

**ANALISIS RISIKO ESTIMASI *VALUE AT RISK* (VaR)
MODEL VOLATILITAS *ASYMMETRIC GLOSTEN*
JAGGANATHAN AND RUNKLE (GJR) PADA *JAKARTA*
*ISLAMIC INDEX***

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Untuk memenuhi sebagian persyaratan

Mencapai derajat sarjana S-1

Program Studi Matematika



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sudah dapat diajukan kembali kepada Program Studi Matematika Fakultas Sains dan Teknologi UIN Sunan Kalijaga Yogyakarta sebagai salah satu syarat untuk memperoleh gelar Sarjana Strata Satu dalam Matematika.

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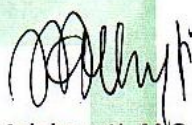
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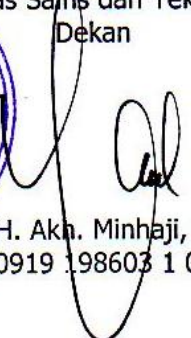

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Dengan ini saya menyatakan bahwa skripsi ini tidak terdapat karya yang pernah diajukan untuk memperoleh gelar kesarjanaan di suatu perguruan tinggi, dan sepanjang pengetahuan saya tidak terdapat karya atau pendapat yang pernah ditulis atau di terbitkan orang lain, kecuali yang secara tertulis diacu dalam naskah ini dan disebutkan dalam daftar pustaka.

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Yang menyatakan



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“Teruntuk kedua orang tuaku,
kakak–kakakku, adikku,
almamater tercinta UIN Sunan
Kalijaga Yogyakarta, serta
pecinta ilmu pengetahuan

MOTTO

“Raihlah ilmu, dan untuk meraih ilmu
belajarlah untuk tenang dan sabar.”

(Umar Bin Khattab)

Cara terbaik untuk keluar dari suatu
persoalan adalah memecahkannya

Kemenangan yang seindah – indahnyanya dan
sesukar – sukarnya yang boleh direbut oleh
manusia ialah menundukan diri sendiri.

(Ibu Kartini)

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Skripsi ini dimaksudkan untuk memperoleh gelar sarjana Sains (Matematika). Skripsi ini berjudul “**ANALISIS RISIKO ESTIMASI VALUE AT RISK (VaR) MODEL VOLATILITAS ASYMMETRIC GLOSTEN JAGGANATHAN AND RUNKLE (GJR) PADA JAKARTA ISLAMIC INDEX**”.

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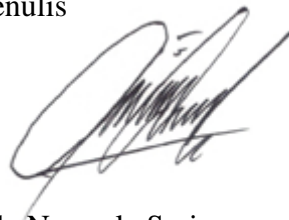
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DAFTAR SIMBOL

| | |
|---------------|---|
| R_t | = Net <i>return</i> |
| P_t | = Harga investasi pada saat t |
| r_t | = <i>Continoustly compounded return</i> |
| t | = Anggota titik waktu |
| Z_t | = Runtun waktu <i>return</i> |
| $T(Z_t)$ | = Fungsi transformasi Z_t |
| X_t | = Data <i>time series</i> |
| μ | = Rata-rata dari Z konstan |
| σ^2 | = Variansi dari Z |
| σ | = Standar deviasi dari Z |
| γ_k | = Kovarian (Z_t, Z_{t+k}) |
| ϕ | = Parameter <i>autoregresif</i> |
| λ | = Parameter transformasi |
| Y | = Nilai prediksi variabel dependen |
| p | = Tingkat autoregressive |
| q | = Tingkat moving average |
| B | = Operator backshif |
| ε | = Nilai residual |
| α | = Parameter ARCH |
| β | = Parameter GARCH |
| γ | = Parameter GJR |
| p* | = Probabilitas |
| α' | = Alfa koreksi |

**ANALISIS RISIKO ESTIMASI VALUE AT RISK (VaR) MODEL
VOLATILITAS ASYMMETRIC GLOSTEN JAGGANATHAN AND RUNKLE
(GJR) PADA JAKARTA ISLAMIC INDEX**

Oleh :

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ABSTRAK

Pada data keuangan seperti *return* saham, analisis menggunakan model GARCH tidak dapat diterapkan karena model GARCH mengasumsikan nilai residu positif maupun negatif memberikan pengaruh yang simetris terhadap volatilitasnya. Pada prakteknya asumsi ini sering dilanggar, tidak semua volatilitas saham bersifat simetris. Oleh karena itu, perlu dilakukan pemodelan volatilitas menggunakan model yang dapat digunakan untuk memodelkan data yang bersifat asimetris, model tersebut adalah model *asymmetric Glosten Jagganathan and Runkle* (GJR). Selain *return*, pengukuran risiko merupakan hal yang sangat penting, salah satu alat yang digunakan untuk mengestimasi risiko adalah *value at risk* (VaR). Pada penelitian ini menggunakan data penutupan harga *saham Jakarta Islamic Index* (JII) periode 2 Januari 2012 sampai dengan 30 April 2014. Volatilitas data *return* saham JII menggunakan model VaR-GJR (1,1) dengan Risiko kerugian pada nilai investasi awal sebesar Rp.10.000.000,- adalah dalam 1 hari ke depan sebesar Rp. 184.887, dalam 7 hari ke depan sebesar Rp. 489.165.

Kata Kunci : *Return*, GARCH, Asimetris, GJR, *Value at Risk* (VaR)

BAB I

PENDAHULUAN

1.1 Latar Belakang

Investasi sebagai suatu aktivitas muamalah tidak terlepas dengan kaidah fiqh, hukumnya yaitu boleh, kecuali yang diharamkan. Islam adalah agama yang pro dengan investasi dimana islam tidak menginginkan sumber daya yang dimiliki orang tersebut hanya disimpan dan tidak diproduktifkan, karena lamban laun harta tersebut akan berkurang. Secara prinsip ekonomi tidak ada yang membedakan antara investasi dengan konsep islam dan investasi konvensional *high return* dan *high risk* tetap menjadi patokan utama. Patokan lain yang jadi pertimbangan adalah investasi merupakan pengorbanan sekarang untuk mendapatkan manfaat dimasa yang akan datang, walaupun secara prinsip ekonomi tidak ada yang membedakan, tetapi dalam islam aktivitas investasi tidak lepas dari ibadah, sehingga harus tetap berpegang terhadap ajaran islam (Najib dkk, 2008 : 91-92).

Gunawan Yasni, salah satu anggota dewan syariah Nasional (DSN) dalam pasar modal (2004) mengungkapkan bahwa dalam berinvestasi selain harus mempunyai entitas investasi yang sesuai dengan syariah islam, juga dalam cara mentraksaksikan subtansi tersebut harus sesuai dengan syariah islam.

Saham merupakan salah satu alternatif berinvestasi yang paling populer saat ini. Saham diterbitkan perusahaan guna mendapatkan modal. Saham berupa surat berharga bukti penyeteran dana dari investor kepada

perusahaan. Tiap investasi antar saham akan memberikan keuntungan dan risiko yang berbeda meskipun dalam sektor industri yang sama. Penyebab perbedaan ini adalah faktor internal dan faktor eksternal. Faktor internal meliputi manajemen, pemasaran, keadaan keuangan, kualitas produk dan kemampuan bersaing. Faktor eksternal terdiri dari kebijakan pemerintah, poleksobudhankam (politik, ekonomi, sosial dan budaya, pertahanan dan keamanan), pesaing serta selera dan daya beli masyarakat.

Proses transaksi sekuritas atau surat berharga harus dimulai dengan akad yang jelas dan transparan. Artinya, ketika menguasai instrumen investasi itu, harus melalui suatu proses yang sesuai syari'ah dan menghindari hal-hal yang bersifat *maysir* (perjudian), *gharar* (ketidak jelasan) dan *riba*. Setelah semua kriteria secara syari tersebut terpenuhi, barulah berbicara pada aspek pertimbangan bisnis rasional, misalnya manajemen aktiva investasi harus berkualitas, masalah *risk* dan *return* dari investasi tersebut, lingkungan investasi harus sesuai dengan ketentuan yang berlaku dan juga tingkat likuiditasnya juga harus bagus (Najib dkk, 2008 :93).

Untuk merespon kebutuhan akan investasi syariah tersebut, di Indonesia, PT. Bursa Efek Jakarta (BEJ) telah menerbitkan daftar reksadana, saham, dan obligasi dalam *Jakarta Islamic Index* (JII) pada tanggal 3 juli 2000 lalu. Peneliti akan menggunakan data harga saham *Jakarta Islamic Index* yang diambil dari www.finance.yahoo.com.

Pada setiap investasi termasuk investasi pasar modal syariah, terdapat dua hal mendasar yang selalu menyertainya, yaitu tingkat keuntungan

(*return*) dan risiko yang akan dihadapi, sehingga diperlukan manajemen risiko untuk mengidentifikasi risiko agar kemungkinan kerugian yang akan dihadapi dapat diketahui.

Peramalan (*forecasting*) merupakan alat penting dalam pengambilan keputusan. Kualitas suatu ramalan berkaitan erat dengan informasi yang dapat diserap dari data di masa lampau. Analisis deret berkala (*time series analysis*) adalah suatu metode kuantitatif untuk menentukan pola data masa lampau yang telah dikumpulkan secara teratur. Apabila kita telah menemukan pola data masa lampau, maka kita dapat menggunakan untuk mengadakan peramalan dimasa yang akan datang. Langkah penting dalam memilih suatu metode runtun waktu (*time series*) yang tepat adalah dengan mempertimbangkan jenis pola data, sehingga metode yang paling tepat dengan pola tersebut dapat diuji. Pola data dapat dibedakan menjadi empat jenis yaitu pola *irregular*, pola musiman, pola siklis, dan pola trend. Pola trend adalah gerak naik atau turun dalam jangka panjang. Pola musiman yaitu gerak naik atau turun secara periodik dalam jangka waktu satu tahun. Pola siklis yaitu gerak naik atau turun dalam jangka panjang, 5 tahun-25 tahun atau lebih. Sedangkan pola *irregular* yaitu gerakan yang tidak teratur dan sulit untuk diramalkan (Boedijoewono, 2005 : 215-221).

Perubahan yang terjadi pada harga saham dapat dipengaruhi oleh isu positif (*good shock*) ataupun isu negatif (*bad shock*), isu-isu tersebut dapat menaikkan ataupun menurunkan harga saham, namun biasanya isu positif mempunyai pengaruh yang kecil terhadap besarnya perubahan harga saham

dibandingkan isu negatif yang mempunyai pengaruh lebih besar terhadap penurunan harga saham sehingga jika di gambar dengan kurva, terlihat tidak simetris.

Dalam analisis data makroekonomi, Engle (1982) memperkenalkan model ARCH sebagai alternatif untuk menganalisis data runtun waktu dengan kondisi variansi yang tidak konstan (heteroskedastisitas). Pada model ARCH maupun generalisasinya (GARCH) sering digunakan untuk memodelkan data ekonomi dan keuangan dengan asumsi stasioner terhadap ragam (homoskedastisitas). Pada model ARCH maupun bentuk generalisasinya GARCH mengasumsikan bahwa nilai residual baik positif maupun negatif memberikan pengaruh yang simetris terhadap volatilitasnya, ketika kondisi *bad shock* dan *good shock*, memberikan pengaruh yang sama terhadap volatilitas. Akan tetapi pada prakteknya asumsi tersebut seringkali dilanggar, tidak semua data runtun waktu mempunyai pergerakan volatilitas yang simetris. Terutama untuk data finansial cenderung memiliki sifat volatilitas yang asimetris, yakni pergerakan volatilitas yang berbeda terhadap kenaikan atau penurunan harga suatu aset.

Terdapat beberapa model yang dapat digunakan untuk mengatasi masalah asimetris, salah satunya *Glosten, Jagganatha, and Runkle* pada tahun 1993 memperkenalkan model *Glosten, Jagganathan, and Runkle* (GJR), asimetris GJR yang diajukan *Glosten, Jagganathan, and Runkle* mempunyai kelebihan mengukur volatilitas harga saham dengan ada perbedaan efek *good shock* dan *bad shock*.

Selain *return*, pengukuran risiko merupakan hal yang sangat penting. Salah satu paradigma penting dalam manajemen risiko untuk mengelola risiko yaitu bahwa risiko dapat di dekati dengan menggunakan suatu kerangka pikir yang sangat rasional. Analisis risiko yang didalamnya banyak menggunakan metode statistika sangat berperan dalam menentukan ukuran risiko yang merupakan elemen penting dalam manajemen risiko. Salah satu alat yang dapat digunakan untuk mengestimasi risiko adalah *Value at Risk* (VaR).

Berdasarkan latar belakang di atas maka peneliti mengambil judul tentang ”**Analisis Risiko Estimasi *Value At Risk* (VaR) Model Volatilitas *Asymmetric Glosten Jaganathan and Runkle* (GJR) pada *Jakarta Islamic Index* ”.**

1.2 Batasan Masalah

Pada penelitian ini terdapat beberapa batasan-batasan yang akan diteliti, batasan-batasan ini digunakan untuk mempermudah peneliti dalam melakukan suatu penelitian, yaitu :

1. Masalah yang dibahas pada tugas akhir ini dibatasi hanya pada VaR dengan model GJR.
2. Menghitung Estimasi parameter dengan menggunakan metode *Maximum Likelihood*.
3. Data yang digunakan adalah saham JII periode 2 Januari 2012 sampai dengan 30 April 2014.
4. *Software* yang digunakan E-views, MATLAB dan Microsoft Office Excel.

1.3 Rumusan Masalah

Dari latar belakang tersebut dapat dirumuskan permasalahan sebagai berikut :

1. Bagaimana langkah-langkah analisis risiko investasi dengan menggunakan VaR dengan GJR?
2. Bagaimana bentuk model VaR dengan GJR untuk mengukur besar risiko investasi pada indeks harga saham syariah JII?
3. Berapa besar risiko investasi pada indeks harga saham syariah JII menggunakan model VaR dengan GJR?.

1.4 Tujuan Penelitian

Berdasarkan rumusan masalah di atas, maka tujuan dari skripsi ini adalah :

1. Mengetahui langkah-langkah analisis risiko investasi dengan menggunakan VaR dengan GRJ.
2. Mengetahui bentuk model VaR dengan GJR untuk mengukur besar risiko investasi pada indeks harga saham syariah JII.
3. Mengetahui besar risiko investasi pada indeks harga saham syariah JII menggunakan model VaR dengan GJR.

1.5 Manfaat Penelitian

1. Bagi penulis, untuk memperdalam dan memperluas pengetahuan penulis tentang aplikasi matematika khususnya statistika serta menerapkannya dalam kenyataan yang ada dilapangan.

2. Bagi bidang matematika, memperkaya dan melengkapi referensi mengenai VaR dengan model GJR.
3. Bagi investor, memberikan informasi atau masukan kepada para investor yang akan berinvestasi dalam pengambilan keputusan, sehingga dapat meminimalisir terjadinya risiko.

1.6 Tinjauan Pustaka

Tinjauan pustaka skripsi ini terdiri dari beberapa buku, karya ilmiah lain ataupun situs internet sebagai referensi pelengkap guna menunjang kelengkapan penelitian.

Adapun beberapa penelitian yang relevan dengan tema yang diambil peneliti, antara lain :

1. Penelitian Dian Harry Hanggara (2013) yang berjudul Analisis Risiko dengan *Value at Risk (VaR)-Generalized Autoregressive Conditional Heteroscedasticity (GARCH)* (Studi Kasus : Indeks Harga Saham Syariah *Jakarta Islamic Index (JII)* Periode Januari 2011-Juli 2013). Dari penelitian tersebut didapatkan pemeriksaan diagnosa yang memenuhi asumsi adalah model VaR-GARCH (1,1) dan VaR-GARCH (3,0). Dari model tersebut dibandingkan dan diperoleh model VAR-GARCH (1,1) menunjukkan tingkat keakuratan risiko yang cukup baik. Jadi bentuk model untuk mengukur besar risiko investasi pada indeks harga saham syariah JII yaitu model VaR-GARCH (1,1)

2. Penelitian Khoirul Liummah Ayu Nastiti, Agus Suharsono (2012) yang berjudul *Analisis Volatilitas Saham Perusahaan Go Publik dengan Metode ARCH-GARCH*. Hasil penelitian menunjukkan *return* saham lima perusahaan go publik menunjukkan keadaan yang berfluktuasi selama periode pengamatan Februari 2011 sampai dengan Januari 2012. Dalam memodelkan volatilitas saham, hanya terdapat dua saham perusahaan yang memiliki model ARCH-GARCH yaitu saham ANTM memiliki model volatilitas GARCH (1,1) dan saham SMGR memiliki model volatilitas ARCH (1).
3. Penelitian Aleš Kresta (2013) yang berjudul *Backtesting VaR Estimation Under GARCH and GJR-GARCH model*. Hasil penelitian menunjukkan bahwa hasil *backtesting* juga dipengaruhi oleh ukuran periode dimanfaatkan untuk estimasi parameter. Untuk investasi indeks pasar saham Praha menunjukkan bahwa untuk hasil *backtesting* dijelaskan buncing model dapat ditolak, yaitu model bereaksi terhadap peningkatan volatilitas langsung. Tetapi model ini tidak cocok untuk saham ini, dan model lain harus diasumsikan. Juga ditemukan bahwa dengan meningkatkan ukuran periode untuk parameter estimasi jumlah pengecualian menurun.

Tabel 1.1 Kajian pustaka

| No. | Nama Peneliti | Judul | Metode | Objek |
|-----|---|--|--------------------------|------------------------------|
| 1 | Dian Harry Hanggara (UIN) | Analisis Risiko Investasi dengan <i>Value at Risk</i> (VaR) – <i>Generalized Autoregressive Conditional Heteroscedasticity</i> (GARCH) | VaR- GARCH | JII |
| 2 | Khoirul Liummah Ayu Nastiti, dan Agus Suharsono | Analisis Volatilitas Saham Perusahaan <i>Go Publik</i> dengan Metode ARCH-GARCH | ARCH- GARCH | ANTM, ASII, BBKA, SMGR, UNTR |
| 3 | Aleš Kresta | <i>Backtesting VaR Estimation Under GARCH and GJR-GARCH model</i> | VaR- GARCH VaR-GJR | Index PX-50 dan PX |

1.7 Sistematika Penulisan

Tugas akhir ini ditulis dengan beberapa bab yang berisikan sub-sub yang telah disusun sedemikian rupa guna memudahkan pembaca untuk memahami isi tulisan ini.

Adapun sistematika penulisan Tugas Akhir ini adalah:

1. BAB I PENDAHULUAN

Berisikan latar belakang permasalahan, perumusan masalah, rumusan

masalah, tujuan penelitian, manfaat penelitian, tinjauan pustaka, dan sistematika penulisan.

2. BAB II LANDASAN TEORI

Berisi tentang suatu tinjauan yang merupakan uraian teori dari semua hal yang dibutuhkan untuk diterapkan dalam pembahasan *Value at Risk* (VaR) dengan GJR .

3. BAB III METODE PENELITIAN

Berisi berbagai penjelasan mengenai proses pelaksanaan penelitian ini, mulai jenis penelitian, sumber penelitian, metode pengumpulan data, variabel penelitian, alat penelitian, metode analisis data, dan sampai pada flow chart.

4. BAB IV PEMBAHASAN

Berisi tentang pembahasan mengenai model analisis risiko investasi menggunakan VaR dengan GJR model.

5. BAB V STUDI KASUS

Berisi tentang penerapan dan aplikasi analisis risiko investasi estimasi VaR dengan GJR pada data indeks saham syariah JII dan memberikan interpretasi terhadap hasil yang diperoleh.

6. BAB VI KESIMPULAN DAN SARAN

Berisi tentang suatu kesimpulan dari seluruh pembahasan permasalahan yang ada dan pemecahan masalah serta saran-saran yang berkaitan dengan penelitian sejenis untuk penelitian berikutnya.

BAB VI

PENUTUP

6.1 Kesimpulan

Berdasarkan pada pembahasan mengenai analisis risiko estimasi *value at risk* (var) dengan model volatilitas *asymmetric glosten jagganathan and runkle* (gjr) pada *return* saham *jakarta islamic index* dapat di ambil kesimpulan sebagai berikut :

1. Ada beberapa langkah-langkah dalam analisis risiko investasi dengan menggunakan VaR-GJR yaitu mengumpulkan data, statistika deskriptif, menentukan nilai *return*, menguji kestasioneran data, menguji kenormalan data karena data tidak berdistribusi normal maka α yang digunakan dikoreksi menggunakan *Cornish fisher Expansion* , menentukan model yang sesuai untuk persamaan *mean*, menguji ada tidaknya efek ARCH, menentukan model GARCH, uji asimetris, menentukan model yang sesuai untuk persamaan GJR, menghitung nilai VaR-GJR dan menguji validasi VaR-GJR.
2. Berdasarkan pemeriksaan diagnosa yang memenuhi asumsi adalah model VaR-GJR (1,1), model tersebut menunjukkan tingkat keakuratan yang cukup baik yang ditunjukkan dengan nilai probabilitas parameter-parameter model (1,1) yang kurang dari 0.05 dan memenuhi asumsi model klasik. Jadi bentuk model untuk mengukur besar risiko investasi pada indeks harga saham syariah JII yaitu model VaR-GJR (1,1), dengan persamaan sebagai berikut:

➤ Persamaan *mean*:

$$\log X_t = 0.000197$$

$$X_t = e^{0.000197}$$

➤ Persamaan variansi:

$$\sigma_t^2 = (6.91 \times 10^{-6}) + 0.107332\sigma_{t-1}^2 + 0.080138\varepsilon_{t-1}^2 + 0.815793 \cdot 1 \cdot \varepsilon_{t-1}^2$$

3. Pengukuran besar risiko investasi dengan menggunakan VaR-GJR (1,1), dengan nilai investasi awal diasumsikan sebesar Rp.10.000.000,- menghasilkan beberapa besaran nilai risiko untuk indeks harga saham JII dengan tingkat kepercayaan 95%, sebagai berikut :
 - a. Dalam 1 hari ke depan sebesar Rp. 184.887.
 - b. Dalam 7 hari ke depan sebesar Rp. 489.165.

6.2 Saran

Adapun saran-saran yang dapat peneliti sampaikan antara lain adalah :

1. Berdasarkan hasil penelitian ini, disarankan bagi investor yang akan berinvestasi untuk mengukur risiko harga dari saham dengan menggunakan *Value at Risk* dalam pengambilan keputusan, sehingga dapat meminimalisir terjadinya risiko.
2. Melanjutkan pembahasan tentang *Value at Risk* dengan metode lain seperti GARCH-M, VGARCH, IGARCH, GARCH non linear *asymmetric*, GARCH *asymmetric*, APARCH dll.
3. Memperluas pembahasan tentang *Value at Risk* pada sekuritas lain seperti deposito ataupun saham luar negeri.

Demikian saran dari peneliti semoga dapat menjadi masukan para peneliti pada bidang statistik khususnya analisis risiko investasi estimasi VaR model *time series*, untuk melanjutkan dan mengembangkan penelitian.

