BAB VI

KESIMPULAN DAN SARAN

A. Kesimpulan

Kesimpulan ini adalah jawaban atau fakta yang menjawab pertanyaan-pertanyaan yang berkaitan dengan faktor-faktor yang mempengaruhi utang luar negeri di Indonesia tahun 1985-2015. Berdasarkan penelitian yang telah dilakukan, maka dapat disumpulkan sebagai berikut:

1. Dalam jangka panjang diketahui variabel PDB berpengaruh signifikan terhadap utang luar negeri di Indonesia. Analisis jangka panjang memiliki pengaruh negatif sehingga kenaikan PDB akan menurunkan utang luar negeri.
2. Dalam jangka panjang diketahui variabel PMA tidak berpengaruh signifikan terhadap utang luar negeri di Indonesia.
3. Dalam jangka panjang diketahui variabel JUB berpengaruh signifikan terhadap utang luar negeri Indonesia. Analisis jangka panjang memiliki pengaruh negatif sehingga kenaikan JUB akan menurunkan utang luar negeri.
4. Dalam jangka panjang diketahui variabel berpengaruh signifikan terhadap utang luar negeri di Indonesia. Analisis jangka panjang memiliki pengaruh negatif sehingga kenaikan Kurs akan menurunkan utang luar negeri.

B. Saran

Berdasarkan penelitian yang dilakukan dan hasil dari penelitian yang diperoleh, maka terdapat beberapa saran yang disampaikan penulis terhadap utang luar negeri di Indonesia:

1. Dari hasil penelitian ini dapat dilihat bahwa ketika PDB meningkat maka utang luar negeri akan menurun. Dengan ini pemerintah harus mampu menguatkan sektor unggulan dan mampu menggali sektor non-unggulan agar dapat meningkatkan PDB. Sehingga, tingginya pendapatan nasional akan mengurangi tingkat utang luar negeri di Indonesia.
2. Dari hasil penelitian ini dapat dilihat bahwa PMA tidak berpengaruh signifikan terhadap utang luar negeri di Indonesia. Namun, pemerintah tetap harus meningkatkan investasi asing ke dalam negeri dengan tujuan agar mampu menyerap tenaga kerja sehingga dapat meningkatkan daya beli masyarakat.
3. Dari hasil penelitian ini dapat dilihat bahwa ketika JUB meningkat maka utang luar negeri akan menurun. Dalam hal ini pemerintah sebagai agen stabilitas mampu mendistribusikan JUB ke seluruh daerah yang tidak hanya berpusat di satu kota tertentu agar lebih tangguh dalam menghadapi guncangan ekonomi global.
4. Dari hasil penelitian ini dapat dilihat bahwa ketika Kurs meningkat maka utang luar negeri akan menurun. Hal ini menunjukkan ketika nilai tukar rupiah menguat maka negara cenderung tidak melakukan utang luar negeri. Bukan berarti membiarkan Kurs melemah menjadi solusi untuk

tidak melakukan utang luar negeri. Pemerintah sebagai agen stabilitas tetap harus menjaga nilai kurs rupiah agar tetap stabil karena berhubungan dengan daya beli masyarakat di dalam negeri.

DAFTAR PUSTAKA

Ahman, Eeng; Epi Indriani, 2007, *Membina Kompetensi Ekonomi*, Bandung: Grafindo Media Pratama.

Ainiyah, Imas Qorhothul, 2015, *Utang Luar Negeri: Instrumen Pembiayaan Pembangunan di Indonesia*, Skripsi, Depok: Universitas Indonesia.

Ansori, Rizki, 2010, *Analisis Pengaruh Tingkat Inflasi,SBI, Jumlah Uang Beredar, dan Tingkat Pendapatan Terhadap Nilai Tukar Rupiah Terhadap Dollar Amerika*, Skripsi, Jakarta: Universitas Islam Negeri Syarif Hidayatullah.

Apriyatman, Aullia, 2014, *Analisis Faktor-Faktor Yang Mempengaruhi Utang Luar Negeri. Pemerintah Indonesia (Periode 1998-2012)*, Skripsi, Lampung: Universitas Negeri Lampung.

Arif, Dodi, (2014), "Pengaruh Produk Domestik Bruto, Jumlah Uang Beredar, Inflasi dan BI Rate Terhadap Indeks Harga Saham Gabungan di Indonesia Periode 2007-2013", *Jurnal Ekonomi Bisnis*, Vol.19, No.3, Halaman 63-77.

Astanti, Ayu, 2015, *Analisis Kausalitas Antara Utang Luar Negeri dan Pertumbuhan Ekonomi di Indonesia Tahun 1990-2013*, Skripsi, Jember: Universitas Jember.

Atmadja, Adwin Surya, (2000), "Utang Luar Negeri Pemerintah Indonesia : Perkembangan dan Dampaknya", *Jurnal Akuntansi & Keuangan*, Vol. 2, No.1, Halaman 83-94.

Azis, Muhammad Abdul, 2009, *Analisis Faktor-Faktor Yang Mempengaruhi Konsumsi Masyarakat di Provinsi Jawa Tengah Tahun 2003-2007(Studi Kasus Kota Semarang, Solo, Purwokerto dan Tegal)*, Skripsi, Surakarta: Universitas Sebelas Maret.

Basuki, Agus Tri, 2015, *Regresi Dalam Penelitian Ekonomi dan Bisnis*, Sleman: Danisa Media.

Budiyanti, Eka; Lisnawati, (2010), "Analisis Faktor Fundamental Ekonomi Yang Mempengaruhi Risiko Pinjaman Luar Negeri Indonesia", *Jurnal Ekonomi & Kebijakan Publik*, Vol.1, No.1, Halaman 129-152.

