selection avg = 10.08
 max = 11
 Estimated covariances = 325 R-squared = 0.1987
 Estimated autocorrelations = 1 Wald chi2(12) = 130.81
 Estimated coefficients = 13 Prob > chi2 = 0.0000

ROE	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.2224583	.1140668	-1.95	0.051	-.4460253	.0011086
DR	-.0452346	.0317846	-1.42	0.155	-.1075313	.0170621
FL	.0969774	.0801047	1.21	0.226	-.0600249	.2539798
ER	6.110994	3.406696	1.79	0.073	-.5660075	12.788
GDP	.1440939	.1625444	0.89	0.375	-.1744872	.462675
INF	.1400029	.3769213	0.37	0.710	-.5987493	.8787551
AT	-5.26965	8.174507	-0.64	0.519	-21.29139	10.75209
LR	-.2990652	.1071469	-2.79	0.005	-.5090693	-.0890611
BE	-.1378092	.0415642	-3.32	0.001	-.2192736	-.0563449
CR	.5162724	.3009059	1.72	0.086	-.0734924	1.106037
Size	3.166066	.8188198	3.87	0.000	1.561209	4.770923
Age	3.989721	1.589194	2.51	0.012	.874958	7.104485
_cons	-41.4957	14.97753	-2.77	0.006	-70.85112	-12.14027
rho	.4847853					

iii) Effect of Financial Crises for model 3

xtpcse TobinsQ LTD DR FL ER GDP INF AT LR BE CR Size Age, correlation(ar1)

Number of gaps in sample: 19

(note: computations for rho restarted at each gap)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 10.08; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 252
 Time variable: Year Number of groups = 25
 Panels: correlated (unbalanced) Obs per group:
 Autocorrelation: common AR(1) min = 5
 Sigma computed by casewise selection avg = 10.08
 max = 11
 Estimated covariances = 325 R-squared = 0.2845
 Estimated autocorrelations = 1 Wald chi2(12) = 498.35
 Estimated coefficients = 13 Prob > chi2 = 0.0000

TobinsQ	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.0054293	.0018892	-2.87	0.004	-.009132	-.0017265
DR	.0018026	.0007401	2.44	0.015	.0003521	.0032531
FL	.0053543	.0013936	3.84	0.000	.002623	.0080856
ER	.3675425	.0871525	4.22	0.000	.1967267	.5383582
GDP	-.0010844	.0040801	-0.27	0.790	-.0090813	.0069125
INF	-.0235637	.0096202	-2.45	0.014	-.042419	-.0047084
AT	-.4896412	.1412548	-3.47	0.001	-.7664956	-.2127868
LR	-.006038	.0015721	-3.84	0.000	-.0091193	-.0029567
BE	-.0103115	.0010629	-9.70	0.000	-.0123948	-.0082282
CR	.0080457	.0047003	1.71	0.087	-.0011667	.0172582
Size	.0332835	.0259824	1.28	0.200	-.0176412	.0842081
Age	-.0490607	.0331714	-1.48	0.139	-.1140754	.015954
_cons	1.548353	.4431249	3.49	0.000	.6798445	2.416862
rho	.5961003					

APPENDIX -H-

i) Independent Variables that Show Insignificant Associations with the Dependent Variables with model 1

xtpcse ROA LTD FL ER AT LR BE CR Size, correlation(ar1)

(note: the number of observations per panel, $e(n_sigma) = 5$, used to compute the disturbance of covariance matrix $e(Sigma)$ is less than half of the average number of observations per panel, $e(n_avg) = 11.76$; you may want to consider the pairwise option Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
Time variable: Year Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 11.76
 max = 13
Estimated covariances = 325 R-squared = 0.1540
Estimated autocorrelations = 1 Wald chi2(8) = 87.12
Estimated coefficients = 9 Prob > chi2 = 0.0000