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Lampiran 1 Data Return Saham Jakarta Islamic Index

| No | Date | Close Price | Return Jakarta Islamic Index |
|----|-----------|-------------|------------------------------|
| 1 | 2-Jan-12 | 533.451 | 0 |
| 2 | 3-Jan-12 | 542.176 | 0.016223452 |
| 3 | 4-Jan-12 | 553.077 | 0.01990656 |
| 4 | 5-Jan-12 | 555.232 | 0.003888812 |
| 5 | 6-Jan-12 | 547.611 | -0.013820864 |
| 6 | 9-Jan-12 | 550.083 | 0.004503995 |
| 7 | 10-Jan-12 | 559.147 | 0.016343232 |
| 8 | 11-Jan-12 | 553.016 | -0.011025474 |
| 9 | 12-Jan-12 | 552.395 | -0.001123564 |
| 10 | 13-Jan-12 | 557.344 | 0.008919273 |
| 11 | 16-Jan-12 | 553.793 | -0.006391673 |
| 12 | 17-Jan-12 | 560.986 | 0.012904979 |
| 13 | 18-Jan-12 | 565.712 | 0.008389165 |
| 14 | 19-Jan-12 | 568.704 | 0.005274973 |
| 15 | 20-Jan-12 | 568.282 | -0.000742313 |
| 16 | 24-Jan-12 | 570.54 | 0.003965506 |
| 17 | 25-Jan-12 | 564.631 | -0.01041086 |
| 18 | 26-Jan-12 | 567.45 | 0.004980219 |
| 19 | 27-Jan-12 | 570.754 | 0.005805654 |
| 20 | 30-Jan-12 | 557.351 | -0.023763091 |
| 21 | 31-Jan-12 | 562.535 | 0.009258151 |
| 22 | 1-Feb-12 | 562.364 | -0.000304027 |
| 23 | 2-Feb-12 | 571.086 | 0.015390484 |
| 24 | 3-Feb-12 | 571.418 | 0.00058118 |
| 25 | 6-Feb-12 | 565.338 | -0.010697209 |
| 26 | 7-Feb-12 | 564.689 | -0.001148645 |
| 27 | 8-Feb-12 | 570.415 | 0.010089029 |
| 28 | 9-Feb-12 | 568.872 | -0.002708713 |
| 29 | 10-Feb-12 | 560.346 | -0.015101003 |
| 30 | 13-Feb-12 | 568.495 | 0.014438068 |
| 31 | 14-Feb-12 | 570.738 | 0.003937742 |
| 32 | 15-Feb-12 | 570.467 | -0.000474937 |
| 33 | 16-Feb-12 | 562.505 | -0.014055301 |
| 34 | 17-Feb-12 | 572.046 | 0.016819385 |
| 35 | 20-Feb-12 | 573.689 | 0.00286803 |
| 36 | 21-Feb-12 | 573.639 | -8.7159E-05 |
| 37 | 22-Feb-12 | 570.748 | -0.005052497 |
| 38 | 23-Feb-12 | 562.08 | -0.015303593 |

| No | Date | Close Price | Return Jakarta Islamic Index |
|----|-----------|-------------|------------------------------|
| 39 | 24-Feb-12 | 550.402 | -0.020995268 |
| 40 | 27-Feb-12 | 545.996 | -0.008037271 |
| 41 | 28-Feb-12 | 553.259 | 0.013214597 |
| 42 | 29-Feb-12 | 566.754 | 0.024099101 |
| 43 | 1-Mar-12 | 561.822 | -0.008740273 |
| 44 | 2-Mar-12 | 570.052 | 0.014542511 |
| 45 | 5-Mar-12 | 565.599 | -0.007842238 |
| 46 | 6-Mar-12 | 561.577 | -0.007136449 |
| 47 | 7-Mar-12 | 559.098 | -0.004424127 |
| 48 | 8-Mar-12 | 563.531 | 0.007897574 |
| 49 | 9-Mar-12 | 567.169 | 0.006434974 |
| 50 | 12-Mar-12 | 564.593 | -0.004552202 |
| 51 | 13-Mar-12 | 568.199 | 0.006366592 |
| 52 | 14-Mar-12 | 575.711 | 0.013134089 |
| 53 | 15-Mar-12 | 571.966 | -0.00652625 |
| 54 | 16-Mar-12 | 566.907 | -0.00888428 |
| 55 | 19-Mar-12 | 566.905 | -3.52792E-06 |
| 56 | 20-Mar-12 | 566.16 | -0.001315017 |
| 57 | 21-Mar-12 | 570.903 | 0.008342594 |
| 58 | 22-Mar-12 | 570.791 | -0.0001962 |
| 59 | 26-Mar-12 | 569.017 | -0.003112807 |
| 60 | 27-Mar-12 | 576.621 | 0.013274894 |
| 61 | 28-Mar-12 | 577.592 | 0.001682532 |
| 62 | 29-Mar-12 | 579.334 | 0.003011431 |
| 63 | 30-Mar-12 | 584.06 | 0.008124549 |
| 64 | 2-Apr-12 | 588.1 | 0.006893284 |
| 65 | 3-Apr-12 | 593.074 | 0.008422179 |
| 66 | 4-Apr-12 | 576.96 | -0.02754624 |
| 67 | 5-Apr-12 | 581.009 | 0.006993307 |
| 68 | 9-Apr-12 | 579.4 | -0.002773162 |
| 69 | 10-Apr-12 | 577.941 | -0.002521298 |
| 70 | 11-Apr-12 | 572.811 | -0.008915968 |
| 71 | 12-Apr-12 | 572.685 | -0.000219992 |
| 72 | 13-Apr-12 | 575.489 | 0.004884287 |
| 73 | 16-Apr-12 | 570.615 | -0.008505388 |
| 74 | 17-Apr-12 | 571.614 | 0.001749212 |
| 75 | 18-Apr-12 | 574.26 | 0.004618317 |
| 76 | 19-Apr-12 | 571.724 | -0.004425898 |
| 77 | 20-Apr-12 | 574.032 | 0.004028786 |
| 78 | 23-Apr-12 | 570.083 | -0.00690318 |

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| 79 | 24-Apr-12 | 571.792 | 0.002993325 |
| 80 | 25-Apr-12 | 569.491 | -0.004032309 |
| 81 | 26-Apr-12 | 570.546 | 0.001850818 |
| 82 | 27-Apr-12 | 572.787 | 0.003920123 |
| 83 | 30-Apr-12 | 575.088 | 0.004009153 |
| 84 | 1-May-12 | 577.299 | 0.003837257 |
| 85 | 2-May-12 | 582.692 | 0.009298415 |
| 86 | 3-May-12 | 583.334 | 0.001101176 |
| 87 | 4-May-12 | 580.754 | -0.004432662 |
| 88 | 7-May-12 | 572.372 | -0.01453813 |
| 89 | 8-May-12 | 575.194 | 0.004918246 |
| 90 | 9-May-12 | 564.783 | -0.018265789 |
| 91 | 10-May-12 | 567.406 | 0.00463351 |
| 92 | 11-May-12 | 562.133 | -0.00933662 |
| 93 | 14-May-12 | 555.611 | -0.011670068 |
| 94 | 15-May-12 | 554.611 | -0.001801442 |
| 95 | 16-May-12 | 548.334 | -0.011382377 |
| 96 | 21-May-12 | 540.184 | -0.014974768 |
| 97 | 22-May-12 | 550.239 | 0.018442907 |
| 98 | 23-May-12 | 545.446 | -0.008748921 |
| 99 | 24-May-12 | 544.454 | -0.001820351 |
| 100 | 25-May-12 | 531.239 | -0.024571443 |
| 101 | 28-May-12 | 533.03 | 0.003365694 |
| 102 | 29-May-12 | 534.052 | 0.001915505 |
| 103 | 30-May-12 | 536.681 | 0.004910665 |
| 104 | 31-May-12 | 525.052 | -0.021906572 |
| 105 | 1-Jun-12 | 519.836 | -0.009983928 |
| 106 | 4-Jun-12 | 498.03 | -0.042853061 |
| 107 | 5-Jun-12 | 510.315 | 0.024367866 |
| 108 | 6-Jun-12 | 527.915 | 0.033907104 |
| 109 | 7-Jun-12 | 528.793 | 0.001661765 |
| 110 | 8-Jun-12 | 526.869 | -0.00364511 |
| 111 | 11-Jun-12 | 530.559 | 0.006979227 |
| 112 | 12-Jun-12 | 530.869 | 0.000584119 |
| 113 | 13-Jun-12 | 532.742 | 0.003521968 |
| 114 | 14-Jun-12 | 521.985 | -0.020398403 |
| 115 | 15-Jun-12 | 525.682 | 0.007057615 |
| 116 | 18-Jun-12 | 531.667 | 0.011320886 |
| 117 | 19-Jun-12 | 535.401 | 0.006998645 |
| 118 | 20-Jun-12 | 545.996 | 0.019595651 |

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| 119 | 21-Jun-12 | 538.139 | -0.014494759 |
| 120 | 22-Jun-12 | 536.224 | -0.003564907 |
| 121 | 25-Jun-12 | 529.903 | -0.011858013 |
| 122 | 26-Jun-12 | 536.11 | 0.011645393 |
| 123 | 27-Jun-12 | 541.618 | 0.010221592 |
| 124 | 28-Jun-12 | 533.777 | -0.014582807 |
| 125 | 29-Jun-12 | 544.19 | 0.019320302 |
| 126 | 2-Jul-12 | 552.122 | 0.014470586 |
| 127 | 3-Jul-12 | 562.704 | 0.018984699 |
| 128 | 4-Jul-12 | 569.656 | 0.012278935 |
| 129 | 5-Jul-12 | 567.403 | -0.00396286 |
| 130 | 6-Jul-12 | 563.918 | -0.006160959 |
| 131 | 9-Jul-12 | 551.524 | -0.022223495 |
| 132 | 10-Jul-12 | 557.358 | 0.010522407 |
| 133 | 11-Jul-12 | 560.168 | 0.005028976 |
| 134 | 12-Jul-12 | 551.736 | -0.015167068 |
| 135 | 13-Jul-12 | 557.98 | 0.011253448 |
| 136 | 16-Jul-12 | 561.122 | 0.005615231 |
| 137 | 17-Jul-12 | 566.363 | 0.009296865 |
| 138 | 18-Jul-12 | 565.576 | -0.001390535 |
| 139 | 19-Jul-12 | 566.322 | 0.00131814 |
| 140 | 20-Jul-12 | 561.332 | -0.00885029 |
| 141 | 23-Jul-12 | 551.113 | -0.018372661 |
| 142 | 24-Jul-12 | 547.297 | -0.006948253 |
| 143 | 25-Jul-12 | 548.252 | 0.001743419 |
| 144 | 26-Jul-12 | 550.705 | 0.00446424 |
| 145 | 27-Jul-12 | 563.878 | 0.02363864 |
| 146 | 30-Jul-12 | 565.824 | 0.00344516 |
| 147 | 31-Jul-12 | 573.731 | 0.01387757 |
| 148 | 1-Aug-12 | 574.507 | 0.001351636 |
| 149 | 2-Aug-12 | 567.417 | -0.012417799 |
| 150 | 3-Aug-12 | 569.883 | 0.004336593 |
| 151 | 6-Aug-12 | 572.202 | 0.004060999 |
| 152 | 7-Aug-12 | 568.351 | -0.00675289 |
| 153 | 8-Aug-12 | 569.352 | 0.001759686 |
| 154 | 9-Aug-12 | 575.658 | 0.011014862 |
| 155 | 10-Aug-12 | 578.382 | 0.004720816 |
| 156 | 13-Aug-12 | 571.891 | -0.011286136 |
| 157 | 14-Aug-12 | 576.209 | 0.007522028 |
| 158 | 15-Aug-12 | 582.471 | 0.010808957 |

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| 159 | 16-Aug-12 | 585.225 | 0.00471699 |
| 160 | 23-Aug-12 | 583.529 | -0.002902238 |
| 161 | 24-Aug-12 | 580.192 | -0.005735067 |
| 162 | 27-Aug-12 | 579.491 | -0.001208951 |
| 163 | 28-Aug-12 | 579.98 | 0.000843488 |
| 164 | 29-Aug-12 | 575.869 | -0.007113416 |
| 165 | 30-Aug-12 | 566.449 | -0.016493154 |
| 166 | 31-Aug-12 | 569.935 | 0.006135269 |
| 167 | 3-Sep-12 | 577.898 | 0.013875063 |
| 168 | 4-Sep-12 | 577.271 | -0.001085556 |
| 169 | 5-Sep-12 | 569.997 | -0.012680729 |
| 170 | 6-Sep-12 | 574.104 | 0.007179467 |
| 171 | 7-Sep-12 | 580.863 | 0.011704364 |
| 172 | 10-Sep-12 | 587.635 | 0.011591078 |
| 173 | 11-Sep-12 | 585.911 | -0.002938106 |
| 174 | 12-Sep-12 | 590.608 | 0.007984614 |
| 175 | 13-Sep-12 | 590.091 | -0.000875752 |
| 176 | 14-Sep-12 | 604.785 | 0.024596261 |
| 177 | 17-Sep-12 | 605.76 | 0.001610845 |
| 178 | 18-Sep-12 | 601.662 | -0.006788042 |
| 179 | 19-Sep-12 | 605.385 | 0.006168793 |
| 180 | 20-Sep-12 | 598.158 | -0.012009686 |
| 181 | 21-Sep-12 | 602.629 | 0.007446817 |
| 182 | 24-Sep-12 | 592.697 | -0.016618443 |
| 183 | 25-Sep-12 | 596.991 | 0.007218731 |
| 184 | 26-Sep-12 | 585.855 | -0.018829719 |
| 185 | 27-Sep-12 | 593.241 | 0.012528406 |
| 186 | 28-Sep-12 | 600.84 | 0.012727952 |
| 187 | 1-Oct-12 | 594.641 | -0.010370814 |
| 188 | 2-Oct-12 | 599.459 | 0.00806972 |
| 189 | 3-Oct-12 | 599.187 | -0.000453845 |
| 190 | 4-Oct-12 | 605.746 | 0.01088702 |
| 191 | 5-Oct-12 | 616.807 | 0.018095415 |
| 192 | 8-Oct-12 | 610.242 | -0.010700571 |
| 193 | 9-Oct-12 | 610.053 | -0.000309761 |
| 194 | 10-Oct-12 | 610.65 | 0.000978125 |
| 195 | 11-Oct-12 | 612.06 | 0.002306353 |
| 196 | 12-Oct-12 | 613.325 | 0.002064658 |
| 197 | 15-Oct-12 | 612.143 | -0.00192906 |
| 198 | 16-Oct-12 | 616.872 | 0.007695632 |

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| 199 | 17-Oct-12 | 617.794 | 0.001493522 |
| 200 | 18-Oct-12 | 621.647 | 0.006217339 |
| 201 | 19-Oct-12 | 616.778 | -0.007863254 |
| 202 | 22-Oct-12 | 617.314 | 0.000868655 |
| 203 | 23-Oct-12 | 613.67 | -0.005920484 |
| 204 | 24-Oct-12 | 616.32 | 0.004308985 |
| 205 | 25-Oct-12 | 615.449 | -0.001414226 |
| 206 | 29-Oct-12 | 614.068 | -0.002246412 |
| 207 | 30-Oct-12 | 618.899 | 0.007836422 |
| 208 | 31-Oct-12 | 619.27 | 0.000599272 |
| 209 | 1-Nov-12 | 616.945 | -0.003761486 |
| 210 | 2-Nov-12 | 616.415 | -0.000859441 |
| 211 | 5-Nov-12 | 610.622 | -0.009442328 |
| 212 | 6-Nov-12 | 611.361 | 0.00120951 |
| 213 | 7-Nov-12 | 617.871 | 0.010592078 |
| 214 | 8-Nov-12 | 614.927 | -0.004776136 |
| 215 | 9-Nov-12 | 612.369 | -0.00416852 |
| 216 | 12-Nov-12 | 608.276 | -0.006706316 |
| 217 | 13-Nov-12 | 608.939 | 0.001089372 |
| 218 | 14-Nov-12 | 611.056 | 0.00347051 |
| 219 | 19-Nov-12 | 605.513 | -0.009112575 |
| 220 | 20-Nov-12 | 604.552 | -0.001588345 |
| 221 | 21-Nov-12 | 604.313 | -0.000395412 |
| 222 | 22-Nov-12 | 607.073 | 0.004556772 |
| 223 | 23-Nov-12 | 607.736 | 0.00109153 |
| 224 | 26-Nov-12 | 611.687 | 0.006480137 |
| 225 | 27-Nov-12 | 604.113 | -0.012459447 |
| 226 | 28-Nov-12 | 595.57 | -0.014242336 |
| 227 | 29-Nov-12 | 597.274 | 0.002857039 |
| 228 | 30-Nov-12 | 588.776 | -0.014330164 |
| 229 | 3-Dec-12 | 588.448 | -0.000557243 |
| 230 | 4-Dec-12 | 587.274 | -0.001997071 |
| 231 | 5-Dec-12 | 588.994 | 0.002924506 |
| 232 | 6-Dec-12 | 589.861 | 0.001470919 |
| 233 | 7-Dec-12 | 590.644 | 0.001326551 |
| 234 | 10-Dec-12 | 591.79 | 0.001938375 |
| 235 | 11-Dec-12 | 595.461 | 0.006184053 |
| 236 | 12-Dec-12 | 597.488 | 0.003398304 |
| 237 | 13-Dec-12 | 593.832 | -0.006137749 |
| 238 | 14-Dec-12 | 593.721 | -0.000186939 |

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| 239 | 17-Dec-12 | 594.437 | 0.001205227 |
| 240 | 18-Dec-12 | 593.16 | -0.002150562 |
| 241 | 19-Dec-12 | 590.926 | -0.003773379 |
| 242 | 20-Dec-12 | 584.286 | -0.011300209 |
| 243 | 21-Dec-12 | 586.093 | 0.003087891 |
| 244 | 26-Dec-12 | 587.401 | 0.002229241 |
| 245 | 27-Dec-12 | 590.455 | 0.005185705 |
| 246 | 28-Dec-12 | 594.789 | 0.007313295 |
| 247 | 2-Jan-13 | 602.073 | 0.01217198 |
| 248 | 3-Jan-13 | 612.339 | 0.01690735 |
| 249 | 4-Jan-13 | 611.797 | -0.000885523 |
| 250 | 7-Jan-13 | 607.12 | -0.007674063 |
| 251 | 8-Jan-13 | 606.579 | -0.00089149 |
| 252 | 9-Jan-13 | 600.603 | -0.009900825 |
| 253 | 10-Jan-13 | 592.112 | -0.014238344 |
| 254 | 11-Jan-13 | 590.345 | -0.002988694 |
| 255 | 14-Jan-13 | 602.059 | 0.019648335 |
| 256 | 15-Jan-13 | 606.274 | 0.006976582 |
| 257 | 16-Jan-13 | 607.899 | 0.002676721 |
| 258 | 17-Jan-13 | 602.804 | -0.008416647 |
| 259 | 18-Jan-13 | 615.444 | 0.020751856 |
| 260 | 21-Jan-13 | 610.287 | -0.00841462 |
| 261 | 22-Jan-13 | 609.291 | -0.001633352 |
| 262 | 23-Jan-13 | 608.162 | -0.001854692 |
| 263 | 25-Jan-13 | 608.625 | 0.000761021 |
| 264 | 28-Jan-13 | 604.901 | -0.006137506 |
| 265 | 29-Jan-13 | 608.602 | 0.006099715 |
| 266 | 30-Jan-13 | 608.935 | 0.000547006 |
| 267 | 31-Jan-13 | 604.61 | -0.007127908 |
| 268 | 1-Feb-13 | 606.257 | 0.002720367 |
| 269 | 4-Feb-13 | 608.689 | 0.004003475 |
| 270 | 5-Feb-13 | 609.587 | 0.001474215 |
| 271 | 6-Feb-13 | 612.28 | 0.004408016 |
| 272 | 7-Feb-13 | 611.407 | -0.001426836 |
| 273 | 8-Feb-13 | 611.504 | 0.000158638 |
| 274 | 11-Feb-13 | 612.914 | 0.002303136 |
| 275 | 12-Feb-13 | 621.24 | 0.013492848 |
| 276 | 13-Feb-13 | 624.342 | 0.004980814 |
| 277 | 14-Feb-13 | 624.019 | -0.000517479 |
| 278 | 15-Feb-13 | 626.243 | 0.003557658 |

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| 279 | 18-Feb-13 | 624.444 | -0.002876821 |
| 280 | 19-Feb-13 | 620.352 | -0.006574595 |
| 281 | 20-Feb-13 | 624.614 | 0.0068468 |
| 282 | 21-Feb-13 | 624.72 | 0.00016969 |
| 283 | 22-Feb-13 | 625.492 | 0.001234991 |
| 284 | 25-Feb-13 | 630.496 | 0.007968271 |
| 285 | 26-Feb-13 | 626.807 | -0.005868133 |
| 286 | 27-Feb-13 | 635.858 | 0.01433659 |
| 287 | 28-Feb-13 | 645.219 | 0.014614526 |
| 288 | 1-Mar-13 | 652.114 | 0.010629599 |
| 289 | 4-Mar-13 | 646.859 | -0.008091051 |
| 290 | 5-Mar-13 | 648.65 | 0.002764938 |
| 291 | 6-Mar-13 | 661.117 | 0.019037549 |
| 292 | 7-Mar-13 | 662.956 | 0.002777794 |
| 293 | 8-Mar-13 | 668.46 | 0.008267936 |
| 294 | 11-Mar-13 | 660.306 | -0.012273195 |
| 295 | 13-Mar-13 | 656.211 | -0.00622098 |
| 296 | 14-Mar-13 | 645.376 | -0.016649291 |
| 297 | 15-Mar-13 | 648.639 | 0.005043229 |
| 298 | 18-Mar-13 | 650.993 | 0.003622568 |
| 299 | 19-Mar-13 | 650.019 | -0.001497296 |
| 300 | 20-Mar-13 | 651.142 | 0.001726151 |
| 301 | 21-Mar-13 | 646.12 | -0.007742499 |
| 302 | 22-Mar-13 | 630.614 | -0.024291297 |
| 303 | 25-Mar-13 | 640.857 | 0.016112395 |
| 304 | 26-Mar-13 | 649.876 | 0.013975232 |
| 305 | 27-Mar-13 | 660.333 | 0.015962678 |
| 306 | 28-Mar-13 | 660.337 | 6.05753E-06 |
| 307 | 1-Apr-13 | 658.055 | -0.003461796 |
| 308 | 2-Apr-13 | 662.145 | 0.006196051 |
| 309 | 3-Apr-13 | 669.778 | 0.011461749 |
| 310 | 4-Apr-13 | 659.339 | -0.015708496 |
| 311 | 5-Apr-13 | 656.545 | -0.004246581 |
| 312 | 8-Apr-13 | 655.311 | -0.001881305 |
| 313 | 9-Apr-13 | 656.951 | 0.002499502 |
| 314 | 10-Apr-13 | 653.381 | -0.005449014 |
| 315 | 11-Apr-13 | 660.087 | 0.010211224 |
| 316 | 12-Apr-13 | 660.704 | 0.000934289 |
| 317 | 15-Apr-13 | 655.728 | -0.007559864 |
| 318 | 16-Apr-13 | 667.887 | 0.018372929 |

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| 319 | 17-Apr-13 | 673.003 | 0.00763079 |
| 320 | 18-Apr-13 | 674.024 | 0.001515931 |
| 321 | 19-Apr-13 | 672.388 | -0.002430164 |
| 322 | 22-Apr-13 | 674.375 | 0.002950781 |
| 323 | 23-Apr-13 | 673.488 | -0.001316158 |
| 324 | 24-Apr-13 | 678.951 | 0.008078782 |
| 325 | 25-Apr-13 | 671.849 | -0.010515347 |
| 326 | 26-Apr-13 | 664.636 | -0.010794091 |
| 327 | 29-Apr-13 | 670.939 | 0.009438701 |
| 328 | 30-Apr-13 | 682.691 | 0.017364118 |
| 329 | 1-May-13 | 682.846 | 0.000227017 |
| 330 | 2-May-13 | 674.963 | -0.011611484 |
| 331 | 3-May-13 | 665.406 | -0.014260494 |
| 332 | 6-May-13 | 673.554 | 0.01217079 |
| 333 | 7-May-13 | 677.039 | 0.005160708 |
| 334 | 8-May-13 | 683.669 | 0.009745004 |
| 335 | 10-May-13 | 684.845 | 0.001718653 |
| 336 | 13-May-13 | 679.324 | -0.008094349 |
| 337 | 14-May-13 | 682.213 | 0.00424374 |
| 338 | 15-May-13 | 681.707 | -0.000741979 |
| 339 | 16-May-13 | 681.489 | -0.000319837 |
| 340 | 17-May-13 | 696.581 | 0.021903972 |
| 341 | 20-May-13 | 709.461 | 0.018321445 |
| 342 | 21-May-13 | 703.323 | -0.008689281 |
| 343 | 22-May-13 | 708.1 | 0.006769081 |
| 344 | 23-May-13 | 694.792 | -0.018972806 |
| 345 | 24-May-13 | 701.254 | 0.009257641 |
| 346 | 27-May-13 | 685.35 | -0.022940504 |
| 347 | 28-May-13 | 701.962 | 0.023949615 |
| 348 | 29-May-13 | 705.97 | 0.005693472 |
| 349 | 30-May-13 | 689.999 | -0.022882595 |
| 350 | 31-May-13 | 676.583 | -0.019635018 |
| 351 | 3-Jun-13 | 665.625 | -0.016328682 |
| 352 | 4-Jun-13 | 677.35 | 0.017461677 |
| 353 | 5-Jun-13 | 674.404 | -0.004358788 |
| 354 | 7-Jun-13 | 647.278 | -0.04105346 |
| 355 | 10-Jun-13 | 634.293 | -0.020264885 |
| 356 | 11-Jun-13 | 608.881 | -0.040888146 |
| 357 | 12-Jun-13 | 635.103 | 0.042164344 |
| 358 | 13-Jun-13 | 618.565 | -0.026384911 |

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| 359 | 14-Jun-13 | 640.218 | 0.034406464 |
| 360 | 17-Jun-13 | 642.789 | 0.004007778 |
| 361 | 18-Jun-13 | 649.351 | 0.010156881 |
| 362 | 19-Jun-13 | 642.421 | -0.010729551 |
| 363 | 20-Jun-13 | 618.389 | -0.038126143 |
| 364 | 21-Jun-13 | 596.67 | -0.035753513 |
| 365 | 24-Jun-13 | 585.773 | -0.018431854 |
| 366 | 25-Jun-13 | 583.403 | -0.004054143 |
| 367 | 26-Jun-13 | 616.886 | 0.055806042 |
| 368 | 27-Jun-13 | 634.272 | 0.027793643 |
| 369 | 28-Jun-13 | 660.165 | 0.040011919 |
| 370 | 1-Jul-13 | 648.254 | -0.018207209 |
| 371 | 2-Jul-13 | 640.965 | -0.011307742 |
| 372 | 3-Jul-13 | 618.621 | -0.035482046 |
| 373 | 4-Jul-13 | 619.17 | 0.000887064 |
| 374 | 5-Jul-13 | 626.55 | 0.011848708 |
| 375 | 8-Jul-13 | 601.218 | -0.041270982 |
| 376 | 9-Jul-13 | 597.702 | -0.005865296 |
| 377 | 10-Jul-13 | 614.084 | 0.027039425 |
| 378 | 11-Jul-13 | 633.028 | 0.030382928 |
| 379 | 12-Jul-13 | 636.975 | 0.006215753 |
| 380 | 15-Jul-13 | 637.697 | 0.001132841 |
| 381 | 16-Jul-13 | 637.506 | -0.00029956 |
| 382 | 17-Jul-13 | 641.934 | 0.006921806 |
| 383 | 18-Jul-13 | 645.732 | 0.005899062 |
| 384 | 19-Jul-13 | 646.651 | 0.001422179 |
| 385 | 22-Jul-13 | 637 | -0.015037081 |
| 386 | 23-Jul-13 | 651.96 | 0.023213555 |
| 387 | 24-Jul-13 | 642.413 | -0.014751811 |
| 388 | 25-Jul-13 | 635.176 | -0.011329273 |
| 389 | 26-Jul-13 | 629.952 | -0.0082585 |
| 390 | 29-Jul-13 | 618.582 | -0.018213864 |
| 391 | 30-Jul-13 | 627.134 | 0.013730472 |
| 392 | 31-Jul-13 | 623.747 | -0.005415396 |
| 393 | 1-Aug-13 | 630.933 | 0.011454839 |
| 394 | 2-Aug-13 | 630.161 | -0.001224334 |
| 395 | 12-Aug-13 | 622.947 | -0.011513899 |
| 396 | 13-Aug-13 | 633.382 | 0.016612273 |
| 397 | 14-Aug-13 | 639.989 | 0.010377273 |
| 398 | 15-Aug-13 | 634.574 | -0.008497081 |