Cateora, Philip R; John L.Graham, 2007, *International Marketing 13th ed*, Jakarta: Penerbit Salemba Empat.

Fatmawati, Ria Yani, (2015), "Analisis Pengaruh Perdagangan Internasional dan Utang Luar Negeri Terhadap *Gross Domestic Product Indonesia* (Periode 1990 -2010)", *E-Jurnal Ekonomi Studi Pembangunan*, Vol.07, No.1, Halaman 55-62.

Badan Pusat Statistik, 2017, Data Produk Domestik Bruto Bulanan. http://www.bps.go.id. Diakses tanggal 15 Febuari 2017.

Bank Indonesia. 2016. Data Kurs http://www.bi.go.id Diakses pada tanggal 18 Januari 2017.

Bank Indonesia. 2016. Data Jumlah Uang Beredar http://www.bi.go.id Diakses pada tanggal 21 Januari 2017.

Bank Indonesia. 2016. Data Utang Luar Negeri http://www.bi.go.id Diakses pada tanggal 11 Januari 2017.

Badan Koordinasi Penanaman Modal http://www.bkpm.go.id Diakses pada tanggal 18 Januari 2017.

Febriana, Asri; Masyhudi Muqorobbin, (2014), "Investasi Asing Langsung di Indonesia dan Faktor Yang Mempengaruhinya", *Jurnal Ekonomi dan Studi Pembangunan*, Vol.15, No.2, Halaman 109-117.

Gilarso, T, 2004, *Pengantar Ilmu Ekonomi Makro*, Yogyakarta: Kanisius.

Hadiyatullah, 2011, *Model Vector Regressive (VAR) dan Penerapannya Untuk Analisis Pengaruh Harga Migas Terhadap Indeks Harga Konsumen(IHK)*, Skripsi, Yogyakarta: Universitas Negeri Yogyakarta.

Harahap, Mahindun Dhiani Melda, 2007, *Faktor-faktor Yang Mempengaruhi Utang Luar Negeri*, Tesis, Medan: Universitas Sumatera Utara.

Hisrich, Robert D; Michael P Peters; Dean A Shepherd, 2008, *Enterpreuner Kewirausahaan*, Jakarta: Penerbit Salemba Empat.

Hutapea, P Dungdang, 2007, *Analisis Faktor-Faktor Yang Mempengaruhi Volume Penyerapan Utang Luar Negeri di Indonesia*, Skripsi, Bogor: Institut Pertanian Bogor.

Inani, Amalia Tafitri, 2015, *Analisis Faktor-Faktor Yang Mempengaruhi Utang Luar Negeri Pemerintah Indonesia Pada Tahun 1990-2013*, Skripsi, Purwokerto: Universitas Negeri Jenderal Soedirman.

Lembaga Penyelidikan Ekonomi dan Masyarakat (LPEM) Fakultas Ekonomi Universitas Indonesia, 2009, *Indonesia Economic Outlook*, Jakarta: Gramedia Widiasarana Indonesia (Grasindo).

Lubis, Rizky P; Muhammad Firdaus; Hendro Sasongko, (2015), "Faktor-Faktor Yang Mempengaruhi Investasi Asing Langsung Pada Sektor Perkebunan di Indonesia", *Jurnal Bisnis dan Manajemen*, Vol.XVI, No.2, Halaman 80-89.

Mankiw, Gregory, 2006, *Pengantar Ekonomi Makro*, Edisi Ketiga, Jakarta: Salemba Empat.

Merdekawati, Bouvilya, 2014, *Faktor-Faktor Yang Mempengaruhi Beban Hutang Luar Negeri Pemerintah Indonesia*, Skripsi, Surakarta: Universitas Muhammadiyah Surakarta.

Mudara, I Made Yogatama Pande, 2011, *Pengaruh Produk Domestik Bruto, Suku Bunga, Upah Pekerja, dan Nilai Total Ekspor Terhadap Investasi Asing Langsung di Indonesia (1990-2009)*, Skripsi, Semarang: Universitas Diponegoro.

Mudrikah, Alfiah; Dewi Sartika; Rahma Yuniarti; Ismanto; Akbar Budi Satria, (2014), "Kontribusi Sektor Pariwisata Terhadap GDP Indonesia Tahun 2004-2009", *Economics Development Analysis Journal*, Vol.03, No.02, Halaman 362-371.

Nopirin, 1992, *Ekonomi Moneter Buku I,* Edisi Keempat, Cetakan Pertama. Yogyakarta: BPFE-YOGYAKARTA.

Priyanto, Kurniawan Dwi, 2010, *Analisis Pengaruh Utang Luar Negeri, Penanaman Modal Asing, dan Ekspor Terhadap Pertumbuhan Ekonomi Indonesia*, Skripsi, Surakarta: Universitas Sebelas Maret.

Purba, Deni Fransiska, 2012, *Analisis Faktor-Faktor Yang Mempengaruhi Utang Luar Negeri Indonesia Tahun 1981-2009*, Skripsi, Semarang: Universitas Negeri Semarang.

Rofida, (2014), "Keterkaitan Investasi Modal Terhadap GDP di Indonesia", *Economic Development Analysis Journal*, Vol.03, No.02, Halaman 372-379.

Rosyaidi, Hilman, 2011, *Analisis Faktor-Fakor yang Mempengaruhi Hutang Luar Negeri di Indonesia*, Skripsi, Jawa Timur: Universitas Pembangunan Nasional "Veteran".