ROA	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.1078215	.0569136	-1.89	0.058	-.2193702	.0037271
FL	.0556953	.0261404	2.13	0.033	.0044612	.1069295
ER	4.240199	1.686602	2.51	0.012	.9345203	7.545878
AT	-5.138661	2.424097	-2.12	0.034	-9.889804	-.3875191
LR	-.1649412	.031277	-5.27	0.000	-.2262431	-.1036394
BE	-.0313376	.0190379	-1.65	0.100	-.0686513	.0059761
CR	.415445	.0864712	4.80	0.000	.2459646	.5849254
Size	1.073347	.3051606	3.52	0.000	.4752436	1.671451
_cons	-11.73159	5.039929	-2.33	0.020	-21.60967	-1.853512
rho	.4595267					

ii) Independent Variables that Show Insignificant Associations with the Dependent Variables with model 2

xtpcse ROE LTD FL ER AT LR BE CR Size, correlation(ar1)

(note: the number of observations per panel, e(n_sigma) = 5,
used to compute the disturbance of covariance matrix e(Sigma)
is less than half of the average number of observations per panel,
e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
Time variable: Year Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 11.76
 max = 13
Estimated covariances = 325 R-squared = 0.1877
Estimated autocorrelations = 1 Wald chi2(8) = 98.59
Estimated coefficients = 9 Prob > chi2 = 0.0000

ROE	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.2818665	.1272828	-2.21	0.027	-.5313363	-.0323968
FL	.0890923	.0680655	1.31	0.191	-.0443136	.2224983
ER	10.11068	2.78603	3.63	0.000	4.650163	15.5712
AT	-10.87899	6.045133	-1.80	0.072	-22.72723	.969257
LR	-.3869802	.1116777	-3.47	0.001	-.6058645	-.1680958
BE	-.1325833	.0419202	-3.16	0.002	-.2147453	-.0504212
CR	.6317551	.304851	2.07	0.038	.0342582	1.229252
Size	3.899016	.7865496	4.96	0.000	2.357407	5.440625
_cons	-40.62708	15.68224	-2.59	0.010	-71.36371	-9.890446
rho	.4980774					

iii) Independent Variables that Show Insignificant Associations with the Dependent Variables with model 3

xtpcse TobinsQ LTD FL ER AT LR BE CR Size, correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])
 (note: the number of observations per panel, e(n_sigma) = 5,
 used to compute the disturbance of covariance matrix e(Sigma)
 is less than half of the average number of observations per panel,
 e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
 Time variable: Year Number of groups = 25
 Panels: correlated (unbalanced) Obs per group:
 Autocorrelation: common AR(1) min = 5
 Sigma computed by casewise selection avg = 11.76
 max = 13
 Estimated covariances = 325 R-squared = 0.1918
 Estimated autocorrelations = 1 Wald chi2(8) = 292.66
 Estimated coefficients = 9 Prob > chi2 = 0.0000

TobinsQ	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.0052393	.0018374	-2.85	0.004	-.0088406	-.0016381
FL	.007044	.0011406	6.18	0.000	.0048084	.0092795
ER	.3584009	.0553936	6.47	0.000	.2498313	.4669704
AT	-.4672524	.1082833	-4.32	0.000	-.6794839	-.255021
LR	-.0047971	.0014955	-3.21	0.001	-.0077283	-.001866
BE	-.0110437	.0008988	-12.29	0.000	-.0128054	-.0092821
CR	.0058719	.004305	1.36	0.173	-.0025658	.0143095
Size	.0198471	.0201903	0.98	0.326	-.0197252	.0594195
_cons	1.684494	.4088451	4.12	0.000	.8831726	2.485816
rho	.5388462					

APPENDIX -I-

i) Exclusion of Bank Size Variable with Model 1

xtpcse ROA LTD DR FL ER GDP INF AT LR BE CR Age, correlation(ar1)