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| 399 | 16-Aug-13 | 619.728 | -0.023673236 |
| 400 | 19-Aug-13 | 580.134 | -0.066021561 |
| 401 | 20-Aug-13 | 561.357 | -0.032902045 |
| 402 | 21-Aug-13 | 572.634 | 0.019889702 |
| 403 | 22-Aug-13 | 571.883 | -0.001312344 |
| 404 | 23-Aug-13 | 572.602 | 0.00125646 |
| 405 | 26-Aug-13 | 562.997 | -0.016916586 |
| 406 | 27-Aug-13 | 541.027 | -0.039805114 |
| 407 | 28-Aug-13 | 552.121 | 0.02029804 |
| 408 | 29-Aug-13 | 568.921 | 0.029974359 |
| 409 | 30-Aug-13 | 592.002 | 0.039768429 |
| 410 | 2-Sep-13 | 574.589 | -0.029855011 |
| 411 | 3-Sep-13 | 585.03 | 0.018008125 |
| 412 | 4-Sep-13 | 568.373 | -0.028885235 |
| 413 | 5-Sep-13 | 562.609 | -0.010193 |
| 414 | 6-Sep-13 | 569.298 | 0.01181913 |
| 415 | 9-Sep-13 | 587.383 | 0.031273054 |
| 416 | 10-Sep-13 | 611.053 | 0.039506621 |
| 417 | 11-Sep-13 | 605.832 | -0.008580979 |
| 418 | 12-Sep-13 | 600.717 | -0.008478778 |
| 419 | 13-Sep-13 | 600.641 | -0.000126523 |
| 420 | 16-Sep-13 | 627.06 | 0.043044812 |
| 421 | 17-Sep-13 | 625.98 | -0.001723808 |
| 422 | 18-Sep-13 | 618.204 | -0.012499922 |
| 423 | 19-Sep-13 | 649.916 | 0.050024624 |
| 424 | 20-Sep-13 | 635.907 | -0.021790798 |
| 425 | 23-Sep-13 | 633.333 | -0.004055976 |
| 426 | 24-Sep-13 | 613.543 | -0.031745999 |
| 427 | 25-Sep-13 | 603.19 | -0.017018113 |
| 428 | 26-Sep-13 | 602.195 | -0.001650925 |
| 429 | 27-Sep-13 | 606.394 | 0.006948627 |
| 430 | 30-Sep-13 | 585.593 | -0.034904931 |
| 431 | 1-Oct-13 | 593.077 | 0.01269923 |
| 432 | 2-Oct-13 | 600.628 | 0.012651536 |
| 433 | 3-Oct-13 | 605.541 | 0.008146499 |
| 434 | 4-Oct-13 | 600.502 | -0.008356301 |
| 435 | 7-Oct-13 | 599.148 | -0.002257326 |
| 436 | 8-Oct-13 | 606.514 | 0.012219165 |
| 437 | 9-Oct-13 | 613.563 | 0.011555137 |
| 438 | 10-Oct-13 | 618.039 | 0.007268614 |

| No | Date | Close Price | Return Jakarta Islamic Index |
|-----|-----------|-------------|------------------------------|
| 439 | 11-Oct-13 | 627.98 | 0.015956757 |
| 440 | 16-Oct-13 | 622.046 | -0.009494274 |
| 441 | 17-Oct-13 | 627.42 | 0.008602128 |
| 442 | 18-Oct-13 | 633.923 | 0.010311323 |
| 443 | 21-Oct-13 | 638.545 | 0.007264655 |
| 444 | 22-Oct-13 | 623.211 | -0.024307005 |
| 445 | 23-Oct-13 | 627.056 | 0.006150706 |
| 446 | 24-Oct-13 | 632.287 | 0.008307554 |
| 447 | 25-Oct-13 | 627.443 | -0.007690575 |
| 448 | 28-Oct-13 | 629.889 | 0.003890783 |
| 449 | 29-Oct-13 | 626.827 | -0.004873028 |
| 450 | 30-Oct-13 | 628.412 | 0.002525417 |
| 451 | 31-Oct-13 | 615.706 | -0.020426425 |
| 452 | 1-Nov-13 | 603.506 | -0.020013594 |
| 453 | 4-Nov-13 | 603.922 | 0.000689068 |
| 454 | 6-Nov-13 | 609.593 | 0.009346471 |
| 455 | 7-Nov-13 | 616.109 | 0.010632375 |
| 456 | 8-Nov-13 | 615.628 | -0.000781011 |
| 457 | 11-Nov-13 | 610.502 | -0.008361315 |
| 458 | 12-Nov-13 | 604.546 | -0.009803806 |
| 459 | 13-Nov-13 | 590.931 | -0.022778504 |
| 460 | 14-Nov-13 | 599.396 | 0.014223222 |
| 461 | 15-Nov-13 | 590.731 | -0.014561728 |
| 462 | 18-Nov-13 | 605.593 | 0.02484739 |
| 463 | 19-Nov-13 | 608.249 | 0.004376194 |
| 464 | 20-Nov-13 | 597.711 | -0.017476978 |
| 465 | 21-Nov-13 | 595.125 | -0.004335892 |
| 466 | 22-Nov-13 | 592.891 | -0.003760897 |
| 467 | 25-Nov-13 | 592.721 | -0.000286772 |
| 468 | 26-Nov-13 | 573.572 | -0.032840326 |
| 469 | 27-Nov-13 | 580.202 | 0.011492845 |
| 470 | 28-Nov-13 | 578.906 | -0.002236203 |
| 471 | 29-Nov-13 | 579.868 | 0.001660376 |
| 472 | 2-Dec-13 | 591.915 | 0.020562552 |
| 473 | 3-Dec-13 | 584.709 | -0.012248756 |
| 474 | 4-Dec-13 | 577.393 | -0.012591144 |
| 475 | 5-Dec-13 | 573.882 | -0.006099344 |
| 476 | 6-Dec-13 | 569.002 | -0.008539851 |
| 477 | 9-Dec-13 | 576.233 | 0.012628144 |
| 478 | 10-Dec-13 | 587.521 | 0.019399897 |

| No | Date | Close Price | Return Jakarta Islamic Index |
|-----|-----------|-------------|------------------------------|
| 479 | 11-Dec-13 | 586.106 | -0.002411329 |
| 480 | 12-Dec-13 | 575.658 | -0.017986926 |
| 481 | 13-Dec-13 | 568.146 | -0.013135306 |
| 482 | 16-Dec-13 | 560.749 | -0.013105038 |
| 483 | 17-Dec-13 | 567.513 | 0.011990267 |
| 484 | 18-Dec-13 | 572.12 | 0.008085103 |
| 485 | 19-Dec-13 | 579.324 | 0.012513147 |
| 486 | 20-Dec-13 | 575.8 | -0.006101528 |
| 487 | 23-Dec-13 | 572.586 | -0.005597436 |
| 488 | 24-Dec-13 | 578.142 | 0.009656571 |
| 489 | 27-Dec-13 | 578.641 | 0.000862737 |
| 490 | 30-Dec-13 | 585.11 | 0.011117613 |
| 491 | 2-Jan-14 | 596.148 | 0.018689095 |
| 492 | 3-Jan-14 | 585.642 | -0.017780277 |
| 493 | 6-Jan-14 | 579.928 | -0.009804723 |
| 494 | 7-Jan-14 | 572.287 | -0.013263344 |
| 495 | 8-Jan-14 | 576.407 | 0.007173395 |
| 496 | 9-Jan-14 | 574.279 | -0.003698667 |
| 497 | 10-Jan-14 | 582.379 | 0.014006098 |
| 498 | 13-Jan-14 | 601.806 | 0.032813696 |
| 499 | 15-Jan-14 | 609.9 | 0.013359875 |
| 500 | 16-Jan-14 | 606.816 | -0.005069394 |
| 501 | 17-Jan-14 | 603.061 | -0.006207262 |
| 502 | 20-Jan-14 | 608.315 | 0.008674487 |
| 503 | 21-Jan-14 | 609.114 | 0.001312602 |
| 504 | 22-Jan-14 | 614.407 | 0.008652133 |
| 505 | 23-Jan-14 | 614.965 | 0.000907781 |
| 506 | 24-Jan-14 | 604.373 | -0.017373799 |
| 507 | 27-Jan-14 | 583.88 | -0.034496075 |
| 508 | 28-Jan-14 | 588.271 | 0.007492244 |
| 509 | 29-Jan-14 | 601.539 | 0.022303645 |
| 510 | 30-Jan-14 | 602.873 | 0.00221519 |
| 511 | 3-Feb-14 | 595.621 | -0.012102002 |
| 512 | 4-Feb-14 | 587.491 | -0.013743632 |
| 513 | 5-Feb-14 | 594.498 | 0.011856425 |
| 514 | 6-Feb-14 | 601.058 | 0.010974084 |
| 515 | 7-Feb-14 | 606.217 | 0.008546572 |
| 516 | 10-Feb-14 | 603.326 | -0.004780327 |
| 517 | 11-Feb-14 | 604.703 | 0.002279748 |
| 518 | 12-Feb-14 | 609.077 | 0.007207268 |

| No | Date | Close Price | Return Jakarta Islamic Index |
|-----|-----------|-------------|------------------------------|
| 519 | 13-Feb-14 | 607.222 | -0.003050239 |
| 520 | 14-Feb-14 | 608.972 | 0.002877832 |
| 521 | 17-Feb-14 | 615.614 | 0.010847854 |
| 522 | 18-Feb-14 | 615.1 | -0.000835288 |
| 523 | 19-Feb-14 | 621.734 | 0.010727492 |
| 524 | 20-Feb-14 | 622.158 | 0.000681731 |
| 525 | 21-Feb-14 | 626.968 | 0.007701423 |
| 526 | 24-Feb-14 | 621.944 | -0.008045446 |
| 527 | 25-Feb-14 | 614.478 | -0.01207693 |
| 528 | 26-Feb-14 | 606.032 | -0.013840337 |
| 529 | 27-Feb-14 | 612.839 | 0.011169469 |
| 530 | 28-Feb-14 | 626.864 | 0.022627353 |
| 531 | 3-Mar-14 | 618.984 | -0.012650187 |
| 532 | 4-Mar-14 | 620.047 | 0.001715857 |
| 533 | 5-Mar-14 | 628.002 | 0.01274807 |
| 534 | 6-Mar-14 | 631 | 0.004762511 |
| 535 | 7-Mar-14 | 631.743 | 0.001176803 |
| 536 | 10-Mar-14 | 632.91 | 0.001845566 |
| 537 | 11-Mar-14 | 635.354 | 0.003854092 |
| 538 | 12-Mar-14 | 633.168 | -0.003446534 |
| 539 | 13-Mar-14 | 641.309 | 0.01277561 |
| 540 | 14-Mar-14 | 661.737 | 0.031356796 |
| 541 | 17-Mar-14 | 663.863 | 0.003207607 |
| 542 | 18-Mar-14 | 651.323 | -0.019070124 |
| 543 | 19-Mar-14 | 655.45 | 0.006316344 |
| 544 | 20-Mar-14 | 634.165 | -0.03301285 |
| 545 | 21-Mar-14 | 636.549 | 0.003752226 |
| 546 | 24-Mar-14 | 637.79 | 0.001947677 |
| 547 | 25-Mar-14 | 632.444 | -0.008417396 |
| 548 | 26-Mar-14 | 636.476 | 0.006355032 |
| 549 | 27-Mar-14 | 635.018 | -0.002293366 |
| 550 | 28-Mar-14 | 640.411 | 0.008456813 |
| 551 | 1-Apr-14 | 657.09 | 0.025710838 |
| 552 | 2-Apr-14 | 655.267 | -0.002778209 |
| 553 | 3-Apr-14 | 658.533 | 0.004971848 |
| 554 | 4-Apr-14 | 653.274 | -0.008017991 |
| 555 | 7-Apr-14 | 667.22 | 0.021123184 |
| 556 | 8-Apr-14 | 666.518 | -0.001052681 |
| 557 | 10-Apr-14 | 643.145 | -0.035696942 |
| 558 | 11-Apr-14 | 653.278 | 0.015632562 |

| No | Date | Close Price | Return Jakarta Islamic Index |
|-----|-----------|-------------|------------------------------|
| 559 | 14-Apr-14 | 659.705 | 0.009789999 |
| 560 | 15-Apr-14 | 659.78 | 0.000113681 |
| 561 | 16-Apr-14 | 657.858 | -0.002917344 |
| 562 | 17-Apr-14 | 663.592 | 0.0086784 |
| 563 | 21-Apr-14 | 663.521 | -0.000106999 |
| 564 | 22-Apr-14 | 664.132 | 0.000920421 |
| 565 | 23-Apr-14 | 664.142 | 1.50571E-05 |
| 566 | 24-Apr-14 | 663.179 | -0.001451043 |
| 567 | 25-Apr-14 | 663.206 | 4.07122E-05 |
| 568 | 28-Apr-14 | 650.317 | -0.019625715 |
| 569 | 29-Apr-14 | 645.254 | -0.007815899 |
| 570 | 30-Apr-14 | 647.674 | 0.003743446 |

Lampiran 2 *Out Put* Statistika Deskriptif

| | RETURN_J... | | | |
|--------------|-------------|--|--|--|
| Mean | 0.000319 | | | |
| Median | 0.000136 | | | |
| Maximum | 0.055806 | | | |
| Minimum | -0.066022 | | | |
| Std. Dev. | 0.013348 | | | |
| Skewness | -0.200614 | | | |
| Kurtosis | 5.504296 | | | |
| | | | | |
| Jarque-Bera | 162.9563 | | | |
| Probability | 0.000000 | | | |
| | | | | |
| Sum | 0.194020 | | | |
| Sum Sq. Dev. | 0.108153 | | | |
| | | | | |
| Observations | 608 | | | |
| | | | | |
| | | | | |
| | | | | |

Lampiran 3 *Out Put* Estimasi Model Kondisional *Mean*

1. ARIMA (1,0,0)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:16
 Sample (adjusted): 1/03/2012 4/30/2014
 Included observations: 607 after adjustments
 Convergence achieved after 3 iterations

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000320 | 0.000568 | 0.563183 | 0.5735 |
| AR(1) | 0.045703 | 0.040615 | 1.125257 | 0.2609 |
| R-squared | 0.002089 | Mean dependent var | | 0.000320 |
| Adjusted R-squared | 0.000439 | S.D. dependent var | | 0.013359 |
| S.E. of regression | 0.013356 | Akaike info criterion | | -5.790360 |
| Sum squared resid | 0.107927 | Schwarz criterion | | -5.775834 |
| Log likelihood | 1759.374 | Hannan-Quinn criter. | | -5.784708 |
| F-statistic | 1.266204 | Durbin-Watson stat | | 1.995075 |
| Prob(F-statistic) | 0.260926 | | | |
| Inverted AR Roots | .05 | | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:17
 Sample (adjusted): 1/03/2012 4/30/2014
 Included observations: 607 after adjustments
 Convergence achieved after 2 iterations

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(1) | 0.046240 | 0.040581 | 1.139433 | 0.2550 |
| R-squared | 0.001566 | Mean dependent var | | 0.000320 |
| Adjusted R-squared | 0.001566 | S.D. dependent var | | 0.013359 |
| S.E. of regression | 0.013349 | Akaike info criterion | | -5.793131 |
| Sum squared resid | 0.107984 | Schwarz criterion | | -5.785868 |
| Log likelihood | 1759.215 | Hannan-Quinn criter. | | -5.790305 |
| Durbin-Watson stat | 1.995076 | | | |
| Inverted AR Roots | .05 | | | |

2. ARIMA (0,0,1)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:20
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 4 iterations
 MA Backcast: 12/30/2011

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000319 | 0.000566 | 0.563758 | 0.5731 |
| MA(1) | 0.046671 | 0.040581 | 1.150062 | 0.2506 |
| R-squared | 0.002153 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | 0.000507 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013345 | Akaike info criterion | | -5.792081 |
| Sum squared resid | 0.107920 | Schwarz criterion | | -5.777574 |
| Log likelihood | 1762.793 | Hannan-Quinn criter. | | -5.786437 |
| F-statistic | 1.307643 | Durbin-Watson stat | | 2.000298 |
| Prob(F-statistic) | 0.253273 | | | |
| Inverted MA Roots | -0.05 | | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:22
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 4 iterations
 MA Backcast: 12/30/2011

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| MA(1) | 0.047158 | 0.040547 | 1.163039 | 0.2453 |
| R-squared | 0.001630 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | 0.001630 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013337 | Akaike info criterion | | -5.794846 |
| Sum squared resid | 0.107977 | Schwarz criterion | | -5.787593 |
| Log likelihood | 1762.633 | Hannan-Quinn criter. | | -5.792024 |
| Durbin-Watson stat | 2.000215 | | | |
| Inverted MA Roots | -0.05 | | | |

3. ARIMA (1,0,1)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:18
 Sample (adjusted): 1/03/2012 4/30/2014
 Included observations: 607 after adjustments
 Convergence achieved after 17 iterations
 MA Backcast: 1/02/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000321 | 0.000567 | 0.566875 | 0.5710 |
| AR(1) | -0.025051 | 0.865162 | -0.028955 | 0.9769 |
| MA(1) | 0.071472 | 0.863225 | 0.082797 | 0.9340 |
| R-squared | 0.002177 | Mean dependent var | | 0.000320 |
| Adjusted R-squared | -0.001127 | S.D. dependent var | | 0.013359 |
| S.E. of regression | 0.013367 | Akaike info criterion | | -5.787154 |
| Sum squared resid | 0.107918 | Schwarz criterion | | -5.765366 |
| Log likelihood | 1759.401 | Hannan-Quinn criter. | | -5.778677 |
| F-statistic | 0.658970 | Durbin-Watson stat | | 1.997888 |
| Prob(F-statistic) | 0.517756 | | | |
| Inverted AR Roots | -.03 | | | |
| Inverted MA Roots | -.07 | | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:23
 Sample (adjusted): 1/03/2012 4/30/2014
 Included observations: 607 after adjustments
 Convergence achieved after 17 iterations
 MA Backcast: 1/02/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(1) | -0.021534 | 0.857926 | -0.025100 | 0.9800 |
| MA(1) | 0.068482 | 0.856112 | 0.079991 | 0.9363 |
| R-squared | 0.001647 | Mean dependent var | | 0.000320 |
| Adjusted R-squared | -0.000003 | S.D. dependent var | | 0.013359 |
| S.E. of regression | 0.013359 | Akaike info criterion | | -5.789918 |
| Sum squared resid | 0.107975 | Schwarz criterion | | -5.775392 |
| Log likelihood | 1759.240 | Hannan-Quinn criter. | | -5.784266 |
| Durbin-Watson stat | 1.997807 | | | |
| Inverted AR Roots | -.02 | | | |
| Inverted MA Roots | -.07 | | | |

4. ARIMA (2,0,1)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 05:44
 Sample (adjusted): 1/04/2012 4/30/2014
 Included observations: 606 after adjustments
 Convergence achieved after 8 iterations
 MA Backcast: 1/03/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000295 | 0.000556 | 0.531019 | 0.5956 |
| AR(2) | -0.015476 | 0.040711 | -0.380134 | 0.7040 |
| MA(1) | 0.040610 | 0.040716 | 0.997412 | 0.3190 |
| R-squared | 0.002146 | Mean dependent var | | 0.000293 |
| Adjusted R-squared | -0.001164 | S.D. dependent var | | 0.013355 |
| S.E. of regression | 0.013362 | Akaike info criterion | | -5.787803 |
| Sum squared resid | 0.107668 | Schwarz criterion | | -5.765987 |
| Log likelihood | 1756.704 | Hannan-Quinn criter. | | -5.779314 |
| F-statistic | 0.648437 | Durbin-Watson stat | | 1.996373 |
| Prob(F-statistic) | 0.523227 | | | |
| Inverted MA Roots | -.04 | | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 05:45
 Sample (adjusted): 1/04/2012 4/30/2014
 Included observations: 606 after adjustments
 Convergence achieved after 8 iterations
 MA Backcast: 1/03/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(2) | -0.014844 | 0.040677 | -0.364926 | 0.7153 |
| MA(1) | 0.041141 | 0.040682 | 1.011274 | 0.3123 |
| R-squared | 0.001680 | Mean dependent var | | 0.000293 |
| Adjusted R-squared | 0.000027 | S.D. dependent var | | 0.013355 |
| S.E. of regression | 0.013354 | Akaike info criterion | | -5.790636 |
| Sum squared resid | 0.107718 | Schwarz criterion | | -5.776092 |
| Log likelihood | 1756.563 | Hannan-Quinn criter. | | -5.784977 |
| Durbin-Watson stat | 1.996259 | | | |
| Inverted MA Roots | -.04 | | | |

5. ARIMA (3,0,1)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 05:46
 Sample (adjusted): 1/05/2012 4/30/2014
 Included observations: 605 after adjustments
 Convergence achieved after 6 iterations
 MA Backcast: 1/04/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000278 | 0.000450 | 0.618898 | 0.5362 |
| AR(3) | -0.208308 | 0.039838 | -5.228927 | 0.0000 |
| MA(1) | 0.023091 | 0.040753 | 0.566601 | 0.5712 |
| R-squared | 0.044836 | Mean dependent var | | 0.000261 |
| Adjusted R-squared | 0.041663 | S.D. dependent var | | 0.013342 |
| S.E. of regression | 0.013061 | Akaike info criterion | | -5.833437 |
| Sum squared resid | 0.102694 | Schwarz criterion | | -5.811593 |
| Log likelihood | 1767.615 | Hannan-Quinn criter. | | -5.824936 |
| F-statistic | 14.12925 | Durbin-Watson stat | | 2.000496 |
| Prob(F-statistic) | 0.000001 | | | |
| Inverted AR Roots | .30+.51i | .30-.51i | | -.59 |
| Inverted MA Roots | -.02 | | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 05:46
 Sample (adjusted): 1/05/2012 4/30/2014
 Included observations: 605 after adjustments
 Convergence achieved after 6 iterations
 MA Backcast: 1/04/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(3) | -0.207596 | 0.039804 | -5.215509 | 0.0000 |
| MA(1) | 0.023775 | 0.040719 | 0.583893 | 0.5595 |
| R-squared | 0.044229 | Mean dependent var | | 0.000261 |
| Adjusted R-squared | 0.042644 | S.D. dependent var | | 0.013342 |
| S.E. of regression | 0.013054 | Akaike info criterion | | -5.836107 |
| Sum squared resid | 0.102759 | Schwarz criterion | | -5.821545 |
| Log likelihood | 1767.422 | Hannan-Quinn criter. | | -5.830440 |
| Durbin-Watson stat | 2.000439 | | | |
| Inverted AR Roots | .30+.51i | .30-.51i | | -.59 |
| Inverted MA Roots | -.02 | | | |

6. ARIMA (2,0,0)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:24
 Sample (adjusted): 1/04/2012 4/30/2014
 Included observations: 606 after adjustments
 Convergence achieved after 3 iterations

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000294 | 0.000530 | 0.554716 | 0.5793 |
| AR(2) | -0.023565 | 0.040645 | -0.579772 | 0.5623 |
| R-squared | 0.000556 | Mean dependent var | | 0.000293 |
| Adjusted R-squared | -0.001099 | S.D. dependent var | | 0.013355 |
| S.E. of regression | 0.013362 | Akaike info criterion | | -5.789511 |
| Sum squared resid | 0.107840 | Schwarz criterion | | -5.774967 |
| Log likelihood | 1756.222 | Hannan-Quinn criter. | | -5.783852 |
| F-statistic | 0.336135 | Durbin-Watson stat | | 1.918073 |
| Prob(F-statistic) | 0.562285 | | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:25
 Sample (adjusted): 1/04/2012 4/30/2014
 Included observations: 606 after adjustments
 Convergence achieved after 3 iterations

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(2) | -0.023013 | 0.040610 | -0.566696 | 0.5711 |
| R-squared | 0.000047 | Mean dependent var | | 0.000293 |
| Adjusted R-squared | 0.000047 | S.D. dependent var | | 0.013355 |
| S.E. of regression | 0.013354 | Akaike info criterion | | -5.792303 |
| Sum squared resid | 0.107895 | Schwarz criterion | | -5.785031 |
| Log likelihood | 1756.068 | Hannan-Quinn criter. | | -5.789473 |
| Durbin-Watson stat | 1.916918 | | | |

7. ARIMA (0,0,2)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 03:27
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 6 iterations
 MA Backcast: 12/29/2011 12/30/2011

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000319 | 0.000526 | 0.605531 | 0.5451 |
| MA(2) | -0.028717 | 0.040619 | -0.706989 | 0.4798 |
| R-squared | 0.000676 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000973 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013355 | Akaike info criterion | | -5.790602 |
| Sum squared resid | 0.108080 | Schwarz criterion | | -5.776095 |
| Log likelihood | 1762.343 | Hannan-Quinn criter. | | -5.784958 |
| F-statistic | 0.410149 | Durbin-Watson stat | | 1.918162 |
| Prob(F-statistic) | 0.522136 | | | |
| Inverted MA Roots | .17 | -.17 | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 00:35
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 6 iterations
 MA Backcast: 12/29/2011 12/30/2011

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| MA(2) | -0.028008 | 0.040585 | -0.690105 | 0.4904 |
| R-squared | 0.000072 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | 0.000072 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | | -5.793287 |
| Sum squared resid | 0.108145 | Schwarz criterion | | -5.786033 |
| Log likelihood | 1762.159 | Hannan-Quinn criter. | | -5.790465 |
| Durbin-Watson stat | 1.916757 | | | |
| Inverted MA Roots | .17 | -.17 | | |

8. ARIMA (1,0,2)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 06:24
 Sample (adjusted): 1/03/2012 4/30/2014
 Included observations: 607 after adjustments
 Convergence achieved after 8 iterations
 MA Backcast: 12/30/2011 1/02/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000319 | 0.000555 | 0.574271 | 0.5660 |
| AR(1) | 0.042384 | 0.040685 | 1.041756 | 0.2979 |
| MA(2) | -0.020005 | 0.040723 | -0.491251 | 0.6234 |
| R-squared | 0.002410 | Mean dependent var | | 0.000320 |
| Adjusted R-squared | -0.000894 | S.D. dependent var | | 0.013359 |
| S.E. of regression | 0.013365 | Akaike info criterion | | -5.787387 |
| Sum squared resid | 0.107892 | Schwarz criterion | | -5.765599 |
| Log likelihood | 1759.472 | Hannan-Quinn criter. | | -5.778910 |
| F-statistic | 0.729487 | Durbin-Watson stat | | 1.996849 |
| Prob(F-statistic) | 0.482581 | | | |
| Inverted AR Roots | .04 | | | |
| Inverted MA Roots | .14 | - .14 | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 06:24
 Sample (adjusted): 1/03/2012 4/30/2014
 Included observations: 607 after adjustments
 Convergence achieved after 8 iterations
 MA Backcast: 12/30/2011 1/02/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(1) | 0.043061 | 0.040652 | 1.059260 | 0.2899 |
| MA(2) | -0.019313 | 0.040691 | -0.474628 | 0.6352 |
| R-squared | 0.001866 | Mean dependent var | | 0.000320 |
| Adjusted R-squared | 0.000216 | S.D. dependent var | | 0.013359 |
| S.E. of regression | 0.013358 | Akaike info criterion | | -5.790137 |
| Sum squared resid | 0.107951 | Schwarz criterion | | -5.775611 |
| Log likelihood | 1759.307 | Hannan-Quinn criter. | | -5.784485 |
| Durbin-Watson stat | 1.996812 | | | |
| Inverted AR Roots | .04 | | | |
| Inverted MA Roots | .14 | - .14 | | |