Safitriani, Suci, 2014, "*Perdagangan Internasional dan Foreign Direct Investment di Indonesia*", Skripsi, Jakarta: Sekolah Tinggi Ilmu Statistik.

Saleh, Samsubar, (2008), "Faktor-Faktor Yang Mempengaruhi Pinjaman Luar Negeri Serta Imbasnya Terhadap APBN", *UNISIA*, Vol.XXXI, No.70, Halaman 343-363.

Simi, Agustinus Bata; Suhadak; Raden Rustam Hidayat, (2015), "Pengaruh Utang Luar Negeri dan Fluktuasi Nilai Tukar Rupiah Terhadap Pertumbuhan Ekonomi Indonesia (Studi Pada Bank Indonesia Tahun 2003-2013)", *Jurnal Adsministrasi Bisnis*, Vol. 28, No.2, Halaman 1-9.

Sugiyono, 2007, *Metode Penelitian Pendidikan Pendekatan Kuantutatif, Kualitatif, dan R&D.* Bandung: ALFABETA.

Sulaksono, Agus, (2015), "Pengaruh Investasi dan Tenaga Kerja Terhadap PDB Sektor Pertambangan di Indonesia", *Jurnal Ekonomi Bisnis*, Vol.20, No.1, Halaman 16-24.

Todaro, Michael P, 1998, *Pembangunan Ekonomi di Dunia Ketiga*, Jakarta: Erlangga.

Ulfa, Siti Aminah, 2011, *Pengaruh Jumlah Uang Beredar (JUB), Suku Bunga Sertifikat Bank Indonesia (SBI), Impor, Ekspor Terhadap Kurs Rupiah/Dollar Amerika Serikat Periode Januari 2006 Sampai Maret 2010*, Skripsi, Semarang: Universitas Negeri Semarang.

Universitas Gadjah Mada, 2017, https://ugm.ac.id/id/berita Diakses tanggal 18 Maret 2017 pukul 22.06 p.m.

Universitas Jenderal Soedirman, 2016, http://www.unsoed.ac.id/id/berita Diakses tanggal 21 Maret 2017 pukul 00.03 a.m.

Wibowo, Catur, 2012, *Analisis Faktor-Faktor Yang Mempengaruhi Hutang Luar Negeri Pemerintah Indonesia*, Skripsi, Surakarta: Universitas Sebelas Maret.

Winarno, W. W. (2015), *Analisis Ekonometrika dan Statistika dengan Eviews*, Edisi Keempat, Cetakan Pertama. Yogyakarta: UPP STIM YKPN.

Widharma, I Wayan Gayun; I Made Kembar; Anak Agung Istri, (2013), "Utang Luar Negeri Pemerintah Indonesia: Kajian Terhadap Faktor-Faktor yang Berpengaruh", *E-Jurnal Ekonomi dan Bisnis*,Vol.02, No.02, Halaman 1-21.

Nur, Mufiedah, 2010, *Analisis Faktor-Faktor Yang Mempengaruhi Pinjaman Luar Negeri Swasta di Indonesai*, Tesis, Sumatera Utara: Universitas Sumatera Utara.

World Bank Debtor Reporting System, 2014, http://www.siteresources.worlbank Diakses tanggal 20 Desember 2016 pukul 16.37 pm.

LAMPIRAN

TAHUN	ULN (milyar dollar)	PDB (milyar dollar)	PMA (milyar dollar)	KURS(kurs Tengah)	JUB(m1)
1985	32123.30	701261.31	956.93	1125	4.00
1986	43871.32	742463.98	1059.06	1641	4.06
1987	64535.59	779034.54	1239.70	1650	4.08
1988	69840.24	824061.58	1279.88	1729	4.15
1989	73713.47	885515.29	1304.76	1795	4.30
1990	86461.28	949639.46	1342.11	1901	4.37
1991	89640.00	1015642.85	2110.92	1992	4.42
1992	109871.61	1081250.62	4002.14	2026	4.45
1993	121371.42	1151490.49	11928.04	2110	4.56
1994	140113.60	1238312.49	8296.64	2200	4.65
1995	148660.59	1340100.07	15459.91	2308	4.72
1996	140660.59	1444873.07	11029.00	2383	4.80
1997	269049.00	1512780.34	16151.31	4650	4.89
1998	573538.73	1314201.87	39047.24	8025	5.00
1999	573140.40	1324596.76	58432.29	7160	5.09
2000	782462.66	1389769.90	94773.65	9595	5.21
2001	742320.80	1440405.70	36497.76	10400	5.24
2002	700967.52	1505216.40	27558.44	8940	5.28
2003	733551.51	1577171.30	46094.46	8447	5.32
2004	812800.68	1656516.80	42480.38	9290	5.39
2005	1322174.32	1750815.20	87595.13	9830	5.43
2006	1196349.66	1847126.70	54045.13	9020	5.54
2007	1329774.42	1964327.30	97405.65	9419	5.65
2008	1636740.00	2082456.10	162841.83	10950	5.66
2009	1590660.00	2178850.40	101662.88	9400	5.71
2010	1676150.00	2314458.80	148000.00	8991	5.78
2011	1803490.00	2464566.10	175300.00	9068	5.85
2012	1975420.00	2618139.20	221000.00	9670	5.94
2013	2023720.00	2770345.00	270000.00	12189	5.96
2014	2933280.00	2909181.50	307000.00	12440	5.97
2015	3100530.00	3020890.60	365900.00	13795	6.01

Uji stasioner
ULN
LEVEL

Null Hypothesis: ULN has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.065415	0.9998
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ULN)
Method: Least Squares
Date: 02/17/17 Time: 20:19
Sample (adjusted): 1986 2015
Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ULN(-1)	0.092887	0.044973	2.065415	0.0483
C	28600.84	49623.03	0.576362	0.5690