(note: the number of observations per panel, e(n_sigma) = 5,
used to compute the disturbance of covariance matrix e(Sigma)
is less than half of the average number of observations per panel,
e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

```

Group variable:  IdBank          Number of obs   =   294
Time variable:  Year            Number of groups =   25
Panels:         correlated (unbalanced)  Obs per group:
Autocorrelation: common AR(1)          min =   5
Sigma computed by casewise selection    avg =  11.76
                                          max =   13
Estimated covariances =   325      R-squared       =  0.1275
Estimated autocorrelations =   1      Wald chi2(11)   =  96.94
Estimated coefficients =   12      Prob > chi2     =  0.0000
  
```

ROA	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.0781955	.0589357	-1.33	0.185	-.1937073	.0373162
DR	-.0007928	.0061446	-0.13	0.897	-.012836	.0112505
FL	.0533084	.0251976	2.12	0.034	.003922	.1026948
ER	1.004269	1.390663	0.72	0.470	-1.721381	3.729919
GDP	.0209526	.0758918	0.28	0.782	-.1277925	.1696977
INF	.0020377	.1576191	0.01	0.990	-.3068901	.3109655
AT	-3.482198	2.534091	-1.37	0.169	-8.448926	1.48453
LR	-.1869926	.0352201	-5.31	0.000	-.2560227	-.1179625
BE	-.0300866	.0223369	-1.35	0.178	-.0738661	.0136928
CR	.389256	.0897474	4.34	0.000	.2133542	.5651577
Age	.7647464	.5287727	1.45	0.148	-.271629	1.801122
_cons	4.749518	3.837347	1.24	0.216	-2.771544	12.27058
rho	.5219611					

ii) Exclusion of Bank Size Variable with Model 2

xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Age, correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

```

Group variable: IdBank           Number of obs   =   294
Time variable:  Year            Number of groups =   25
Panels:      correlated (unbalanced)  Obs per group:
Autocorrelation: common AR(1)      min =           5
Sigma computed by casewise selection  avg  =          11.76
                                         max =           13

Estimated covariances   =   325   R-squared      =   0.1997
Estimated autocorrelations =     1   Wald chi2(11)  =   81.03
Estimated coefficients  =    12   Prob > chi2    =   0.0000
  
```

ROE	Panel-corrected					[95% Conf. Interval]	
	Coef.	Std. Err.	z	P> z			
LTD	-.1872594	.1191397	-1.57	0.116	-.4207688	.0462501	
DR	-.0568376	.0269502	-2.11	0.035	-.109659	-.0040162	
FL	.1116903	.0700544	1.59	0.111	-.0256138	.2489943	
ER	-.6307244	2.041459	-0.31	0.757	-4.63191	3.370461	
GDP	.0385736	.1766361	0.22	0.827	-.3076267	.3847739	
INF	.2523425	.2577081	0.98	0.327	-.2527561	.7574411	
AT	-5.648073	6.767901	-0.83	0.404	-18.91292	7.616769	
LR	-.3970998	.1097501	-3.62	0.000	-.6122061	-.1819935	
BE	-.1668139	.0407396	-4.09	0.000	-.2466621	-.0869656	
CR	.4853866	.3081113	1.58	0.115	-.1185004	1.089274	
Age	4.982904	1.496064	3.33	0.001	2.050672	7.915135	
_cons	17.3656	9.203947	1.89	0.059	-.6738091	35.405	
rho	.4543978						

iii) Exclusion of Bank Size Variable with Model 3

xtpcse TobinsQ LTD DR FL ER GDP INF AT LR BE CR Age, correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

```

Group variable: IdBank      Number of obs = 294
Time variable: Year        Number of groups = 25
Panels: correlated (unbalanced)  Obs per group:
Autocorrelation: common AR(1)    min = 5
Sigma computed by casewise selection    avg = 11.76
                                       max = 13
Estimated covariances = 325      R-squared = 0.1971
Estimated autocorrelations = 1    Wald chi2(11) = 433.42
Estimated coefficients = 12       Prob > chi2 = 0.0000
    
```