9. ARIMA (2,0,2)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 00:36
 Sample (adjusted): 1/04/2012 4/30/2014
 Included observations: 606 after adjustments
 Convergence achieved after 11 iterations
 MA Backcast: 1/02/2012 1/03/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000245 | 0.000484 | 0.506705 | 0.6125 |
| AR(2) | 0.570874 | 0.342872 | 1.664977 | 0.0964 |
| MA(2) | -0.620041 | 0.328133 | -1.889601 | 0.0593 |
| R-squared | 0.004520 | Mean dependent var | | 0.000293 |
| Adjusted R-squared | 0.001219 | S.D. dependent var | | 0.013355 |
| S.E. of regression | 0.013347 | Akaike info criterion | | -5.790185 |
| Sum squared resid | 0.107412 | Schwarz criterion | | -5.768369 |
| Log likelihood | 1757.426 | Hannan-Quinn criter. | | -5.781696 |
| F-statistic | 1.369106 | Durbin-Watson stat | | 1.942024 |
| Prob(F-statistic) | 0.255124 | | | |
| Inverted AR Roots | .76 | -.76 | | |
| Inverted MA Roots | .79 | -.79 | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 00:37
 Sample (adjusted): 1/04/2012 4/30/2014
 Included observations: 606 after adjustments
 Convergence achieved after 10 iterations
 MA Backcast: 1/02/2012 1/03/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(2) | 0.578137 | 0.333228 | 1.734959 | 0.0833 |
| MA(2) | -0.626153 | 0.318964 | -1.963085 | 0.0501 |
| R-squared | 0.004097 | Mean dependent var | | 0.000293 |
| Adjusted R-squared | 0.002448 | S.D. dependent var | | 0.013355 |
| S.E. of regression | 0.013338 | Akaike info criterion | | -5.793060 |
| Sum squared resid | 0.107458 | Schwarz criterion | | -5.778516 |
| Log likelihood | 1757.297 | Hannan-Quinn criter. | | -5.787401 |
| Durbin-Watson stat | 1.940651 | | | |
| Inverted AR Roots | .76 | -.76 | | |
| Inverted MA Roots | .79 | -.79 | | |

10. ARIMA (3,0,2)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 06:25
 Sample (adjusted): 1/05/2012 4/30/2014
 Included observations: 605 after adjustments
 Convergence achieved after 5 iterations
 MA Backcast: 1/03/2012 1/04/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000278 | 0.000430 | 0.646896 | 0.5179 |
| AR(3) | -0.209940 | 0.039848 | -5.268484 | 0.0000 |
| MA(2) | -0.019351 | 0.040795 | -0.474354 | 0.6354 |
| R-squared | 0.044646 | Mean dependent var | | 0.000261 |
| Adjusted R-squared | 0.041472 | S.D. dependent var | | 0.013342 |
| S.E. of regression | 0.013062 | Akaike info criterion | | -5.833238 |
| Sum squared resid | 0.102714 | Schwarz criterion | | -5.811394 |
| Log likelihood | 1767.554 | Hannan-Quinn criter. | | -5.824737 |
| F-statistic | 14.06652 | Durbin-Watson stat | | 1.954904 |
| Prob(F-statistic) | 0.000001 | | | |
| Inverted AR Roots | .30+.51i | .30-.51i | | -.59 |
| Inverted MA Roots | .14 | -.14 | | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 06:25
 Sample (adjusted): 1/05/2012 4/30/2014
 Included observations: 605 after adjustments
 Convergence achieved after 5 iterations
 MA Backcast: 1/03/2012 1/04/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(3) | -0.209257 | 0.039815 | -5.255760 | 0.0000 |
| MA(2) | -0.018479 | 0.040762 | -0.453344 | 0.6505 |
| R-squared | 0.043983 | Mean dependent var | | 0.000261 |
| Adjusted R-squared | 0.042398 | S.D. dependent var | | 0.013342 |
| S.E. of regression | 0.013056 | Akaike info criterion | | -5.835850 |
| Sum squared resid | 0.102786 | Schwarz criterion | | -5.821287 |
| Log likelihood | 1767.345 | Hannan-Quinn criter. | | -5.830183 |
| Durbin-Watson stat | 1.953466 | | | |
| Inverted AR Roots | .30+.51i | .30-.51i | | -.59 |
| Inverted MA Roots | .14 | -.14 | | |

11. ARIMA (3,0,0)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 00:38
 Sample (adjusted): 1/05/2012 4/30/2014
 Included observations: 605 after adjustments
 Convergence achieved after 3 iterations

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000278 | 0.000438 | 0.634441 | 0.5260 |
| AR(3) | -0.210431 | 0.039780 | -5.289878 | 0.0000 |
| R-squared | 0.044348 | Mean dependent var | | 0.000261 |
| Adjusted R-squared | 0.042763 | S.D. dependent var | | 0.013342 |
| S.E. of regression | 0.013053 | Akaike info criterion | | -5.836231 |
| Sum squared resid | 0.102746 | Schwarz criterion | | -5.821669 |
| Log likelihood | 1767.460 | Hannan-Quinn criter. | | -5.830564 |
| F-statistic | 27.98281 | Durbin-Watson stat | | 1.955503 |
| Prob(F-statistic) | 0.000000 | | | |
| Inverted AR Roots | .30+.52i | .30-.52i | | -.59 |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 00:46
 Sample (adjusted): 1/05/2012 4/30/2014
 Included observations: 605 after adjustments
 Convergence achieved after 3 iterations

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(3) | -0.209751 | 0.039746 | -5.277306 | 0.0000 |
| R-squared | 0.043710 | Mean dependent var | | 0.000261 |
| Adjusted R-squared | 0.043710 | S.D. dependent var | | 0.013342 |
| S.E. of regression | 0.013047 | Akaike info criterion | | -5.838870 |
| Sum squared resid | 0.102815 | Schwarz criterion | | -5.831589 |
| Log likelihood | 1767.258 | Hannan-Quinn criter. | | -5.836037 |
| Durbin-Watson stat | 1.954070 | | | |
| Inverted AR Roots | .30+.51i | .30-.51i | | -.59 |

12. ARIMA (0,0,3)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 00:46
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 5 iterations
 MA Backcast: 12/28/2011 12/30/2011

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000314 | 0.000414 | 0.757865 | 0.4488 |
| MA(3) | -0.218762 | 0.039717 | -5.508019 | 0.0000 |
| R-squared | 0.046081 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | 0.044507 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013048 | Akaike info criterion | | -5.837102 |
| Sum squared resid | 0.103169 | Schwarz criterion | | -5.822594 |
| Log likelihood | 1776.479 | Hannan-Quinn criter. | | -5.831458 |
| F-statistic | 29.27384 | Durbin-Watson stat | | 1.948546 |
| Prob(F-statistic) | 0.000000 | | | |
| Inverted MA Roots | .60 | -.30+.52i | -.30-.52i | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 00:44
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 5 iterations
 MA Backcast: 12/28/2011 12/30/2011

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| MA(3) | -0.217729 | 0.039687 | -5.486105 | 0.0000 |
| R-squared | 0.045178 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | 0.045178 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013043 | Akaike info criterion | | -5.839445 |
| Sum squared resid | 0.103267 | Schwarz criterion | | -5.832191 |
| Log likelihood | 1776.191 | Hannan-Quinn criter. | | -5.836623 |
| Durbin-Watson stat | 1.946494 | | | |
| Inverted MA Roots | .60 | -.30+.52i | -.30-.52i | |

13. ARIMA (1,0,3)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I

Method: Least Squares

Date: 01/10/10 Time: 06:26

Sample (adjusted): 1/03/2012 4/30/2014

Included observations: 607 after adjustments

Convergence achieved after 6 iterations

MA Backcast: 12/29/2011 1/02/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000312 | 0.000427 | 0.730336 | 0.4655 |
| AR(1) | 0.025795 | 0.040692 | 0.633910 | 0.5264 |
| MA(3) | -0.216828 | 0.039811 | -5.446448 | 0.0000 |
| R-squared | 0.046751 | Mean dependent var | | 0.000320 |
| Adjusted R-squared | 0.043594 | S.D. dependent var | | 0.013359 |
| S.E. of regression | 0.013065 | Akaike info criterion | | -5.832853 |
| Sum squared resid | 0.103097 | Schwarz criterion | | -5.811065 |
| Log likelihood | 1773.271 | Hannan-Quinn criter. | | -5.824376 |
| F-statistic | 14.81114 | Durbin-Watson stat | | 1.996253 |
| Prob(F-statistic) | 0.000001 | | | |
| Inverted AR Roots | .03 | | | |
| Inverted MA Roots | .60 | -.30+.52i | -.30-.52i | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I

Method: Least Squares

Date: 01/10/10 Time: 06:28

Sample (adjusted): 1/03/2012 4/30/2014

Included observations: 607 after adjustments

Convergence achieved after 6 iterations

MA Backcast: 12/29/2011 1/02/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(1) | 0.026784 | 0.040656 | 0.658807 | 0.5103 |
| MA(3) | -0.215824 | 0.039780 | -5.425469 | 0.0000 |
| R-squared | 0.045911 | Mean dependent var | | 0.000320 |
| Adjusted R-squared | 0.044334 | S.D. dependent var | | 0.013359 |
| S.E. of regression | 0.013060 | Akaike info criterion | | -5.835267 |
| Sum squared resid | 0.103188 | Schwarz criterion | | -5.820742 |
| Log likelihood | 1773.004 | Hannan-Quinn criter. | | -5.829616 |
| Durbin-Watson stat | 1.996212 | | | |
| Inverted AR Roots | .03 | | | |
| Inverted MA Roots | .60 | -.30+.52i | -.30-.52i | |

14. ARIMA (2,0,3)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 06:54
 Sample (adjusted): 1/04/2012 4/30/2014
 Included observations: 606 after adjustments
 Convergence achieved after 5 iterations
 MA Backcast: 12/30/2011 1/03/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000298 | 0.000407 | 0.732491 | 0.4642 |
| AR(2) | -0.021947 | 0.040700 | -0.539234 | 0.5899 |
| MA(3) | -0.217597 | 0.039816 | -5.465116 | 0.0000 |
| R-squared | 0.045790 | Mean dependent var | | 0.000293 |
| Adjusted R-squared | 0.042625 | S.D. dependent var | | 0.013355 |
| S.E. of regression | 0.013067 | Akaike info criterion | | -5.832526 |
| Sum squared resid | 0.102959 | Schwarz criterion | | -5.810709 |
| Log likelihood | 1770.255 | Hannan-Quinn criter. | | -5.824037 |
| F-statistic | 14.46804 | Durbin-Watson stat | | 1.950091 |
| Prob(F-statistic) | 0.000001 | | | |
| Inverted MA Roots | .60 | -.30+.52i | -.30-.52i | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 06:55
 Sample (adjusted): 1/04/2012 4/30/2014
 Included observations: 606 after adjustments
 Convergence achieved after 5 iterations
 MA Backcast: 12/30/2011 1/03/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(2) | -0.021003 | 0.040664 | -0.516496 | 0.6057 |
| MA(3) | -0.216497 | 0.039788 | -5.441298 | 0.0000 |
| R-squared | 0.044943 | Mean dependent var | | 0.000293 |
| Adjusted R-squared | 0.043361 | S.D. dependent var | | 0.013355 |
| S.E. of regression | 0.013062 | Akaike info criterion | | -5.834939 |
| Sum squared resid | 0.103050 | Schwarz criterion | | -5.820395 |
| Log likelihood | 1769.986 | Hannan-Quinn criter. | | -5.829279 |
| Durbin-Watson stat | 1.948286 | | | |
| Inverted MA Roots | .60 | -.30+.52i | -.30-.52i | |

15. ARIMA (3,0,3)

a. Dengan Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 00:49
 Sample (adjusted): 1/05/2012 4/30/2014
 Included observations: 605 after adjustments
 Convergence achieved after 6 iterations
 MA Backcast: 1/02/2012 1/04/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000273 | 0.000420 | 0.650918 | 0.5153 |
| AR(3) | -0.050255 | 0.177320 | -0.283412 | 0.7770 |
| MA(3) | -0.169705 | 0.175441 | -0.967300 | 0.3338 |
| R-squared | 0.045807 | Mean dependent var | | 0.000261 |
| Adjusted R-squared | 0.042637 | S.D. dependent var | | 0.013342 |
| S.E. of regression | 0.013054 | Akaike info criterion | | -5.834454 |
| Sum squared resid | 0.102590 | Schwarz criterion | | -5.812609 |
| Log likelihood | 1767.922 | Hannan-Quinn criter. | | -5.825953 |
| F-statistic | 14.44985 | Durbin-Watson stat | | 1.956476 |
| Prob(F-statistic) | 0.000001 | | | |
| Inverted AR Roots | .18+.32i | .18-.32i | -.37 | |
| Inverted MA Roots | .55 | -.28-.48i | -.28+.48i | |

b. Tanpa Konstanta

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: Least Squares
 Date: 01/10/10 Time: 01:08
 Sample (adjusted): 1/05/2012 4/30/2014
 Included observations: 605 after adjustments
 Convergence achieved after 6 iterations
 MA Backcast: 1/02/2012 1/04/2012

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| AR(3) | -0.051367 | 0.177339 | -0.289654 | 0.7722 |
| MA(3) | -0.167704 | 0.175550 | -0.955308 | 0.3398 |
| R-squared | 0.045136 | Mean dependent var | | 0.000261 |
| Adjusted R-squared | 0.043553 | S.D. dependent var | | 0.013342 |
| S.E. of regression | 0.013048 | Akaike info criterion | | -5.837057 |
| Sum squared resid | 0.102662 | Schwarz criterion | | -5.822494 |
| Log likelihood | 1767.710 | Hannan-Quinn criter. | | -5.831390 |
| Durbin-Watson stat | 1.954960 | | | |
| Inverted AR Roots | .19+.32i | .19-.32i | -.37 | |
| Inverted MA Roots | .55 | -.28-.48i | -.28+.48i | |

Lampiran 4 Uji ARCH-LM

1. Uji ARCH-LM model ARIMA (3,0,0)

| Heteroskedasticity Test: ARCH | | | | |
|--|-------------|-----------------------|-------------|-----------|
| F-statistic | 16.35036 | Prob. F(3,598) | | 0.0000 |
| Obs*R-squared | 45.63588 | Prob. Chi-Square(3) | | 0.0000 |
| Test Equation: | | | | |
| Dependent Variable: RESID^2 | | | | |
| Method: Least Squares | | | | |
| Date: 01/10/10 Time: 00:52 | | | | |
| Sample (adjusted): 1/10/2012 4/30/2014 | | | | |
| Included observations: 602 after adjustments | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.000102 | 1.73E-05 | 5.869235 | 0.0000 |
| RESID^2(-1) | 0.155593 | 0.040391 | 3.852163 | 0.0001 |
| RESID^2(-2) | 0.090624 | 0.040722 | 2.225443 | 0.0264 |
| RESID^2(-3) | 0.157219 | 0.040402 | 3.891360 | 0.0001 |
| R-squared | 0.075807 | Mean dependent var | | 0.000170 |
| Adjusted R-squared | 0.071171 | S.D. dependent var | | 0.000362 |
| S.E. of regression | 0.000349 | Akaike info criterion | | -13.07923 |
| Sum squared resid | 7.26E-05 | Schwarz criterion | | -13.04999 |
| Log likelihood | 3940.848 | Hannan-Quinn criter. | | -13.06785 |
| F-statistic | 16.35036 | Durbin-Watson stat | | 2.022094 |
| Prob(F-statistic) | 0.000000 | | | |

2. Uji ARCH-LM model ARIMA (0,0,3)

| Heteroskedasticity Test: ARCH | | | | |
|--|-------------|-----------------------|-------------|-----------|
| F-statistic | 16.49911 | Prob. F(3,601) | | 0.0000 |
| Obs*R-squared | 46.03538 | Prob. Chi-Square(3) | | 0.0000 |
| Test Equation: | | | | |
| Dependent Variable: RESID^2 | | | | |
| Method: Least Squares | | | | |
| Date: 01/10/10 Time: 00:53 | | | | |
| Sample (adjusted): 1/05/2012 4/30/2014 | | | | |
| Included observations: 605 after adjustments | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.000101 | 1.73E-05 | 5.849158 | 0.0000 |
| RESID^2(-1) | 0.158970 | 0.040287 | 3.945969 | 0.0001 |
| RESID^2(-2) | 0.088098 | 0.040649 | 2.167289 | 0.0306 |
| RESID^2(-3) | 0.156262 | 0.040294 | 3.878024 | 0.0001 |
| R-squared | 0.076092 | Mean dependent var | | 0.000170 |
| Adjusted R-squared | 0.071480 | S.D. dependent var | | 0.000362 |
| S.E. of regression | 0.000348 | Akaike info criterion | | -13.07943 |
| Sum squared resid | 7.30E-05 | Schwarz criterion | | -13.05031 |
| Log likelihood | 3960.528 | Hannan-Quinn criter. | | -13.06810 |
| F-statistic | 16.49911 | Durbin-Watson stat | | 2.020519 |
| Prob(F-statistic) | 0.000000 | | | |

Lampiran 5 *Out Put* Estimasi Pemodelan GARCH

1. GARCH (0,1)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 01:24
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 17 iterations
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(2) + C(3)*GARCH(-1)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000355 | 0.000585 | 0.608049 | 0.5432 |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-----------|-------------|------------|-------------|--------|
| C | -2.28E-07 | 5.22E-07 | -0.437096 | 0.6620 |
| GARCH(-1) | 1.002302 | 0.003162 | 316.9380 | 0.0000 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000007 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000007 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -5.821922 |
| Sum squared resid | 0.108154 | Schwarz criterion | -5.800162 |
| Log likelihood | 1772.864 | Hannan-Quinn criter. | -5.813456 |
| Durbin-Watson stat | 1.908481 | | |

2. GARCH (0,2)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 01:28
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 12 iterations
 WARNING: Singular covariance - coefficients are not unique
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(2) + C(3)*GARCH(-1) + C(4)*GARCH(-2)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|-------|
| C | 0.000345 | NA | NA | NA |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-----------|-------------|------------|-------------|-------|
| C | -2.87E-07 | NA | NA | NA |
| GARCH(-1) | 0.902697 | NA | NA | NA |
| GARCH(-2) | 0.100046 | NA | NA | NA |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000004 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000004 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -5.818584 |
| Sum squared resid | 0.108154 | Schwarz criterion | -5.789570 |
| Log likelihood | 1772.850 | Hannan-Quinn criter. | -5.807296 |
| Durbin-Watson stat | 1.908488 | | |

3. GARCH (0,3)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 01:27
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 10 iterations
 WARNING: Singular covariance - coefficients are not unique
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(2) + C(3)*GARCH(-1) + C(4)*GARCH(-2) + C(5)*GARCH(-3)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|-------|
| C | 0.000450 | NA | NA | NA |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-----------|-------------|------------|-------------|-------|
| C | -3.80E-07 | NA | NA | NA |
| GARCH(-1) | 0.796536 | NA | NA | NA |
| GARCH(-2) | 0.202063 | NA | NA | NA |
| GARCH(-3) | 0.004849 | NA | NA | NA |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000097 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000097 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | -5.815926 |
| Sum squared resid | 0.108164 | Schwarz criterion | -5.779658 |
| Log likelihood | 1773.041 | Hannan-Quinn criter. | -5.801816 |
| Durbin-Watson stat | 1.908310 | | |

4. GARCH (1,0)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 01:38
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 7 iterations
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(2) + C(3)*RESID(-1)^2

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000430 | 0.000464 | 0.927410 | 0.3537 |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-------------|-------------|------------|-------------|--------|
| C | 0.000121 | 6.22E-06 | 19.48101 | 0.0000 |
| RESID(-1)^2 | 0.345816 | 0.057700 | 5.993403 | 0.0000 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000069 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000069 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | -5.875564 |
| Sum squared resid | 0.108161 | Schwarz criterion | -5.853803 |
| Log likelihood | 1789.171 | Hannan-Quinn criter. | -5.867098 |
| Durbin-Watson stat | 1.908363 | | |

5. GARCH (1,1)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 00:25
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 11 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000379 | 0.000431 | 0.879141 | 0.3793 |

Variance Equation

| | | | | |
|-------------|----------|----------|----------|--------|
| C | 6.49E-06 | 2.48E-06 | 2.617355 | 0.0089 |
| RESID(-1)^2 | 0.157803 | 0.025461 | 6.197736 | 0.0000 |
| GARCH(-1) | 0.811137 | 0.032007 | 25.34224 | 0.0000 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000020 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000020 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -6.017898 |
| Sum squared resid | 0.108155 | Schwarz criterion | -5.988883 |
| Log likelihood | 1833.441 | Hannan-Quinn criter. | -6.006610 |
| Durbin-Watson stat | 1.908457 | | |

6. GARCH (1,2)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 01:39
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 10 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*GARCH(-2)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000341 | 0.000426 | 0.800365 | 0.4235 |

Variance Equation

| | | | | |
|-------------|----------|----------|----------|--------|
| C | 8.06E-06 | 3.20E-06 | 2.517411 | 0.0118 |
| RESID(-1)^2 | 0.209057 | 0.037343 | 5.598335 | 0.0000 |
| GARCH(-1) | 0.446876 | 0.206308 | 2.166064 | 0.0303 |
| GARCH(-2) | 0.307206 | 0.184160 | 1.668150 | 0.0953 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000003 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000003 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -6.017773 |
| Sum squared resid | 0.108154 | Schwarz criterion | -5.981505 |
| Log likelihood | 1834.403 | Hannan-Quinn criter. | -6.003663 |
| Durbin-Watson stat | 1.908490 | | |

7. GARCH (1,3)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 01:40
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 21 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*GARCH(-1) + C(5)*GARCH(-2) + C(6)*GARCH(-3)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000275 | 0.000422 | 0.651961 | 0.5144 |

Variance Equation

| | | | | |
|-------------|----------|----------|----------|--------|
| C | 1.06E-05 | 4.31E-06 | 2.469386 | 0.0135 |
| RESID(-1)^2 | 0.289810 | 0.049034 | 5.910398 | 0.0000 |
| GARCH(-1) | 0.134525 | 0.115942 | 1.160275 | 0.2459 |
| GARCH(-2) | 0.219035 | 0.137485 | 1.593157 | 0.1111 |
| GARCH(-3) | 0.311833 | 0.123657 | 2.521751 | 0.0117 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000011 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000011 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -6.017540 |
| Sum squared resid | 0.108154 | Schwarz criterion | -5.974018 |
| Log likelihood | 1835.332 | Hannan-Quinn criter. | -6.000608 |
| Durbin-Watson stat | 1.908474 | | |

8. GARCH (2,0)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 01:40
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 9 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000663 | 0.000462 | 1.434321 | 0.1515 |

Variance Equation

| | | | | |
|-------------|----------|----------|----------|--------|
| C | 0.000106 | 6.96E-06 | 15.17833 | 0.0000 |
| RESID(-1)^2 | 0.292637 | 0.050642 | 5.778569 | 0.0000 |
| RESID(-2)^2 | 0.139821 | 0.041971 | 3.331330 | 0.0009 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000664 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000664 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013353 | Akaike info criterion | -5.891096 |
| Sum squared resid | 0.108225 | Schwarz criterion | -5.862082 |
| Log likelihood | 1794.893 | Hannan-Quinn criter. | -5.879808 |
| Durbin-Watson stat | 1.907228 | | |

9. GARCH (2,1)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 00:38
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 8 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + C(5)*GARCH(-1)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000354 | 0.000428 | 0.828605 | 0.4073 |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-------------|-------------|------------|-------------|--------|
| C | 4.77E-06 | 2.27E-06 | 2.102374 | 0.0355 |
| RESID(-1)^2 | 0.221763 | 0.041265 | 5.374157 | 0.0000 |
| RESID(-2)^2 | -0.089083 | 0.044646 | -1.995306 | 0.0460 |
| GARCH(-1) | 0.845903 | 0.038644 | 21.88942 | 0.0000 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000007 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000007 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -6.017860 |
| Sum squared resid | 0.108154 | Schwarz criterion | -5.981592 |
| Log likelihood | 1834.429 | Hannan-Quinn criter. | -6.003750 |
| Durbin-Watson stat | 1.908481 | | |

10. GARCH (2,2)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 01:42
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 15 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + C(5)*GARCH(-1)
+ C(6)*GARCH(-2)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000334 | 0.000426 | 0.784617 | 0.4327 |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-------------|-------------|------------|-------------|--------|
| C | 6.45E-06 | 5.12E-06 | 1.261068 | 0.2073 |
| RESID(-1)^2 | 0.229150 | 0.042044 | 5.450233 | 0.0000 |
| RESID(-2)^2 | -0.055085 | 0.110443 | -0.498762 | 0.6179 |
| GARCH(-1) | 0.611020 | 0.549453 | 1.112051 | 0.2661 |
| GARCH(-2) | 0.186015 | 0.428457 | 0.434152 | 0.6642 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000001 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000001 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -6.015049 |
| Sum squared resid | 0.108153 | Schwarz criterion | -5.971528 |
| Log likelihood | 1834.575 | Hannan-Quinn criter. | -5.998117 |
| Durbin-Watson stat | 1.908492 | | |

11. GARCH (2,3)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 00:47
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 20 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + C(5)*GARCH(-1)
+ C(6)*GARCH(-2) + C(7)*GARCH(-3)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000242 | 0.000419 | 0.577476 | 0.5636 |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-------------|-------------|------------|-------------|--------|
| C | 1.42E-05 | 5.51E-06 | 2.571621 | 0.0101 |
| RESID(-1)^2 | 0.269987 | 0.047581 | 5.674279 | 0.0000 |
| RESID(-2)^2 | 0.153810 | 0.052040 | 2.955615 | 0.0031 |
| GARCH(-1) | -0.330774 | 0.110899 | -2.982666 | 0.0029 |
| GARCH(-2) | 0.255154 | 0.065765 | 3.879789 | 0.0001 |
| GARCH(-3) | 0.597072 | 0.077400 | 7.714096 | 0.0000 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000033 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000033 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | -6.023499 |
| Sum squared resid | 0.108157 | Schwarz criterion | -5.972724 |
| Log likelihood | 1838.144 | Hannan-Quinn criter. | -6.003745 |
| Durbin-Watson stat | 1.908431 | | |

12. GARCH (3,0)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 01:44
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 10 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + C(5)*RESID(-3)^2

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000516 | 0.000430 | 1.198225 | 0.2308 |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-------------|-------------|------------|-------------|--------|
| C | 7.94E-05 | 7.06E-06 | 11.24555 | 0.0000 |
| RESID(-1)^2 | 0.266289 | 0.045499 | 5.852601 | 0.0000 |
| RESID(-2)^2 | 0.090918 | 0.039457 | 2.304217 | 0.0212 |
| RESID(-3)^2 | 0.227043 | 0.047784 | 4.751410 | 0.0000 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000217 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000217 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013350 | Akaike info criterion | -5.947417 |
| Sum squared resid | 0.108177 | Schwarz criterion | -5.911149 |
| Log likelihood | 1813.015 | Hannan-Quinn criter. | -5.933307 |
| Durbin-Watson stat | 1.908080 | | |

13. GARCH (3,1)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 00:55
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 8 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + C(5)*RESID(-3)^2
+ C(6)*GARCH(-1)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000312 | 0.000423 | 0.737096 | 0.4611 |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-------------|-------------|------------|-------------|--------|
| C | 6.30E-06 | 3.22E-06 | 1.956001 | 0.0505 |
| RESID(-1)^2 | 0.228802 | 0.041236 | 5.548613 | 0.0000 |
| RESID(-2)^2 | -0.113952 | 0.056022 | -2.034061 | 0.0419 |
| RESID(-3)^2 | 0.046330 | 0.050905 | 0.910139 | 0.3627 |
| GARCH(-1) | 0.810310 | 0.056543 | 14.33075 | 0.0000 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000000 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000000 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -6.015455 |
| Sum squared resid | 0.108153 | Schwarz criterion | -5.971933 |
| Log likelihood | 1834.698 | Hannan-Quinn criter. | -5.998523 |
| Durbin-Watson stat | 1.908494 | | |

