

Lampiran 1

Daftar Perusahaan Sampel

No	Kode Perusahaan	Nama perusahaan
1	APLN	Agung Podomoro Land Tbk.
2	BAPA	Bekasi Asri Pemula Tbk.
3	BEST	Bekasi Fajar Industrial Estate Tbk.
4	BIPP	Bhuwanatala Indah Permai Tbk.
5	BKDP	Bukit Darmo Property Tbk.
6	DGIK	Nusa Konstruksi Enjiniring Tbk.
7	DILD	Intiland Development Tbk.
8	GWSA	Greenwood Sejahtera Tbk.
9	JKON	Jaya Konstruksi Manggala Pratama Tbk.
10	MKPI	Metropolitan Kentjana Tbk.
11	MTLA	Metropolitan Land Tbk.
12	MYRX	Hanson International Tbk.
13	NRCA	Nusa Raya Cipta Tbk.
14	PWON	Pakuwon Jati Tbk.
15	RBMS	Ristia Bintang Mahkotasejati Tbk.
16	RDTX	Roda Vivatex Tbk.
17	SCBD	Danayasa Arthatama Tbk.
18	SMRA	Summarecon Agung Tbk.
19	TOTL	Total Bangun Persada Tbk.
20	WIKA	Wijaya Karya (Persero) Tbk.

Lampiran 2

Proses Pengambilan Sampel

No.	Kode	IPO							Delisitng						Annual Report						Variabel Penelitian						Sampel	
		2013	2014	2015	2016	2017	2018	2019	2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018		
1	ACST																										x	
2	ADHI																				x	x	x	x	x	x	x	
3	APLN																											√
4	ARMY					IPO																						
5	ASRI																				x	x	x	x	x	x	x	
6	BAPA																											√
7	BAPI							IPO																				
8	BCIP																		x									
9	BEST																											√
10	BIKA			IPO																								
11	BIPP																											√
12	BKDP																											√
13	BKSL																				x	x	x	x	x	x	x	
14	BSDE																				x	x	x	x	x	x	x	
15	CITY							IPO																				
16	COWL																				x	x	x	x	x	x	x	
17	CPRI							IPO																				
18	CSIS							IPO																				
19	CTRA																						x	x	x	x	x	

70	RIMO																				x	x	x	x					
71	RISE						IPO																						
72	RODA																					x	x	x	x				
73	SATU						IPO																						
74	SCBD																											v	
75	SKRN						IPO																						
76	SMDM																						x	x	x	x	x	x	
77	SMRA																											v	
78	SSIA																						x	x	x	x	x	x	
79	TARA		IPO																										
80	TOPS						IPO																						
81	TOTL																											v	
82	URBN						IPO																						
83	WEGE						IPO																						
84	WIKA																											v	
85	WSKT																						x	x	x	x	x	x	

Lampiran 3

Perhitungan Nilai Perusahaan (Tobin's Q)

$$Q = \frac{MVS + D}{TA}$$

Dimana:

- Q : *Tobin's Q* (nilai perusahaan)
MVS : *Market Value of all outstanding shares* (nilai pasar saham)
D : *Debt* (nilai pasar hutang)
TA : *Total asset* (total aktiva perusahaan)

No	Kode	tahun	jmlh saham beredar	closing price	total liabilitas	total aset	MVS	Tobin's Q
1	APLN	2013	20500900000	215	12467225599000	19679908990000	4407693500000	0.8575
		2014	20500900000	335	15223273846000	23686158211000	6867801500000	0.9327
		2015	20500900000	334	15486506060000	24559174988000	6847300600000	0.9094
		2016	20500900000	210	15741190673000	25711953382000	4305189000000	0.7797
		2017	20500900000	210	17293138465000	28790116014000	4305189000000	0.7502
		2018	19364561700	152	17376276425000	29583829904000	2943413378400	0.6869
2	BAPA	2013	661784520	66	83135962299	175635233972	43677778320	0.7220
		2014	661784520	50	76625843194	176171620663	33089226000	0.6228
		2015	661784520	50	74812450750	175743601667	33089226000	0.6140
		2016	661784520	50	72199908418	179260878116	33089226000	0.5874
		2017	661784520	88	58885428727	179035974052	58237037760	0.6542
		2018	661784520	109	44423132493	172313437729	72134512680	0.6764
3	BEST	2013	9629044750	445	883452694685	3360272281414	4284924913750	1.5381
		2014	9645462300	730	803492240778	3652993439542	7041187479000	2.1475
		2015	9647311150	294	1589160166683	4631315439422	2836309478100	0.9556
		2016	9647311150	254	1814537354523	5205373116830	2450417032100	0.8193
		2017	9647311150	250	1870815438091	5719000999540	2411827787500	0.7488
		2018	9647311150	208	2118132306800	6290126551391	2006640719200	0.6558
4	BIPP_	2013	3032239205	90	126968794620	557633263041	272901528450	0.7171
		2014	3032239245	95	164803358823	613810885565	288062728275	0.7378
		2015	4669648436	88	247411164002	1324396226004	410929062368	0.4971
		2016	4669648582	90	444202117934	1648021678720	420268372380	0.5246
		2017	5028669338	73	534787535126	1748640897106	367092861674	0.5158
		2018	5028669338	88	932018121876	2063247282902	442522901744	0.6662

