

## BAB V

### KESIMPULAN DAN SARAN

#### A. Kesimpulan

Dari hasil penelitian yang telah dilakukan terhadap determinan penentu penanaman modal asing di Indonesia periode 1980 – 2007 dengan menggunakan *Error Correction Model* (ECM) , maka dapat disimpulkan beberapa hal yaitu:

1. Dalam pengujian asumsi klasik tidak ditemuinya berbagai gangguan terhadap model yang dipakai (tidak terdapat gangguan multikolinearitas, heteroskedastisitas, dan autokorelasi) hal ini menunjukkan bahwa model yang digunakan sudah valid dan memenuhi kriteria BLUE.
2. Adanya perubahan struktural yang terjadi pada tahun 1997 dan 2005. Hal ini menunjukkan bahwa perubahan besarnya PMA yang masuk di Indonesia pada tahun tersebut lebih banyak dipengaruhi oleh variabel yang tidak terdapat dalam model penelitian.
3. Variabel independen (*Gross Domestic Product*/GDP, tenaga kerja, tingkat suku bunga, dan kurs) secara bersama – sama berpengaruh terhadap variabel dependen (penanaman modal asing).
4. Variabel GDP baik dalam jangka panjang dan jangka pendek berpengaruh positif dan signifikan terhadap masuknya PMA di Indonesia periode 1980 – 2007.
5. Variabel tenaga kerja (diproksi dengan tingkat produktivitas) dalam jangka panjang berpengaruh positif dan signifikan terhadap masuknya PMA di Indonesia periode 1980 – 2007. Pada variabel tenaga kerja dalam jangka

pendek tidak berpengaruh terhadap masuknya PMA di Indonesia periode 1980 – 2007.

6. Variabel tingkat suku bunga (diproksi dengan Sertifikat Bank Indonesia<sup>3</sup> bulan) baik dalam jangka panjang dan jangka pendek berpengaruh negatif dan signifikan terhadap masuknya PMA di Indonesia periode 1980 – 2007.
7. Variabel kurs rupiah terhadap dollar Amerika Serikat dalam jangka panjang berpengaruh negatif dan signifikan terhadap masuknya PMA di Indonesia periode 1980 – 2007. Variabel kurs dalam jangka pendek tidak berpengaruh terhadap masuknya PMA di Indonesia.
8. Hipotesis penelitian tentang GDP dan tingkat suku bunga diterima, sedangkan pada produktivitas tenaga kerja hipotesis yang diterima hanya pada jangka panjang saja. Pada variabel kurs hipotesis ditolak karena kurs berpengaruh negatif (terjadinya depresiasi pada rupiah).
9. *Error Correction Term* (ECT) berpengaruh secara signifikan terhadap PMA. Nilai koefisien dari ECT menentukan seberapa cepat keseimbangan bisa tercapai kembali bila didapat penyimpangan dalam masuknya PMA di Indonesia pada periode 1980 – 2007.

## **B. Saran**

Upaya penarikan investasi asing ke Indonesia perlu terus ditingkatkan oleh karena itu upaya – upaya yang perlu dilakukan adalah:

1. Meningkatkan *output* yang dihasilkan yang salah satunya tercermin pada GDP , karena bagaimanapun juga para investor akan melihat GDP ini

sebagai salah satu pertimbangan investor dalam melakukan investasi di Indonesia.

2. Peningkatan produktivitas tenaga kerja. Misalnya dengan pengembangan kualitas dan produktivitas Sumber Daya Manusia, dengan berbagai pelatihan – pelatihan dan bentuk pendidikan yang lainnya.
3. Menjaga kestabilan nilai tukar/kurs rupiah terhadap mata uang asing, karena kurs juga merupakan salah satu indikator yang menunjukkan kestabilan dan kondisi perekonomian suatu negara, di mana hal ini sangat berpengaruh terhadap persepsi para investor asing pada negara tersebut.
4. Penentuan tingkat suku bunga yang lebih baik untuk semua pihak, sehingga investor merasa tertarik untuk melakukan investasi di Indonesia terutama dalam sektor riil diperlukan tingkat bunga yang diharapkan adalah rendah sehingga bisa menyerap investasi yang lebih banyak. Sangat diperlukan implementasi yang tegas terhadap perangkat peraturan yang mendukung perbaikan iklim investasi, terutama tentang perpajakan, ketenagakerjaan, dan penanaman modal. Namun, perlu dipikirkan agar peraturan tidak terlalu berlebihan karena cenderung akan menambah biaya investasi dan mengurangi produktivitas
5. Kajian yang lebih komprehensif perlu dilakukan, guna mengetahui permasalahan yang sesungguhnya dihadapi dalam investasi, sehingga penentuan strategi kebijakan investasi menjadi lebih tepat. Karena penentu PMA terdiri dari berbagai faktor – faktor yang lain, baik dari yang ekonomi maupun yang non-ekonomi.

## DAFTAR PUSTAKA

- Abdullatif alani, Emad, Dr, 2006. "Crowding-Out And Crowding In Effect Of Government Bonds Market on Private Sector Investment (Japanese Case Study)", *Institute of Developing Economies (IDE)*, Jepang), diakses dari <http://www.adb.or> tanggal 24 Oktober 2008.
- Aghosin, Manuel, & Mayer, Richardo. 2000. "Foreign Direct Investment In Developing Countries Does It Crowd In Domestik Investment ", *Department of Economics, University of Chile, Santiago(Chile)*. diakses dari <http://www.UNCTAD.or> tanggal 24 Oktober 2008.
- Agus, Nusantara & Eny, Puji Astutik. 2001. "Analisis Peranan Modal Asing Terhadap Pertumbuhan Ekonomi Indonesia", *Jurnal Bisnis dan Ekonomi*. Vol.3 No.2
- Ambarsari, Indah & Purnomo, Didit 2005. "Studi Tentang Penanaman Modal Asing di Indonesia", *Jurnal Ekonomi Pembangunan*. Vol.6 No.1.
- Arlini, Silvia Mila, 2004, "Crowding in /Crowding out Investasi dari FDI di Indonesia", *Jurnal Ekonomi dan Bisnis* Vol. 7 No 1.
- Arsyad, Lincolin, 1997. *Ekonomi Pembangunan*, edisi ke tiga, Bagian Penerbitan STIE YKPN, Yogyakarta
- Baum, C.Warren, dan Tolbert,M. Stokes, 1988. *Investasi Dalam Pembangunan*, Penerbit Universitas Indonesia. Jakarta.
- Emory, William C. 1980. *Business Research Methods*. Revised Edition. Richard D. Irwin Inc. Homewood. Illinois.
- Enders, Walter (1995), *Applied Econometric Time Series*, John Wiley & Sons, Inc., United States Of America.
- Fuller, Russell.J & Farrell James L. Jr. 1987. *Modern Investment and Security Analysis*. McGraw Hill. International Editions Financial Series. Singapore.
- Gujarati, Damodar, 1995. *Basic Econometrics*, 3<sup>rd</sup> edition, McGraw-Hill Inc, New York.
- Gujarati, Damodar 1997. *Ekonometrika Dasar*. Erlangga, Jakarta.
- Gujarati, Damodar, 2003. *Basic Econometrics*, 4<sup>th</sup> edition, McGraw-Hill Inc, New York.
- Insukindro, 1999, "Pemilihan Model Ekonomi Empirik dengan Pendekatan Kesalahan", *Jurnal Ekonomi dan Bisnis Indonesia*, vol. 4, no. 1, hal. 1-8