R-squared	0.132212	Mean dependent var	102280.2
Adjusted R-squared	0.101219	S.D. dependent var	199290.6
S.E. of regression	188935.6	Akaike info criterion	27.20054
Sum squared resid	1.00E+12	Schwarz criterion	27.29395
Log likelihood	-406.0081	Hannan-Quinn criter.	27.23042
F-statistic	4.265941	Durbin-Watson stat	2.631091
Prob(F-statistic)	0.048252		

1ST
Null Hypothesis: D(ULN) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.451142	0.0001
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ULN,2)
Method: Least Squares
Date: 02/17/17 Time: 20:20
Sample (adjusted): 1987 2015
Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ULN(-1))	-1.046075	0.191900	-5.451142	0.0000
C	110011.4	42727.07	2.574747	0.0158

R-squared	0.523935	Mean dependent var	5362.137
Adjusted R-squared	0.506303	S.D. dependent var	292554.1
S.E. of regression	205559.0	Akaike info criterion	27.37133
Sum squared resid	1.14E+12	Schwarz criterion	27.46562
Log likelihood	-394.8842	Hannan-Quinn criter.	27.40086
F-statistic	29.71495	Durbin-Watson stat	1.994033
Prob(F-statistic)	0.000009		

PDB
LEVEL
Null Hypothesis: PDB has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.916930	1.0000
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PDB)
Method: Least Squares
Date: 02/17/17 Time: 20:20
Sample (adjusted): 1986 2015
Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PDB(-1)	0.049556	0.016989	2.916930	0.0069
C	60.93651	28438.69	0.002143	0.9983

R-squared	0.233055	Mean dependent var	77320.98
Adjusted R-squared	0.205664	S.D. dependent var	63632.15
S.E. of regression	56712.49	Akaike info criterion	24.79372
Sum squared resid	9.01E+10	Schwarz criterion	24.88713
Log likelihood	-369.9058	Hannan-Quinn criter.	24.82360
F-statistic	8.508479	Durbin-Watson stat	1.453665
Prob(F-statistic)	0.006892		

1ST

Null Hypothesis: D(PDB) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.145639	0.0341
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PDB,2)
Method: Least Squares
Date: 02/17/17 Time: 20:21
Sample (adjusted): 1987 2015
Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PDB(-1))	-0.535845	0.170345	-3.145639	0.0040
C	43227.92	16866.29	2.562978	0.0163

R-squared	0.268194	Mean dependent var	2431.256
Adjusted R-squared	0.241090	S.D. dependent var	66655.64
S.E. of regression	58067.34	Akaike info criterion	24.84307
Sum squared resid	9.10E+10	Schwarz criterion	24.93736
Log likelihood	-358.2245	Hannan-Quinn criter.	24.87260
F-statistic	9.895043	Durbin-Watson stat	2.015651
Prob(F-statistic)	0.004009		

PMA

LEVEL

Null Hypothesis: PMA has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.900977	1.0000
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PMA)
Method: Least Squares
Date: 02/17/17 Time: 20:22
Sample (adjusted): 1987 2015
Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PMA(-1)	0.216215	0.074532	2.900977	0.0075
D(PMA(-1))	-0.461361	0.212721	-2.168859	0.0394
C	2203.167	6791.223	0.324414	0.7482

R-squared	0.254005	Mean dependent var	12580.72
Adjusted R-squared	0.196620	S.D. dependent var	31010.78
S.E. of regression	27795.41	Akaike info criterion	23.40083
Sum squared resid	2.01E+10	Schwarz criterion	23.54227
Log likelihood	-336.3120	Hannan-Quinn criter.	23.44513
F-statistic	4.426380	Durbin-Watson stat	2.262215
Prob(F-statistic)	0.022160		

1ST
Null Hypothesis: D(PMA) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.605680	0.0001
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PMA,2)
Method: Least Squares
Date: 02/17/17 Time: 20:23
Sample (adjusted): 1987 2015
Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PMA(-1))	-1.116648	0.199199	-5.605680	0.0000
C	13811.74	6194.926	2.229524	0.0343

R-squared	0.537858	Mean dependent var	2027.513
Adjusted R-squared	0.520742	S.D. dependent var	45329.89
S.E. of regression	31381.19	Akaike info criterion	23.61228
Sum squared resid	2.66E+10	Schwarz criterion	23.70657
Log likelihood	-340.3780	Hannan-Quinn criter.	23.64181
F-statistic	31.42364	Durbin-Watson stat	1.897395
Prob(F-statistic)	0.000006		

KURS
LEVEL

Null Hypothesis: KURS has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.282783	0.9163
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(KURS)
Method: Least Squares
Date: 02/17/17 Time: 20:23
Sample (adjusted): 1986 2015
Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KURS(-1)	-0.015258	0.053956	-0.282783	0.7794
C	519.1414	400.7350	1.295473	0.2057

R-squared	0.002848	Mean dependent var	422.3333
Adjusted R-squared	-0.032765	S.D. dependent var	1122.699
S.E. of regression	1140.943	Akaike info criterion	16.98144
Sum squared resid	36449042	Schwarz criterion	17.07485
Log likelihood	-252.7216	Hannan-Quinn criter.	17.01132
F-statistic	0.079966	Durbin-Watson stat	1.937477
Prob(F-statistic)	0.779423		

1ST

Null Hypothesis: D(KURS) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.093562	0.0003
Test critical values:	1% level	-3.679322	
	5% level	-2.967767	
	10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(KURS,2)
Method: Least Squares
Date: 02/17/17 Time: 20:24
Sample (adjusted): 1987 2015
Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(KURS(-1))	-0.992399	0.194834	-5.093562	0.0000
C	416.1376	229.0155	1.817072	0.0803