5	BKDP_	2013	6830992252	80	254836207890	845487178846	546479380160	0.9478
		2014	6830992252	98	231347145941	829193043343	669437240696	1.0863
		2015	7315022252	90	218404283896	791161825436	658352002680	1.1082
		2016	7315022252	70	239151281393	785095652150	512051557640	0.9568
		2017	7315022252	75	283731887459	783494758697	548626668900	1.0624
		2018	6830992252	61	300149514530	763537440279	416690527372	0.9388
6	DGIK	2013	5541165000	150	1040515028969	2100802668869	831174750000	0.8909
		2014	5541165000	179	940355179179	2045294737932	991868535000	0.9447
		2015	5541165000	85	1010467912312	2094465627081	470999025000	0.7073
		2016	5541165000	55	796318130465	1555022620037	304764075000	0.7081
		2017	5541165000	58	1034401126690	1820798804324	321387570000	0.7446
		2018	5541165000	50	1063438648353	1727826033852	277058250000	0.7758
7	DILD	2013	10365854185	315	3430425895884	7526470401005	3265244068275	0.8896
		2014	10365854185	650	4534717461582	9004884010541	6737805220250	1.2518
		2015	10365854185	489	5517743393322	10288572076882	5068902696465	1.0290
		2016	10365854185	500	6782581912231	11840059936442	5182927092500	1.0106
		2017	10365854185	350	6786634657165	13097184984411	3628048964750	0.7952
		2018	10365854185	308	7699882620129	14215535191206	3192683088980	0.7662
8	GWSA	2013	7800760000	159	250934436830	2045701784445	1240320840000	0.7290
		2014	7800760000	174	321208369989	2292661995500	1357332240000	0.7321
		2015	7800760000	123	536331978128	6805277762308	959493480000	0.2198
		2016	7800760000	129	478485384788	6963273062204	1006298040000	0.2132
		2017	7800760000	150	524360986056	7200861383403	1170114000000	0.2353
		2018	7800760000	142	597490070576	7491033825272	1107707920000	0.2276
9	JKON	2013	16308519860	550	1800740198870	3417012222326	8969685923000	3.1520
		2014	16308519860	850	2081364258110	3844756799399	13862241881000	4.1468
		2015	16308519860	840	1866428882202	3810273494244	13699156682400	4.0852
		2016	16308519860	620	1806636040445	4007387279838	10111282313200	2.9740
		2017	16308519860	540	1799503533000	4202515316000	8806600724400	2.5238
		2018	16308519860	364	2221760533000	4804256788000	5936301229040	1.6981
10	MKPI_	2013	948194000	9500	920106415024	2838815438871	9007843000000	3.4972
		2014	948194000	15300	2154420021554	4316214269222	14507368200000	3.8603
		2015	948194000	16875	2880175893867	5709371372467	16000773750000	3.3070
		2016	948194000	25750	2897296559011	6612200867199	24415995500000	4.1307
		2017	948194000	36500	2276438836762	6828046514843	34609081000000	5.4021
		2018	948194000	22500	1776589738461	7008254843361	21334365000000	3.2977
11	MTLA	2013	7579333000	380	1069728862000	2834484171000	2880146540000	1.3935
		2014	7579333000	440	1213581467000	3250717743000	3334906520000	1.3992
		2015	7655126330	215	1407525853000	3620742578000	1645852160950	0.8433
		2016	7655126330	354	1430126743000	3932529273000	2709914720820	1.0528
		2017	7655126330	398	1819793556000	4819145802000	3046740279340	1.0098
		2018	7655126330	448	1755200333000	5193962740000	3429496595840	0.9982

12	MYRX_	2013	15331668396	570	454785952485	5335862891977	8739050985720	1.7230
		2014	15331668396	695	861812237324	5723420360339	10655509535220	2.0123
		2015	14854287896	635	1977050652510	8298894990882	9432472813960	1.3748
		2016	78719201175	169	2396355541497	8410268542375	13303544998575	1.8668
		2017	80294004275	110	3046007262472	10008169293650	8832340470250	1.1869
		2018	86703220792	119	3700746491765	11625186862977	10317683274248	1.2059
13	NRCA	2013	2480000000	670	839818002786	1625318983017	1661600000000	1.5390
		2014	2480000146	1160	850775102847	1844708044787	2876800169360	2.0207
		2015	2496257846	625	908458231529	1995091384706	1560161153750	1.2373
		2016	2496258344	330	992553991254	2134213795106	823765253520	0.8510
		2017	2496258344	380	1139310048741	2342166843820	948578170720	0.8914
		2018	2496258344	386	1046474842586	2254711765640	963555720784	0.8915
14	PWON	2013	48159602400	270	5195736526000	9298245408000	13003092648000	1.9572
		2014	48159602400	515	8487671758000	16770742538000	24802195236000	1.9850
		2015	48159602400	496	9323066490000	18778122467000	23887162790400	1.7686
		2016	48159602400	565	9654447854000	20674141654000	27210175356000	1.7831
		2017	48159602400	685	10567227711000	23358717736000	32989327644000	1.8647
		2018	48159602400	620	9706398758000	25018080224000	29858953488000	1.5815
15	RBMS	2013	326722500	58	31163379030	158997539543	18949905000	0.3152
		2014	326722500	56	23772179228	155939885534	18296460000	0.2698
		2015	326722500	63	18057945092	191275595985	20583517500	0.2020
		2016	326722500	85	5615874579	167489721098	27771412500	0.1993
		2017	326722500	238	201017062310	432055786199	77759955000	0.6452
		2018	2656212826	94	268758850964	897968027638	249684005644	0.5774
16	RDTX	2013	268800000	4900	402415984925	1549674922146	1317120000000	1.1096
		2014	268800000	5250	291666592282	1643441092309	1411200000000	1.0362
		2015	268800000	6000	282593660798	1872158609529	1612800000000	1.0124
		2016	268800000	10000	273290660870	2101753788854	2688000000000	1.4090
		2017	268800000	6000	225499951528	2280461717989	1612800000000	0.8061
		2018	268800000	5500	213066766537	2526489781165	1478400000000	0.6695
17	SCBD_	2013	3322092000	2700	1255256029000	5550429288000	8969648400000	1.8422
		2014	3322092000	2000	1621222893000	5569183172000	6644184000000	1.4841
		2015	3322092000	1695	1787170403000	5566425030000	5630945940000	1.3327
		2016	3322092000	1650	1592379580000	5714281871000	5481451800000	1.2379
		2017	3322092000	2700	1472489392000	5783263814000	8969648400000	1.8056
		2018	3322092000	2700	1376616763000	5772828195000	8969648400000	1.7922
18	SMRA	2013	14426781680	780	9001470153000	13659136820000	11252889710400	1.4828
		2014	14426781680	1520	9386842550000	15379478994000	21928708153600	2.0362
		2015	14426781680	1650	11228512108000	18758262022000	23804189772000	1.8676
		2016	14426781680	1325	12644764172000	20810319657000	19115485726000	1.5262
		2017	14426781680	945	13309208657000	21662950720000	13633308687600	1.2437
		2018	14426781680	805	14238537503000	23299242068000	11613559252400	1.1096