- James, William, Dr. 2001. "Domestik Trade, Desentralization and Globalizatoin", *International Center for Southeast Asian Development (ICSAD)*. Jepang), diakses dari <http://www.adb.or> tanggal 12 Oktober 2008.
- Jones, Charles P. 1996. *Investments*. Fifth Edition. John Wiley & Sons Inc. New York.
- Londong, Ivan, 2005. *Laporan Pembangunan Dunia 2005: Iklim Investasi yang Lebih Baik Bagi Setiap Orang*. Salemba Empat. Jakarta.
- Kuncoro, Mudrajad, 2004. *Otonomi dan Pembangunan Daerah, Reformasi, Perencanaan, Strategi, dan Peluang*. Erlangga, Jakarta.
- Marzuki, Usman, 1990, *ABC Pasar Modal Indonesia*, Ikatan Sarjana Ekonomi Indonesia, Jakarta
- Nopirin, Nicholas 2000, *Ekonomika Makro*, STEI YKPN, Yogyakarta
- Nurchayaningtyas, 2006. "Determinan Ekonomi Masuknya FDI (Foreign Direct Investment) Ke ASEAN-4 (Indonesia, Malaysia, dan Filipina)", *Modus*, Vol.18
- Panglakyim, J, & Pangestu, Mari, 1984. *Investasi Langsung Jepang di Kawasan ASEAN*, Andi Offset. Yogyakarta.
- Pontoh, Husein, 2004. "FDI dan Globalisasi Ekonomi", diakses dari <http://www.wordpress.com> tanggal 20 Agustus 2008.
- Rahmad, Basuki & Prihadi Utomo, Yuni, 2005. "Pengaruh Hutang Luar Negeri, Penanaman Modal Asing, dan Tabungan Domestik Terhadap Pertumbuhan Ekonomi Indonesia (1976-2000)", *Jurnal Ekonomi Pembangunan*. Vol.6 No.1.
- Rahmatyo Tarhadi, Edy, 2005, "Ketimpangan Dana dan Pembiayaan Dalam Negeri, Haruskah Dipenuhi dengan Hutang Luar Negeri?", *Jurnal Ekonomi pembangunan*. Vol.6 No.2.
- Rizal, Setiawan, April 2000. "Saving – Investment Gap", *Jurnal Pasar Modal Indonesia*. Vol.4 No.2.
- Sjafrizal, 1997. *Pertumbuhan Ekonomi dan Ketimpangan Regional Wilayah Indonesia Bagian Barat*. Prisma, LP3ES.
- Suad Husnan, 1994. *Dasar-dasar Teori Portofolio*. Edisi Kedua. UPP AMP YKPN, Yogyakarta.
- Sugiyanto, Catur, 1995. *Ekonometrika Terapan Edisi I*. BPFE. Yogyakarta.

Sukirno, Sadono, (2000). *Pengantar Teori Makroekonomi*, Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia, Jakarta.

Sukirno, Sadono (2004), *Teori Mikro Ekonomi*, Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia, Jakarta.

Stoner, James A.F., R. Edward Freeman, and Daniel R.Gilbert (1995), *Management*, 6<sup>th</sup> ed., New Jersey: Englewood Cliffs

Syahib Natarsyah, Syahib. 2000. *Analisis Pengaruh Beberapa Faktor Fundamental dan Risiko Sistematis terhadap Harga Saham*. JEBI, Vol. 15, No. 3.

Tambunan, Tulus, 2006. "Iklim Investasi di Indonesia: Masalah, Tantangan, dan Potensi" *Kadin-Indonesia* diakses dari <http://www.kadin-indonesia.or.id> tanggal 28 Agustus 2008.

Widarjono, Agus, 2007. *Ekonometrika Teori Dan Aplikasi Untuk Ekonomi Dan Bisnis*, Ekonisia FE-UII. Yogyakarta.

Yaswar, Zainul basri, 2000. "Utang Luar Negeri, Investasi dan Tabungan Domestik: Sebuah Survey Literatur", *Jurnal Ekonomi dan Bisnis Indonesia*, Vol.15 No.3.

....., *Statistik Ekonomi dan Keuangan*, berbagai edisi, Bank Indonesia, Jakarta.

....., *Statistik Indonesia*, berbagai edisi, BPS, Jakarta

Lampiran 1  
DATA PENELITIAN

TH	PMA nom	GDP nom	SBI 3 Bln	Kurs		Tenaga Kerja	
	(Juta Rp)	(Juta Rp)		(Rp)	1 Rp thd USD	(Jutaorang)	Produktivitas
1980	397.530	45.445.700	15,52	631	0,00158479	53,158	854.917,416
1981	195.164	54.027.000	17,14	643	0,00155521	54,458	992.082,001
1982	1.134.188	59.632.600	17,21	692	0,00144509	55,130	1.081.680,259
1983	1.964.776	73.697.600	16,20	1.076	0,00092937	56,143	1.312.688,249
1984	856.167	85.914.400	17,06	1.131	0,00088417	56,528	1.519.858,335
1985	791.220	94.491.500	16,01	1.165	0,00085837	56,451	1.673.879,463
1986	2.132.732	102.545.900	9,37	1.652	0,00060533	57,195	1.792.920,348
1987	2.676.492	124.538.900	16,83	1.729	0,00057837	57,987	2.147.692,684
1988	1.039.680	139.452.100	16,93	1.805	0,00055402	74,923	1.861.282,177
1989	1.296.482	167.187.700	17,08	1.901	0,00052604	76,089	2.197.276,596
1990	2.175.264	196.919.200	17,84	1.992	0,00050201	77,802	2.531.023,544
1991	3.055.884	227.450.200	18,65	2.062	0,00048497	78,456	2.899.094,520
1992	3.749.470	259.884.500	19,93	2.110	0,00047393	80,704	3.220.222,319
1993	4.406.600	302.017.800	15,49	2.200	0,00045455	84,461	3.575.838,230
1994	4.865.264	382.219.700	13,09	2.308	0,00043328	85,776	4.456.037,083
1995	10.356.518	454.514.100	15,77	2.383	0,00041964	86,361	5.262.943,313
1996	14.177.850	532.630.800	16,67	4.650	0,00021505	90,325	5.896.832,435
1997	7.262.625	627.695.500	18,32	8.025	0,00012461	91,325	6.873.213,111
1998	3.415.820	1.002.333.000	30,85	9.595	0,00010422	92,735	10.808.584,470
1999	28.236.000	1.099.731.600	23,52	10.400	0,00009615	94,847	11.594.771,380
2000	40.549.410	1.264.918.700	17,45	8.910	0,00011223	95,651	13.224.326,169
2001	26.212.485	1.684.280.482	15,65	8.805	0,00011357	98,812	17.045.234,019
2002	11.175.950	1.726.461.982	12,13	8.110	0,00012330	100,779	17.131.122,125
2003	5.053.605	1.933.266.623	8,34	8.465	0,00011813	100,316	19.271.767,445
2004	9.503.670	2.202.878.171	7,29	9.290	0,00010764	103,973	21.186.960,220
2005	22.344.300	2.729.708.200	12,83	9.900	0,00010101	105,762	25.809.817,099
2006	24.786.782	3.339.479.000	9,50	9.197	0,00010873	107,633	31.026.592,266
2007	26.670.874	3.957.403.900	7,83	9.376	0,00010666	109,592	36.110.203,810