14. GARCH (3,2)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 01:46
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 9 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + C(5)*RESID(-3)^2
+ C(6)*GARCH(-1) + C(7)*GARCH(-2)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000313 | 0.000426 | 0.734274 | 0.4628 |

Variance Equation

| | Coefficient | Std. Error | z-Statistic | Prob. |
|-------------|-------------|------------|-------------|--------|
| C | 6.50E-06 | 6.62E-06 | 0.982538 | 0.3258 |
| RESID(-1)^2 | 0.228933 | 0.041272 | 5.546936 | 0.0000 |
| RESID(-2)^2 | -0.106140 | 0.253343 | -0.418957 | 0.6752 |
| RESID(-3)^2 | 0.043637 | 0.106676 | 0.409067 | 0.6825 |
| GARCH(-1) | 0.774296 | 1.051132 | 0.736631 | 0.4613 |
| GARCH(-2) | 0.029884 | 0.871300 | 0.034298 | 0.9726 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000000 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000000 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013348 | Akaike info criterion | -6.012173 |
| Sum squared resid | 0.108153 | Schwarz criterion | -5.961398 |
| Log likelihood | 1834.701 | Hannan-Quinn criter. | -5.992419 |
| Durbin-Watson stat | 1.908494 | | |

15. GARCH (3,3)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 01/10/10 Time: 01:46
Sample: 1/02/2012 4/30/2014
Included observations: 608
Convergence achieved after 42 iterations
Presample variance: backcast (parameter = 0.7)
GARCH = C(2) + C(3)*RESID(-1)² + C(4)*RESID(-2)² + C(5)*RESID(-3)²
+ C(6)*GARCH(-1) + C(7)*GARCH(-2) + C(8)*GARCH(-3)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 0.000216 | 0.000410 | 0.526730 | 0.5984 |

Variance Equation

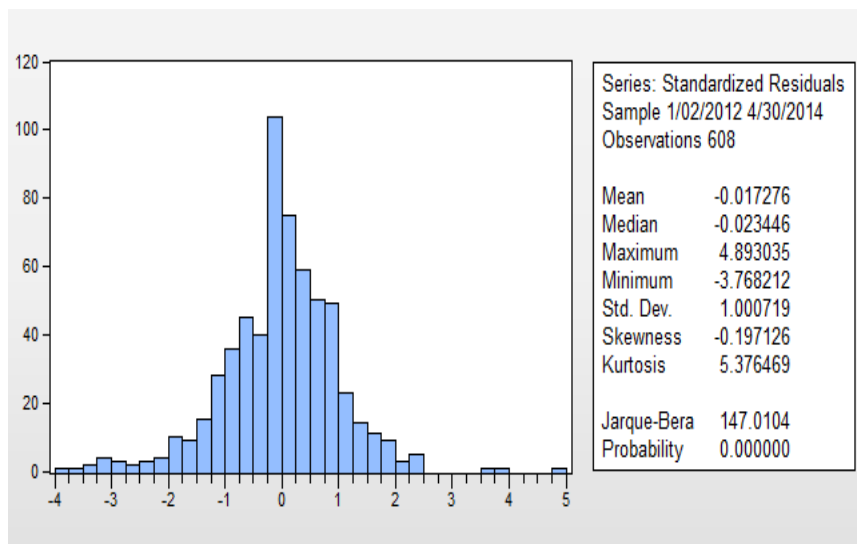
| | | | | |
|------------------------|-----------|----------|-----------|--------|
| C | 1.66E-05 | 6.83E-06 | 2.427937 | 0.0152 |
| RESID(-1) ² | 0.256594 | 0.035407 | 7.246967 | 0.0000 |
| RESID(-2) ² | 0.207567 | 0.044799 | 4.633324 | 0.0000 |
| RESID(-3) ² | 0.084206 | 0.045063 | 1.868615 | 0.0617 |
| GARCH(-1) | -0.455516 | 0.038694 | -11.77232 | 0.0000 |
| GARCH(-2) | 0.162927 | 0.052318 | 3.114141 | 0.0018 |
| GARCH(-3) | 0.691086 | 0.033981 | 20.33737 | 0.0000 |

| | | | |
|--------------------|-----------|-----------------------|-----------|
| R-squared | -0.000060 | Mean dependent var | 0.000319 |
| Adjusted R-squared | -0.000060 | S.D. dependent var | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | -6.028893 |
| Sum squared resid | 0.108160 | Schwarz criterion | -5.970864 |
| Log likelihood | 1840.783 | Hannan-Quinn criter. | -6.006317 |
| Durbin-Watson stat | 1.908380 | | |

Lampiran 6 Pemeriksaan Diagnosa

1. GARCH (1,0)

a) Uji normalitas



b) Uji ARCH-LM

Heteroskedasticity Test: ARCH

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 6.793686 | Prob. F(3,601) | 0.0002 |
| Obs*R-squared | 19.84377 | Prob. Chi-Square(3) | 0.0002 |

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 01/10/10 Time: 00:32

Sample (adjusted): 1/05/2012 4/30/2014

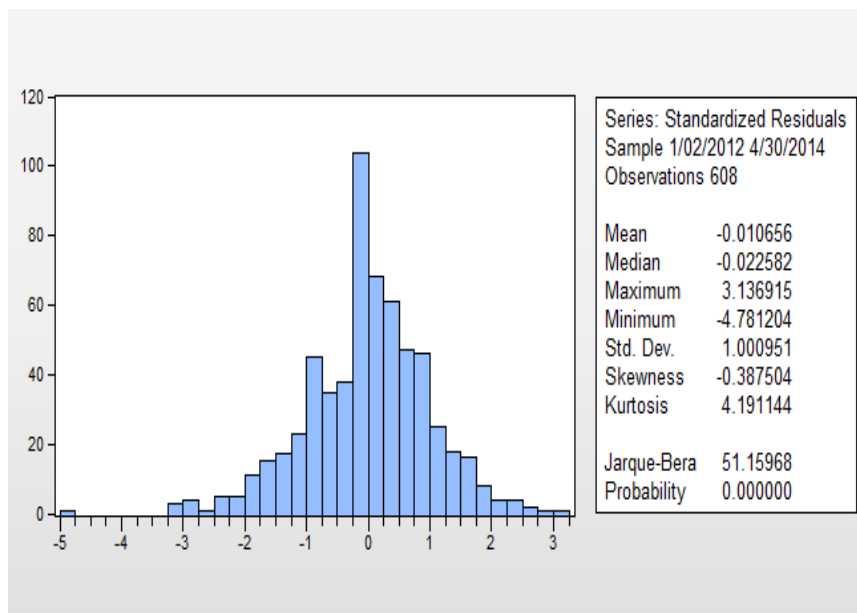
Included observations: 605 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|-----------------|-------------|------------|-------------|--------|
| C | 0.796631 | 0.109081 | 7.303147 | 0.0000 |
| WGT_RESID^2(-1) | -0.039933 | 0.040248 | -0.992172 | 0.3215 |
| WGT_RESID^2(-2) | 0.078655 | 0.040146 | 1.959206 | 0.0506 |
| WGT_RESID^2(-3) | 0.163138 | 0.040277 | 4.050443 | 0.0001 |

| | | | |
|--------------------|-----------|-----------------------|----------|
| R-squared | 0.032800 | Mean dependent var | 0.998622 |
| Adjusted R-squared | 0.027972 | S.D. dependent var | 2.100923 |
| S.E. of regression | 2.071331 | Akaike info criterion | 4.300850 |
| Sum squared resid | 2578.538 | Schwarz criterion | 4.329975 |
| Log likelihood | -1297.007 | Hannan-Quinn criter. | 4.312183 |
| F-statistic | 6.793686 | Durbin-Watson stat | 2.044628 |
| Prob(F-statistic) | 0.000165 | | |

2. GARCH (1,1)

a) Uji normalitas



b) Uji ARCH-LM

Heteroskedasticity Test: ARCH

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 0.340798 | Prob. F(3,601) | 0.7958 |
| Obs*R-squared | 1.027451 | Prob. Chi-Square(3) | 0.7946 |

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 01/10/10 Time: 00:29

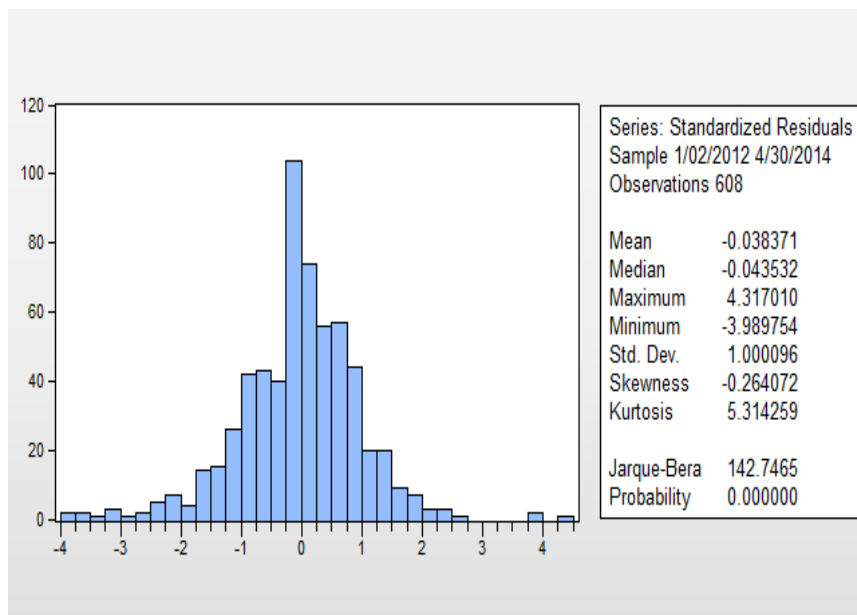
Sample (adjusted): 1/05/2012 4/30/2014

Included observations: 605 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 1.013963 | 0.101223 | 10.01711 | 0.0000 |
| WGT_RESID^2(-1) | 0.026805 | 0.040765 | 0.657549 | 0.5111 |
| WGT_RESID^2(-2) | -0.025969 | 0.040760 | -0.637116 | 0.5243 |
| WGT_RESID^2(-3) | -0.017221 | 0.040952 | -0.420523 | 0.6743 |
| R-squared | 0.001698 | Mean dependent var | | 0.997594 |
| Adjusted R-squared | -0.003285 | S.D. dependent var | | 1.795310 |
| S.E. of regression | 1.798256 | Akaike info criterion | | 4.018102 |
| Sum squared resid | 1943.469 | Schwarz criterion | | 4.047227 |
| Log likelihood | -1211.476 | Hannan-Quinn criter. | | 4.029435 |
| F-statistic | 0.340798 | Durbin-Watson stat | | 1.996913 |
| Prob(F-statistic) | 0.795838 | | | |

3. GARCH (2,0)

a) Uji normalitas



b) Uji ARCH-LM

Heteroskedasticity Test: ARCH

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 4.933936 | Prob. F(3,601) | 0.0022 |
| Obs*R-squared | 14.54217 | Prob. Chi-Square(3) | 0.0023 |

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 01/10/10 Time: 00:46

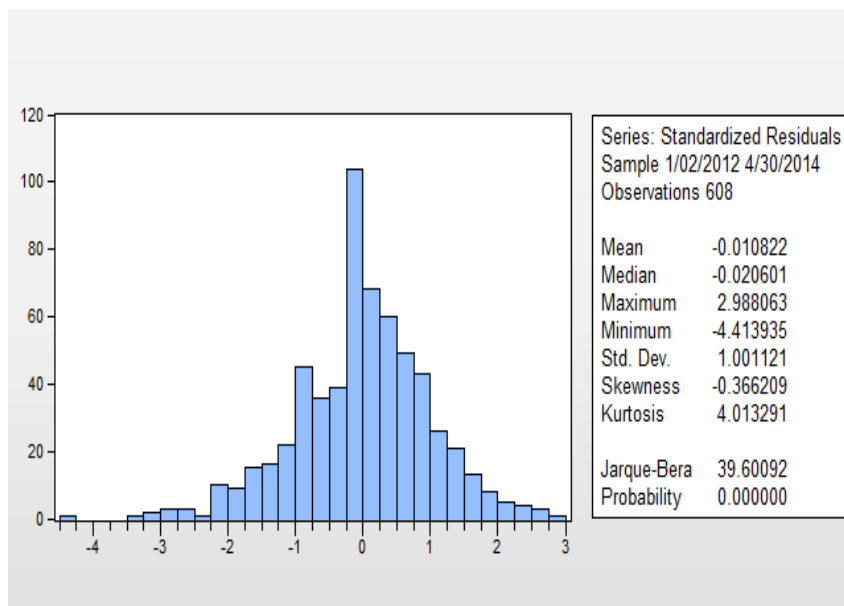
Sample (adjusted): 1/05/2012 4/30/2014

Included observations: 605 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 0.892476 | 0.110623 | 8.067701 | 0.0000 |
| WGT_RESID^2(-1) | -0.023384 | 0.040322 | -0.579929 | 0.5622 |
| WGT_RESID^2(-2) | -0.021289 | 0.040320 | -0.528005 | 0.5977 |
| WGT_RESID^2(-3) | 0.150941 | 0.040373 | 3.738619 | 0.0002 |
| R-squared | 0.024037 | Mean dependent var | | 0.998305 |
| Adjusted R-squared | 0.019165 | S.D. dependent var | | 2.090874 |
| S.E. of regression | 2.070741 | Akaike info criterion | | 4.300280 |
| Sum squared resid | 2577.069 | Schwarz criterion | | 4.329405 |
| Log likelihood | -1296.835 | Hannan-Quinn criter. | | 4.311614 |
| F-statistic | 4.933936 | Durbin-Watson stat | | 2.036064 |
| Prob(F-statistic) | 0.002157 | | | |

4. GARCH (2,1)

a) Uji normalitas



b) Uji ARCH-LM

Heteroskedasticity Test: ARCH

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 0.066054 | Prob. F(3,601) | 0.9779 |
| Obs*R-squared | 0.199416 | Prob. Chi-Square(3) | 0.9777 |

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 01/10/10 Time: 00:48

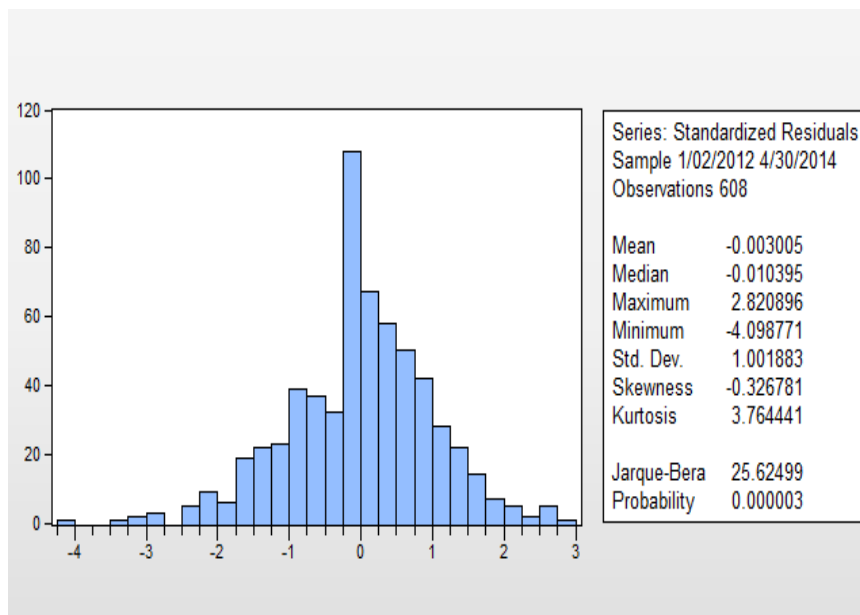
Sample (adjusted): 1/05/2012 4/30/2014

Included observations: 605 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 1.028448 | 0.100673 | 10.21576 | 0.0000 |
| WGT_RESID^2(-1) | -0.006211 | 0.040773 | -0.152324 | 0.8790 |
| WGT_RESID^2(-2) | -0.011421 | 0.040758 | -0.280215 | 0.7794 |
| WGT_RESID^2(-3) | -0.012858 | 0.040929 | -0.314142 | 0.7535 |
| R-squared | 0.000330 | Mean dependent var | | 0.997937 |
| Adjusted R-squared | -0.004660 | S.D. dependent var | | 1.745181 |
| S.E. of regression | 1.749243 | Akaike info criterion | | 3.962833 |
| Sum squared resid | 1838.971 | Schwarz criterion | | 3.991959 |
| Log likelihood | -1194.757 | Hannan-Quinn criter. | | 3.974167 |
| F-statistic | 0.066054 | Durbin-Watson stat | | 1.997023 |
| Prob(F-statistic) | 0.977864 | | | |

5. GARCH (2,3)

a) Uji normalitas



b) Uji ARCH-LM

Heteroskedasticity Test: ARCH

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 0.150655 | Prob. F(3,601) | 0.9293 |
| Obs*R-squared | 0.454631 | Prob. Chi-Square(3) | 0.9287 |

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 01/10/10 Time: 00:52

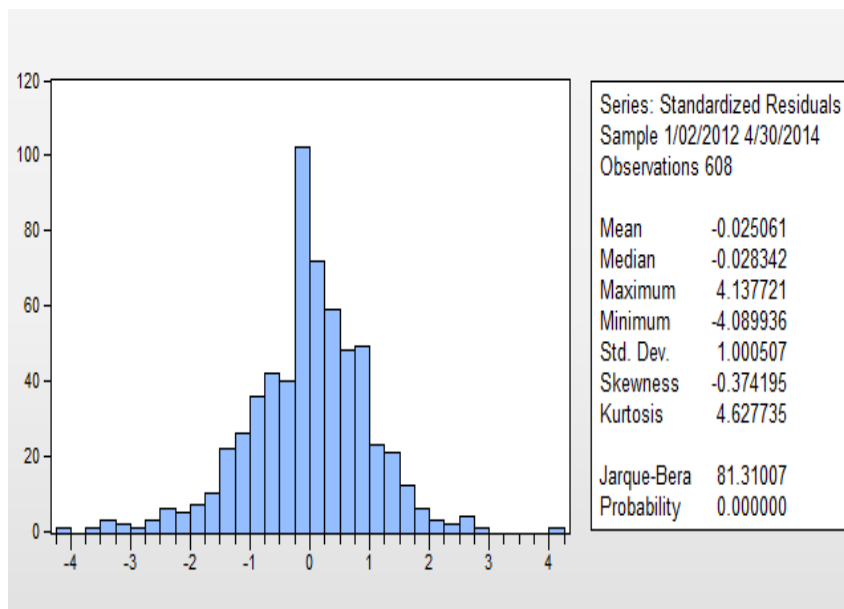
Sample (adjusted): 1/05/2012 4/30/2014

Included observations: 605 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 1.000654 | 0.098862 | 10.12170 | 0.0000 |
| WGT_RESID^2(-1) | -0.022542 | 0.040777 | -0.552813 | 0.5806 |
| WGT_RESID^2(-2) | 0.007672 | 0.040767 | 0.188203 | 0.8508 |
| WGT_RESID^2(-3) | 0.013675 | 0.040847 | 0.334771 | 0.7379 |
| R-squared | 0.000751 | Mean dependent var | | 0.999436 |
| Adjusted R-squared | -0.004236 | S.D. dependent var | | 1.670675 |
| S.E. of regression | 1.674210 | Akaike info criterion | | 3.875149 |
| Sum squared resid | 1684.590 | Schwarz criterion | | 3.904275 |
| Log likelihood | -1168.233 | Hannan-Quinn criter. | | 3.886483 |
| F-statistic | 0.150655 | Durbin-Watson stat | | 1.997065 |
| Prob(F-statistic) | 0.929266 | | | |

6. GARCH (3,0)

a) Uji normalitas



b) Uji ARCH-LM

Heteroskedasticity Test: ARCH

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 0.288863 | Prob. F(3,601) | 0.8335 |
| Obs*R-squared | 0.871100 | Prob. Chi-Square(3) | 0.8324 |

Test Equation:

Dependent Variable: WGT_RESID^2

Method: Least Squares

Date: 01/10/10 Time: 00:53

Sample (adjusted): 1/05/2012 4/30/2014

Included observations: 605 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 1.053295 | 0.106224 | 9.915822 | 0.0000 |
| WGT_RESID^2(-1) | -0.026526 | 0.040772 | -0.650605 | 0.5156 |
| WGT_RESID^2(-2) | -0.001473 | 0.040780 | -0.036130 | 0.9712 |
| WGT_RESID^2(-3) | -0.027226 | 0.040910 | -0.665523 | 0.5060 |
| R-squared | 0.001440 | Mean dependent var | | 0.998136 |
| Adjusted R-squared | -0.003545 | S.D. dependent var | | 1.918853 |
| S.E. of regression | 1.922251 | Akaike info criterion | | 4.151461 |
| Sum squared resid | 2220.725 | Schwarz criterion | | 4.180586 |
| Log likelihood | -1251.817 | Hannan-Quinn criter. | | 4.162794 |
| F-statistic | 0.288863 | Durbin-Watson stat | | 1.992243 |
| Prob(F-statistic) | 0.833459 | | | |

Lampiran 7 Estimasi Parameter GJR

1. GJR (1,1)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 00:45
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 10 iterations
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-1)^2*(RESID(-1)<0) + C(5)*GARCH(-1)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|---------------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000197 | 0.000442 | 0.445653 | 0.6558 |
| Variance Equation | | | | |
| C | 6.91E-06 | 2.41E-06 | 2.866327 | 0.0042 |
| RESID(-1)^2 | 0.107332 | 0.040957 | 2.620638 | 0.0088 |
| RESID(-1)^2*(RESID(-1)<0) | 0.080138 | 0.043860 | 1.827157 | 0.0677 |
| GARCH(-1) | 0.815793 | 0.033975 | 24.01183 | 0.0000 |
| R-squared | -0.000084 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000084 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | | -6.018042 |
| Sum squared resid | 0.108162 | Schwarz criterion | | -5.981774 |
| Log likelihood | 1834.485 | Hannan-Quinn criter. | | -6.003932 |
| Durbin-Watson stat | 1.908334 | | | |

2. GJR (1,2)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 00:48
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 21 iterations
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-1)^2*(RESID(-1)<0) + C(5)*GARCH(-1) + C(6)*GARCH(-2)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|---------------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000174 | 0.000439 | 0.394951 | 0.6929 |
| Variance Equation | | | | |
| C | 8.33E-06 | 3.08E-06 | 2.709724 | 0.0067 |
| RESID(-1)^2 | 0.142947 | 0.051538 | 2.773629 | 0.0055 |
| RESID(-1)^2*(RESID(-1)<0) | 0.096390 | 0.056181 | 1.715701 | 0.0862 |
| GARCH(-1) | 0.480651 | 0.217244 | 2.212498 | 0.0269 |
| GARCH(-2) | 0.285311 | 0.195555 | 1.458981 | 0.1446 |
| R-squared | -0.000119 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000119 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | | -6.017552 |
| Sum squared resid | 0.108166 | Schwarz criterion | | -5.974031 |
| Log likelihood | 1835.336 | Hannan-Quinn criter. | | -6.000620 |
| Durbin-Watson stat | 1.908268 | | | |

3. GJR (2,1)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 00:48
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 10 iterations
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-1)^2*(RESID(-1)<0) +
 C(5)*RESID(-2)^2 + C(6)*GARCH(-1)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|---------------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000217 | 0.000443 | 0.490039 | 0.6241 |
| Variance Equation | | | | |
| C | 5.10E-06 | 2.33E-06 | 2.194250 | 0.0282 |
| RESID(-1)^2 | 0.170895 | 0.053457 | 3.196883 | 0.0014 |
| RESID(-1)^2*(RESID(-1)<0) | 0.054887 | 0.041716 | 1.315727 | 0.1883 |
| RESID(-2)^2 | -0.070921 | 0.046492 | -1.525448 | 0.1271 |
| GARCH(-1) | 0.846826 | 0.040249 | 21.03968 | 0.0000 |
| R-squared | -0.000059 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000059 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | | -6.016487 |
| Sum squared resid | 0.108160 | Schwarz criterion | | -5.972965 |
| Log likelihood | 1835.012 | Hannan-Quinn criter. | | -5.999555 |
| Durbin-Watson stat | 1.908383 | | | |

4. GJR (2,2)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 00:49
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 20 iterations
 Presample variance: backcast (parameter = 0.7)
 GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-1)^2*(RESID(-1)<0) +
 C(5)*RESID(-2)^2 + C(6)*GARCH(-1) + C(7)*GARCH(-2)

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|---------------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000169 | 0.000440 | 0.383325 | 0.7015 |
| Variance Equation | | | | |
| C | 7.44E-06 | 5.58E-06 | 1.333512 | 0.1824 |
| RESID(-1)^2 | 0.161876 | 0.071151 | 2.275107 | 0.0229 |
| RESID(-1)^2*(RESID(-1)<0) | 0.086275 | 0.072376 | 1.192032 | 0.2332 |
| RESID(-2)^2 | -0.028876 | 0.119674 | -0.241285 | 0.8093 |
| GARCH(-1) | 0.551509 | 0.562703 | 0.980108 | 0.3270 |
| GARCH(-2) | 0.234659 | 0.443920 | 0.528607 | 0.5971 |
| R-squared | -0.000127 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000127 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | | -6.014481 |
| Sum squared resid | 0.108167 | Schwarz criterion | | -5.963706 |
| Log likelihood | 1835.402 | Hannan-Quinn criter. | | -5.994727 |
| Durbin-Watson stat | 1.908253 | | | |

5. GJR (1,3)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 00:16
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 43 iterations
 Presample variance: backcast (parameter = 0.7)
 $GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-1)^2*(RESID(-1)<0) +$
 $C(5)*GARCH(-1) + C(6)*GARCH(-2) + C(7)*GARCH(-3)$

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|---------------------------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000146 | 0.000437 | 0.334759 | 0.7378 |
| Variance Equation | | | | |
| C | 1.05E-05 | 4.04E-06 | 2.589387 | 0.0096 |
| RESID(-1) ² | 0.202647 | 0.066319 | 3.055667 | 0.0022 |
| RESID(-1) ² *(RESID(-1)<0) | 0.116747 | 0.074699 | 1.562886 | 0.1181 |
| GARCH(-1) | 0.200677 | 0.137237 | 1.462274 | 0.1437 |
| GARCH(-2) | 0.203745 | 0.164040 | 1.242047 | 0.2142 |
| GARCH(-3) | 0.284731 | 0.144452 | 1.971106 | 0.0487 |
| R-squared | -0.000168 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000168 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | | -6.016600 |
| Sum squared resid | 0.108171 | Schwarz criterion | | -5.965825 |
| Log likelihood | 1836.046 | Hannan-Quinn criter. | | -5.996846 |
| Durbin-Watson stat | 1.908175 | | | |