TobinsQ	Panel-corrected					[95% Conf. Interval]
	Coef.	Std. Err.	z	P> z		
LTD	-.0058078	.001781	-3.26	0.001	-.0092985	-.0023171
DR	.0015466	.0006596	2.34	0.019	.0002537	.0028394
FL	.0069343	.0012964	5.35	0.000	.0043934	.0094751
ER	.2915406	.0365117	7.98	0.000	.219979	.3631023
GDP	-.0073445	.0037116	-1.98	0.048	-.014619	-.0000699
INF	-.0000365	.0043484	-0.01	0.993	-.0085593	.0084862
AT	-.3680034	.1151079	-3.20	0.001	-.5936107	-.142396
LR	-.0053094	.0012911	-4.11	0.000	-.0078399	-.0027788
BE	-.0117097	.0009001	-13.01	0.000	-.0134738	-.0099456
CR	.004428	.0044233	1.00	0.317	-.0042416	.0130975
Age	.0021184	.026216	0.08	0.936	-.0492641	.0535008
_cons	1.929577	.168294	11.47	0.000	1.599727	2.259427
rho	.4973432					

APPENDIX -J-

i) Exclusion of Omani Banks with Model 1

xtpcse ROA LTD DR FL ER GDP INF AT LR BE CR Size Age, correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank	Number of obs =	284
Time variable: Year	Number of groups =	23
Panels: correlated (unbalanced)	Obs per group:	
Autocorrelation: common AR(1)	min =	7
Sigma computed by casewise selection	avg =	12.347826
	max =	13
Estimated covariances =	276	R-squared = 0.1447
Estimated autocorrelations =	1	Wald chi2(12) = 30.52
Estimated coefficients =	13	Prob > chi2 = 0.0023

ROA	Panel-corrected					[95% Conf. Interval]	
	Coef.	Std. Err.	z	P> z			
LTD	-.1139453	.0476374	-2.39	0.017	-.2073129	-.0205778	
DR	-.0036734	.0076048	-0.48	0.629	-.0185786	.0112318	
FL	.0478204	.0269543	1.77	0.076	-.0050092	.1006499	
ER	4.35351	1.873777	2.32	0.020	.6809741	8.026045	
GDP	.020841	.0678182	0.31	0.759	-.1120803	.1537623	
INF	-.0511023	.1289442	-0.40	0.692	-.3038282	.2016237	
AT	-3.611343	2.799195	-1.29	0.197	-9.097664	1.874979	
LR	-.1655411	.0584994	-2.83	0.005	-.2801979	-.0508843	
BE	-.0224695	.0182	-1.23	0.217	-.0581408	.0132018	
CR	.3755969	.1092896	3.44	0.001	.1613932	.5898007	
Size	.9615252	.3965932	2.42	0.015	.1842169	1.738834	
Age	-.3997658	.60853	-0.66	0.511	-1.592463	.7929311	
_cons	-10.26226	7.325649	-1.40	0.161	-24.62027	4.095749	
rho	.4207841						

iii) Exclusion of Omani Banks with Model 3

xtpcse TobinsQ LTD DR FL ER GDP INF AT LR BE CR Size Age, correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])
 Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 284
 Time variable: Year Number of groups = 23
 Panels: correlated (unbalanced) Obs per group:
 Autocorrelation: common AR(1) min = 7
 Sigma computed by casewise selection avg = 12.347826
 max = 13
 Estimated covariances = 276 R-squared = 0.2010
 Estimated autocorrelations = 1 Wald chi2(12) = 344.94
 Estimated coefficients = 13 Prob > chi2 = 0.0000