Sumber: Statistik Indonesia (BPS), dan Statistik Ekonomi dan Keuangan Indonesia (BI), diolah

PMA : penanaman modal asing di Indonesia (dalam satuan juta rupiah)

GDP : *Gross Domestic Product* nominal (dalam satuan juta rupiah)

Suku bunga : Sertifikat Bank Indonesia 3 bulan (dalam satuan persen)

Kurs : nilai tukar rupiah terhadap dollar Amerika serikat (perhitungannya adalah per 1 rupiah nilainya/dihargai berapa dollar AS)

Produktivitas tenaga kerja : GDP nominal (dalam juta rupiah) dibagi dengan jumlah tenaga kerja (dalam juta orang).

Lampiran 2.  
UJI AKAR-AKAR UNIT NILAI DF

**Variabel PMA**

ADF Test Statistic	-2.324209	1% Critical Value*	-4.6567
		5% Critical Value	-3.6438
		10% Critical Value	-2.9845

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PMA)

Method: Least Squares

Date: 14/12/08 Time: 06:12

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PMA(-1)	-11.94031	6.029721	1.980243	0.0663
D(PMA(-1))	-0.341713	11.34999	-1.005916	0.3304
D(PMA(-2))	0.480308	0.496093	0.968181	0.3483
D(PMA(-3))	0.265201	0.292719	0.905991	0.3793
C	0.833748	0.391854	2.127704	0.0504
R-squared	0.849183	Mean dependent var	7.440433	
Adjusted R-squared	0.829019	S.D. dependent var	0.397771	
S.E. of regression	0.377564	Akaike info criterion	1.074510	
Sum squared resid	2.138318	Schwarz criterion	1.273340	
Log likelihood	-6.207847	F-statistic	1.659409	
Durbin-Watson stat	1.136078	Prob(F-statistic)	0.000087	

**Variabel GDP**

ADF Test Statistic	-2.527829	1% Critical Value*	-3.8847
		5% Critical Value	-3.1242
		10% Critical Value	-2.7564

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP)

Method: Least Squares

Date: 14/12/08 Time: 06:14

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	25.14611	7.699683	3.265863	0.0052
D(GDP(-1))	-0.603575	0.410619	-1.469916	0.1622
D(GDP(-2))	-0.310561	0.375535	-0.826984	0.4212
D(GDP(-3))	0.195634	0.215933	0.905991	0.3793
C	0.009873	0.076507	1.190643	0.0802
R-squared	0.652789	Mean dependent var	13.73761	
Adjusted R-squared	-0.616654	S.D. dependent var	0.556905	
S.E. of regression	0.561523	Akaike info criterion	1.868337	
Sum squared resid	4.729629	Schwarz criterion	2.067167	
Log likelihood	-13.74920	F-statistic	0.901714	
Durbin-Watson stat	1.385571	Prob(F-statistic)	0.000074	



**Variabel L**

ADF Test Statistic	-2.376788	1% Critical Value*	-3.7987
		5% Critical Value	-3.1209
		10% Critical Value	-2.6578

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L)

Method: Least Squares

Date: 14/12/08 Time: 06:15

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
L(-1)	0.410029	0.168113	2.439009	0.0268
D(L(-1))	0.825094	0.235938	3.497086	0.0030
D(L(-2))	-0.429601	0.200765	-2.139823	0.0481
D(L(-3))	0.469675	0.226860	2.070332	0.0550
C	0.003007	0.002323	1.294266	0.2139
R-squared	0.661278	Mean dependent var	17.24954	
Adjusted R-squared	-0.606466	S.D. dependent var	0.329050	
S.E. of regression	0.330112	Akaike info criterion	0.805897	
Sum squared resid	1.634614	Schwarz criterion	1.004726	
Log likelihood	-3.656024	F-statistic	0.961453	
Durbin-Watson stat	0.447275	Prob(F-statistic)	0.000028	

**Variabel r**

ADF Test Statistic	-2.435485	1% Critical Value*	-3.8735
		5% Critical Value	-3.6891
		10% Critical Value	-2.5709

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R)

Method: Least Squares

Date: 14/12/08 Time: 06:17

Sample(adjusted): 1985 2007

Included observations: 21 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R(-1)	2.424435	0.188609	1.214047	0.2423
D(R(-1))	1.078027	0.250886	-0.889524	0.3869
D(R(-2))	0.896566	0.153377	-3.603205	0.0024
D(R(-3))	-0.064900	0.186365	-0.245936	0.8089
C	-0.014574	0.008388	0.610175	0.5503
R-squared	0.813538	Mean dependent var	14.95667	
Adjusted R-squared	0.807975	S.D. dependent var	0.943546	
S.E. of regression	0.286231	Akaike info criterion	0.588052	
Sum squared resid	1.065064	Schwarz criterion	0.886295	
Log likelihood	0.413510	F-statistic	36.51981	
Durbin-Watson stat	1.321364	Prob(F-statistic)	0.000087	

**Variabel E**

ADF Test Statistic	-3.107493	1% Critical Value*	-3.9867
		5% Critical Value	-3.6202
		10% Critical Value	-2.0982

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(E)

Method: Least Squares

Date: 14/12/08 Time: 06:18

Sample(adjusted): 1986 2007

Included observations: 20 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
E(-1)	0.260311	0.038042	6.842698	0.0002
D(E(-1))	0.702317	0.206823	3.395731	0.0048
D(E(-2))	2218.237	710.6323	3.121498	0.0081
D(E(-3))	-796.8925	406.8460	-1.958708	0.0720
C	2961383.	603627.1	4.905980	0.0003
R-squared	0.856992	Mean dependent var		0.696517
Adjusted R-squared	0.801989	S.D. dependent var		0.609808
S.E. of regression	1307952.	Akaike info criterion		0.589389
Sum squared resid	2.22E+13	Schwarz criterion		4.863319
Log likelihood	-290.9502	F-statistic		-14.01401
Durbin-Watson stat	1.263918	Prob(F-statistic)		0.000145

Lampiran 3  
UJI AKAR – AKAR UNIT NILAI ADF

**Variabel PMA**

ADF Test Statistic	-2.234506	1% Critical Value*	-3.9815
		5% Critical Value	-3.3730
		10% Critical Value	-3.1225