R-squared	0.490031	Mean dependent var	28.93103
Adjusted R-squared	0.471143	S.D. dependent var	1599.724
S.E. of regression	1163.360	Akaike info criterion	17.02249
Sum squared resid	36542003	Schwarz criterion	17.11678
Log likelihood	-244.8260	Hannan-Quinn criter.	17.05202
F-statistic	25.94437	Durbin-Watson stat	1.967648
Prob(F-statistic)	0.000024		

JUB
LEVEL

Null Hypothesis: JUB has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.701992	0.9637
Test critical values:	1% level	-4.296729	
	5% level	-3.568379	
	10% level	-3.218382	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(JUB)
Method: Least Squares
Date: 02/17/17 Time: 20:57
Sample (adjusted): 1986 2015
Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
JUB(-1)	-0.090233	0.128539	-0.701992	0.4887
C	0.437987	0.505808	0.865914	0.3942
@TREND(1985)	0.005458	0.009279	0.588240	0.5613

R-squared	0.082409	Mean dependent var	0.067000
Adjusted R-squared	0.014439	S.D. dependent var	0.035540
S.E. of regression	0.035283	Akaike info criterion	-3.756211
Sum squared resid	0.033611	Schwarz criterion	-3.616092
Log likelihood	59.34317	Hannan-Quinn criter.	-3.711386
F-statistic	1.212433	Durbin-Watson stat	1.634240
Prob(F-statistic)	0.313159		

1ST

Null Hypothesis: D(JUB) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.566704	0.0055
Test critical values:	1% level	-4.309824	
	5% level	-3.574244	
	10% level	-3.221728	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(JUB,2)
Method: Least Squares
Date: 02/17/17 Time: 20:57
Sample (adjusted): 1987 2015
Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(JUB(-1))	-0.884434	0.193670	-4.566704	0.0001
C	0.076795	0.021540	3.565293	0.0014
@TREND(1985)	-0.001088	0.000814	-1.336009	0.1931

R-squared	0.446279	Mean dependent var	-0.000690
Adjusted R-squared	0.403685	S.D. dependent var	0.046286
S.E. of regression	0.035742	Akaike info criterion	-3.727258
Sum squared resid	0.033216	Schwarz criterion	-3.585813
Log likelihood	57.04524	Hannan-Quinn criter.	-3.682959
F-statistic	10.47754	Durbin-Watson stat	1.902257
Prob(F-statistic)	0.000460		

UJI LAG

VAR Lag Order Selection Criteria
Endogenous variables: D(LOG(ULN)) D(LOG(PDB)) D(LOG(PMA)) JUB D(LOG(KURS))
Exogenous variables: C
Date: 02/17/17 Time: 21:05
Sample: 1985 2015
Included observations: 28

Lag	LogL	LR	FPE	AIC	SC	HQ
0	47.02985	NA	3.42e-08	-3.002132	-2.764238	-2.929405
1	154.9962	169.6614*	9.44e-11*	-8.928298*	-7.500936*	-8.491939*
2	178.7534	28.84805	1.25e-10	-8.839528	-6.222697	-8.039536

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

UJI STABILITAS

Roots of Characteristic Polynomial
Endogenous variables: D(LOG(ULN)) D(LOG(PDB)) D(LOG(PMA)) JUB D(LOG(KURS))
Exogenous variables: C
Lag specification: 1 2
Date: 02/17/17 Time: 21:06

Root	Modulus
0.980009	0.980009
-0.659739 - 0.197581i	0.688690
-0.659739 + 0.197581i	0.688690
0.607284	0.607284
-0.048586 - 0.578687i	0.580723
-0.048586 + 0.578687i	0.580723
0.046867 - 0.561543i	0.563495
0.046867 + 0.561543i	0.563495
0.072831 - 0.247066i	0.257577
0.072831 + 0.247066i	0.257577

No root lies outside the unit circle.
VAR satisfies the stability condition.

UJI JOHANSEN

Date: 02/17/17 Time: 21:07
Sample (adjusted): 1988 2015
Included observations: 28 after adjustments
Trend assumption: Linear deterministic trend
Series: D(LOG(ULN)) D(LOG(PDB)) D(LOG(PMA)) JUB D(LOG(KURS))
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.745463	95.79134	69.81889	0.0001
At most 1 *	0.655805	57.47870	47.85613	0.0048
At most 2	0.431754	27.61538	29.79707	0.0875
At most 3	0.292978	11.78978	15.49471	0.1673
At most 4	0.071671	2.082341	3.841466	0.1490

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.745463	38.31264	33.87687	0.0138
At most 1 *	0.655805	29.86332	27.58434	0.0250
At most 2	0.431754	15.82560	21.13162	0.2352
At most 3	0.292978	9.707436	14.26460	0.2319
At most 4	0.071671	2.082341	3.841466	0.1490

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

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

D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
-10.75032	21.98048	-0.613256	0.548972	13.31765
10.50582	39.90071	-2.481790	0.327070	3.645446
-6.441440	12.28354	3.063411	0.206553	11.33200
4.278487	47.77647	1.583365	0.959548	-1.462845
4.934299	0.198562	-0.721501	1.759104	-1.393108

Unrestricted Adjustment Coefficients (alpha):

D(LOG(ULN),2)	0.123321	-0.045330	-0.014015	-0.010014	-0.039225
D(LOG(PDB),2)	-0.012114	-0.017016	0.001746	-0.001713	0.003647
D(LOG(PMA),2)	0.223213	0.039235	-0.252961	-0.129549	-0.055411
D(JUB)	-0.019646	0.011497	-0.000879	0.000382	-0.005386