19	TOTL	2013	341000000	500	1407428067000	2226418477000	1705000000000	1.3980
		2014	341000000	1120	1684511582000	2483746395000	3819200000000	2.2159
		2015	341000000	615	1979837997000	2846152620000	2097150000000	1.4325
		2016	341000000	765	2007949620000	2950559912000	2608650000000	1.5647
		2017	341000000	660	2232994466000	3243093474000	2250600000000	1.3825
		2018	341000000	560	1010099008000	3228718157000	1909600000000	0.9043
20	WIKA	2013	6139968000	1463	9368003825000	12594962700000	8982773184000	1.4570
		2014	6149225000	3407	10936403458000	15915161682000	20950409575000	2.0035
		2015	6149225000	2640	14164304669000	19602406034000	16233954000000	1.5507
		2016	8969951372	2360	18597824186000	31096539490000	21169085237920	1.2788
		2017	8969951372	1550	31051949689000	45683774302000	13903424626600	0.9841
		2018	8969951372	1655	42014686674000	59230001239000	14845269520660	0.9600

Lampiran 4

Perhitungan Kepemilikan Manajerial

$$\text{Kepemilikan Manajerial} = \frac{\text{jumlah saham manajer \& dewan komisaris}}{\text{Jumlah saham beredar}}$$

No	Kode	Nama Perusahaan	tahun	Saham Manajer	Saham Beredar	Kepemilikan Manajerial
1	APLN	Agung Podomoro Land Tbk.	2013	14531500	20500900000	0.0007088
			2014	14553600	20500900000	0.0007099
			2015	11476600	20500900000	0.0005598
			2016	9704100	20500900000	0.0004733
			2017	8449500	20500900000	0.0004122
			2018	6869000	19364561700	0.0003547
2	BAPA	Bekasi Asri Pemula Tbk.	2013	884000	661784520	0.0013358
			2014	884000	661784520	0.0013358
			2015	884000	661784520	0.0013358
			2016	884000	661784520	0.0013358
			2017	884000	661784520	0.0013358
			2018	884000	661784520	0.0013358
3	BEST	Bekasi Fajar Industrial Estate Tbk.	2013	7000000	9629044750	0.0007270
			2014	7000000	9645462300	0.0007257
			2015	7000000	9647311150	0.0007256
			2016	7000000	9647311150	0.0007256
			2017	7000000	9647311150	0.0007256
			2018	7000000	9647311150	0.0007256
4	BIPP_	Bhuwanatala Indah Permai Tbk.	2013	7000	3032239205	0.0000023
			2014	7000	3032239245	0.0000023
			2015	7000	4669648436	0.0000015
			2016	7000	4669648582	0.0000015
			2017	112042000	5028669338	0.0222806
			2018	112042000	5028669338	0.0222806
5	BKDP_	Bukit Darmo Property Tbk	2013	600000000	6830992252	0.0878350
			2014	600000000	6830992252	0.0878350
			2015	600000000	7315022252	0.0820230
			2016	600000000	7315022252	0.0820230
			2017	600000000	7315022252	0.0820230
			2018	600000000	6830992252	0.0878350

6	DGIK	Nusa Konstruksi Enjiniring Tbk	2013	5050000	5541165000	0.0009114
			2014	5050000	5541165000	0.0009114
			2015	5050000	5541165000	0.0009114
			2016	16105900	5541165000	0.0029066
			2017	16105900	5541165000	0.0029066
			2018	17987900	5541165000	0.0032462
7	DILD	Intiland Development Tbk.	2013	12680	10365854185	0.0000012
			2014	12680	10365854185	0.0000012
			2015	2280	10365854185	0.0000002
			2016	2280	10365854185	0.0000002
			2017	2280	10365854185	0.0000002
			2018	2651871336	10365854185	0.2558276
8	GWSA	Greenwood Sejahtera Tbk.	2013	2840000	7800760000	0.0003641
			2014	2840000	7800760000	0.0003641
			2015	2840000	7800760000	0.0003641
			2016	2840000	7800760000	0.0003641
			2017	2840000	7800760000	0.0003641
			2018	2840000	7800760000	0.0003641
9	JKON	Jaya Konstruksi Manggala Prata Tbk.	2013	661230280	16308519860	0.0405451
			2014	661230280	16308519860	0.0405451
			2015	675980280	16308519860	0.0414495
			2016	344259150	16308519860	0.0211092
			2017	537949550	16308519860	0.0329858
			2018	537949550	16308519860	0.0329858
10	MKPI_	Metropolitan Kentjana Tbk.	2013	26994815	948194000	0.0284697
			2014	26994815	948194000	0.0284697
			2015	23462838	948194000	0.0247448
			2016	23462838	948194000	0.0247448
			2017	44792688	948194000	0.0472400
			2018	53579688	948194000	0.0565071
11	MTLA	Metropolitan Land Tbk.	2013	24336000	7579333000	0.0032108
			2014	29689100	7579333000	0.0039171
			2015	39285687	7655126330	0.0051319
			2016	30336093	7655126330	0.0039628
			2017	35749093	7655126330	0.0046700
			2018	105102623	7655126330	0.0137297
12	MYRX_	Hanson International Tbk.	2013	1217788037	15331668396	0.0794296
			2014	1271357343	15331668396	0.0829236
			2015	1461513614	14854287896	0.0983900
			2016	8157628717	78719201175	0.1036295
			2017	10822535594	80294004275	0.1347863
			2018	7003356384	86703220792	0.0807739