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PMA)

Method: Least Squares

Date: 14/12/08 Time: 06:20

Sample(adjusted): 1984 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PMA(-1)	0.385905	0.159496	2.419522	0.0270
D(PMA(-1))	0.778824	0.217237	3.585137	0.0023
D(PMA(-2))	-0.424504	0.196562	-2.159648	0.0454
D(PMA(-3))	0.410453	0.197871	2.074341	0.0535
C	0.002533	0.002127	1.190643	0.2502
@TREND(1980)	0.237736	0.171475	1.386417	0.1835
R-squared	0.564466	Mean dependent var	14.95667	
Adjusted R-squared	0.455582	S.D. dependent var	0.943546	
S.E. of regression	0.008414	Akaike info criterion	2.001475	
Sum squared resid	0.001133	Schwarz criterion	2.250011	
Log likelihood	73.39193	F-statistic	8.032789	
Durbin-Watson stat	1.894603	Prob(F-statistic)	0.001393	

**Variabel GDP**

ADF Test Statistic	-3.055896	1% Critical Value*	-4.4415
		5% Critical Value	-3.4330
		10% Critical Value	-3.0135

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP)

Method: Least Squares

Date: 14/12/08 Time: 06:22

Sample(adjusted): 1985 2007

Included observations: 22 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	0.644014	0.210745	3.055896	0.0075
D(GDP(-1))	0.949958	0.227226	4.180676	0.0007
D(GDP(-2))	-0.325644	0.194006	-1.678526	0.1127
D(GDP(-3))	0.528621	0.198660	2.660937	0.0171
C	0.013846	0.006766	2.046330	0.0575
@TREND(1980)	-0.000646	0.000369	-1.750928	0.0991
R-squared	0.630316	Mean dependent var	-0.000840	
Adjusted R-squared	0.514790	S.D. dependent var	0.011179	
S.E. of regression	0.007787	Akaike info criterion	-6.645799	
Sum squared resid	0.000970	Schwarz criterion	-6.348242	
Log likelihood	79.10379	F-statistic	5.456051	
Durbin-Watson stat	1.972700	Prob(F-statistic)	0.004062	

**Variabel L**

ADF Test Statistic	-1.721190	1% Critical Value*	-4.4415
		5% Critical Value	-3.6330
		10% Critical Value	-3.2535

\*MacKinnon critical values for rejection of hypothesis of a unit root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L)

Method: Least Squares

Date: 14/12/08 Time: 06:24

Sample(adjusted): 1985 2007

Included observations: 22 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
L(-1)	0.644829	0.374642	1.721190	0.1045
D(L(-1))	0.065366	0.323188	0.202254	0.8423
D(L(-2))	-0.381662	0.196650	-1.940816	0.0701
D(L(-3))	0.030771	0.183503	0.167687	0.8689
C	0.036177	0.026198	1.380919	0.1863
@TREND(1980)	-0.000958	0.000787	-1.217705	0.2410
R-squared	0.627232	Mean dependent var	-0.001064	
Adjusted R-squared	0.502976	S.D. dependent var	0.011404	
S.E. of regression	0.008040	Akaike info criterion	6.573897	
Sum squared resid	0.000970	Schwarz criterion	6.275462	
Log likelihood	75.02592	F-statistic	5.047909	
Durbin-Watson stat	1.984657	Prob(F-statistic)	0.000538	

**Variabel r**

ADF Test Statistic	-1.666862	1% Critical Value*	-4.4691
		5% Critical Value	-3.6591
		10% Critical Value	-3.4202

\*MacKinnon critical values for rejection of hypothesis of a unit root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R)

Method: Least Squares

Date: 14/12/08 Time: 06:25

Sample(adjusted): 1984 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R(-1)	0.642567	0.385495	1.666862	0.1163
D(R(-1))	0.052920	0.334499	0.158207	0.8764
D(R(-2))	-0.386809	0.202880	-1.906594	0.0759
D(R(-3))	0.020249	0.191297	0.105849	0.9171
C	0.037566	0.027760	1.353269	0.1960
@TREND(1980)	-0.001006	0.000822	-1.224353	0.2397
R-squared	0.748253	Mean dependent var	-0.003476	
Adjusted R-squared	0.664337	S.D. dependent var	0.018382	
S.E. of regression	0.010650	Akaike info criterion	6.011528	
Sum squared resid	0.001701	Schwarz criterion	5.713093	
Log likelihood	69.12104	F-statistic	8.916710	
Durbin-Watson stat	1.842447	Prob(F-statistic)	0.000429	

**Variabel E**

ADF Test Statistic	-2.558380	1% Critical Value*	-3.7856
		5% Critical Value	-3.0114
		10% Critical Value	-2.1457

\*MacKinnon critical values for rejection of hypothesis of a unit root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(E)

Method: Least Squares

Date: 14/12/08 Time: 06:26

Sample(adjusted): 1984 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
E(-1)	1.142273	0.327099	3.492133	0.0030
D(E(-1))	0.692770	0.272165	2.545403	0.0216
D(E(-2))	0.377571	0.263750	1.431546	0.1715
D(E(-3))	0.401939	0.255039	1.575988	0.1346
C	10.95547	3.276229	3.343927	0.0041
@TREND(1980)	-0.275400	0.086681	-3.177159	0.0059
R-squared	0.468459	Mean dependent var	-0.198182	
Adjusted R-squared	0.302353	S.D. dependent var	1.143310	
S.E. of regression	0.954953	Akaike info criterion	2.972692	
Sum squared resid	14.59097	Schwarz criterion	3.270249	
Log likelihood	-26.69961	F-statistic	2.820232	
Durbin-Watson stat	2.049846	Prob(F-statistic)	0.051812	

Lampiran 4  
UJI INTEGRASI (FIRST DIFFERENCE) NILAI DF

**Variabel d(PMA)**

ADF Test Statistic	-3.711862	1% Critical Value*	-3.8366
		5% Critical Value	-3.1483
		10% Critical Value	-2.7180

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PMA,2)

Method: Least Squares

Date: 14/12/08 Time: 06:30

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PMA(-1))	-3.033080	1.118449	-2.711862	0.0301
D(PMA(-1),2)	1.389619	0.817071	1.700731	0.1328
D(PMA(-2),2)	0.482291	0.499509	0.965530	0.3664
D(PMA(-3),2)	0.154153	0.262529	0.587184	0.5755
C	-0.003400	0.004088	-0.831735	0.4330
R-squared	0.890589	Mean dependent var		0.002737
Adjusted R-squared	0.828069	S.D. dependent var		0.032980
S.E. of regression	0.013675	Akaike info criterion		-5.452180
Sum squared resid	0.001309	Schwarz criterion		-5.250135
Log likelihood	37.71308	F-statistic		14.24476
Durbin-Watson stat	1.706079	Prob(F-statistic)		0.001784

**Variabel d(GDP)**

ADF Test Statistic	-4.056453	1% Critical Value*	-4.0066
		5% Critical Value	-3.9483
		10% Critical Value	-3.2380