TobinsQ	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.0085786	.0026893	-3.19	0.001	-.0138495	-.0033076
DR	.0015657	.0007059	2.22	0.027	.0001822	.0029493
FL	.0086528	.0015945	5.43	0.000	.0055277	.0117779
ER	.3353058	.0954378	3.51	0.000	.1482511	.5223605
GDP	-.0076103	.0040779	-1.87	0.062	-.0156028	.0003822
INF	-.0005443	.0056446	-0.10	0.923	-.0116075	.0105189
AT	-.4719736	.1371353	-3.44	0.001	-.7407539	-.2031933
LR	-.0055723	.0019338	-2.88	0.004	-.0093625	-.001782
BE	-.0118882	.0010646	-11.17	0.000	-.0139748	-.0098016
CR	.0061527	.0048288	1.27	0.203	-.0033116	.015617
Size	.0106301	.028761	0.37	0.712	-.0457405	.0670007
Age	-.0118369	.0405419	-0.29	0.770	-.0912977	.0676238
_cons	1.870213	.487049	3.84	0.000	.9156149	2.824812
rho	.4942713					

APPENDIX -K-

i) Controlling for the Arab Spring (Major and Minor Effect) for model 1

xtpcse ROA LTD DR FL ER GDP INF AT LR BE CR Size Age BahrainDummy
KuwaitDummy OmanDummy SADummy, correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])
(note: the number of observations per panel, $e(n_sigma) = 5$,
used to compute the disturbance of covariance matrix $e(Sigma)$
is less than half of the average number of observations per panel,
 $e(n_avg) = 11.76$; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

```

Group variable: IdBank           Number of obs   =   294
Time variable:  Year            Number of groups =    25
Panels:          correlated (unbalanced)  Obs per group:
Autocorrelation: common AR(1)           min =         5
Sigma computed by casewise selection     avg =        11.76
                                           max =         13
Estimated covariances =   325      R-squared =   0.2465
Estimated autocorrelations =    1      Wald chi2(16) =  399.27
Estimated coefficients =   17      Prob > chi2 =  0.0000
  
```

ROA	Panel-corrected					[95% Conf. Interval]
	Coef.	Std. Err.	z	P> z		
LTD	-.0587796	.0479753	-1.23	0.220	-.1528094	.0352502
DR	2.05e-06	.0061302	0.00	1.000	-.0120129	.012017
FL	.0498025	.0224216	2.22	0.026	.0058568	.0937481
ER	5.275458	2.076158	2.54	0.011	1.206263	9.344653
GDP	-.0077517	.0714401	-0.11	0.914	-.1477716	.1322682
INF	.0096897	.1457003	0.07	0.947	-.2758776	.2952571
AT	-4.798225	2.454725	-1.95	0.051	-9.609398	.0129487
LR	-.1935499	.0346956	-5.58	0.000	-.2615521	-.1255478
BE	-.0247498	.0171351	-1.44	0.149	-.058334	.0088345
CR	.3767682	.0782704	4.81	0.000	.2233611	.5301753
Size	1.401253	.4023544	3.48	0.000	.6126527	2.189853
Age	-.3411763	.5776138	-0.59	0.555	-1.473279	.790926
BahrainDummy	2.480318	.7438905	3.33	0.001	1.022319	3.938316
KuwaitDummy	-2.310378	.5604579	-4.12	0.000	-3.408856	-1.211901
OmanDummy	-8.665765	2.584259	-3.35	0.001	-13.73082	-3.600711
SADummy	-.6868622	.9529392	-0.72	0.471	-2.554589	1.180864
_cons	-17.43024	5.889118	-2.96	0.003	-28.9727	-5.887776
rho	.4177944					

ii) **Controlling for the Arab Spring** (Major and Minor Effect) for model 2

xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Size Age BahrainDummy
KuwaitDummy OmanDummy SADummy, correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
 Time variable: Year Number of groups = 25
 Panels: correlated (unbalanced) Obs per group:
 Autocorrelation: common AR(1) min = 5
 Sigma computed by casewise selection avg = 11.76
 max = 13
 Estimated covariances = 325 R-squared = 0.2560
 Estimated autocorrelations = 1 Wald chi2(16) = 835.14
 Estimated coefficients = 17 Prob > chi2 = 0.0000