13	NRCA	Nusa Raya Cipta Tbk.	2013	168705000	2480000000	0.0680262
			2014	168705000	2480000146	0.0680262
			2015	168705000	2496257846	0.0675832
			2016	168705000	2496258344	0.0675831
			2017	170205000	2496258344	0.0681840
			2018	170705000	2496258344	0.0683843
14	PWON	Pakuwon Jati Tbk.	2013	12279040	48159602400	0.0002550
			2014	11860940	48159602400	0.0002463
			2015	7619040	48159602400	0.0001582
			2016	7619040	48159602400	0.0001582
			2017	10739040	48159602400	0.0002230
			2018	10739040	48159602400	0.0002230
15	RBMS	Ristia Bintang Mahkotasejati Tbk.	2013	164365125	326722500	0.5030726
			2014	164365125	326722500	0.5030726
			2015	165083325	326722500	0.5052708
			2016	165083325	326722500	0.5052708
			2017	167201425	326722500	0.5117536
			2018	1453781918	2656212826	0.5473138
16	RDTX	Roda Vivatex Tbk.	2013	3410500	268800000	0.0126879
			2014	3410500	268800000	0.0126879
			2015	2756000	268800000	0.0102530
			2016	7155100	268800000	0.0266187
			2017	6714200	268800000	0.0249784
			2018	6534200	268800000	0.0243088
17	SCBD_	Danayasa Arthatama Tbk.	2013	2000	3322092000	0.0000006
			2014	2000	3322092000	0.0000006
			2015	2000	3322092000	0.0000006
			2016	2000	3322092000	0.0000006
			2017	2000	3322092000	0.0000006
			2018	2000	3322092000	0.0000006
18	SMRA	Summarecon Agung Tbk.	2013	40730664	14426781680	0.0028233
			2014	40730664	14426781680	0.0028233
			2015	40730664	14426781680	0.0028233
			2016	20000000	14426781680	0.0013863
			2017	88053600	14426781680	0.0061035
			2018	142345000	14426781680	0.0098667
19	TOTL	Total Bangun Persada Tbk.	2013	62232500	3410000000	0.0182500
			2014	62232500	3410000000	0.0182500
			2015	62232880	3410000000	0.0182501
			2016	62232800	3410000000	0.0182501
			2017	62232500	3410000000	0.0182500
			2018	62232500	3410000000	0.0182500

20	WIKA	Wijaya Karya (Persero) Tbk.	2013	13474500	6139968000	0.0021946
			2014	4769000	6149225000	0.0007755
			2015	5226700	6149225000	0.0008500
			2016	799059	8969951372	0.0000891
			2017	799059	8969951372	0.0000891
			2018	863900	8969951372	0.0000963

Lampiran 5

Perhitungan Kepemilikan Institusional

$$\text{Kepemilikan Institusional} = \frac{\text{jumlah saham yang dimiliki institusi}}{\text{Jumlah saham beredar}}$$

No	Kode	Nama Perusahaan	tahun	Saham Institusi	Saham Beredar	Kepemilikan Institusional
1	APLN	Agung Podomoro Land Tbk.	2013	13743780000	20500900000	0.6703989
			2014	13743780000	20500900000	0.6703989
			2015	15811483100	20500900000	0.7712580
			2016	15789694200	20500900000	0.7701952
			2017	14715780000	20500900000	0.7178114
			2018	14715780000	19364561700	0.7599335
2	BAPA	Bekasi Asri Pemula Tbk.	2013	424620000	661784520	0.6416288
			2014	508842500	661784520	0.7688945
			2015	508842500	661784520	0.7688945
			2016	508842500	661784520	0.7688945
			2017	344620000	661784520	0.5207435
			2018	595067100	661784520	0.8991856
3	BEST	Bekasi Fajar Industrial Estate Tbk.	2013	5911599500	9629044750	0.6139342
			2014	5591169500	9645462300	0.5796684
			2015	5608354400	9647311150	0.5813386
			2016	5608354400	9647311150	0.5813386
			2017	5608354400	9647311150	0.5813386
			2018	6205520000	9647311150	0.6432383
4	BIPP_	Bhuwanatala Indah Permai Tbk.	2013	2011864203	3032239205	0.6634913
			2014	2011864203	3032239245	0.6634912
			2015	3595072195	4669648436	0.7698807
			2016	3595072195	4669648582	0.7698807
			2017	3595072195	5028669338	0.7149152
			2018	3595072195	5028669338	0.7149152
5	BKDP_	Bukit Darmo Property Tbk	2013	2600000000	6830992252	0.3806182
			2014	2600000000	6830992252	0.3806182
			2015	2600000000	7315022252	0.3554330
			2016	2600000000	7315022252	0.3554330
			2017	2600000000	7315022252	0.3554330
			2018	2600000000	6830992252	0.3806182

6	DGIK	Nusa Konstruksi Enjiniring Tbk	2013	3552876500	5541165000	0.6411786
			2014	3545327400	5541165000	0.6398162
			2015	3545713800	5541165000	0.6398860
			2016	3518199100	5541165000	0.6349205
			2017	3518199100	5541165000	0.6349205
			2018	3713779200	5541165000	0.6702163
7	DILD	Intiland Development Tbk.	2013	4367946966	10365854185	0.4213784
			2014	4367946966	10365854185	0.4213784
			2015	4367946966	10365854185	0.4213784
			2016	4367946966	10365854185	0.4213784
			2017	6356188893	10365854185	0.6131853
			2018	3225374925	10365854185	0.3111538
8	GWSA	Greenwood Sejahtera Tbk.	2013	6200760000	7800760000	0.7948918
			2014	6200760000	7800760000	0.7948918
			2015	6200760000	7800760000	0.7948918
			2016	6200760000	7800760000	0.7948918
			2017	6200760000	7800760000	0.7948918
			2018	6200760000	7800760000	0.7948918
9	JKON	Jaya Konstruksi Manggala Prata Tbk.	2013	11507924000	16308519860	0.7056388
			2014	11507924000	16308519860	0.7056388
			2015	10790408415	16308519860	0.6616424
			2016	11048167915	16308519860	0.6774476
			2017	9929587750	16308519860	0.6088589
			2018	9929587750	16308519860	0.6088589
10	MKPI_	Metropolitan Kentjana Tbk.	2013	723109281	948194000	0.7626174
			2014	723109281	948194000	0.7626174
			2015	723123281	948194000	0.7626322
			2016	723123281	948194000	0.7626322
			2017	730771281	948194000	0.7706981
			2018	730771281	948194000	0.7706981
11	MTLA	Metropolitan Land Tbk.	2013	6731597188	7579333000	0.8881517
			2014	6736731488	7579333000	0.8888291
			2015	6804098803	7655126330	0.8888291
			2016	6450776407	7655126330	0.8426741
			2017	5680473803	7655126330	0.7420483
			2018	5680473803	7655126330	0.7420483
12	MYRX_	Hanson International Tbk.	2013	773700000	15331668396	0.0504642
			2014	1872785900	15331668396	0.1221515
			2015	769657142	14854287896	0.0518138
			2016	8712208500	78719201175	0.1106745
			2017	4235683500	80294004275	0.0527522
			2018	4235683500	86703220792	0.0488527