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP,2)

Method: Least Squares

Date: 14/12/08 Time: 06:33

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-2.687143	1.306688	-2.056453	0.0788
D(GDP(-1),2)	1.406529	1.045835	1.344886	0.2206
D(GDP(-2),2)	0.417524	0.620113	0.673302	0.5224
D(GDP(-3),2)	0.228356	0.395170	0.577867	0.5815
C	0.001089	0.001745	0.624103	0.5523
R-squared	0.865473	Mean dependent var		0.001711
Adjusted R-squared	0.788601	S.D. dependent var		0.013000
S.E. of regression	0.005977	Akaike info criterion		-7.107354
Sum squared resid	0.000250	Schwarz criterion		-6.905310
Log likelihood	47.64412	F-statistic		11.25857
Durbin-Watson stat	1.844329	Prob(F-statistic)		0.003598

**Variabel d(L)**

ADF Test Statistic	-3.891935	1% Critical Value*	-3.2207
		5% Critical Value	-3.1801
		10% Critical Value	-2.7349

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L,2)

Method: Least Squares

Date: 14/12/08 Time: 06:34

Sample(adjusted): 1986 2007

Included observations: 21 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(L(-1))	-3.298636	1.504897	-2.191935	0.0709
D(L(-1),2)	1.754713	1.137603	1.542464	0.1739
D(L(-2),2)	0.675273	0.697500	0.968133	0.3704
D(L(-3),2)	0.281864	0.406973	0.692587	0.5145
C	0.000615	0.001858	0.331053	0.7519
R-squared	0.875916	Mean dependent var	0.002432	
Adjusted R-squared	0.793194	S.D. dependent var	0.013381	
S.E. of regression	0.006085	Akaike info criterion	-7.062979	
Sum squared resid	0.000222	Schwarz criterion	-6.882118	
Log likelihood	43.84639	F-statistic	10.58861	
Durbin-Watson stat	1.432967	Prob(F-statistic)	0.006931	

**Variabel d(r)**

ADF Test Statistic	-4.392207	1% Critical Value*	-3.2207
		5% Critical Value	-3.1801
		10% Critical Value	-3.0319

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R,2)

Method: Least Squares

Date: 14/12/08 Time: 06:35

Sample(adjusted): 1985 2007

Included observations: 22 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(R(-1))	-2.744476	1.147257	-2.392207	0.0539
D(R(-1),2)	1.108025	0.923008	1.200450	0.2752
D(R(-2),2)	0.866085	0.685545	1.263352	0.2533
D(R(-3),2)	0.328255	0.385331	0.851878	0.4270
C	0.317197	15.33118	0.020690	0.9842
R-squared	0.816281	Mean dependent var	0.064436	
Adjusted R-squared	0.693801	S.D. dependent var	91.88232	
S.E. of regression	50.84330	Akaike info criterion	10.99833	
Sum squared resid	15510.25	Schwarz criterion	11.17919	
Log likelihood	-55.49081	F-statistic	6.664627	
Durbin-Watson stat	2.019110	Prob(F-statistic)	0.021386	

**Variabel d(E)**

ADF Test Statistic	-4.671688	1% Critical Value*	-4.1366
		5% Critical Value	-3.1483
		10% Critical Value	-2.5490

\*MacKinnon critical values for rejection of hypothesis of a UNITt root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(E,2)

Method: Least Squares

Date: 14/12/08 Time: 06:38

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(E(-1))	-1.872927	1.120381	-1.671688	0.1385
D(E(-1),2)	0.533029	0.921731	0.578291	0.5812
D(E(-2),2)	0.149303	0.689935	0.216402	0.8348
D(E(-3),2)	-0.046343	0.419032	-0.110595	0.9150
C	-0.220358	1.251664	-0.176052	0.8652
R-squared	0.661010	Mean dependent var		0.003333
Adjusted R-squared	0.467302	S.D. dependent var		5.878578
S.E. of regression	4.290548	Akaike info criterion		6.045043
Sum squared resid	128.8616	Schwarz criterion		6.247087
Log likelihood	-31.27026	F-statistic		3.412400
Durbin-Watson stat	1.944517	Prob(F-statistic)		0.075153



Lampiran 5  
UJI INTEGRASI (FIRST DIFFERENSI) NILAI ADF

**Variabel d(PMA)**

ADF Test Statistic	-5.371018	1% Critical Value*	-4.9893
		5% Critical Value	-3.8730
		10% Critical Value	-3.0920

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(PMA,2)

Method: Least Squares

Date: 14/12/08 Time: 06:40

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PMA(-1))	-3.867407	1.147252	-3.371018	0.0150
D(PMA(-1),2)	1.891294	0.808627	2.338896	0.0579
D(PMA(-2),2)	0.771795	0.490128	1.574681	0.1664
D(PMA(-3),2)	0.238631	0.244678	0.975287	0.3671
C	-0.024966	0.014222	-1.755385	0.1297
@TREND(1980)	0.001959	0.001247	1.570896	0.1673
R-squared	0.922474	Mean dependent var		0.002737
Adjusted R-squared	0.857870	S.D. dependent var		0.032980
S.E. of regression	0.012433	Akaike info criterion		-5.630015
Sum squared resid	0.000928	Schwarz criterion		-5.387561
Log likelihood	39.78009	F-statistic		14.27875
Durbin-Watson stat	1.347397	Prob(F-statistic)		0.002795

**Variabel d(GDP)**

ADF Test Statistic	-3.985685	1% Critical Value*	-3.0249
		5% Critical Value	-2.9873
		10% Critical Value	-2.3690

\*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GDP,2)

Method: Least Squares

Date: 14/12/08 Time: 06:41

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-3.758649	1.191072	-3.155685	0.0197
D(GDP(-1),2)	2.081004	0.918852	2.264788	0.0641
D(GDP(-2),2)	0.843518	0.549344	1.535500	0.1756
D(GDP(-3),2)	0.379447	0.332954	1.139636	0.2979
C	-0.009472	0.005263	-1.799793	0.1220
@TREND(1980)	0.001016	0.000487	2.085762	0.0821
R-squared	0.922017	Mean dependent var		0.001711
Adjusted R-squared	0.907030	S.D. dependent var		0.013000
S.E. of regression	0.004916	Akaike info criterion		7.485953
Sum squared resid	0.000145	Schwarz criterion		7.243500
Log likelihood	50.91572	F-statistic		14.18788
Durbin-Watson stat	1.708127	Prob(F-statistic)		0.002844

**Variabel d(L)**

ADF Test Statistic	-5.864068	1% Critical Value*	-4.1322
		5% Critical Value	-3.8725
		10% Critical Value	-3.2152

\*MacKinnon critical values for rejection of hypothesis of a unit root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(L,2)