6. GJR (3,1)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 00:19
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 21 iterations
 Presample variance: backcast (parameter = 0.7)
 $GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-1)^2*(RESID(-1)<0) +$
 $C(5)*RESID(-2)^2 + C(6)*RESID(-3)^2 + C(7)*GARCH(-1)$

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|---------------------------------------|-------------|-----------------------|-------------|-----------|
| C | 6.80E-05 | 0.000439 | 0.154806 | 0.8770 |
| Variance Equation | | | | |
| C | 1.02E-05 | 4.15E-06 | 2.468564 | 0.0136 |
| RESID(-1) ² | 0.133944 | 0.060572 | 2.211323 | 0.0270 |
| RESID(-1) ² *(RESID(-1)<0) | 0.113667 | 0.053845 | 2.111029 | 0.0348 |
| RESID(-2) ² | -0.081159 | 0.056257 | -1.442643 | 0.1491 |
| RESID(-3) ² | 0.091761 | 0.048211 | 1.903323 | 0.0570 |
| GARCH(-1) | 0.746435 | 0.059824 | 12.47729 | 0.0000 |
| R-squared | -0.000355 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000355 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013351 | Akaike info criterion | | -6.016039 |
| Sum squared resid | 0.108192 | Schwarz criterion | | -5.965264 |
| Log likelihood | 1835.876 | Hannan-Quinn criter. | | -5.996285 |
| Durbin-Watson stat | 1.907818 | | | |

7. GJR (2,3)

Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 00:19
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 34 iterations
 Presample variance: backcast (parameter = 0.7)

$$\text{GARCH} = C(2) + C(3)*\text{RESID}(-1)^2 + C(4)*\text{RESID}(-1)^2*(\text{RESID}(-1)<0) + C(5)*\text{RESID}(-2)^2 + C(6)*\text{GARCH}(-1) + C(7)*\text{GARCH}(-2) + C(8)*\text{GARCH}(-3)$$

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|---------------------------------------|-------------|-----------------------|-------------|-----------|
| C | 0.000227 | 0.000434 | 0.523963 | 0.6003 |
| Variance Equation | | | | |
| C | 1.42E-05 | 5.52E-06 | 2.569681 | 0.0102 |
| RESID(-1) ² | 0.261652 | 0.079378 | 3.296277 | 0.0010 |
| RESID(-1) ² *(RESID(-1)<0) | 0.010105 | 0.080051 | 0.126225 | 0.8996 |
| RESID(-2) ² | 0.153983 | 0.052431 | 2.936860 | 0.0033 |
| GARCH(-1) | -0.332493 | 0.114220 | -2.910973 | 0.0036 |
| GARCH(-2) | 0.258282 | 0.066878 | 3.861993 | 0.0001 |
| GARCH(-3) | 0.597662 | 0.081350 | 7.346787 | 0.0000 |
| R-squared | -0.000048 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000048 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013349 | Akaike info criterion | | -6.020230 |
| Sum squared resid | 0.108158 | Schwarz criterion | | -5.962201 |
| Log likelihood | 1838.150 | Hannan-Quinn criter. | | -5.997654 |
| Durbin-Watson stat | 1.908404 | | | |

8. GJR (3,2)

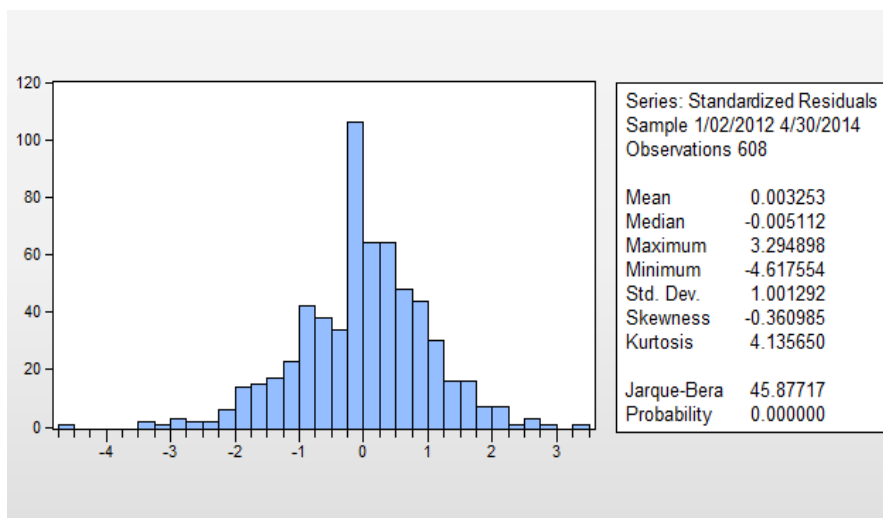
Dependent Variable: RETURN_JAKARTA_ISLAMIC_I
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 01/10/10 Time: 00:21
 Sample: 1/02/2012 4/30/2014
 Included observations: 608
 Convergence achieved after 22 iterations
 Presample variance: backcast (parameter = 0.7)

$$\text{GARCH} = C(2) + C(3)*\text{RESID}(-1)^2 + C(4)*\text{RESID}(-1)^2*(\text{RESID}(-1)<0) + C(5)*\text{RESID}(-2)^2 + C(6)*\text{RESID}(-3)^2 + C(7)*\text{GARCH}(-1) + C(8)*\text{GARCH}(-2)$$

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|---------------------------------------|-------------|-----------------------|-------------|-----------|
| C | 6.10E-05 | 0.000440 | 0.138506 | 0.8898 |
| Variance Equation | | | | |
| C | 1.10E-05 | 5.05E-06 | 2.178432 | 0.0294 |
| RESID(-1) ² | 0.124472 | 0.065725 | 1.893824 | 0.0582 |
| RESID(-1) ² *(RESID(-1)<0) | 0.129595 | 0.069186 | 1.873123 | 0.0611 |
| RESID(-2) ² | -0.058919 | 0.096770 | -0.608858 | 0.5426 |
| RESID(-3) ² | 0.086835 | 0.055514 | 1.564192 | 0.1178 |
| GARCH(-1) | 0.634791 | 0.395438 | 1.605287 | 0.1084 |
| GARCH(-2) | 0.091885 | 0.325097 | 0.282639 | 0.7775 |
| R-squared | -0.000375 | Mean dependent var | | 0.000319 |
| Adjusted R-squared | -0.000375 | S.D. dependent var | | 0.013348 |
| S.E. of regression | 0.013351 | Akaike info criterion | | -6.013162 |
| Sum squared resid | 0.108194 | Schwarz criterion | | -5.955133 |
| Log likelihood | 1836.001 | Hannan-Quinn criter. | | -5.990586 |
| Durbin-Watson stat | 1.907780 | | | |

Lampiran 8 Pemeriksaan Diagnosa

a. Uji Normalitas model GJR-GARCH



b. Uji ARCH-LM

Heteroskedasticity Test: ARCH

| | | | |
|---------------|----------|---------------------|--------|
| F-statistic | 0.298355 | Prob. F(3,601) | 0.8266 |
| Obs*R-squared | 0.899681 | Prob. Chi-Square(3) | 0.8255 |

Test Equation:

Dependent Variable: WGT_RESID^2
Method: Least Squares
Date: 01/10/10 Time: 02:53
Sample (adjusted): 1/05/2012 4/30/2014
Included observations: 605 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 1.016864 | 0.100905 | 10.07749 | 0.0000 |
| WGT_RESID^2(-1) | 0.020844 | 0.040758 | 0.511418 | 0.6092 |
| WGT_RESID^2(-2) | -0.031251 | 0.040739 | -0.767122 | 0.4433 |
| WGT_RESID^2(-3) | -0.008849 | 0.040910 | -0.216298 | 0.8288 |
| R-squared | 0.001487 | Mean dependent var | | 0.997527 |
| Adjusted R-squared | -0.003497 | S.D. dependent var | | 1.774161 |
| S.E. of regression | 1.777260 | Akaike info criterion | | 3.994613 |
| Sum squared resid | 1898.351 | Schwarz criterion | | 4.023738 |
| Log likelihood | -1204.370 | Hannan-Quinn criter. | | 4.005946 |
| F-statistic | 0.298355 | Durbin-Watson stat | | 1.996968 |
| Prob(F-statistic) | 0.826600 | | | |

Lampiran 9

Program perhitungan nilai *Value at Risk* dengan Matlab 7.1

```

clc;
Po=input('Nilai investasi awal=');
t1=input('periode waktu=');
t2=input('periode waktu=');
t3=input('periode waktu=');
t4=input('periode waktu=');
Z=input('nilai Z alpha=');
s=-0.200614%nilai skewness
Zkoreksi=Z-(1/6*(Z^2)*s)+(1/6*s) %karena data tdk berdistribusi
normal dg pendekatan Cornish Fisher Expansion
v=0.010827348;
clc;
fprintf('#####\n')
fprintf('##          Analisis Risiko Estimasi VaR          ##\n')
fprintf('##          dengan ModelAsymetric GJR          ##\n')
fprintf('#####\n')
fprintf('Value at Risk(t)=Po*Zkoreksi*vol*c          \n')
fprintf('Investasi awal:%8.0f\n',Po)
fprintf('nilai Z koreksi:%8.3f\n',Zkoreksi)
fprintf('periode waktu=%8.0f\n',t1)
fprintf('periode waktu=%8.0f\n',t2)
fprintf('periode waktu=%8.0f\n',t3)
fprintf('periode waktu=%8.0f\n',t4)
fprintf('#####\n')
    c1=sqrt(t1);
    c2=sqrt(t2);
    c3=sqrt(t3);
    c4=sqrt(t4);
    VaR1=Po*Zkoreksi*v*c1;%VaR GJR(1,1) selama 1 hari
    VaR7=Po*Zkoreksi*v*c2;%VaR GJR(1,1) selama 7 hari
    VaR30=Po*Zkoreksi*v*c3;%VaR GJR(1,1) selama 30 hari
    VaR120=Po*Zkoreksi*v*c4;%VaR GJR(1,1) selama 120 hari
fprintf('#####\n')
fprintf('Dengan nilai VaR1 adalah %8.3f\n',VaR1)
fprintf('Dengan nilai VaR7 adalah %8.3f\n',VaR7)
fprintf('Dengan nilai VaR30 adalah %8.3f\n',VaR30)
fprintf('Dengan nilai VaR120 adalah %8.3f\n',VaR120)
fprintf('#####\n')

```

Out Put perhitungan Value at Risk dengan Matlab

#####

Analisis Risiko Estimasi VaR

dengan ModelAsymmetric GJR

#####

Value at Risk(t)=Po*Zkoreksi*vol*c

Investasi awal:10000000

nilai Z koreksi: 1.708

periode waktu= 1

periode waktu= 7

periode waktu= 30

periode waktu= 120

#####

#####

Dengan nilai VaR1 adalah 184887.030

Dengan nilai VaR7 adalah 489165.101

Dengan nilai VaR30 adalah 1012667.967

Dengan nilai VaR120 adalah 2025335.934

#####

Lampiran 10 Perhitungan *Likelihood Ratio Test*

| No | Date | close | Return Jakarta Islamic Index | return*10juta | T1 | T2 | T3 | T4 |
|----|-----------|---------|------------------------------|---------------|----|----|----|----|
| 1 | 2-Jan-12 | 533.451 | 0 | 0 | 1 | 1 | 1 | 1 |
| 2 | 3-Jan-12 | 542.176 | 0.016223452 | 162234.5175 | 1 | 1 | 1 | 1 |
| 3 | 4-Jan-12 | 553.077 | 0.01990656 | 199065.6036 | 1 | 1 | 1 | 1 |
| 4 | 5-Jan-12 | 555.232 | 0.003888812 | 38888.12084 | 1 | 1 | 1 | 1 |
| 5 | 6-Jan-12 | 547.611 | -0.013820864 | -138208.6355 | 1 | 1 | 1 | 1 |
| 6 | 9-Jan-12 | 550.083 | 0.004503995 | 45039.95064 | 1 | 1 | 1 | 1 |
| 7 | 10-Jan-12 | 559.147 | 0.016343232 | 163432.3224 | 1 | 1 | 1 | 1 |
| 8 | 11-Jan-12 | 553.016 | -0.011025474 | -110254.7398 | 1 | 1 | 1 | 1 |
| 9 | 12-Jan-12 | 552.395 | -0.001123564 | -11235.64114 | 1 | 1 | 1 | 1 |
| 10 | 13-Jan-12 | 557.344 | 0.008919273 | 89192.73467 | 1 | 1 | 1 | 1 |
| 11 | 16-Jan-12 | 553.793 | -0.006391673 | -63916.72835 | 1 | 1 | 1 | 1 |
| 12 | 17-Jan-12 | 560.986 | 0.012904979 | 129049.7906 | 1 | 1 | 1 | 1 |
| 13 | 18-Jan-12 | 565.712 | 0.008389165 | 83891.65006 | 1 | 1 | 1 | 1 |
| 14 | 19-Jan-12 | 568.704 | 0.005274973 | 52749.73092 | 1 | 1 | 1 | 1 |
| 15 | 20-Jan-12 | 568.282 | -0.000742313 | -7423.134839 | 1 | 1 | 1 | 1 |
| 16 | 24-Jan-12 | 570.54 | 0.003965506 | 39655.0639 | 1 | 1 | 1 | 1 |
| 17 | 25-Jan-12 | 564.631 | -0.01041086 | -104108.6034 | 1 | 1 | 1 | 1 |
| 18 | 26-Jan-12 | 567.45 | 0.004980219 | 49802.19307 | 1 | 1 | 1 | 1 |
| 19 | 27-Jan-12 | 570.754 | 0.005805654 | 58056.53961 | 1 | 1 | 1 | 1 |
| 20 | 30-Jan-12 | 557.351 | -0.023763091 | -237630.9067 | 0 | 1 | 1 | 1 |
| 21 | 31-Jan-12 | 562.535 | 0.009258151 | 92581.51326 | 1 | 1 | 1 | 1 |
| 22 | 1-Feb-12 | 562.364 | -0.000304027 | -3040.272972 | 1 | 1 | 1 | 1 |
| 23 | 2-Feb-12 | 571.086 | 0.015390484 | 153904.8421 | 1 | 1 | 1 | 1 |
| 24 | 3-Feb-12 | 571.418 | 0.00058118 | 5811.796009 | 1 | 1 | 1 | 1 |
| 25 | 6-Feb-12 | 565.338 | -0.010697209 | -106972.0851 | 1 | 1 | 1 | 1 |
| 26 | 7-Feb-12 | 564.689 | -0.001148645 | -11486.45247 | 1 | 1 | 1 | 1 |
| 27 | 8-Feb-12 | 570.415 | 0.010089029 | 100890.2897 | 1 | 1 | 1 | 1 |
| 28 | 9-Feb-12 | 568.872 | -0.002708713 | -27087.13333 | 1 | 1 | 1 | 1 |
| 29 | 10-Feb-12 | 560.346 | -0.015101003 | -151010.0268 | 1 | 1 | 1 | 1 |
| 30 | 13-Feb-12 | 568.495 | 0.014438068 | 144380.68 | 1 | 1 | 1 | 1 |
| 31 | 14-Feb-12 | 570.738 | 0.003937742 | 39377.42145 | 1 | 1 | 1 | 1 |
| 32 | 15-Feb-12 | 570.467 | -0.000474937 | -4749.365891 | 1 | 1 | 1 | 1 |
| 33 | 16-Feb-12 | 562.505 | -0.014055301 | -140553.007 | 1 | 1 | 1 | 1 |
| 34 | 17-Feb-12 | 572.046 | 0.016819385 | 168193.848 | 1 | 1 | 1 | 1 |
| 35 | 20-Feb-12 | 573.689 | 0.00286803 | 28680.29913 | 1 | 1 | 1 | 1 |
| 36 | 21-Feb-12 | 573.639 | -8.7159E-05 | -871.5903391 | 1 | 1 | 1 | 1 |
| 37 | 22-Feb-12 | 570.748 | -0.005052497 | -50524.97363 | 1 | 1 | 1 | 1 |

| No | Date | close | Return Jakarta Islamic Index | return*10juta | T1 | T2 | T3 | T4 |
|----|-----------|---------|------------------------------|---------------|----|----|----|----|
| 38 | 23-Feb-12 | 562.08 | -0.015303593 | -153035.9273 | 1 | 1 | 1 | 1 |
| 39 | 24-Feb-12 | 550.402 | -0.020995268 | -209952.6818 | 0 | 1 | 1 | 1 |
| 40 | 27-Feb-12 | 545.996 | -0.008037271 | -80372.70623 | 1 | 1 | 1 | 1 |
| 41 | 28-Feb-12 | 553.259 | 0.013214597 | 132145.966 | 1 | 1 | 1 | 1 |
| 42 | 29-Feb-12 | 566.754 | 0.024099101 | 240991.0084 | 1 | 1 | 1 | 1 |
| 43 | 1-Mar-12 | 561.822 | -0.008740273 | -87402.73402 | 1 | 1 | 1 | 1 |
| 44 | 2-Mar-12 | 570.052 | 0.014542511 | 145425.1099 | 1 | 1 | 1 | 1 |
| 45 | 5-Mar-12 | 565.599 | -0.007842238 | -78422.38191 | 1 | 1 | 1 | 1 |
| 46 | 6-Mar-12 | 561.577 | -0.007136449 | -71364.4909 | 1 | 1 | 1 | 1 |
| 47 | 7-Mar-12 | 559.098 | -0.004424127 | -44241.26608 | 1 | 1 | 1 | 1 |
| 48 | 8-Mar-12 | 563.531 | 0.007897574 | 78975.74428 | 1 | 1 | 1 | 1 |
| 49 | 9-Mar-12 | 567.169 | 0.006434974 | 64349.74005 | 1 | 1 | 1 | 1 |
| 50 | 12-Mar12 | 564.593 | -0.004552202 | -45522.01697 | 1 | 1 | 1 | 1 |
| 51 | 13-Mar12 | 568.199 | 0.006366592 | 63665.9189 | 1 | 1 | 1 | 1 |
| 52 | 14-Mar12 | 575.711 | 0.013134089 | 131340.892 | 1 | 1 | 1 | 1 |
| 53 | 15-Mar12 | 571.966 | -0.00652625 | -65262.49619 | 1 | 1 | 1 | 1 |
| 54 | 16-Mar12 | 566.907 | -0.00888428 | -88842.79943 | 1 | 1 | 1 | 1 |
| 55 | 19-Mar12 | 566.905 | -3.52792E-06 | -35.27921737 | 1 | 1 | 1 | 1 |
| 56 | 20-Mar12 | 566.16 | -0.001315017 | -13150.17422 | 1 | 1 | 1 | 1 |
| 57 | 21-Mar12 | 570.903 | 0.008342594 | 83425.9405 | 1 | 1 | 1 | 1 |
| 58 | 22-Mar12 | 570.791 | -0.0001962 | -1961.996829 | 1 | 1 | 1 | 1 |
| 59 | 26-Mar12 | 569.017 | -0.003112807 | -31128.07477 | 1 | 1 | 1 | 1 |
| 60 | 27-Mar12 | 576.621 | 0.013274894 | 132748.9428 | 1 | 1 | 1 | 1 |
| 61 | 28-Mar12 | 577.592 | 0.001682532 | 16825.32131 | 1 | 1 | 1 | 1 |
| 62 | 29-Mar12 | 579.334 | 0.003011431 | 30114.30837 | 1 | 1 | 1 | 1 |
| 63 | 30-Mar12 | 584.06 | 0.008124549 | 81245.49372 | 1 | 1 | 1 | 1 |
| 64 | 2-Apr-12 | 588.1 | 0.006893284 | 68932.84189 | 1 | 1 | 1 | 1 |
| 65 | 3-Apr-12 | 593.074 | 0.008422179 | 84221.78954 | 1 | 1 | 1 | 1 |
| 66 | 4-Apr-12 | 576.96 | -0.02754624 | -275462.404 | 0 | 1 | 1 | 1 |
| 67 | 5-Apr-12 | 581.009 | 0.006993307 | 69933.07251 | 1 | 1 | 1 | 1 |
| 68 | 9-Apr-12 | 579.4 | -0.002773162 | -27731.6193 | 1 | 1 | 1 | 1 |
| 69 | 10-Apr-12 | 577.941 | -0.002521298 | -25212.97998 | 1 | 1 | 1 | 1 |
| 70 | 11-Apr-12 | 572.811 | -0.008915968 | -89159.67965 | 1 | 1 | 1 | 1 |
| 71 | 12-Apr-12 | 572.685 | -0.000219992 | -2199.920393 | 1 | 1 | 1 | 1 |
| 72 | 13-Apr-12 | 575.489 | 0.004884287 | 48842.86832 | 1 | 1 | 1 | 1 |
| 73 | 16-Apr-12 | 570.615 | -0.008505388 | -85053.87614 | 1 | 1 | 1 | 1 |
| 74 | 17-Apr-12 | 571.614 | 0.001749212 | 17492.11856 | 1 | 1 | 1 | 1 |
| 75 | 18-Apr-12 | 574.26 | 0.004618317 | 46183.17028 | 1 | 1 | 1 | 1 |
| 76 | 19-Apr-12 | 571.724 | -0.004425898 | -44258.97988 | 1 | 1 | 1 | 1 |

| No | Date | close | Return Jakarta Islamic Index | return*10juta | T1 | T2 | T3 | T4 |
|-----|-----------|---------|---------------------------------|---------------|----|----|----|----|
| 77 | 20-Apr-12 | 574.032 | 0.004028786 | 40287.86446 | 1 | 1 | 1 | 1 |
| 78 | 23-Apr-12 | 570.083 | -0.00690318 | -69031.79632 | 1 | 1 | 1 | 1 |
| 79 | 24-Apr-12 | 571.792 | 0.002993325 | 29933.24621 | 1 | 1 | 1 | 1 |
| 80 | 25-Apr-12 | 569.491 | -0.004032309 | -40323.09458 | 1 | 1 | 1 | 1 |
| 81 | 26-Apr-12 | 570.546 | 0.001850818 | 18508.17651 | 1 | 1 | 1 | 1 |
| 82 | 27-Apr-12 | 572.787 | 0.003920123 | 39201.22781 | 1 | 1 | 1 | 1 |
| 83 | 30-Apr-12 | 575.088 | 0.004009153 | 40091.52707 | 1 | 1 | 1 | 1 |
| 84 | 1-May-12 | 577.299 | 0.003837257 | 38372.57298 | 1 | 1 | 1 | 1 |
| 85 | 2-May-12 | 582.692 | 0.009298415 | 92984.14999 | 1 | 1 | 1 | 1 |
| 86 | 3-May-12 | 583.334 | 0.001101176 | 11011.76243 | 1 | 1 | 1 | 1 |
| 87 | 4-May-12 | 580.754 | -0.004432662 | -44326.61834 | 1 | 1 | 1 | 1 |
| 88 | 7-May-12 | 572.372 | -0.01453813 | -145381.2963 | 1 | 1 | 1 | 1 |
| 89 | 8-May-12 | 575.194 | 0.004918246 | 49182.45554 | 1 | 1 | 1 | 1 |
| 90 | 9-May-12 | 564.783 | -0.018265789 | -182657.8862 | 1 | 1 | 1 | 1 |
| 91 | 10-May12 | 567.406 | 0.00463351 | 46335.10294 | 1 | 1 | 1 | 1 |
| 92 | 11-May12 | 562.133 | -0.00933662 | -93366.2017 | 1 | 1 | 1 | 1 |
| 93 | 14-May12 | 555.611 | -0.011670068 | -116700.676 | 1 | 1 | 1 | 1 |
| 94 | 15-May12 | 554.611 | -0.001801442 | -18014.42001 | 1 | 1 | 1 | 1 |
| 95 | 16-May12 | 548.334 | -0.011382377 | -113823.7676 | 1 | 1 | 1 | 1 |
| 96 | 21-May12 | 540.184 | -0.014974768 | -149747.6808 | 1 | 1 | 1 | 1 |
| 97 | 22-May12 | 550.239 | 0.018442907 | 184429.0703 | 1 | 1 | 1 | 1 |
| 98 | 23-May12 | 545.446 | -0.008748921 | -87489.20671 | 1 | 1 | 1 | 1 |
| 99 | 24-May12 | 544.454 | -0.001820351 | -18203.50994 | 1 | 1 | 1 | 1 |
| 100 | 25-May12 | 531.239 | -0.024571443 | -245714.4349 | 0 | 1 | 1 | 1 |
| 101 | 28-May12 | 533.03 | 0.003365694 | 33656.93618 | 1 | 1 | 1 | 1 |
| 102 | 29-May12 | 534.052 | 0.001915505 | 19155.04736 | 1 | 1 | 1 | 1 |
| 103 | 30-May12 | 536.681 | 0.004910665 | 49106.64532 | 1 | 1 | 1 | 1 |
| 104 | 31-May12 | 525.052 | -0.021906572 | -219065.7172 | 0 | 1 | 1 | 1 |
| 105 | 1-Jun-12 | 519.836 | -0.009983928 | -99839.2809 | 1 | 1 | 1 | 1 |
| 106 | 4-Jun-12 | 498.03 | -0.042853061 | -428530.6104 | 0 | 1 | 1 | 1 |
| 107 | 5-Jun-12 | 510.315 | 0.024367866 | 243678.6594 | 1 | 1 | 1 | 1 |
| 108 | 6-Jun-12 | 527.915 | 0.033907104 | 339071.0379 | 1 | 1 | 1 | 1 |
| 109 | 7-Jun-12 | 528.793 | 0.001661765 | 16617.65033 | 1 | 1 | 1 | 1 |
| 110 | 8-Jun-12 | 526.869 | -0.00364511 | -36451.1014 | 1 | 1 | 1 | 1 |
| 111 | 11-Jun-12 | 530.559 | 0.006979227 | 69792.26913 | 1 | 1 | 1 | 1 |
| 112 | 12-Jun-12 | 530.869 | 0.000584119 | 5841.187698 | 1 | 1 | 1 | 1 |
| 113 | 13-Jun-12 | 532.742 | 0.003521968 | 35219.67968 | 1 | 1 | 1 | 1 |
| 114 | 14-Jun-12 | 521.985 | -0.020398403 | -203984.026 | 0 | 1 | 1 | 1 |
| 115 | 15-Jun-12 | 525.682 | 0.007057615 | 70576.15341 | 1 | 1 | 1 | 1 |