D(LOG(KURS),2)	0.048903	-0.028931	-0.045696	0.044720	-0.029634

1 Cointegrating Equation(s): Log likelihood 150.0140

Normalized cointegrating coefficients (standard error in parentheses)

D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1.000000	-2.044634	0.057045	-0.051066	-1.238814
	(0.76874)	(0.04558)	(0.02432)	(0.17003)

Adjustment coefficients (standard error in parentheses)

D(LOG(ULN),2)	-1.325736
	(0.41030)
D(LOG(PDB),2)	0.130233
	(0.06181)
D(LOG(PMA),2)	-2.399608
	(1.21375)
D(JUB)	0.211205
	(0.06383)
D(LOG(KURS),2)	-0.525724
	(0.37833)

2 Cointegrating Equation(s): Log likelihood 164.9457

Normalized cointegrating coefficients (standard error in parentheses)

D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1.000000	0.000000	-0.045587	-0.022300	-0.683856
		(0.03549)	(0.01671)	(0.08840)
0.000000	1.000000	-0.050196	0.014069	0.271422
		(0.01247)	(0.00587)	(0.03105)

Adjustment coefficients (standard error in parentheses)

D(LOG(ULN),2)	-1.801965	0.901945
	(0.55409)	(1.67925)
D(LOG(PDB),2)	-0.048536	-0.945237
	(0.06599)	(0.20000)
D(LOG(PMA),2)	-1.987410	6.471834
	(1.69220)	(5.12843)
D(JUB)	0.331987	0.026887
	(0.08089)	(0.24515)
D(LOG(KURS),2)	-0.829667	-0.079453
	(0.52040)	(1.57715)

3 Cointegrating Equation(s): Log likelihood 172.8585

Normalized cointegrating coefficients (standard error in parentheses)

D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1.000000	0.000000	0.000000	-0.023780	-0.635487
			(0.01921)	(0.09582)
0.000000	1.000000	0.000000	0.012440	0.324680
			(0.00828)	(0.04130)
0.000000	0.000000	1.000000	-0.032456	1.061015

			(0.13800)	(0.68819)

Adjustment coefficients (standard error in parentheses)

D(LOG(ULN),2)	-1.711690	0.729793	-0.006061	
	(0.60075)	(1.73323)	(0.14657)	
D(LOG(PDB),2)	-0.059785	-0.923785	0.055010	
	(0.07153)	(0.20636)	(0.01745)	
D(LOG(PMA),2)	-0.357980	3.364582	-1.009182	
	(1.60453)	(4.62925)	(0.39148)	
D(JUB)	0.337652	0.016084	-0.019178	
	(0.08795)	(0.25375)	(0.02146)	
D(LOG(KURS),2)	-0.535321	-0.640757	-0.098174	
	(0.54218)	(1.56426)	(0.13228)	

4 Cointegrating Equation(s): Log likelihood 177.7122

Normalized cointegrating coefficients (standard error in parentheses)

D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1.000000	0.000000	0.000000	0.000000	-1.366552
				(0.18058)
0.000000	1.000000	0.000000	0.000000	0.707112
				(0.13371)
0.000000	0.000000	1.000000	0.000000	0.063229
				(0.55420)
0.000000	0.000000	0.000000	1.000000	-30.74313
				(8.24738)

Adjustment coefficients (standard error in parentheses)

D(LOG(ULN),2)	-1.754534	0.251364	-0.021917	0.040370
	(0.61987)	(2.46229)	(0.15741)	(0.04295)
D(LOG(PDB),2)	-0.067113	-1.005608	0.052298	-0.013499
	(0.07366)	(0.29261)	(0.01871)	(0.00510)
D(LOG(PMA),2)	-0.912252	-2.824796	-1.214305	-0.041188
	(1.58820)	(6.30877)	(0.40332)	(0.11004)
D(JUB)	0.339288	0.034355	-0.018573	-0.006840
	(0.09090)	(0.36108)	(0.02308)	(0.00630)
D(LOG(KURS),2)	-0.343989	1.495786	-0.027367	0.050856
	(0.53561)	(2.12757)	(0.13601)	(0.03711)

UJI GRANGER

Pairwise Granger Causality Tests
Date: 02/17/17 Time: 21:11
Sample: 1985 2015
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
PDB does not Granger Cause ULN	30	7.99002	0.0087
ULN does not Granger Cause PDB		1.28664	0.2666
PMA does not Granger Cause ULN	30	3.23602	0.0832
ULN does not Granger Cause PMA		2.23571	0.1465
JUB does not Granger Cause ULN	30	1.32434	0.2599
ULN does not Granger Cause JUB		0.89621	0.3522
KURS does not Granger Cause ULN	30	0.32350	0.5742
ULN does not Granger Cause KURS		1.16394	0.2902
PMA does not Granger Cause PDB	30	0.29133	0.5938
PDB does not Granger Cause PMA		5.90825	0.0220
JUB does not Granger Cause PDB	30	0.02723	0.8702
PDB does not Granger Cause JUB		0.26175	0.6131
KURS does not Granger Cause PDB	30	0.20871	0.6514
PDB does not Granger Cause KURS		4.85577	0.0363
JUB does not Granger Cause PMA	30	1.25295	0.2728
PMA does not Granger Cause JUB		2.23564	0.1465
KURS does not Granger Cause PMA	30	0.01296	0.9102
PMA does not Granger Cause KURS		2.19576	0.1500
KURS does not Granger Cause JUB	30	1.12470	0.2983
JUB does not Granger Cause KURS		5.68952	0.0243