13	NRCA	Nusa Raya Cipta Tbk.	2013	1773850500	2480000000	0.7152623
			2014	215740500	2480000146	0.0869921
			2015	188740500	2496257846	0.0756094
			2016	188740500	2496258344	0.0756094
			2017	188740500	2496258344	0.0756094
			2018	188740500	2496258344	0.0756094
14	PWON	Pakuwon Jati Tbk.	2013	25129459200	48159602400	0.5217954
			2014	27738526730	48159602400	0.5759708
			2015	25129459200	48159602400	0.5217954
			2016	27032158800	48159602400	0.5613036
			2017	33587598400	48159602400	0.6974227
			2018	33077598400	48159602400	0.6868329
15	RBMS	Ristia Bintang Mahkotasejati Tbk.	2013	62663875	326722500	0.1917954
			2014	62663875	326722500	0.1917954
			2015	62663875	326722500	0.1917954
			2016	57974200	326722500	0.1774417
			2017	58974200	326722500	0.1805024
			2018	277143663	2656212826	0.1043379
16	RDTX	Roda Vivatex Tbk.	2013	219725000	268800000	0.8174293
			2014	226324300	268800000	0.8419803
			2015	222233900	268800000	0.8267630
			2016	201590500	268800000	0.7499647
			2017	201590500	268800000	0.7499647
			2018	201603500	268800000	0.7500130
17	SCBD_	Danayasa Arthatama Tbk.	2013	2737748506	3322092000	0.8241038
			2014	2737748506	3322092000	0.8241038
			2015	2737748506	3322092000	0.8241038
			2016	2737748506	3322092000	0.8241038
			2017	3032286298	3322092000	0.9127641
			2018	3032286298	3322092000	0.9127641
18	SMRA	Summarecon Agung Tbk.	2013	5430364728	14426781680	0.3764086
			2014	5430364728	14426781680	0.3764086
			2015	5430364728	14426781680	0.3764086
			2016	5430364728	14426781680	0.3764086
			2017	6597992138	14426781680	0.4573433
			2018	6602239138	14426781680	0.4576377
19	TOTL	Total Bangun Persada Tbk.	2013	1926650000	3410000000	0.5650000
			2014	1926650000	3410000000	0.5650000
			2015	1926650000	3410000000	0.5650000
			2016	1926650000	3410000000	0.5650000
			2017	1926650000	3410000000	0.5650000
			2018	1926650000	3410000000	0.5650000

20	WIKA	Wijaya Karya (Persero) Tbk.	2013	4000000000	6139968000	0.6514692
			2014	4000000000	6149225000	0.6504885
			2015	4000000000	6149225000	0.6504885
			2016	5834850001	8969951372	0.6504885
			2017	5834850001	8969951372	0.6504885
			2018	5834850001	8969951372	0.6504885

Lampiran 6

Perhitungan Proporsi Dewan Direksi

$$\text{Proporsi Dewan Direksi} = \sum \text{Anggota Dewan Direksi}$$

No.	Kode Perusahaan	Nama Perusahaan	Proporsi Dewan Direksi					
			2013	2014	2015	2016	2017	2018
1	APLN	Agung Podomoro Land Tbk.	9	8	7	8	8	7
2	BAPA	Bekasi Asri Pemula Tbk.	3	3	3	3	3	3
3	BEST	Bekasi Fajar Industrial Estate Tbk.	4	3	3	5	5	5
4	BIPP	Bhuwanatala Indah Permai Tbk.	3	3	3	3	3	3
5	BKDP	Bukit Darmo Property Tbk	4	4	4	4	4	4
6	DGIK	Nusa Konstruksi Enjiniring Tbk	3	3	3	4	4	4
7	DILD	Intiland Development Tbk.	8	8	7	7	7	8
8	GWSA	Greenwood Sejahtera Tbk.	4	4	4	4	4	4
9	JKON	Jaya Konstruksi Manggala Prata Tbk.	8	9	9	7	6	6
10	MKPI	Metropolitan Kentjana Tbk.	6	7	7	7	7	7
11	MTLA	Metropolitan Land Tbk.	5	5	5	6	6	6
12	MYRX	Hanson International Tbk.	2	4	5	5	4	4
13	NRCA	Nusa Raya Cipta Tbk.	5	6	6	6	6	6
14	PWON	Pakuwon Jati Tbk.	7	7	7	6	6	6
15	RBMS	Ristia Bintang Mahkotasejati Tbk.	3	3	2	3	4	4
16	RDTX	Roda Vivatex Tbk.	3	3	3	3	3	3
17	SCBD	Danayasa Arthatama Tbk.	5	6	6	6	5	6
18	SMRA	Summarecon Agung Tbk.	9	9	8	8	8	8
19	TOTL	Total Bangun Persada Tbk.	7	8	8	8	8	7
20	WIKA	Wijaya Karya (Persero) Tbk.	6	6	7	6	6	7

Lampiran 7

Perhitungan *Investment Opportunity Set (IOS)*

Market to Book Value of Equity (MBVE)

$$\text{MBVE} = \frac{\text{jumlah saham beredar} \times \text{closing price}}{\text{total ekuitas}}$$