| No | Date | close | Return Jakarta Islamic Index | Return*10juta | T1 | T2 | T3 | T4 |
|-----|-----------|---------|---------------------------------|---------------|----|----|----|----|
| 116 | 18-Jun-12 | 531.667 | 0.011320886 | 113208.8633 | 1 | 1 | 1 | 1 |
| 117 | 19-Jun-12 | 535.401 | 0.006998645 | 69986.45337 | 1 | 1 | 1 | 1 |
| 118 | 20-Jun-12 | 545.996 | 0.019595651 | 195956.5086 | 1 | 1 | 1 | 1 |
| 119 | 21-Jun-12 | 538.139 | -0.014494759 | -144947.5861 | 1 | 1 | 1 | 1 |
| 120 | 22-Jun-12 | 536.224 | -0.003564907 | -35649.06885 | 1 | 1 | 1 | 1 |
| 121 | 25-Jun-12 | 529.903 | -0.011858013 | -118580.1329 | 1 | 1 | 1 | 1 |
| 122 | 26-Jun-12 | 536.11 | 0.011645393 | 116453.9297 | 1 | 1 | 1 | 1 |
| 123 | 27-Jun-12 | 541.618 | 0.010221592 | 102215.9201 | 1 | 1 | 1 | 1 |
| 124 | 28-Jun-12 | 533.777 | -0.014582807 | -145828.0716 | 1 | 1 | 1 | 1 |
| 125 | 29-Jun-12 | 544.19 | 0.019320302 | 193203.0184 | 1 | 1 | 1 | 1 |
| 126 | 2-Jul-12 | 552.122 | 0.014470586 | 144705.8577 | 1 | 1 | 1 | 1 |
| 127 | 3-Jul-12 | 562.704 | 0.018984699 | 189846.9865 | 1 | 1 | 1 | 1 |
| 128 | 4-Jul-12 | 569.656 | 0.012278935 | 122789.3487 | 1 | 1 | 1 | 1 |
| 129 | 5-Jul-12 | 567.403 | -0.00396286 | -39628.60236 | 1 | 1 | 1 | 1 |
| 130 | 6-Jul-12 | 563.918 | -0.006160959 | -61609.58779 | 1 | 1 | 1 | 1 |
| 131 | 9-Jul-12 | 551.524 | -0.022223495 | -222234.9543 | 0 | 1 | 1 | 1 |
| 132 | 10-Jul-12 | 557.358 | 0.010522407 | 105224.0694 | 1 | 1 | 1 | 1 |
| 133 | 11-Jul-12 | 560.168 | 0.005028976 | 50289.76368 | 1 | 1 | 1 | 1 |
| 134 | 12-Jul-12 | 551.736 | -0.015167068 | -151670.6773 | 1 | 1 | 1 | 1 |
| 135 | 13-Jul-12 | 557.98 | 0.011253448 | 112534.4844 | 1 | 1 | 1 | 1 |
| 136 | 16-Jul-12 | 561.122 | 0.005615231 | 56152.3124 | 1 | 1 | 1 | 1 |
| 137 | 17-Jul-12 | 566.363 | 0.009296865 | 92968.64702 | 1 | 1 | 1 | 1 |
| 138 | 18-Jul-12 | 565.576 | -0.001390535 | -13905.3452 | 1 | 1 | 1 | 1 |
| 139 | 19-Jul-12 | 566.322 | 0.00131814 | 13181.40165 | 1 | 1 | 1 | 1 |
| 140 | 20-Jul-12 | 561.332 | -0.00885029 | -88502.90198 | 1 | 1 | 1 | 1 |
| 141 | 23-Jul-12 | 551.113 | -0.018372661 | -183726.6104 | 1 | 1 | 1 | 1 |
| 142 | 24-Jul-12 | 547.297 | -0.006948253 | -69482.53116 | 1 | 1 | 1 | 1 |
| 143 | 25-Jul-12 | 548.252 | 0.001743419 | 17434.18582 | 1 | 1 | 1 | 1 |
| 144 | 26-Jul-12 | 550.705 | 0.00446424 | 44642.40319 | 1 | 1 | 1 | 1 |
| 145 | 27-Jul-12 | 563.878 | 0.02363864 | 236386.4046 | 1 | 1 | 1 | 1 |
| 146 | 30-Jul-12 | 565.824 | 0.00344516 | 34451.59741 | 1 | 1 | 1 | 1 |
| 147 | 31-Jul-12 | 573.731 | 0.01387757 | 138775.6957 | 1 | 1 | 1 | 1 |
| 148 | 1-Aug-12 | 574.507 | 0.001351636 | 13516.36365 | 1 | 1 | 1 | 1 |
| 149 | 2-Aug-12 | 567.417 | -0.012417799 | -124177.9857 | 1 | 1 | 1 | 1 |
| 150 | 3-Aug-12 | 569.883 | 0.004336593 | 43365.93449 | 1 | 1 | 1 | 1 |
| 151 | 6-Aug-12 | 572.202 | 0.004060999 | 40609.9929 | 1 | 1 | 1 | 1 |
| 152 | 7-Aug-12 | 568.351 | -0.00675289 | -67528.90281 | 1 | 1 | 1 | 1 |
| 153 | 8-Aug-12 | 569.352 | 0.001759686 | 17596.86418 | 1 | 1 | 1 | 1 |
| 154 | 9-Aug-12 | 575.658 | 0.011014862 | 110148.6233 | 1 | 1 | 1 | 1 |

| No | Date | close | Return Jakarta Islamic Index | Return*10juta | T1 | T2 | T3 | T4 |
|-----|-----------|---------|---------------------------------|---------------|----|----|----|----|
| 155 | 10-Aug12 | 578.382 | 0.004720816 | 47208.15672 | 1 | 1 | 1 | 1 |
| 156 | 13-Aug12 | 571.891 | -0.011286136 | -112861.3625 | 1 | 1 | 1 | 1 |
| 157 | 14-Aug12 | 576.209 | 0.007522028 | 75220.28324 | 1 | 1 | 1 | 1 |
| 158 | 15-Aug12 | 582.471 | 0.010808957 | 108089.5669 | 1 | 1 | 1 | 1 |
| 159 | 16-Aug12 | 585.225 | 0.00471699 | 47169.89878 | 1 | 1 | 1 | 1 |
| 160 | 23-Aug12 | 583.529 | -0.002902238 | -29022.38094 | 1 | 1 | 1 | 1 |
| 161 | 24-Aug12 | 580.192 | -0.005735067 | -57350.67334 | 1 | 1 | 1 | 1 |
| 162 | 27-Aug12 | 579.491 | -0.001208951 | -12089.51214 | 1 | 1 | 1 | 1 |
| 163 | 28-Aug12 | 579.98 | 0.000843488 | 8434.881579 | 1 | 1 | 1 | 1 |
| 164 | 29-Aug12 | 575.869 | -0.007113416 | -71134.15913 | 1 | 1 | 1 | 1 |
| 165 | 30-Aug12 | 566.449 | -0.016493154 | -164931.5434 | 1 | 1 | 1 | 1 |
| 166 | 31-Aug12 | 569.935 | 0.006135269 | 61352.69301 | 1 | 1 | 1 | 1 |
| 167 | 3-Sep-12 | 577.898 | 0.013875063 | 138750.6327 | 1 | 1 | 1 | 1 |
| 168 | 4-Sep-12 | 577.271 | -0.001085556 | -10855.55553 | 1 | 1 | 1 | 1 |
| 169 | 5-Sep-12 | 569.997 | -0.012680729 | -126807.293 | 1 | 1 | 1 | 1 |
| 170 | 6-Sep-12 | 574.104 | 0.007179467 | 71794.6692 | 1 | 1 | 1 | 1 |
| 171 | 7-Sep-12 | 580.863 | 0.011704364 | 117043.6413 | 1 | 1 | 1 | 1 |
| 172 | 10-Sep-12 | 587.635 | 0.011591078 | 115910.7815 | 1 | 1 | 1 | 1 |
| 173 | 11-Sep-12 | 585.911 | -0.002938106 | -29381.05946 | 1 | 1 | 1 | 1 |
| 174 | 12-Sep-12 | 590.608 | 0.007984614 | 79846.13856 | 1 | 1 | 1 | 1 |
| 175 | 13-Sep-12 | 590.091 | -0.000875752 | -8757.524704 | 1 | 1 | 1 | 1 |
| 176 | 14-Sep-12 | 604.785 | 0.024596261 | 245962.6068 | 1 | 1 | 1 | 1 |
| 177 | 17-Sep-12 | 605.76 | 0.001610845 | 16108.45051 | 1 | 1 | 1 | 1 |
| 178 | 18-Sep-12 | 601.662 | -0.006788042 | -67880.42185 | 1 | 1 | 1 | 1 |
| 179 | 19-Sep-12 | 605.385 | 0.006168793 | 61687.93438 | 1 | 1 | 1 | 1 |
| 180 | 20-Sep-12 | 598.158 | -0.012009686 | -120096.8617 | 1 | 1 | 1 | 1 |
| 181 | 21-Sep-12 | 602.629 | 0.007446817 | 74468.17232 | 1 | 1 | 1 | 1 |
| 182 | 24-Sep-12 | 592.697 | -0.016618443 | -166184.4313 | 1 | 1 | 1 | 1 |
| 183 | 25-Sep-12 | 596.991 | 0.007218731 | 72187.30704 | 1 | 1 | 1 | 1 |
| 184 | 26-Sep-12 | 585.855 | -0.018829719 | -188297.1922 | 0 | 1 | 1 | 1 |
| 185 | 27-Sep-12 | 593.241 | 0.012528406 | 125284.0585 | 1 | 1 | 1 | 1 |
| 186 | 28-Sep-12 | 600.84 | 0.012727952 | 127279.516 | 1 | 1 | 1 | 1 |
| 187 | 1-Oct-12 | 594.641 | -0.010370814 | -103708.1402 | 1 | 1 | 1 | 1 |
| 188 | 2-Oct-12 | 599.459 | 0.00806972 | 80697.19698 | 1 | 1 | 1 | 1 |
| 189 | 3-Oct-12 | 599.187 | -0.000453845 | -4538.4543 | 1 | 1 | 1 | 1 |
| 190 | 4-Oct-12 | 605.746 | 0.01088702 | 108870.1992 | 1 | 1 | 1 | 1 |
| 191 | 5-Oct-12 | 616.807 | 0.018095415 | 180954.1479 | 1 | 1 | 1 | 1 |
| 192 | 8-Oct-12 | 610.242 | -0.010700571 | -107005.7128 | 1 | 1 | 1 | 1 |
| 193 | 9-Oct-12 | 610.053 | -0.000309761 | -3097.611668 | 1 | 1 | 1 | 1 |

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|-----|-----------|---------|---------------------------------|---------------|----|----|----|----|
| 194 | 10-Oct-12 | 610.65 | 0.000978125 | 9781.249781 | 1 | 1 | 1 | 1 |
| 195 | 11-Oct-12 | 612.06 | 0.002306353 | 23063.53305 | 1 | 1 | 1 | 1 |
| 196 | 12-Oct-12 | 613.325 | 0.002064658 | 20646.57964 | 1 | 1 | 1 | 1 |
| 197 | 15-Oct-12 | 612.143 | -0.00192906 | -19290.59537 | 1 | 1 | 1 | 1 |
| 198 | 16-Oct-12 | 616.872 | 0.007695632 | 76956.31605 | 1 | 1 | 1 | 1 |
| 199 | 17-Oct-12 | 617.794 | 0.001493522 | 14935.21602 | 1 | 1 | 1 | 1 |
| 200 | 18-Oct-12 | 621.647 | 0.006217339 | 62173.38964 | 1 | 1 | 1 | 1 |
| 201 | 19-Oct-12 | 616.778 | -0.007863254 | -78632.53871 | 1 | 1 | 1 | 1 |
| 202 | 22-Oct-12 | 617.314 | 0.000868655 | 8686.549037 | 1 | 1 | 1 | 1 |
| 203 | 23-Oct-12 | 613.67 | -0.005920484 | -59204.84172 | 1 | 1 | 1 | 1 |
| 204 | 24-Oct-12 | 616.32 | 0.004308985 | 43089.84789 | 1 | 1 | 1 | 1 |
| 205 | 25-Oct-12 | 615.449 | -0.001414226 | -14142.26442 | 1 | 1 | 1 | 1 |
| 206 | 29-Oct-12 | 614.068 | -0.002246412 | -22464.11527 | 1 | 1 | 1 | 1 |
| 207 | 30-Oct-12 | 618.899 | 0.007836422 | 78364.21774 | 1 | 1 | 1 | 1 |
| 208 | 31-Oct-12 | 619.27 | 0.000599272 | 5992.720075 | 1 | 1 | 1 | 1 |
| 209 | 1-Nov-12 | 616.945 | -0.003761486 | -37614.86054 | 1 | 1 | 1 | 1 |
| 210 | 2-Nov-12 | 616.415 | -0.000859441 | -8594.409299 | 1 | 1 | 1 | 1 |
| 211 | 5-Nov-12 | 610.622 | -0.009442328 | -94423.28211 | 1 | 1 | 1 | 1 |
| 212 | 6-Nov-12 | 611.361 | 0.00120951 | 12095.09609 | 1 | 1 | 1 | 1 |
| 213 | 7-Nov-12 | 617.871 | 0.010592078 | 105920.7841 | 1 | 1 | 1 | 1 |
| 214 | 8-Nov-12 | 614.927 | -0.004776136 | -47761.36231 | 1 | 1 | 1 | 1 |
| 215 | 9-Nov-12 | 612.369 | -0.00416852 | -41685.19581 | 1 | 1 | 1 | 1 |
| 216 | 12-Nov12 | 608.276 | -0.006706316 | -67063.15661 | 1 | 1 | 1 | 1 |
| 217 | 13-Nov12 | 608.939 | 0.001089372 | 10893.72158 | 1 | 1 | 1 | 1 |
| 218 | 14-Nov12 | 611.056 | 0.00347051 | 34705.0951 | 1 | 1 | 1 | 1 |
| 219 | 19-Nov12 | 605.513 | -0.009112575 | -91125.75377 | 1 | 1 | 1 | 1 |
| 220 | 20-Nov12 | 604.552 | -0.001588345 | -15883.44762 | 1 | 1 | 1 | 1 |
| 221 | 21-Nov12 | 604.313 | -0.000395412 | -3954.122307 | 1 | 1 | 1 | 1 |
| 222 | 22-Nov12 | 607.073 | 0.004556772 | 45567.7179 | 1 | 1 | 1 | 1 |
| 223 | 23-Nov12 | 607.736 | 0.00109153 | 10915.29723 | 1 | 1 | 1 | 1 |
| 224 | 26-Nov12 | 611.687 | 0.006480137 | 64801.36632 | 1 | 1 | 1 | 1 |
| 225 | 27-Nov12 | 604.113 | -0.012459447 | -124594.4725 | 1 | 1 | 1 | 1 |
| 226 | 28-Nov12 | 595.57 | -0.014242336 | -142423.3636 | 1 | 1 | 1 | 1 |
| 227 | 29-Nov12 | 597.274 | 0.002857039 | 28570.3941 | 1 | 1 | 1 | 1 |
| 228 | 30-Nov12 | 588.776 | -0.014330164 | -143301.6386 | 1 | 1 | 1 | 1 |
| 229 | 3-Dec-12 | 588.448 | -0.000557243 | -5572.431559 | 1 | 1 | 1 | 1 |
| 230 | 4-Dec-12 | 587.274 | -0.001997071 | -19970.714 | 1 | 1 | 1 | 1 |
| 231 | 5-Dec-12 | 588.994 | 0.002924506 | 29245.05684 | 1 | 1 | 1 | 1 |
| 232 | 6-Dec-12 | 589.861 | 0.001470919 | 14709.1908 | 1 | 1 | 1 | 1 |

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|-----|-----------|---------|------------------------------|---------------|----|----|----|----|
| 233 | 7-Dec-12 | 590.644 | 0.001326551 | 13265.5112 | 1 | 1 | 1 | 1 |
| 234 | 10-Dec-12 | 591.79 | 0.001938375 | 19383.7518 | 1 | 1 | 1 | 1 |
| 235 | 11-Dec-12 | 595.461 | 0.006184053 | 61840.53244 | 1 | 1 | 1 | 1 |
| 236 | 12-Dec-12 | 597.488 | 0.003398304 | 33983.04455 | 1 | 1 | 1 | 1 |
| 237 | 13-Dec-12 | 593.832 | -0.006137749 | -61377.48846 | 1 | 1 | 1 | 1 |
| 238 | 14-Dec-12 | 593.721 | -0.000186939 | -1869.390256 | 1 | 1 | 1 | 1 |
| 239 | 17-Dec-12 | 594.437 | 0.001205227 | 12052.2706 | 1 | 1 | 1 | 1 |
| 240 | 18-Dec-12 | 593.16 | -0.002150562 | -21505.62004 | 1 | 1 | 1 | 1 |
| 241 | 19-Dec-12 | 590.926 | -0.003773379 | -37733.79046 | 1 | 1 | 1 | 1 |
| 242 | 20-Dec-12 | 584.286 | -0.011300209 | -113002.0908 | 1 | 1 | 1 | 1 |
| 243 | 21-Dec-12 | 586.093 | 0.003087891 | 30878.91078 | 1 | 1 | 1 | 1 |
| 244 | 26-Dec-12 | 587.401 | 0.002229241 | 22292.41124 | 1 | 1 | 1 | 1 |
| 245 | 27-Dec-12 | 590.455 | 0.005185705 | 51857.04948 | 1 | 1 | 1 | 1 |
| 246 | 28-Dec-12 | 594.789 | 0.007313295 | 73132.94675 | 1 | 1 | 1 | 1 |
| 247 | 2-Jan-13 | 602.073 | 0.01217198 | 121719.7961 | 1 | 1 | 1 | 1 |
| 248 | 3-Jan-13 | 612.339 | 0.01690735 | 169073.5031 | 1 | 1 | 1 | 1 |
| 249 | 4-Jan-13 | 611.797 | -0.000885523 | -8855.225815 | 1 | 1 | 1 | 1 |
| 250 | 7-Jan-13 | 607.12 | -0.007674063 | -76740.63046 | 1 | 1 | 1 | 1 |
| 251 | 8-Jan-13 | 606.579 | -0.00089149 | -8914.896294 | 1 | 1 | 1 | 1 |
| 252 | 9-Jan-13 | 600.603 | -0.009900825 | -99008.24925 | 1 | 1 | 1 | 1 |
| 253 | 10-Jan-13 | 592.112 | -0.014238344 | -142383.4436 | 1 | 1 | 1 | 1 |
| 254 | 11-Jan-13 | 590.345 | -0.002988694 | -29886.94414 | 1 | 1 | 1 | 1 |
| 255 | 14-Jan-13 | 602.059 | 0.019648335 | 196483.3539 | 1 | 1 | 1 | 1 |
| 256 | 15-Jan-13 | 606.274 | 0.006976582 | 69765.81946 | 1 | 1 | 1 | 1 |
| 257 | 16-Jan-13 | 607.899 | 0.002676721 | 26767.20649 | 1 | 1 | 1 | 1 |
| 258 | 17-Jan-13 | 602.804 | -0.008416647 | -84166.47316 | 1 | 1 | 1 | 1 |
| 259 | 18-Jan-13 | 615.444 | 0.020751856 | 207518.5611 | 1 | 1 | 1 | 1 |
| 260 | 21-Jan-13 | 610.287 | -0.00841462 | -84146.20221 | 1 | 1 | 1 | 1 |
| 261 | 22-Jan-13 | 609.291 | -0.001633352 | -16333.52227 | 1 | 1 | 1 | 1 |
| 262 | 23-Jan-13 | 608.162 | -0.001854692 | -18546.92253 | 1 | 1 | 1 | 1 |
| 263 | 25-Jan-13 | 608.625 | 0.000761021 | 7610.206591 | 1 | 1 | 1 | 1 |
| 264 | 28-Jan-13 | 604.901 | -0.006137506 | -61375.06226 | 1 | 1 | 1 | 1 |
| 265 | 29-Jan-13 | 608.602 | 0.006099715 | 60997.15411 | 1 | 1 | 1 | 1 |
| 266 | 30-Jan-13 | 608.935 | 0.000547006 | 5470.059773 | 1 | 1 | 1 | 1 |
| 267 | 31-Jan-13 | 604.61 | -0.007127908 | -71279.07596 | 1 | 1 | 1 | 1 |
| 268 | 1-Feb-13 | 606.257 | 0.002720367 | 27203.66507 | 1 | 1 | 1 | 1 |
| 269 | 4-Feb-13 | 608.689 | 0.004003475 | 40034.7546 | 1 | 1 | 1 | 1 |
| 270 | 5-Feb-13 | 609.587 | 0.001474215 | 14742.14649 | 1 | 1 | 1 | 1 |
| 271 | 6-Feb-13 | 612.28 | 0.004408016 | 44080.15538 | 1 | 1 | 1 | 1 |

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| 272 | 7-Feb-13 | 611.407 | -0.001426836 | -14268.35699 | 1 | 1 | 1 | 1 |
| 273 | 8-Feb-13 | 611.504 | 0.000158638 | 1586.378734 | 1 | 1 | 1 | 1 |
| 274 | 11-Feb-13 | 612.914 | 0.002303136 | 23031.36059 | 1 | 1 | 1 | 1 |
| 275 | 12-Feb-13 | 621.24 | 0.013492848 | 134928.4825 | 1 | 1 | 1 | 1 |
| 276 | 13-Feb-13 | 624.342 | 0.004980814 | 49808.14451 | 1 | 1 | 1 | 1 |
| 277 | 14-Feb-13 | 624.019 | -0.000517479 | -5174.785294 | 1 | 1 | 1 | 1 |
| 278 | 15-Feb-13 | 626.243 | 0.003557658 | 35576.58068 | 1 | 1 | 1 | 1 |
| 279 | 18-Feb-13 | 624.444 | -0.002876821 | -28768.20884 | 1 | 1 | 1 | 1 |
| 280 | 19-Feb-13 | 620.352 | -0.006574595 | -65745.94937 | 1 | 1 | 1 | 1 |
| 281 | 20-Feb-13 | 624.614 | 0.0068468 | 68468.00073 | 1 | 1 | 1 | 1 |
| 282 | 21-Feb-13 | 624.72 | 0.00016969 | 1696.904115 | 1 | 1 | 1 | 1 |
| 283 | 22-Feb-13 | 625.492 | 0.001234991 | 12349.90703 | 1 | 1 | 1 | 1 |
| 284 | 25-Feb-13 | 630.496 | 0.007968271 | 79682.71157 | 1 | 1 | 1 | 1 |
| 285 | 26-Feb-13 | 626.807 | -0.005868133 | -58681.32957 | 1 | 1 | 1 | 1 |
| 286 | 27-Feb-13 | 635.858 | 0.01433659 | 143365.8972 | 1 | 1 | 1 | 1 |
| 287 | 28-Feb-13 | 645.219 | 0.014614526 | 146145.2608 | 1 | 1 | 1 | 1 |
| 288 | 1-Mar-13 | 652.114 | 0.010629599 | 106295.9922 | 1 | 1 | 1 | 1 |
| 289 | 4-Mar-13 | 646.859 | -0.008091051 | -80910.5142 | 1 | 1 | 1 | 1 |
| 290 | 5-Mar-13 | 648.65 | 0.002764938 | 27649.38169 | 1 | 1 | 1 | 1 |
| 291 | 6-Mar-13 | 661.117 | 0.019037549 | 190375.4871 | 1 | 1 | 1 | 1 |
| 292 | 7-Mar-13 | 662.956 | 0.002777794 | 27777.94249 | 1 | 1 | 1 | 1 |
| 293 | 8-Mar-13 | 668.46 | 0.008267936 | 82679.36323 | 1 | 1 | 1 | 1 |
| 294 | 11-Mar13 | 660.306 | -0.012273195 | -122731.9536 | 1 | 1 | 1 | 1 |
| 295 | 13-Mar13 | 656.211 | -0.00622098 | -62209.8037 | 1 | 1 | 1 | 1 |
| 296 | 14-Mar13 | 645.376 | -0.016649291 | -166492.9088 | 1 | 1 | 1 | 1 |
| 297 | 15-Mar13 | 648.639 | 0.005043229 | 50432.2889 | 1 | 1 | 1 | 1 |
| 298 | 18-Mar13 | 650.993 | 0.003622568 | 36225.67887 | 1 | 1 | 1 | 1 |
| 299 | 19-Mar13 | 650.019 | -0.001497296 | -14972.96231 | 1 | 1 | 1 | 1 |
| 300 | 20-Mar13 | 651.142 | 0.001726151 | 17261.51151 | 1 | 1 | 1 | 1 |
| 301 | 21-Mar13 | 646.12 | -0.007742499 | -77424.99337 | 1 | 1 | 1 | 1 |
| 302 | 22-Mar13 | 630.614 | -0.024291297 | -242912.971 | 0 | 1 | 1 | 1 |
| 303 | 25-Mar13 | 640.857 | 0.016112395 | 161123.9517 | 1 | 1 | 1 | 1 |
| 304 | 26-Mar13 | 649.876 | 0.013975232 | 139752.3235 | 1 | 1 | 1 | 1 |
| 305 | 27-Mar13 | 660.333 | 0.015962678 | 159626.7777 | 1 | 1 | 1 | 1 |
| 306 | 28-Mar13 | 660.337 | 6.05753E-06 | 60.57531404 | 1 | 1 | 1 | 1 |
| 307 | 1-Apr-13 | 658.055 | -0.003461796 | -34617.96308 | 1 | 1 | 1 | 1 |
| 308 | 2-Apr-13 | 662.145 | 0.006196051 | 61960.50727 | 1 | 1 | 1 | 1 |
| 309 | 3-Apr-13 | 669.778 | 0.011461749 | 114617.4901 | 1 | 1 | 1 | 1 |
| 310 | 4-Apr-13 | 659.339 | -0.015708496 | -157084.9618 | 1 | 1 | 1 | 1 |