ROE	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.1402963	.0898443	-1.56	0.118	-.316388	.0357953
DR	-.0612672	.0273052	-2.24	0.025	-.1147844	-.00775
FL	.0851838	.058479	1.46	0.145	-.029433	.1998006
ER	5.593711	3.118338	1.79	0.073	-.5181189	11.70554
GDP	.0764675	.1554479	0.49	0.623	-.2282049	.3811399
INF	.1538268	.2318106	0.66	0.507	-.3005135	.6081671
AT	-6.47878	6.433071	-1.01	0.314	-19.08737	6.129808
LR	-.4091273	.123003	-3.33	0.001	-.6502088	-.1680458
BE	-.1112206	.0470463	-2.36	0.018	-.2034295	-.0190116
CR	.5746817	.2821016	2.04	0.042	.0217728	1.127591
Size	2.194407	1.089796	2.01	0.044	.0584452	4.330369
Age	2.534941	1.541557	1.64	0.100	-.486455	5.556338
BahrainDummy	-.8909024	3.690317	-0.24	0.809	-8.123791	6.341986
KuwaitDummy	-4.887505	1.542801	-3.17	0.002	-7.911339	-1.86367
OmanDummy	-21.4845	3.553919	-6.05	0.000	-28.45006	-14.51895
SADummy	2.461112	4.74506	0.52	0.604	-6.839035	11.76126
_cons	-17.76648	22.59341	-0.79	0.432	-62.04875	26.51579
rho	.4785836					

i) **Controlling for the Arab Spring (Major Effect) for model 1**

xtpcse ROA LTD DR FL ER GDP INF AT LR BE CR Size Age BahrainDummy
KuwaitDummy , correlation(ar1)

(note: the number of observations per panel, $e(n_sigma) = 5$,
used to compute the disturbance of covariance matrix $e(Sigma)$
is less than half of the average number of observations per panel,
 $e(n_avg) = 11.76$; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
Time variable: Year Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 11.76
max = 13
Estimated covariances = 325 R-squared = 0.2046
Estimated autocorrelations = 1 Wald chi2(14) = 269.98
Estimated coefficients = 15 Prob > chi2 = 0.0000

ROA	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.0924768	.056986	-1.62	0.105	-.2041673	.0192138
DR	.0007079	.0056242	0.13	0.900	-.0103153	.0117311
FL	.0524049	.0250758	2.09	0.037	.0032571	.1015526
ER	6.183335	2.088416	2.96	0.003	2.090114	10.27656
GDP	.0125543	.0713547	0.18	0.860	-.1272984	.152407
INF	.0298752	.1508952	0.20	0.843	-.2658739	.3256243
AT	-5.616784	2.601429	-2.16	0.031	-10.71549	-.5180778
LR	-.2047275	.0351051	-5.83	0.000	-.2735322	-.1359228
BE	-.0295317	.0197995	-1.49	0.136	-.0683381	.0092747
CR	.3953833	.0796329	4.97	0.000	.2393058	.5514609
Size	1.923333	.3885143	4.95	0.000	1.161859	2.684807
Age	-.076988	.6092895	-0.13	0.899	-1.271174	1.117198
BahrainDummy	4.336845	1.032116	4.20	0.000	2.313934	6.359756
KuwaitDummy	-1.37871	.5740089	-2.40	0.016	-2.503747	-.2536735
_cons	-27.29432	5.316255	-5.13	0.000	-37.71399	-16.87465
rho	.4563827					

ii) **Controlling for the Arab Spring** (Major Effect) for model 2

xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Size Age BahrainDummy
KuwaitDummy , correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])
(note: the number of observations per panel, e(n_sigma) = 5,
used to compute the disturbance of covariance matrix e(Sigma)
is less than half of the average number of observations per panel,
e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
Time variable: Year Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 11.76
max = 13
Estimated covariances = 325 R-squared = 0.2359
Estimated autocorrelations = 1 Wald chi2(14) = 170.29
Estimated coefficients = 15 Prob > chi2 = 0.0000