UJI VECM

Vector Error Correction Estimates
Date: 02/17/17 Time: 21:08
Sample (adjusted): 1988 2015
Included observations: 28 after adjustments
Standard errors in ( ) & t-statistics in [ ]

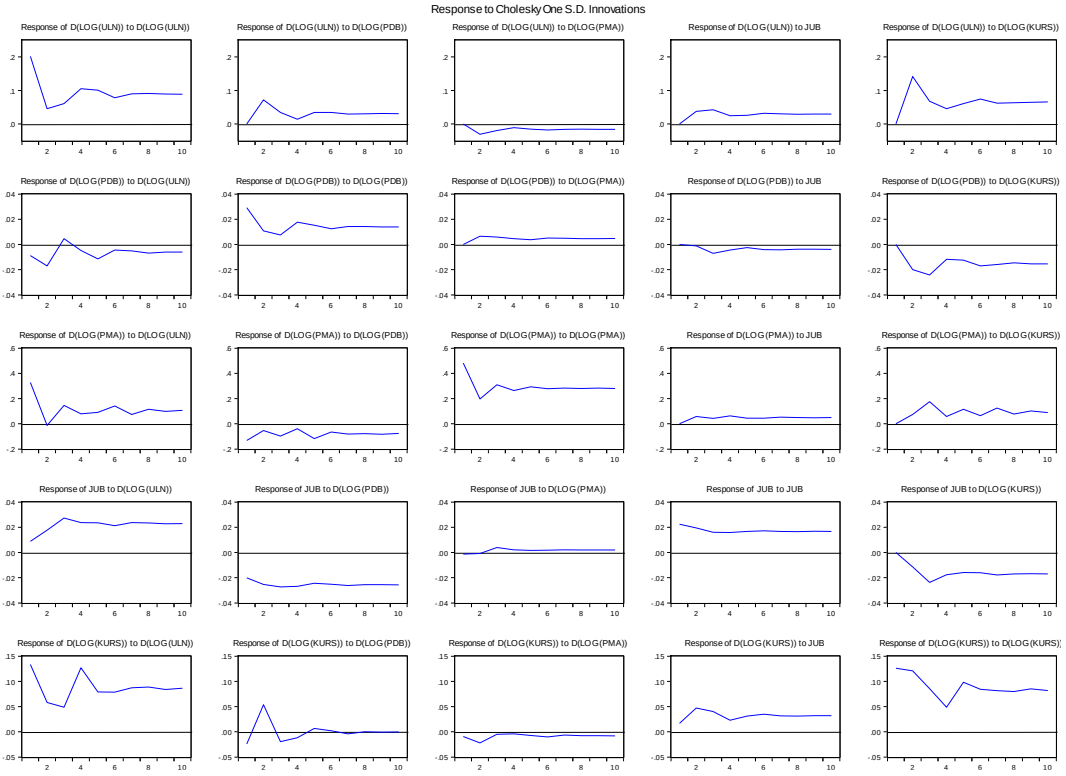
Cointegrating Eq:	CointEq1
D(LOG(ULN(-1)))	1.000000
D(LOG(PDB(-1)))	-2.044634 (0.76874) [-2.65971]
D(LOG(PMA(-1)))	0.057045 (0.04558) [1.25148]
JUB(-1)	-0.051066 (0.02432) [-2.09934]
D(LOG(KURS(-1)))	-1.238814 (0.17003) [-7.28568]
C	0.289246

Error Correction:	D(LOG(ULN),2)	D(LOG(PDB),2)	D(LOG(PMA),2)	D(JUB)	D(LOG(KURS),2)
CointEq1	-1.325736 (0.41030) [-3.23112]	0.130233 (0.06181) [2.10682]	-2.399608 (1.21375) [-1.97703]	0.211205 (0.06383) [3.30882]	-0.525724 (0.37833) [-1.38960]
D(LOG(ULN(-1)),2)	0.004872 (0.29353) [0.01660]	-0.115943 (0.04422) [-2.62177]	1.250502 (0.86833) [1.44013]	-0.116309 (0.04567) [-2.54700]	0.309259 (0.27066) [1.14261]
D(LOG(PDB(-1)),2)	1.096828 (0.93051) [1.17874]	-0.398259 (0.14019) [-2.84091]	-2.863571 (2.75260) [-1.04031]	0.128555 (0.14476) [0.88806]	2.411763 (0.85799) [2.81094]
D(LOG(PMA(-1)),2)	0.035559 (0.07052) [0.50426]	0.003399 (0.01062) [0.31997]	-0.436703 (0.20861) [-2.09343]	-0.012892 (0.01097) [-1.17513]	0.005998 (0.06502) [0.09225]
D(JUB(-1))	0.769966 (1.25700) [0.61254]	0.076855 (0.18938) [0.40584]	2.011927 (3.71843) [0.54107]	-0.054418 (0.19555) [-0.27828]	1.359141 (1.15904) [1.17264]
D(LOG(KURS(-1)),2)	-0.521201 (0.44107) [-1.18167]	0.003617 (0.06645) [0.05442]	-2.383257 (1.30476) [-1.82659]	0.171179 (0.06862) [2.49469]	-0.693753 (0.40670) [-1.70582]