Method: Least Squares

Date: 14/12/08 Time: 06:44

Sample(adjusted): 1986 2007

Included observations: 21 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(L(-1))	-4.002076	1.035716	-3.864068	0.0118
D(L(-1),2)	1.949645	0.728420	2.676540	0.0440
D(L(-2),2)	0.820746	0.442049	1.856684	0.1225
D(L(-3),2)	0.232946	0.220144	1.058151	0.3384
C	-0.035888	0.015032	-2.387477	0.0626
@TREND(1980)	0.002874	0.001267	2.268284	0.0726
R-squared	0.944879	Mean dependent var		0.004897
Adjusted R-squared	0.889758	S.D. dependent var		0.033688
S.E. of regression	0.011185	Akaike info criterion		5.845975
Sum squared resid	0.000626	Schwarz criterion		5.628941
Log likelihood	38.15286	F-statistic		17.14186
Durbin-Watson stat	1.524401	Prob(F-statistic)		0.003649

**Variabel d(r)**

ADF Test Statistic	-4.350120	1% Critical Value*	-4.0253
		5% Critical Value	-3.6879
		10% Critical Value	-3.3264

\*MacKinnon critical values for rejection of hypothesis of a unit root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(R,2)

Method: Least Squares

Date: 14/12/08 Time: 06:45

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(R(-1))	-2.916693	1.241082	-2.350120	0.0656
D(R(-1),2)	1.239067	0.995903	1.244164	0.2686
D(R(-2),2)	0.958643	0.738123	1.298758	0.2507
D(R(-3),2)	0.372784	0.412653	0.903385	0.4077
C	36.45107	59.93793	0.608147	0.5697
R-squared	0.829636	Mean dependent var		0.064436
Adjusted R-squared	0.659272	S.D. dependent var		91.88232
S.E. of regression	53.63344	Akaike info criterion		11.10467
Sum squared resid	14382.73	Schwarz criterion		11.32171
Log likelihood	-55.07571	F-statistic		4.869791
Durbin-Watson stat	2.105255	Prob(F-statistic)		0.053603

**Variabel d(E)**

ADF Test Statistic	-4.551530	1% Critical Value*	-4.3528
		5% Critical Value	-3.0330
		10% Critical Value	-3.0245

\*MacKinnon critical values for rejection of hypothesis of a unit root.

## Augmented Dickey-Fuller Test Equation

Dependent Variable: D(E,2)

Method: Least Squares

Date: 14/12/08 Time: 06:47

Sample(adjusted): 1985 2007

Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(E(-1))	-1.887127	1.216300	-1.551530	0.1718
D(E(-1),2)	0.543085	0.999092	0.543579	0.6063
D(E(-2),2)	0.152610	0.745153	0.204803	0.8445
D(E(-3),2)	-0.047305	0.452267	-0.104594	0.9201
C	0.217112	4.315502	0.050310	0.9615
@TREND(1980)	-0.041988	0.393391	-0.106734	0.9185
R-squared	0.661653	Mean dependent var		0.003333
Adjusted R-squared	0.379697	S.D. dependent var		5.878578
S.E. of regression	4.629928	Akaike info criterion		6.209813
Sum squared resid	128.6174	Schwarz criterion		6.452266
Log likelihood	-31.25888	F-statistic		2.346653
Durbin-Watson stat	1.940435	Prob(F-statistic)		0.164329

Lampiran 6  
REGRESI KOINTGRASI *first Difference*

Dependent Variable: D(PMA)  
Method: Least Squares  
Date: 14/12/08 Time: 06:50  
Sample(adjusted): 1982 2007  
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-72.58880	0.568066	-2.258435	0.0002
D(PMA)	1.258253	0.002548	4.685549	0.0020
D(GDP)	1.078532	0.249254	2.052459	0.0033
D(L)	0.223575	0.004145	1.254893	0.0018
D(R)	-1.202405	1.032535	0.025460	0.0087
D(E)	-0.868598	0.007792	-2.258932	0.0053
R-squared	0.849867	Mean dependent var		0.258791
Adjusted R-squared	0.823563	S.D. dependent var		0.689149
S.E. of regression	0.025462	Akaike info criterion		85.29837
Sum squared resid	0.008798	Schwarz criterion		83.23588
Log likelihood	79.79964	F-statistic		7.258672
Durbin-Watson stat	2.980253	Prob(F-statistic)		0.000087

Persamaan 1

Dependent Variable: DRESID  
Method: Least Squares  
Date: 14/12/08 Time: 06:55  
Sample(adjusted): 1982 2007  
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LRESID	-1.049672	0.294631	-3.562668	0.0031
R-squared	0.473040	Mean dependent var		-0.000881
Adjusted R-squared	0.473040	S.D. dependent var		0.013289
S.E. of regression	0.009647	Akaike info criterion		-6.380018
Sum squared resid	0.001303	Schwarz criterion		-6.332815
Log likelihood	48.85013	Durbin-Watson stat		1.794256

Persamaan 2

Dependent Variable: DRESID  
Method: Least Squares  
Date: 14/12/08 Time: 06:57  
Sample(adjusted): 1985 2007  
Included observations: 23 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LRESID	-2.525442	0.718533	-3.514720	0.0079
DRESID(-1)	1.071731	0.529937	2.022373	0.0778
DRESID(-2)	0.482211	0.376955	1.279227	0.2367
DRESID(-3)	-2.525442	0.718533	-3.514720	0.0079
R-squared	0.762207	Mean dependent var		-0.001215
Adjusted R-squared	0.673035	S.D. dependent var		0.012170
S.E. of regression	0.006959	Akaike info criterion		-6.836308
Sum squared resid	0.000387	Schwarz criterion		-6.674672
Log likelihood	45.01785	F-statistic		8.547586
Durbin-Watson stat	1.574167	Prob(F-statistic)		0.007079

## Lampiran 7

REGRESI PADA MODEL ECM

Dependent Variable: D(PMA)

Method: Least Squares

Date: 14/12/08 Time: 06:59

Sample(adjusted): 1982 2007

Included observations: 24 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-88.67883	0.001368	-2.258435	0.0034
D(GDP)	1.124899	0.036984	4.685549	0.0023
D(L)	0.154865	0.457255	2.052459	0.0055
D(R)	-1.259631	0.005285	-1.254893	0.0027
D(E)	-0.072554	1.325871	-0.025460	0.0068
GDP(-1)	1.032558	1.577395	2.258932	0.0048
L(-1)	0.904542	1.602663	1.256718	0.0614
R(-1)	-0.922377	1.176787	-3.215851	0.0083
E(-1)	-0.003707	0.545919	-0.002555	0.2455
ECT	1.780739	1.818336	1.325861	0.0007
R-squared	0.880985	Mean dependent var		0.589664
Adjusted R-squared	0.860526	S.D. dependent var		0.369239
S.E. of regression	0.256288	Akaike info criterion		18.54326
Sum squared resid	1.32E-03	Schwarz criterion		17.47211
Log likelihood	53.25612	F-statistic		18.10055
Durbin-Watson stat	13.42859	Prob(F-statistic)		0.000005

Lampiran 8  
Chow Test

**Chow test 1997**

Chow Breakpoint: 1997

F-statistic	11.009690	Probability	0.000650
Obs*R-squared	12.498067	Probability	0.000957