No	Kode	Nama Perusahaan	tahun	jmlh saham beredar	closing price	total ekuitas	IOS
1	APLN	Agung Podomoro Land Tbk.	2013	20500900000	215	7212683391000	0.6111
			2014	20500900000	335	8462884365000	0.8115
			2015	20500900000	334	9072668928000	0.7547
			2016	20500900000	210	9970762709000	0.4318
			2017	20500900000	210	11496977549000	0.3745
			2018	19364561700	152	12207553479000	0.2411
2	BAPA	Bekasi Asri Pemula Tbk.	2013	661784520	66	92499271673	0.4722
			2014	661784520	50	99545777469	0.3324
			2015	661784520	50	100931150917	0.3278
			2016	661784520	50	107060969698	0.3091
			2017	661784520	88	120150545325	0.4847
			2018	661784520	109	127890305236	0.5640
3	BEST	Bekasi Fajar Industrial Estate Tbk.	2013	9629044750	445	2476819586729	1.7300
			2014	9645462300	730	2849501198764	2.4710
			2015	9647311150	294	3042155272739	0.9323
			2016	9647311150	254	3390835762307	0.7227
			2017	9647311150	250	3848185561449	0.6267
			2018	9647311150	208	4171994244591	0.4810
4	BIPP_	Bhuwanatala Indah Permai Tbk.	2013	3032239205	90	430664468421	0.6337
			2014	3032239245	95	449007526742	0.6416
			2015	4669648436	88	1076985062002	0.3816
			2016	4669648582	90	1203819560786	0.3491
			2017	5028669338	73	1213853361980	0.3024
			2018	5028669338	88	1131229161026	0.3912
5	BKDP_	Bukit Darmo Property Tbk	2013	6830992252	80	590650970956	0.9252
			2014	6830992252	98	597845897402	1.1197
			2015	7315022252	90	572757541540	1.1494
			2016	7315022252	70	545944370757	0.9379
			2017	7315022252	75	499762871238	1.0978
			2018	6830992252	61	463387925749	0.8992

6	DGIK	Nusa Konstruksi Enjiniring Tbk	2013	5541165000	150	1060287639900	0.7839
			2014	5541165000	179	1104939558753	0.8977
			2015	5541165000	85	1083997714769	0.4345
			2016	5541165000	55	758704489572	0.4017
			2017	5541165000	58	786397677634	0.4087
			2018	5541165000	50	664387385499	0.4170
7	DILD	Intiland Development Tbk.	2013	10365854185	315	4096044505121	0.7972
			2014	10365854185	650	4470166548979	1.5073
			2015	10365854185	489	4770828683560	1.0625
			2016	10365854185	500	5057478024211	1.0248
			2017	10365854185	350	6310550327246	0.5749
			2018	10365854185	308	6515652571077	0.4900
8	GWSA	Greenwood Sejahtera Tbk.	2013	7800760000	159	1794767347615	0.6911
			2014	7800760000	174	1971453625511	0.6885
			2015	7800760000	123	6268945784180	0.1531
			2016	7800760000	129	6484787677416	0.1552
			2017	7800760000	150	6676500397347	0.1753
			2018	7800760000	142	6893543754696	0.1607
9	JKON	Jaya Konstruksi Manggala Prata Tbk.	2013	16308519860	550	1616272023456	5.5496
			2014	16308519860	850	1763392541289	7.8611
			2015	16308519860	840	1943844612042	7.0475
			2016	16308519860	620	2200751239393	4.5945
			2017	16308519860	540	2403011783000	3.6648
			2018	16308519860	364	2582496255000	2.2987
10	MKPI_	Metropolitan Kentjana Tbk.	2013	948194000	9500	1918709023847	4.6947
			2014	948194000	15300	2161794247668	6.7108
			2015	948194000	16875	2829195478600	5.6556
			2016	948194000	25750	3714904308188	6.5724
			2017	948194000	36500	4551607678081	7.6037
			2018	948194000	22500	5231665104900	4.0779
11	MTLA	Metropolitan Land Tbk.	2013	7579333000	380	1764755309000	1.6320
			2014	7579333000	440	2037136276000	1.6371
			2015	7655126330	215	2213216725000	0.7436
			2016	7655126330	354	2502402530000	1.0829
			2017	7655126330	398	2999352246000	1.0158
			2018	7655126330	448	3438762407000	0.9973
12	MYRX_	Hanson International Tbk.	2013	15331668396	570	4881076939492	1.7904
			2014	15331668396	695	4861608123015	2.1918
			2015	14854287896	635	6321844338372	1.4920
			2016	78719201175	169	6013913000878	2.2121
			2017	80294004275	110	6962162031178	1.2686
			2018	86703220792	119	7924440371212	1.3020

13	NRCA	Nusa Raya Cipta Tbk.	2013	2480000000	670	785500980231	2.1153
			2014	2480000146	1160	993932941940	2.8944
			2015	2496257846	625	1086633153177	1.4358
			2016	2496258344	330	1141659803852	0.7216
			2017	2496258344	380	1202856795079	0.7886
			2018	2496258344	386	1208236923054	0.7975
14	PWON	Pakuwon Jati Tbk.	2013	48159602400	270	4102508882000	3.1695
			2014	48159602400	515	8283070780000	2.9943
			2015	48159602400	496	9455055977000	2.5264
			2016	48159602400	565	11019693800000	2.4692
			2017	48159602400	685	12791490025000	2.5790
			2018	48159602400	620	15311681466000	1.9501
15	RBMS	Ristia Bintang Mahkotasejati Tbk.	2013	326722500	58	127834160513	0.1482
			2014	326722500	56	132167706307	0.1384
			2015	326722500	63	173217650893	0.1188
			2016	326722500	85	161873846519	0.1716
			2017	326722500	238	231038723889	0.3366
			2018	2656212826	94	629209176674	0.3968
16	RDTX	Roda Vivatex Tbk.	2013	268800000	4900	1147258937221	1.1481
			2014	268800000	5250	1351774500027	1.0440
			2015	268800000	6000	1589564948731	1.0146
			2016	268800000	10000	1828463127984	1.4701
			2017	268800000	6000	2054961766461	0.7848
			2018	268800000	5500	2313423014628	0.6391
17	SCBD_	Danayasa Arthatama Tbk.	2013	3322092000	2700	4295173259000	2.0883
			2014	3322092000	2000	3947960279000	1.6829
			2015	3322092000	1695	3779254627000	1.4900
			2016	3322092000	1650	4121902291000	1.3298
			2017	3322092000	2700	4310774422000	2.0808
			2018	3322092000	2700	4396211432000	2.0403
18	SMRA	Summarecon Agung Tbk.	2013	14426781680	780	4657666667000	2.4160
			2014	14426781680	1520	5992636444000	3.6593
			2015	14426781680	1650	7529749914000	3.1614
			2016	14426781680	1325	8165555485000	2.3410
			2017	14426781680	945	8353742063000	1.6320
			2018	14426781680	805	9060704565000	1.2818
19	TOTL	Total Bangun Persada Tbk.	2013	3410000000	500	818990410000	2.0818
			2014	3410000000	1120	799234813000	4.7786
			2015	3410000000	615	866314623000	2.4208
			2016	3410000000	765	942610292000	2.7675
			2017	3410000000	660	1010099008000	2.2281
			2018	3410000000	560	1052110737000	1.8150