C	-0.070698	-0.005441	-0.170071	0.075121	-0.098022
	(0.09689)	(0.01460)	(0.28662)	(0.01507)	(0.08934)
	[-0.72967]	[-0.37277]	[-0.59337]	[4.98373]	[-1.09718]
R-squared	0.633189	0.680796	0.463121	0.395065	0.477776
Adj. R-squared	0.528386	0.589594	0.309727	0.222227	0.328569
Sum sq. resids	0.856530	0.019441	7.495311	0.020730	0.728231
S.E. equation	0.201958	0.030426	0.597427	0.031419	0.186219
F-statistic	6.041692	7.464765	3.019163	2.285747	3.202098
Log likelihood	9.088712	62.08578	-21.27930	61.18713	11.36050
Akaike AIC	-0.149194	-3.934698	2.019950	-3.870509	-0.311464
Schwarz SC	0.183857	-3.601647	2.353001	-3.537458	0.021587
Mean dependent	-0.011804	-0.000371	0.000644	0.068929	0.003497
S.D. dependent	0.294082	0.047494	0.719076	0.035626	0.227261

Determinant resid covariance (dof adj.)	6.44E-11
Determinant resid covariance	1.53E-11
Log likelihood	150.0140
Akaike information criterion	-7.858145
Schwarz criterion	-5.954996

IMPULSE RESPON FUNCTION



VARIANCE DECOMPOTION

Variance Decomposition of D(LOG(ULN)):

Period	S.E.	D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1	0.201958	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.265417	60.88220	7.423714	1.332322	2.019363	28.34240
3	0.286467	56.78800	7.829743	1.601081	3.909102	29.87207
4	0.309988	59.96530	6.889913	1.497900	3.978736	27.66815
5	0.334871	60.46123	6.983685	1.484602	4.014422	27.05606
6	0.355517	58.51164	7.146134	1.561336	4.366314	28.41457
7	0.374745	58.42292	7.067979	1.591250	4.582393	28.33546
8	0.393356	58.36747	7.001571	1.594887	4.702218	28.33385
9	0.411152	58.15246	7.001109	1.612986	4.821080	28.41237
10	0.428130	57.90426	6.985988	1.627482	4.931421	28.55085

Variance Decomposition of D(LOG(PDB)):

Period	S.E.	D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1	0.030426	8.306289	91.69371	0.000000	0.000000	0.000000
2	0.042050	20.60010	54.54203	2.444966	0.066430	22.34647
3	0.050114	15.33621	40.62641	3.073157	2.038903	38.92531
4	0.055003	13.48065	44.06867	3.253678	2.335751	36.86125
5	0.059681	15.12173	43.87251	3.161237	2.144374	35.70015
6	0.063802	13.72863	42.20554	3.380285	2.281898	38.40365
7	0.067730	12.73595	41.82911	3.509553	2.410677	39.51472
8	0.071307	12.40695	41.73958	3.571015	2.446826	39.83563
9	0.074747	11.95733	41.47162	3.632333	2.483181	40.45554
10	0.078043	11.55942	41.23508	3.694817	2.524605	40.98608

Variance Decomposition of D(LOG(PMA)):

Period	S.E.	D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1	0.597427	30.10575	4.837267	65.05698	0.000000	0.000000
2	0.638575	26.38969	4.938272	66.49764	0.821126	1.353275
3	0.752929	22.71191	5.225360	64.70844	0.925140	6.429147
4	0.807164	20.73341	4.786972	66.98630	1.396529	6.096795
5	0.880057	18.50279	5.788245	67.45976	1.438057	6.811151
6	0.938969	18.48769	5.564040	68.01906	1.488420	6.440789
7	0.996127	16.97755	5.603901	68.52046	1.596581	7.301505
8	1.047907	16.53858	5.618652	69.02559	1.665000	7.152173
9	1.099197	15.84208	5.674267	69.40837	1.705219	7.370059
10	1.146561	15.42924	5.664145	69.77584	1.750932	7.379836

Variance Decomposition of JUB:

Period	S.E.	D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1	0.031419	7.941951	40.82905	0.160377	51.06862	0.000000
2	0.049515	16.03524	42.56343	0.087737	36.01143	5.302157
3	0.069147	23.80795	37.38706	0.369274	23.89483	14.54090
4	0.081470	25.65791	37.83148	0.334548	20.97037	15.20570
5	0.091255	27.13855	37.33164	0.301836	20.07873	15.14925
6	0.099882	27.21269	37.56031	0.283089	19.72493	15.21898
7	0.108708	27.70346	37.48203	0.275191	18.99509	15.54423
8	0.116580	28.11981	37.41158	0.269668	18.54076	15.65818
9	0.123800	28.33409	37.39829	0.262585	18.28018	15.72486
10	0.130710	28.50837	37.39907	0.257870	18.04286	15.79184

Variance Decomposition of D(LOG(KURS)):

Period	S.E.	D(LOG(ULN))	D(LOG(PDB))	D(LOG(PMA))	JUB	D(LOG(KURS))
1	0.186219	51.45095	1.680285	0.242192	0.820309	45.80626
2	0.241295	36.42485	5.971957	0.981594	4.326058	52.29554
3	0.264427	33.73274	5.510750	0.851761	5.900763	54.00399
4	0.298413	44.51805	4.480687	0.686858	5.217268	45.09714
5	0.325566	43.29304	3.805532	0.628505	5.297562	46.97536
6	0.347289	43.17408	3.348377	0.639998	5.665586	47.17196
7	0.368688	43.92825	2.983736	0.598697	5.752429	46.73689
8	0.388876	44.71969	2.681997	0.576207	5.813111	46.20900
9	0.408111	44.81876	2.435318	0.558744	5.894668	46.29251
10	0.426368	45.17217	2.231291	0.546039	5.963499	46.08700

Cholesky Ordering: D(LOG(ULN)) D(LOG(PDB)) D(LOG(PMA)) JUB D(LOG(KURS))