**Chow Test 2005**

Chow Breakpoint: 2005

F-statistic	11.867868	Probability	0.000098
Obs*R-squared	13.094075	Probability	0.000752



Lampiran 9  
DETEKSI MULTIKOLINEARITAS

Regresi awal pada tingkat *first difference*

Dependent Variable: D(PMA)

Method: Least Squares

Date: 14/12/08 Time: 06:59

Sample(adjusted): 1982 2007

Included observations: 24 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-88.67883	0.001368	-2.258435	0.0034
D(GDP)	1.124899	0.036984	4.685549	0.0023
D(L)	0.154865	0.457255	2.052459	0.0055
D(R)	-1.259631	0.005285	-1.254893	0.0027
D(E)	-0.072554	1.325871	-0.025460	0.0068
GDP(-1)	0.932558	1.577395	2.258932	0.0048
L(-1)	0.904542	1.602663	1.256718	0.0614
R(-1)	-0.922377	1.176787	-3.215851	0.0083
E(-1)	-0.883707	0.545919	-0.002555	0.2455
ECT	1.780739	1.818336	1.325861	0.0007
R-squared	0.880985	Mean dependent var		0.589664
Adjusted R-squared	0.860526	S.D. dependent var		0.369239
S.E. of regression	0.256288	Akaike info criterion		18.54326
Sum squared resid	1.32E-03	Schwarz criterion		17.47211
Log likelihood	53.25612	F-statistic		18.10055
Durbin-Watson stat	13.42859	Prob(F-statistic)		0.000005

*Auxillary regression* variabel dependen D(GDP)

Dependent Variable: D(GDP)

Method: Least Squares

Date: 14/12/08 Time: 07:07

Sample(adjusted): 1981 2007

Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.031987	0.018313	1.746736	0.1113
D(L)	0.347147	0.707003	0.491012	0.6340
D(r)	-0.077558	0.297108	-0.261041	0.7994
D(E)	-4.01E-05	8.40E-05	-0.477539	0.6432
GDP(-1)	-0.000598	0.000896	-0.666807	0.5200
L(-1)	-0.001101	0.001505	-0.731648	0.4812
R(-1)	-0.300496	0.001171	-0.423647	0.0008
E(-1)	-0.003502	0.000964	-0.785463	0.0054
R-squared	0.771718	Mean dependent var		0.014461
Adjusted R-squared	0.742423	S.D. dependent var		0.007971
S.E. of regression	0.008885	Akaike info criterion		36.32887
Sum squared resid	0.000789	Schwarz criterion		36.03915
Log likelihood	56.63096	F-statistic		36.44637
Durbin-Watson stat	1.752558	Prob(F-statistic)		0.828342

*Auxillary regression* variabel dependen D(L)

Dependent Variable: D(L)

Method: Least Squares

Date: 14/12/08 Time: 07:11

Sample(adjusted): 1981 2007

Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.005038	0.009108	-0.553100	0.5923
D(GDP)	0.067815	0.138112	0.491012	0.6340
D(r)	0.369248	0.061051	6.048167	0.0001
D(E)	2.55E-05	3.67E-05	0.694835	0.5030
GDP(-1)	-4.78E-05	0.000405	-0.118198	0.9083
L(-1)	-5.13E-05	0.000682	-0.075219	0.9415
R(-1)	-0.077558	0.297108	-0.261041	0.7994
E(-1)	-0.000808	0.000826	-0.978676	0.3400
R-squared	0.795516	Mean dependent var		0.007304
Adjusted R-squared	0.741704	S.D. dependent var		0.014638
S.E. of regression	0.007439	Akaike info criterion		6.758507
Sum squared resid	0.001052	Schwarz criterion		6.465976
Log likelihood	90.48133	F-statistic		11.72834
Durbin-Watson stat	1.691677	Prob(F-statistic)		0.000006



*Auxillary regression* variabel dependen D(r)

Dependent Variable: D(R)

Method: Least Squares

Date: 14/12/08 Time: 07:13

Sample(adjusted): 1981 2007

Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.047330	0.018148	2.608029	0.0173
D(GDP)	-0.198437	0.306088	-0.648300	0.5245
D(L)	1.102901	0.333570	3.306357	0.0037
D(E)	9.08E-05	6.56E-05	1.383239	0.1826
GDP(-1)	-0.000941	0.000866	-1.085817	0.2911
L(-1)	2.55E-05	3.67E-05	0.694835	0.5030
R(-1)	-4.78E-05	0.000405	-0.118198	0.9083
E(-1)	-0.000722	0.001535	-0.470156	0.6436
R-squared	0.616188	Mean dependent var		0.039971
Adjusted R-squared	0.515185	S.D. dependent var		0.019498
S.E. of regression	0.013577	Akaike info criterion		5.555384
Sum squared resid	0.003502	Schwarz criterion		5.262854
Log likelihood	75.44230	F-statistic		36.10068
Durbin-Watson stat	1.777869	Prob(F-statistic)		0.000066

*Auxillary regression* variabel dependen D(E)

Dependent Variable: D(E)

Method: Least Squares

Date: 14/12/08 Time: 07:17

Sample(adjusted): 1981 2007

Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-17.91716	0.021832	0.576348	0.5771
D(GDP)	0.942263	0.334299	-0.261041	0.7994
D(L)	0.206283	0.351644	6.048167	0.0001
D(R)	0.007789	8.49E-05	-1.120557	0.2887
GDP(-1)	2.252187	0.000955	0.586254	0.5707
L(-1)	-0.067815	0.001637	0.147830	0.8854
R(-1)	0.369248	0.061051	6.048167	0.0001
E(-1)	-1.702919	5.130466	-0.331923	0.7436
R-squared	0.754904	Mean dependent var		0.049124
Adjusted R-squared	0.738107	S.D. dependent var		0.018417
S.E. of regression	0.009425	Akaike info criterion		-6.210930
Sum squared resid	0.000888	Schwarz criterion		-5.921210
Log likelihood	55.68744	F-statistic		9.455042
Durbin-Watson stat	1.493843	Prob(F-statistic)		0.001504

*Auxillary regression* variabel dependen GDP(-1)

Dependent Variable: GDP(-1)

Method: Least Squares

Date: 14/12/08 Time: 07:18

Sample(adjusted): 1981 2007

Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-10.63918	77.80927	-0.136734	0.8940
D(GDP)	-555.8713	1164.034	-0.477539	0.6432
D(L)	1807.588	2601.464	0.694835	0.5030
D(R)	-1172.196	1046.083	-1.120557	0.2887
D(E)	2.104758	3.344462	0.629326	0.5432
L(-1)	4.752650	5.550013	0.856331	0.4119
R(-1)	2.104758	3.344462	0.629326	0.5432
E(-1)	0.175162	0.394729	0.443752	0.6622
R-squared	0.657075	Mean dependent var		16.36990
Adjusted R-squared	0.614388	S.D. dependent var		31.33353
S.E. of regression	33.07711	Akaike info criterion		10.11556
Sum squared resid	10940.95	Schwarz criterion		10.40528
Log likelihood	-74.92445	F-statistic		17.69261
Durbin-Watson stat	2.253593	Prob(F-statistic)		0.001067