20	WIKA	Wijaya Karya (Persero) Tbk.	2013	6139968000	1463	3226958875000	2.7837
			2014	6149225000	3407	4978758224000	4.2080
			2015	6149225000	2640	5438101365000	2.9852
			2016	8969951372	2360	12498715304000	1.6937
			2017	8969951372	1550	14631824613000	0.9502
			2018	8969951372	1655	17215314565000	0.8623

Lampiran 8

Statistik Deskriptif

Date: 8/19/19
Time: 21:26
Sample: 2013 2018

	Y	X1	X2	X3	X4
Mean	1.324538	0.046760	0.577694	5.366667	1.688830
Median	1.032565	0.003059	0.646863	5.500000	1.072702
Maximum	5.402060	0.547314	0.912764	9.000000	7.861121
Minimum	0.199339	0.000001	0.048853	2.000000	0.118830
Std. Dev.	0.913264	0.113476	0.237519	1.913830	1.657307
Skewness	1.906671	3.537600	-0.884526	0.147625	1.866003
Kurtosis	7.250215	14.66466	2.765170	1.813060	6.369558
Jarque-Bera Probability	163.0295 0.000000	930.6131 0.000000	15.92346 0.000349	7.479994 0.023754	126.4090 0.000000
Sum	158.9446	5.611167	69.32330	644.0000	202.6596
Sum Sq. Dev.	99.25198	1.532348	6.713398	435.8667	326.8532
Observations	120	120	120	120	120

Lampiran 9

a. Model Estimasi Data Panel

- *Common Effect Model (CEM)*

Dependent Variable: Y
Method: Panel Least Squares
Date: 8/19/19 Time: 21:44
Sample: 2013 2018
Periods included: 6
Cross-sections included: 20
Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.596914	0.103753	5.753230	0.0005
X1	-0.349877	0.229480	-1.524654	0.4376
X2	-0.057627	0.106813	-0.539515	0.8985
X3	-0.027547	0.013281	-2.074176	0.1149
X4	0.547778	0.014832	36.93208	0.0000
R-squared	0.286078	Mean dependent var		1.324538
Adjusted R-squared	0.261246	S.D. dependent var		0.913264
S.E. of regression	0.224892	Akaike info criterion		-0.105616
Sum squared resid	5.816307	Schwarz criterion		0.010530
Log likelihood	11.33695	Hannan-Quinn criter.		-0.058449
F-statistic	461.8525	Durbin-Watson stat		0.647868
Prob(F-statistic)	0.000000			

Lampiran 9 (lanjutan)

- *Fixed Effect Model (FEM)*

Dependent Variable: Y
 Method: Panel Least Squares
 Date: 8/19/19 Time: 21:46
 Sample: 2013 2018
 Periods included: 6
 Cross-sections included: 20
 Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.722198	0.198809	3.632628	0.0000
X1	0.501586	0.643492	0.779475	0.1301
X2	0.026357	0.206059	0.127910	0.5906
X3	-0.042489	0.026707	-1.590947	0.0403
X4	0.468781	0.020816	22.52021	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.321575	Mean dependent var	1.324538
Adjusted R-squared	0.293009	S.D. dependent var	0.913264
S.E. of regression	0.153628	Akaike info criterion	-0.731712
Sum squared resid	2.265743	Schwarz criterion	-0.174214
Log likelihood	67.90273	Hannan-Quinn criter.	-0.505309
F-statistic	178.6664	Durbin-Watson stat	2.155158
Prob(F-statistic)	0.000000		

Lampiran 9 (lanjutan)

- *Random Effect Model (REM)*

Dependent Variable: Y
 Method: Panel EGLS (Cross-section random effects)
 Date: 8/19/19 Time: 21:48
 Sample: 2013 2018
 Periods included: 6
 Cross-sections included: 20
 Total panel (balanced) observations: 120
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.593203	0.148331	3.999183	0.0001
X1	-0.175061	0.356443	-0.491133	0.6243
X2	0.014201	0.150409	0.094413	0.9249
X3	-0.020072	0.018439	-1.088578	0.2786
X4	0.496813	0.017603	28.22370	0.0000

Effects Specification		S.D.	Rho
Cross-section random		0.170322	0.5514
Idiosyncratic random		0.153628	0.4486

Weighted Statistics			
R-squared	0.886070	Mean dependent var	0.457695
Adjusted R-squared	0.882107	S.D. dependent var	0.460662
S.E. of regression	0.158171	Sum squared resid	2.877081
F-statistic	223.5970	Durbin-Watson stat	1.222025
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.933663	Mean dependent var	1.324538
Sum squared resid	6.584060	Durbin-Watson stat	0.533997

Lampiran 9 (lanjutan)

b. Pemilihan Model Estimasi Data Panel

- Uji *chow*

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.917799	(19,96)	0.0000
Cross-section Chi-square	113.131555	19	0.0000

- Uji *hausman*

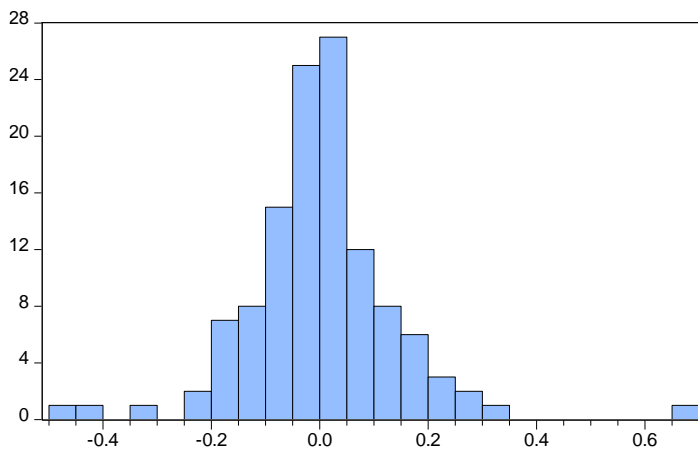
Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	10.902558	4	0.0277