ROE	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.2486772	.1284845	-1.94	0.053	-.5005021	.0031478
DR	-.059435	.0266432	-2.23	0.026	-.1116546	-.0072154
FL	.1024586	.0672051	1.52	0.127	-.0292609	.2341781
ER	9.541377	3.054559	3.12	0.002	3.554551	15.5282
GDP	.0860829	.1537468	0.56	0.576	-.2152553	.3874211
INF	.2364901	.233658	1.01	0.311	-.2214711	.6944513
AT	-9.26559	6.717618	-1.38	0.168	-22.43188	3.900698
LR	-.3987246	.11664	-3.42	0.001	-.6273348	-.1701144
BE	-.126355	.0446458	-2.83	0.005	-.2138591	-.038851
CR	.5347226	.2945743	1.82	0.069	-.0426325	1.112078
Size	3.844349	.8531336	4.51	0.000	2.172238	5.51646
Age	3.015256	1.508564	2.00	0.046	.0585255	5.971987
BahrainDummy	2.576597	4.233883	0.61	0.543	-5.72166	10.87485
KuwaitDummy	-3.590338	2.505809	-1.43	0.152	-8.501633	1.320957
_cons	-46.9114	16.872	-2.78	0.005	-79.97991	-13.8429
rho	.4465152					

iii) **Controlling for the Arab Spring (Major Effect) for model 3**

xtpcse TobinsQ LTD DR FL ER GDP INF AT LR BE CR Size Age BahrainDummy KuwaitDummy , correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])
 (note: the number of observations per panel, e(n_sigma) = 5,
 used to compute the disturbance of covariance matrix e(Sigma)
 is less than half of the average number of observations per panel,
 e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
 Time variable: Year Number of groups = 25
 Panels: correlated (unbalanced) Obs per group:
 Autocorrelation: common AR(1) min = 5
 Sigma computed by casewise selection avg = 11.76
 max = 13
 Estimated covariances = 325 R-squared = 0.2039
 Estimated autocorrelations = 1 Wald chi2(14) = 429.79
 Estimated coefficients = 15 Prob > chi2 = 0.0000

TobinsQ	Panel-corrected					[95% Conf. Interval]
	Coef.	Std. Err.	z	P> z		
LTD	-.0075694	.0022008	-3.44	0.001	-.011883	-.0032558
DR	.0013306	.0006211	2.14	0.032	.0001132	.002548
FL	.0069874	.0013391	5.22	0.000	.0043628	.009612
ER	.2002831	.0833794	2.40	0.016	.0368626	.3637037
GDP	-.0070498	.0036803	-1.92	0.055	-.014263	.0001634
INF	-.0016698	.0046164	-0.36	0.718	-.0107178	.0073782
AT	-.3610258	.1145737	-3.15	0.002	-.5855861	-.1364655
LR	-.0028085	.001319	-2.13	0.033	-.0053937	-.0002232
BE	-.010919	.0009406	-11.61	0.000	-.0127626	-.0090755
CR	.0054828	.0042958	1.28	0.202	-.0029368	.0139024
Size	-.0452797	.0262496	-1.72	0.085	-.0967279	.0061686
Age	-.001053	.0314495	-0.03	0.973	-.0626929	.0605868
BahrainDummy	-.3349827	.052761	-6.35	0.000	-.4383924	-.2315731
KuwaitDummy	-.0845028	.0443807	-1.90	0.057	-.1714874	.0024818
_cons	2.805572	.4508179	6.22	0.000	1.921985	3.689159
rho	.5253807					

i) **Controlling for the Arab Spring** (Minor Effect) for model 1

xtpcse ROA LTD DR FL ER GDP INF AT LR BE CR Size Age OmanDummy
SADummy, correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])
(note: the number of observations per panel, e(n_sigma) = 5,
used to compute the disturbance of covariance matrix e(Sigma)
is less than half of the average number of observations per panel,
e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
Time variable: Year Number of groups = 25
Panels: correlated (unbalanced) Obs per group:
Autocorrelation: common AR(1) min = 5
Sigma computed by casewise selection avg = 11.76
 max = 13
Estimated covariances = 325 R-squared = 0.2072
Estimated autocorrelations = 1 Wald chi2(14) = 264.47
Estimated coefficients = 15 Prob > chi2 = 0.0000