*Auxillary regression* variabel dependen L(-1)

Dependent Variable: L(-1)

Method: Least Squares

Date: 14/12/08 Time: 07:20

Sample(adjusted): 1981 2007

Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-16.20299	5.090006	3.183294	0.0098
D(GDP)	-71.22875	106.8206	-0.666807	0.5200
D(L)	-29.17438	246.8271	-0.118198	0.9083
D(R)	59.32523	101.1936	0.586254	0.5707
D(E)	0.018100	0.028761	0.629326	0.5432
GDP(-1)	-0.204463	0.529278	-0.386305	0.7074
R(-1)	-0.204463	0.529278	-0.386305	0.7074
E(-1)	0.073065	0.118016	0.619110	0.5432
R-squared	0.553296	Mean dependent var		16.54500
Adjusted R-squared	0.520056	S.D. dependent var		2.721796
S.E. of regression	3.067377	Akaike info criterion		5.359519
Sum squared resid	94.08799	Schwarz criterion		5.649239
Log likelihood	-36.87615	F-statistic		4.362100
Durbin-Watson stat	1.494287	Prob(F-statistic)		0.000044

*Auxillary regression* variabel dependen R(-1)

Dependent Variable: R(-1)

Method: Least Squares

Date: 14/12/08 Time: 07:23

Sample(adjusted): 1981 2007

Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.038296	0.061704	0.620646	0.5788
D(GDP)	0.923267	0.695435	1.327610	0.2763
D(L)	0.384510	2.364154	-0.162642	0.8811
D(R)	5.83E-07	0.000108	0.005410	0.9960
D(E)	-0.001098	0.002153	-0.510241	0.6451
GDP(-1)	-0.002693	0.009196	-0.292862	0.7887
L(-1)	1.932802	0.396939	4.869263	0.0005
E(-1)	-0.071914	0.186159	-0.386305	0.7074
R-squared	0.698039	Mean dependent var	-0.005482	
Adjusted R-squared	0.694772	S.D. dependent var	0.015399	
S.E. of regression	0.013818	Akaike info criterion	-5.490951	
Sum squared resid	0.000573	Schwarz criterion	-5.359468	
Log likelihood	30.70928	F-statistic	21.38704	
Durbin-Watson stat	1.857297	Prob(F-statistic)	0.000889	

*Auxillary regression* variabel dependen E(-1)

Dependent Variable: E(-1)

Method: Least Squares

Date: 14/12/08 Time: 07:25

Sample(adjusted): 1981 2007

Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.066905	0.019318	-3.463390	0.0405
D(GDP)	0.400843	0.301928	1.327610	0.2763
D(L)	2.036221	1.032441	1.972240	0.1431
D(R)	-1.38E-05	7.05E-05	-0.196194	0.8570
D(E)	0.001996	0.000927	2.153992	0.1203
GDP(-1)	-0.004620	0.005536	-0.834440	0.4653
L(-1)	-0.300496	0.001171	-0.423647	0.0008
R(-1)	-0.001101	0.001505	-0.731648	0.4812
R-squared	0.807990	Mean dependent var	-0.003434	
Adjusted R-squared	0.754639	S.D. dependent var	0.018381	
S.E. of regression	0.009105	Akaike info criterion	-6.325299	
Sum squared resid	0.000249	Schwarz criterion	-6.193816	
Log likelihood	34.46384	F-statistic	15.21001	
Durbin-Watson stat	2.010596	Prob(F-statistic)	0.000045	

Lampiran 10  
UJI HETEROSKEDASTISITAS

White Heteroskedasticity Test:

F-statistic	11.02486	Probability	0.056004
Obs*R-squared	13.90410	Probability	0.245217

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 14/12/08 Time: 08:30

Sample: 1981 2005

Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-147.3205	134.1105	-12.53788	0.0044
D(GDP)	0.024583	0.004496	1.492744	0.0036
D(GDP)^2	0.001466	0.161963	1.675296	0.0035
D(L)	0.051253	0.006093	1.161963	0.0025
D(L)^2	1.124625	0.158359	2.006093	0.3582
D(R)	0.056863	0.155248	-0.107921	0.5209
D(R)^2	0.365916	0.241673	0.139095	0.5322
D(E)	2.23E-38	1.53E-26	0.011556	0.4752
D(E)^2	2.12E-07	2.56E-08	0.094929	0.6875
D(GDP-1)	-1.35E-05	3.72E-25	-0.236556	0.0056
D(GDP-1)^2	-2.87E-02	2.49E-06	-0.155212	0.0057
D(L-1)	-3.075643	0.000175	-0.402637	0.2472
D(L-1)^2	-1.240126	1.320505	-0.318254	0.2452
D(R-1)	0.033616	0.241673	1.139095	0.0982
D(R-1)^2	2.00E-06	2.53E-06	2.245540	0.4887
D(E-1)	1.35E-08	1.99E-08	-1.985265	0.5453
D(E-1)^2	-1.83E-05	7.72E-05	-1.236556	0.2282
R-squared	0.863625	Mean dependent var	5.98E+5	
Adjusted R-squared	0.843658	S.D. dependent var	6.33E+4	
S.E. of regression	822.0405	Akaike info criterion	17.25635	
Sum squared resid	1245631	Schwarz criterion	16.25846	
Log likelihood	132.5879	F-statistic	8.256439	
Durbin-Watson stat	2.875456	Prob(F-statistic)	0.00002	

Lampiran 11  
UJI AUTOKORELASI

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.154693	Probability	0.172599
Obs*R-squared	6.124578	Probability	0.130484

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 14/12/08 Time: 08:54

Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.56811	0.183810	-0.309072	0.0013
D(GDP)	0.059758	0.235028	0.254261	0.0025
D(L)	6.25E-06	5.98E-05	0.104493	0.0181
D(R)	-0.002888	0.009955	-0.290113	0.0755
D(E)	-0.001799	0.014599	-0.123214	0.0035
D(GDP-1)	-0.002888	0.009955	-0.290113	0.7755
D(L-1)	-0.001799	0.014599	-0.123214	0.9035
D(R-1)	0.404228	0.293683	1.376411	0.0877
D(E-1)	-0.539503	0.222690	-2.422661	0.0276
RESID(-1)	0.255568	0.354516	0.852453	0.0828
RESID(-2)	0.798818	0.233328	-2.588875	0.0214
RESID(-3)	0.799749	0.354516	0.720893	0.0128
R-squared	0.751547	Mean dependent var	-2.06E-16	
Adjusted R-squared	0.765316	S.D. dependent var	332.8892	
S.E. of regression	0.009177	Akaike info criterion	26.24903	
Sum squared resid	0.001179	Schwarz criterion	25.75897	
Log likelihood	84.99763	F-statistic	2.843316	
Durbin-Watson stat	2.043256	Prob(F-statistic)	0.000049	