Lampiran 10

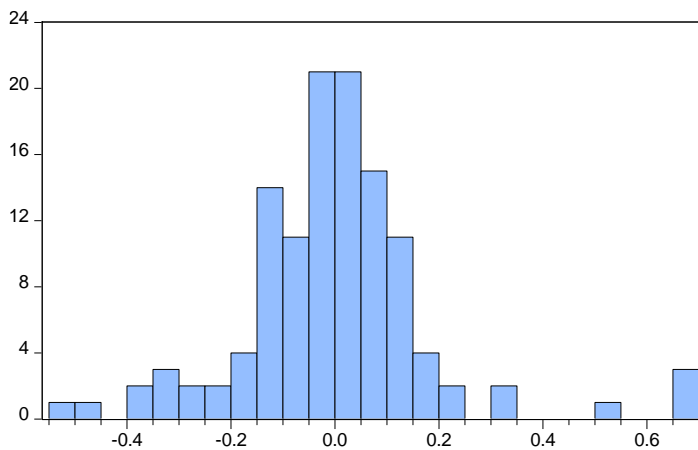
Uji Asumsi Klasik

a. Uji Normalitas



Series: Standardized Residuals	
Sample 2013 2018	
Observations 120	
Mean	5.55e-18
Median	0.000302
Maximum	0.681756
Minimum	-0.488560
Std. Dev.	0.137985
Skewness	0.553111
Kurtosis	8.550762
Jarque-Bera	160.1734
Probability	0.000000

Uji normalitas transformasi logaritma



Series: Standardized Residuals	
Sample 2013 2018	
Observations 120	
Mean	1.62e-18
Median	-0.003545
Maximum	0.697519
Minimum	-0.514220
Std. Dev.	0.186966
Skewness	0.927532
Kurtosis	7.135685
Jarque-Bera	102.7258
Probability	0.000000

Lampiran 10 (lanjutan)

b. Uji Multikolinieritas

	X1	X2	X3	X4
X1	1.000000	-0.556365	-0.254544	-0.164725
X2	-0.556365	1.000000	0.008227	0.110741
X3	-0.254544	0.008227	1.000000	0.532804
X4	-0.164725	0.110741	0.532804	1.000000

c. Uji Heteroskedastisitas

Dependent Variable: RESABS
 Method: Panel Least Squares
 Date: 8/19/19 Time: 21:59
 Sample: 2013 2018
 Periods included: 6
 Cross-sections included: 20
 Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.696172	1.269226	-1.336382	0.1846
X1	0.041782	0.058309	0.716565	0.4754
X2	-0.295612	0.402109	-0.735153	0.4640
X3	-0.469479	0.726140	-0.646540	0.5195
X4	0.452858	0.234603	1.930314	0.0565

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.492907	Mean dependent var	-2.455447
Adjusted R-squared	0.371416	S.D. dependent var	1.226370
S.E. of regression	0.972307	Akaike info criterion	2.958566
Sum squared resid	90.75658	Schwarz criterion	3.516065
Log likelihood	-153.5140	Hannan-Quinn criter.	3.184969
F-statistic	4.057142	Durbin-Watson stat	1.539740
Prob(F-statistic)	0.000001		

Lampiran 10 (lanjutan)

d. Uji Autokorelasi

Dependent Variable: Y
 Method: Panel Least Squares
 Date: 8/19/19 Time: 21:36
 Sample: 2013 2018
 Periods included: 6
 Cross-sections included: 20
 Total panel (balanced) observations: 120

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.321575	Mean dependent var	1.324538
Adjusted R-squared	0.293009	S.D. dependent var	0.913264
S.E. of regression	0.153628	Akaike info criterion	-0.731712
Sum squared resid	2.265743	Schwarz criterion	-0.174214
Log likelihood	67.90273	Hannan-Quinn criter.	-0.505309
F-statistic	178.6664	Durbin-Watson stat	2.155158
Prob(F-statistic)	0.000000		

Tabel Durbin-Watson (DW), $\alpha = 5\%$

k = 4, n = 120

n	k = 1		k = 2		k = 3		k = 4		k = 5	
	dL	dU	dL	dU	dL	dU	dL	dU	dL	dU
116	1.6797	1.7145	1.6622	1.7323	1.6445	1.7504	1.6265	1.7690	1.6084	1.7878
117	1.6812	1.7156	1.6638	1.7332	1.6462	1.7512	1.6284	1.7696	1.6105	1.7883
118	1.6826	1.7167	1.6653	1.7342	1.6479	1.7520	1.6303	1.7702	1.6125	1.7887
119	1.6839	1.7178	1.6669	1.7352	1.6496	1.7528	1.6321	1.7709	1.6145	1.7892
120	1.6853	1.7189	1.6684	1.7361	1.6513	1.7536	1.6339	1.7715	1.6164	1.7896
121	1.6867	1.7200	1.6699	1.7370	1.6529	1.7544	1.6357	1.7721	1.6184	1.7901
122	1.6880	1.7210	1.6714	1.7379	1.6545	1.7552	1.6375	1.7727	1.6203	1.7905
123	1.6893	1.7221	1.6728	1.7388	1.6561	1.7559	1.6392	1.7733	1.6222	1.7910
124	1.6906	1.7231	1.6743	1.7397	1.6577	1.7567	1.6409	1.7739	1.6240	1.7914
125	1.6919	1.7241	1.6757	1.7406	1.6592	1.7574	1.6426	1.7745	1.6258	1.7919

Lampiran 11

Regresi Data Panel Model Terpilih *Fixed Effect Model (FEM)*

Dependent Variable: Y
Method: Panel Least Squares
Date: 8/19/19 Time: 21:36
Sample: 2013 2018
Periods included: 6
Cross-sections included: 20
Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.722198	0.198809	3.632628	0.0000
X1	0.501586	0.643492	0.779475	0.1301
X2	0.026357	0.206059	0.127910	0.5906
X3	-0.042489	0.026707	-1.590947	0.0403
X4	0.468781	0.020816	22.52021	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.321575	Mean dependent var	1.324538
Adjusted R-squared	0.293009	S.D. dependent var	0.913264
S.E. of regression	0.153628	Akaike info criterion	-0.731712
Sum squared resid	2.265743	Schwarz criterion	-0.174214
Log likelihood	67.90273	Hannan-Quinn criter.	-0.505309
F-statistic	178.6664	Durbin-Watson stat	2.155158
Prob(F-statistic)	0.000000		