ROA	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.0526868	.0466699	-1.13	0.259	-.144158	.0387845
DR	-.0018564	.0062358	-0.30	0.766	-.0140784	.0103656
FL	.0520296	.0220334	2.36	0.018	.008845	.0952142
ER	3.602896	2.128773	1.69	0.091	-.5694216	7.775214
GDP	.0199903	.0729193	0.27	0.784	-.1229288	.1629094
INF	-.0343869	.1448251	-0.24	0.812	-.3182389	.2494651
AT	-4.36198	2.574238	-1.69	0.090	-9.407394	.6834341
LR	-.1683049	.0333711	-5.04	0.000	-.233711	-.1028988
BE	-.0300348	.0174425	-1.72	0.085	-.0642215	.004152
CR	.406468	.0852607	4.77	0.000	.2393601	.5735758
Size	.7536213	.4029113	1.87	0.061	-.0360703	1.543313
Age	-.2501756	.5925218	-0.42	0.673	-1.411497	.9111457
OmanDummy	-9.602158	2.643694	-3.63	0.000	-14.7837	-4.420613
SADummy	.0368846	.8250205	0.04	0.964	-1.580126	1.653895
_cons	-5.977426	5.42885	-1.10	0.271	-16.61778	4.662925
rho	.4352848					

ii) Controlling for the Arab Spring (Minor Effect) for model 2

xtpcse ROE LTD DR FL ER GDP INF AT LR BE CR Size Age OmanDummy
SADummy , correlation(ar1)

(note: estimates of rho outside [-1,1] bounded to be in the range [-1,1])

(note: the number of observations per panel, e(n_sigma) = 5,

used to compute the disturbance of covariance matrix e(Sigma)

is less than half of the average number of observations per panel,

e(n_avg) = 11.76; you may want to consider the pairwise option)

Prais-Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable: IdBank Number of obs = 294
 Time variable: Year Number of groups = 25
 Panels: correlated (unbalanced) Obs per group:
 Autocorrelation: common AR(1) min = 5
 Sigma computed by casewise selection avg = 11.76
 max = 13
 Estimated covariances = 325 R-squared = 0.2515
 Estimated autocorrelations = 1 Wald chi2(14) = 474.17
 Estimated coefficients = 15 Prob > chi2 = 0.0000

ROE	Panel-corrected					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LTD	-.1274281	.0848585	-1.50	0.133	-.2937478	.0388915
DR	-.0615184	.0272766	-2.26	0.024	-.1149796	-.0080571
FL	.0894518	.0577376	1.55	0.121	-.0237119	.2026155
ER	4.895741	2.448094	2.00	0.046	.0975643	9.693917
GDP	.1072583	.1521835	0.70	0.481	-.1910158	.4055325
INF	.1259909	.2269427	0.56	0.579	-.3188087	.5707904
AT	-6.57471	6.490895	-1.01	0.311	-19.29663	6.14721
LR	-.3994028	.1122365	-3.56	0.000	-.6193822	-.1794234
BE	-.1346504	.0428023	-3.15	0.002	-.2185414	-.0507594
CR	.6172932	.2763025	2.23	0.025	.0757501	1.158836
Size	2.031044	.7442605	2.73	0.006	.5723203	3.489768
Age	2.667092	1.510565	1.77	0.077	-.2935607	5.627744
OmanDummy	-19.83461	3.051637	-6.50	0.000	-25.81571	-13.85352
SADummy	4.405203	4.987503	0.88	0.377	-5.370124	14.18053
_cons	-15.30952	15.5523	-0.98	0.325	-45.79146	15.17242
rho	.4747729					