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|-----|-----------|---------|------------------------------|---------------|----|----|----|----|
| 311 | 5-Apr-13 | 656.545 | -0.004246581 | -42465.81308 | 1 | 1 | 1 | 1 |
| 312 | 8-Apr-13 | 655.311 | -0.001881305 | -18813.046 | 1 | 1 | 1 | 1 |
| 313 | 9-Apr-13 | 656.951 | 0.002499502 | 24995.02163 | 1 | 1 | 1 | 1 |
| 314 | 10-Apr-13 | 653.381 | -0.005449014 | -54490.14194 | 1 | 1 | 1 | 1 |
| 315 | 11-Apr-13 | 660.087 | 0.010211224 | 102112.2444 | 1 | 1 | 1 | 1 |
| 316 | 12-Apr-13 | 660.704 | 0.000934289 | 9342.886874 | 1 | 1 | 1 | 1 |
| 317 | 15-Apr-13 | 655.728 | -0.007559864 | -75598.64389 | 1 | 1 | 1 | 1 |
| 318 | 16-Apr-13 | 667.887 | 0.018372929 | 183729.2874 | 1 | 1 | 1 | 1 |
| 319 | 17-Apr-13 | 673.003 | 0.00763079 | 76307.89737 | 1 | 1 | 1 | 1 |
| 320 | 18-Apr-13 | 674.024 | 0.001515931 | 15159.313 | 1 | 1 | 1 | 1 |
| 321 | 19-Apr-13 | 672.388 | -0.002430164 | -24301.63732 | 1 | 1 | 1 | 1 |
| 322 | 22-Apr-13 | 674.375 | 0.002950781 | 29507.81157 | 1 | 1 | 1 | 1 |
| 323 | 23-Apr-13 | 673.488 | -0.001316158 | -13161.57693 | 1 | 1 | 1 | 1 |
| 324 | 24-Apr-13 | 678.951 | 0.008078782 | 80787.81686 | 1 | 1 | 1 | 1 |
| 325 | 25-Apr-13 | 671.849 | -0.010515347 | -105153.4711 | 1 | 1 | 1 | 1 |
| 326 | 26-Apr-13 | 664.636 | -0.010794091 | -107940.9052 | 1 | 1 | 1 | 1 |
| 327 | 29-Apr-13 | 670.939 | 0.009438701 | 94387.01374 | 1 | 1 | 1 | 1 |
| 328 | 30-Apr-13 | 682.691 | 0.017364118 | 173641.1764 | 1 | 1 | 1 | 1 |
| 329 | 1-May-13 | 682.846 | 0.000227017 | 2270.169181 | 1 | 1 | 1 | 1 |
| 330 | 2-May-13 | 674.963 | -0.011611484 | -116114.8375 | 1 | 1 | 1 | 1 |
| 331 | 3-May-13 | 665.406 | -0.014260494 | -142604.9388 | 1 | 1 | 1 | 1 |
| 332 | 6-May-13 | 673.554 | 0.01217079 | 121707.9013 | 1 | 1 | 1 | 1 |
| 333 | 7-May-13 | 677.039 | 0.005160708 | 51607.07533 | 1 | 1 | 1 | 1 |
| 334 | 8-May-13 | 683.669 | 0.009745004 | 97450.04025 | 1 | 1 | 1 | 1 |
| 335 | 10-May13 | 684.845 | 0.001718653 | 17186.52918 | 1 | 1 | 1 | 1 |
| 336 | 13-May13 | 679.324 | -0.008094349 | -80943.49225 | 1 | 1 | 1 | 1 |
| 337 | 14-May13 | 682.213 | 0.00424374 | 42437.39738 | 1 | 1 | 1 | 1 |
| 338 | 15-May13 | 681.707 | -0.000741979 | -7419.790357 | 1 | 1 | 1 | 1 |
| 339 | 16-May13 | 681.489 | -0.000319837 | -3198.36622 | 1 | 1 | 1 | 1 |
| 340 | 17-May13 | 696.581 | 0.021903972 | 219039.7208 | 1 | 1 | 1 | 1 |
| 341 | 20-May13 | 709.461 | 0.018321445 | 183214.4458 | 1 | 1 | 1 | 1 |
| 342 | 21-May13 | 703.323 | -0.008689281 | -86892.81051 | 1 | 1 | 1 | 1 |
| 343 | 22-May13 | 708.1 | 0.006769081 | 67690.80907 | 1 | 1 | 1 | 1 |
| 344 | 23-May13 | 694.792 | -0.018972806 | -189728.0646 | 0 | 1 | 1 | 1 |
| 345 | 24-May13 | 701.254 | 0.009257641 | 92576.40725 | 1 | 1 | 1 | 1 |
| 346 | 27-May13 | 685.35 | -0.022940504 | -229405.0424 | 0 | 1 | 1 | 1 |
| 347 | 28-May13 | 701.962 | 0.023949615 | 239496.1483 | 1 | 1 | 1 | 1 |
| 348 | 29-May13 | 705.97 | 0.005693472 | 56934.72166 | 1 | 1 | 1 | 1 |
| 349 | 30-May13 | 689.999 | -0.022882595 | -228825.9536 | 0 | 1 | 1 | 1 |

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| 350 | 31-May13 | 676.583 | -0.019635018 | -196350.1791 | 0 | 1 | 1 | 1 |
| 351 | 3-Jun-13 | 665.625 | -0.016328682 | -163286.8151 | 1 | 1 | 1 | 1 |
| 352 | 4-Jun-13 | 677.35 | 0.017461677 | 174616.7713 | 1 | 1 | 1 | 1 |
| 353 | 5-Jun-13 | 674.404 | -0.004358788 | -43587.88159 | 1 | 1 | 1 | 1 |
| 354 | 7-Jun-13 | 647.278 | -0.04105346 | -410534.6023 | 0 | 1 | 1 | 1 |
| 355 | 10-Jun-13 | 634.293 | -0.020264885 | -202648.8485 | 0 | 1 | 1 | 1 |
| 356 | 11-Jun-13 | 608.881 | -0.040888146 | -408881.4647 | 0 | 1 | 1 | 1 |
| 357 | 12-Jun-13 | 635.103 | 0.042164344 | 421643.4415 | 1 | 1 | 1 | 1 |
| 358 | 13-Jun-13 | 618.565 | -0.026384911 | -263849.1119 | 0 | 1 | 1 | 1 |
| 359 | 14-Jun-13 | 640.218 | 0.034406464 | 344064.6408 | 1 | 1 | 1 | 1 |
| 360 | 17-Jun-13 | 642.789 | 0.004007778 | 40077.77731 | 1 | 1 | 1 | 1 |
| 361 | 18-Jun-13 | 649.351 | 0.010156881 | 101568.8147 | 1 | 1 | 1 | 1 |
| 362 | 19-Jun-13 | 642.421 | -0.010729551 | -107295.5055 | 1 | 1 | 1 | 1 |
| 363 | 20-Jun-13 | 618.389 | -0.038126143 | -381261.4274 | 0 | 1 | 1 | 1 |
| 364 | 21-Jun-13 | 596.67 | -0.035753513 | -357535.1253 | 0 | 1 | 1 | 1 |
| 365 | 24-Jun-13 | 585.773 | -0.018431854 | -184318.5423 | 1 | 1 | 1 | 1 |
| 366 | 25-Jun-13 | 583.403 | -0.004054143 | -40541.42826 | 1 | 1 | 1 | 1 |
| 367 | 26-Jun-13 | 616.886 | 0.055806042 | 558060.4215 | 1 | 1 | 1 | 1 |
| 368 | 27-Jun-13 | 634.272 | 0.027793643 | 277936.4267 | 1 | 1 | 1 | 1 |
| 369 | 28-Jun-13 | 660.165 | 0.040011919 | 400119.1926 | 1 | 1 | 1 | 1 |
| 370 | 1-Jul-13 | 648.254 | -0.018207209 | -182072.0892 | 1 | 1 | 1 | 1 |
| 371 | 2-Jul-13 | 640.965 | -0.011307742 | -113077.4161 | 1 | 1 | 1 | 1 |
| 372 | 3-Jul-13 | 618.621 | -0.035482046 | -354820.4595 | 0 | 1 | 1 | 1 |
| 373 | 4-Jul-13 | 619.17 | 0.000887064 | 8870.64191 | 1 | 1 | 1 | 1 |
| 374 | 5-Jul-13 | 626.55 | 0.011848708 | 118487.0812 | 1 | 1 | 1 | 1 |
| 375 | 8-Jul-13 | 601.218 | -0.041270982 | -412709.8206 | 0 | 1 | 1 | 1 |
| 376 | 9-Jul-13 | 597.702 | -0.005865296 | -58652.95565 | 1 | 1 | 1 | 1 |
| 377 | 10-Jul-13 | 614.084 | 0.027039425 | 270394.2462 | 1 | 1 | 1 | 1 |
| 378 | 11-Jul-13 | 633.028 | 0.030382928 | 303829.2837 | 1 | 1 | 1 | 1 |
| 379 | 12-Jul-13 | 636.975 | 0.006215753 | 62157.53361 | 1 | 1 | 1 | 1 |
| 380 | 15-Jul-13 | 637.697 | 0.001132841 | 11328.4057 | 1 | 1 | 1 | 1 |
| 381 | 16-Jul-13 | 637.506 | -0.00029956 | -2995.601507 | 1 | 1 | 1 | 1 |
| 382 | 17-Jul-13 | 641.934 | 0.006921806 | 69218.05914 | 1 | 1 | 1 | 1 |
| 383 | 18-Jul-13 | 645.732 | 0.005899062 | 58990.62356 | 1 | 1 | 1 | 1 |
| 384 | 19-Jul-13 | 646.651 | 0.001422179 | 14221.79269 | 1 | 1 | 1 | 1 |
| 385 | 22-Jul-13 | 637 | -0.015037081 | -150370.8072 | 1 | 1 | 1 | 1 |
| 386 | 23-Jul-13 | 651.96 | 0.023213555 | 232135.5478 | 1 | 1 | 1 | 1 |
| 387 | 24-Jul-13 | 642.413 | -0.014751811 | -147518.1131 | 1 | 1 | 1 | 1 |
| 388 | 25-Jul-13 | 635.176 | -0.011329273 | -113292.732 | 1 | 1 | 1 | 1 |

| No | Date | close | Return Jakarta Islamic Index | Return*10juta | T1 | T2 | T3 | T4 |
|-----|-----------|---------|---------------------------------|---------------|----|----|----|----|
| 389 | 26-Jul-13 | 629.952 | -0.0082585 | -82584.99837 | 1 | 1 | 1 | 1 |
| 390 | 29-Jul-13 | 618.582 | -0.018213864 | -182138.6414 | 1 | 1 | 1 | 1 |
| 391 | 30-Jul-13 | 627.134 | 0.013730472 | 137304.7204 | 1 | 1 | 1 | 1 |
| 392 | 31-Jul-13 | 623.747 | -0.005415396 | -54153.96472 | 1 | 1 | 1 | 1 |
| 393 | 1-Aug-13 | 630.933 | 0.011454839 | 114548.388 | 1 | 1 | 1 | 1 |
| 394 | 2-Aug-13 | 630.161 | -0.001224334 | -12243.33946 | 1 | 1 | 1 | 1 |
| 395 | 12-Aug13 | 622.947 | -0.011513899 | -115138.9935 | 1 | 1 | 1 | 1 |
| 396 | 13-Aug13 | 633.382 | 0.016612273 | 166122.727 | 1 | 1 | 1 | 1 |
| 397 | 14-Aug13 | 639.989 | 0.010377273 | 103772.7307 | 1 | 1 | 1 | 1 |
| 398 | 15-Aug13 | 634.574 | -0.008497081 | -84970.81086 | 1 | 1 | 1 | 1 |
| 399 | 16-Aug13 | 619.728 | -0.023673236 | -236732.3552 | 0 | 1 | 1 | 1 |
| 400 | 19-Aug13 | 580.134 | -0.066021561 | -660215.6076 | 0 | 0 | 1 | 1 |
| 401 | 20-Aug13 | 561.357 | -0.032902045 | -329020.4457 | 0 | 1 | 1 | 1 |
| 402 | 21-Aug13 | 572.634 | 0.019889702 | 198897.0241 | 1 | 1 | 1 | 1 |
| 403 | 22-Aug13 | 571.883 | -0.001312344 | -13123.44173 | 1 | 1 | 1 | 1 |
| 404 | 23-Aug13 | 572.602 | 0.00125646 | 12564.60495 | 1 | 1 | 1 | 1 |
| 405 | 26-Aug13 | 562.997 | -0.016916586 | -169165.8597 | 1 | 1 | 1 | 1 |
| 406 | 27-Aug13 | 541.027 | -0.039805114 | -398051.1435 | 0 | 1 | 1 | 1 |
| 407 | 28-Aug13 | 552.121 | 0.02029804 | 202980.3997 | 1 | 1 | 1 | 1 |
| 408 | 29-Aug13 | 568.921 | 0.029974359 | 299743.5926 | 1 | 1 | 1 | 1 |
| 409 | 30-Aug13 | 592.002 | 0.039768429 | 397684.2884 | 1 | 1 | 1 | 1 |
| 410 | 2-Sep-13 | 574.589 | -0.029855011 | -298550.1065 | 0 | 1 | 1 | 1 |
| 411 | 3-Sep-13 | 585.03 | 0.018008125 | 180081.2536 | 1 | 1 | 1 | 1 |
| 412 | 4-Sep-13 | 568.373 | -0.028885235 | -288852.3463 | 0 | 1 | 1 | 1 |
| 413 | 5-Sep-13 | 562.609 | -0.010193 | -101930.0025 | 1 | 1 | 1 | 1 |
| 414 | 6-Sep-13 | 569.298 | 0.01181913 | 118191.2978 | 1 | 1 | 1 | 1 |
| 415 | 9-Sep-13 | 587.383 | 0.031273054 | 312730.5438 | 1 | 1 | 1 | 1 |
| 416 | 10-Sep-13 | 611.053 | 0.039506621 | 395066.212 | 1 | 1 | 1 | 1 |
| 417 | 11-Sep-13 | 605.832 | -0.008580979 | -85809.78542 | 1 | 1 | 1 | 1 |
| 418 | 12-Sep-13 | 600.717 | -0.008478778 | -84787.7814 | 1 | 1 | 1 | 1 |
| 419 | 13-Sep-13 | 600.641 | -0.000126523 | -1265.234844 | 1 | 1 | 1 | 1 |
| 420 | 16-Sep-13 | 627.06 | 0.043044812 | 430448.1155 | 1 | 1 | 1 | 1 |
| 421 | 17-Sep-13 | 625.98 | -0.001723808 | -17238.08127 | 1 | 1 | 1 | 1 |
| 422 | 18-Sep-13 | 618.204 | -0.012499922 | -124999.2163 | 1 | 1 | 1 | 1 |
| 423 | 19-Sep-13 | 649.916 | 0.050024624 | 500246.2369 | 1 | 1 | 1 | 1 |
| 424 | 20-Sep-13 | 635.907 | -0.021790798 | -217907.9754 | 0 | 1 | 1 | 1 |
| 425 | 23-Sep-13 | 633.333 | -0.004055976 | -40559.76062 | 1 | 1 | 1 | 1 |
| 426 | 24-Sep-13 | 613.543 | -0.031745999 | -317459.9883 | 0 | 1 | 1 | 1 |
| 427 | 25-Sep-13 | 603.19 | -0.017018113 | -170181.1304 | 1 | 1 | 1 | 1 |

| No | Date | close | Return Jakarta Islamic Index | Return*10juta | T1 | T2 | T3 | T4 |
|-----|-----------|---------|---------------------------------|---------------|----|----|----|----|
| 428 | 26-Sep-13 | 602.195 | -0.001650925 | -16509.25183 | 1 | 1 | 1 | 1 |
| 429 | 27-Sep-13 | 606.394 | 0.006948627 | 69486.26696 | 1 | 1 | 1 | 1 |
| 430 | 30-Sep-13 | 585.593 | -0.034904931 | -349049.308 | 0 | 1 | 1 | 1 |
| 431 | 1-Oct-13 | 593.077 | 0.01269923 | 126992.2977 | 1 | 1 | 1 | 1 |
| 432 | 2-Oct-13 | 600.628 | 0.012651536 | 126515.3571 | 1 | 1 | 1 | 1 |
| 433 | 3-Oct-13 | 605.541 | 0.008146499 | 81464.98826 | 1 | 1 | 1 | 1 |
| 434 | 4-Oct-13 | 600.502 | -0.008356301 | -83563.01263 | 1 | 1 | 1 | 1 |
| 435 | 7-Oct-13 | 599.148 | -0.002257326 | -22573.26012 | 1 | 1 | 1 | 1 |
| 436 | 8-Oct-13 | 606.514 | 0.012219165 | 122191.6532 | 1 | 1 | 1 | 1 |
| 437 | 9-Oct-13 | 613.563 | 0.011555137 | 115551.3698 | 1 | 1 | 1 | 1 |
| 438 | 10-Oct-13 | 618.039 | 0.007268614 | 72686.13897 | 1 | 1 | 1 | 1 |
| 439 | 11-Oct-13 | 627.98 | 0.015956757 | 159567.5656 | 1 | 1 | 1 | 1 |
| 440 | 16-Oct-13 | 622.046 | -0.009494274 | -94942.73839 | 1 | 1 | 1 | 1 |
| 441 | 17-Oct-13 | 627.42 | 0.008602128 | 86021.2785 | 1 | 1 | 1 | 1 |
| 442 | 18-Oct-13 | 633.923 | 0.010311323 | 103113.2312 | 1 | 1 | 1 | 1 |
| 443 | 21-Oct-13 | 638.545 | 0.007264655 | 72646.54714 | 1 | 1 | 1 | 1 |
| 444 | 22-Oct-13 | 623.211 | -0.024307005 | -243070.0544 | 0 | 1 | 1 | 1 |
| 445 | 23-Oct-13 | 627.056 | 0.006150706 | 61507.05604 | 1 | 1 | 1 | 1 |
| 446 | 24-Oct-13 | 632.287 | 0.008307554 | 83075.54153 | 1 | 1 | 1 | 1 |
| 447 | 25-Oct-13 | 627.443 | -0.007690575 | -76905.74766 | 1 | 1 | 1 | 1 |
| 448 | 28-Oct-13 | 629.889 | 0.003890783 | 38907.83159 | 1 | 1 | 1 | 1 |
| 449 | 29-Oct-13 | 626.827 | -0.004873028 | -48730.27891 | 1 | 1 | 1 | 1 |
| 450 | 30-Oct-13 | 628.412 | 0.002525417 | 25254.16821 | 1 | 1 | 1 | 1 |
| 451 | 31-Oct-13 | 615.706 | -0.020426425 | -204264.2544 | 0 | 1 | 1 | 1 |
| 452 | 1-Nov-13 | 603.506 | -0.020013594 | -200135.9438 | 0 | 1 | 1 | 1 |
| 453 | 4-Nov-13 | 603.922 | 0.000689068 | 6890.680297 | 1 | 1 | 1 | 1 |
| 454 | 6-Nov-13 | 609.593 | 0.009346471 | 93464.70844 | 1 | 1 | 1 | 1 |
| 455 | 7-Nov-13 | 616.109 | 0.010632375 | 106323.7457 | 1 | 1 | 1 | 1 |
| 456 | 8-Nov-13 | 615.628 | -0.000781011 | -7810.109211 | 1 | 1 | 1 | 1 |
| 457 | 11-Nov13 | 610.502 | -0.008361315 | -83613.15462 | 1 | 1 | 1 | 1 |
| 458 | 12-Nov13 | 604.546 | -0.009803806 | -98038.06442 | 1 | 1 | 1 | 1 |
| 459 | 13-Nov13 | 590.931 | -0.022778504 | -227785.0379 | 0 | 1 | 1 | 1 |
| 460 | 14-Nov13 | 599.396 | 0.014223222 | 142232.222 | 1 | 1 | 1 | 1 |
| 461 | 15-Nov13 | 590.731 | -0.014561728 | -145617.2848 | 1 | 1 | 1 | 1 |
| 462 | 18-Nov13 | 605.593 | 0.02484739 | 248473.9023 | 1 | 1 | 1 | 1 |
| 463 | 19-Nov13 | 608.249 | 0.004376194 | 43761.9433 | 1 | 1 | 1 | 1 |
| 464 | 20-Nov13 | 597.711 | -0.017476978 | -174769.7806 | 1 | 1 | 1 | 1 |
| 465 | 21-Nov13 | 595.125 | -0.004335892 | -43358.92028 | 1 | 1 | 1 | 1 |
| 466 | 22-Nov13 | 592.891 | -0.003760897 | -37608.96542 | 1 | 1 | 1 | 1 |

| No | Date | close | Return Jakarta Islamic Index | return*10juta | T1 | T2 | T3 | T4 |
|-----|-----------|---------|---------------------------------|---------------|----|----|----|----|
| 467 | 25-Nov13 | 592.721 | -0.000286772 | -2867.717283 | 1 | 1 | 1 | 1 |
| 468 | 26-Nov13 | 573.572 | -0.032840326 | -328403.2566 | 0 | 1 | 1 | 1 |
| 469 | 27-Nov13 | 580.202 | 0.011492845 | 114928.4518 | 1 | 1 | 1 | 1 |
| 470 | 28-Nov13 | 578.906 | -0.002236203 | -22362.03253 | 1 | 1 | 1 | 1 |
| 471 | 29-Nov13 | 579.868 | 0.001660376 | 16603.75916 | 1 | 1 | 1 | 1 |
| 472 | 2-Dec-13 | 591.915 | 0.020562552 | 205625.5206 | 1 | 1 | 1 | 1 |
| 473 | 3-Dec-13 | 584.709 | -0.012248756 | -122487.5592 | 1 | 1 | 1 | 1 |
| 474 | 4-Dec-13 | 577.393 | -0.012591144 | -125911.4373 | 1 | 1 | 1 | 1 |
| 475 | 5-Dec-13 | 573.882 | -0.006099344 | -60993.43571 | 1 | 1 | 1 | 1 |
| 476 | 6-Dec-13 | 569.002 | -0.008539851 | -85398.51215 | 1 | 1 | 1 | 1 |
| 477 | 9-Dec-13 | 576.233 | 0.012628144 | 126281.4373 | 1 | 1 | 1 | 1 |
| 478 | 10-Dec-13 | 587.521 | 0.019399897 | 193998.9727 | 1 | 1 | 1 | 1 |
| 479 | 11-Dec-13 | 586.106 | -0.002411329 | -24113.29469 | 1 | 1 | 1 | 1 |
| 480 | 12-Dec-13 | 575.658 | -0.017986926 | -179869.2623 | 1 | 1 | 1 | 1 |
| 481 | 13-Dec-13 | 568.146 | -0.013135306 | -131353.0641 | 1 | 1 | 1 | 1 |
| 482 | 16-Dec-13 | 560.749 | -0.013105038 | -131050.3787 | 1 | 1 | 1 | 1 |
| 483 | 17-Dec-13 | 567.513 | 0.011990267 | 119902.6651 | 1 | 1 | 1 | 1 |
| 484 | 18-Dec-13 | 572.12 | 0.008085103 | 80851.03005 | 1 | 1 | 1 | 1 |
| 485 | 19-Dec-13 | 579.324 | 0.012513147 | 125131.4697 | 1 | 1 | 1 | 1 |
| 486 | 20-Dec-13 | 575.8 | -0.006101528 | -61015.28378 | 1 | 1 | 1 | 1 |
| 487 | 23-Dec-13 | 572.586 | -0.005597436 | -55974.35691 | 1 | 1 | 1 | 1 |
| 488 | 24-Dec-13 | 578.142 | 0.009656571 | 96565.70752 | 1 | 1 | 1 | 1 |
| 489 | 27-Dec-13 | 578.641 | 0.000862737 | 8627.3749 | 1 | 1 | 1 | 1 |
| 490 | 30-Dec-13 | 585.11 | 0.011117613 | 111176.1301 | 1 | 1 | 1 | 1 |
| 491 | 2-Jan-14 | 596.148 | 0.018689095 | 186890.9464 | 1 | 1 | 1 | 1 |
| 492 | 3-Jan-14 | 585.642 | -0.017780277 | -177802.77 | 1 | 1 | 1 | 1 |
| 493 | 6-Jan-14 | 579.928 | -0.009804723 | -98047.23483 | 1 | 1 | 1 | 1 |
| 494 | 7-Jan-14 | 572.287 | -0.013263344 | -132633.4411 | 1 | 1 | 1 | 1 |
| 495 | 8-Jan-14 | 576.407 | 0.007173395 | 71733.94598 | 1 | 1 | 1 | 1 |
| 496 | 9-Jan-14 | 574.279 | -0.003698667 | -36986.67449 | 1 | 1 | 1 | 1 |
| 497 | 10-Jan-14 | 582.379 | 0.014006098 | 140060.9759 | 1 | 1 | 1 | 1 |
| 498 | 13-Jan-14 | 601.806 | 0.032813696 | 328136.957 | 1 | 1 | 1 | 1 |
| 499 | 15-Jan-14 | 609.9 | 0.013359875 | 133598.7507 | 1 | 1 | 1 | 1 |
| 500 | 16-Jan-14 | 606.816 | -0.005069394 | -50693.94344 | 1 | 1 | 1 | 1 |
| 501 | 17-Jan-14 | 603.061 | -0.006207262 | -62072.62485 | 1 | 1 | 1 | 1 |
| 502 | 20-Jan-14 | 608.315 | 0.008674487 | 86744.87435 | 1 | 1 | 1 | 1 |
| 503 | 21-Jan-14 | 609.114 | 0.001312602 | 13126.02402 | 1 | 1 | 1 | 1 |
| 504 | 22-Jan-14 | 614.407 | 0.008652133 | 86521.32688 | 1 | 1 | 1 | 1 |
| 505 | 23-Jan-14 | 614.965 | 0.000907781 | 9077.806202 | 1 | 1 | 1 | 1 |

| No | Date | close | Return Jakarta Islamic Index | Return*10juta | T1 | T2 | T3 | T4 |
|-----|-----------|---------|------------------------------|---------------|----|----|----|----|
| 506 | 24-Jan-14 | 604.373 | -0.017373799 | -173737.9862 | 1 | 1 | 1 | 1 |
| 507 | 27-Jan-14 | 583.88 | -0.034496075 | -344960.7474 | 0 | 1 | 1 | 1 |
| 508 | 28-Jan-14 | 588.271 | 0.007492244 | 74922.43815 | 1 | 1 | 1 | 1 |
| 509 | 29-Jan-14 | 601.539 | 0.022303645 | 223036.4514 | 1 | 1 | 1 | 1 |
| 510 | 30-Jan-14 | 602.873 | 0.00221519 | 22151.89728 | 1 | 1 | 1 | 1 |
| 511 | 3-Feb-14 | 595.621 | -0.012102002 | -121020.022 | 1 | 1 | 1 | 1 |
| 512 | 4-Feb-14 | 587.491 | -0.013743632 | -137436.32 | 1 | 1 | 1 | 1 |
| 513 | 5-Feb-14 | 594.498 | 0.011856425 | 118564.252 | 1 | 1 | 1 | 1 |
| 514 | 6-Feb-14 | 601.058 | 0.010974084 | 109740.8375 | 1 | 1 | 1 | 1 |
| 515 | 7-Feb-14 | 606.217 | 0.008546572 | 85465.72078 | 1 | 1 | 1 | 1 |
| 516 | 10-Feb-14 | 603.326 | -0.004780327 | -47803.26959 | 1 | 1 | 1 | 1 |
| 517 | 11-Feb-14 | 604.703 | 0.002279748 | 22797.47583 | 1 | 1 | 1 | 1 |
| 518 | 12-Feb-14 | 609.077 | 0.007207268 | 72072.68094 | 1 | 1 | 1 | 1 |
| 519 | 13-Feb-14 | 607.222 | -0.003050239 | -30502.3919 | 1 | 1 | 1 | 1 |
| 520 | 14-Feb-14 | 608.972 | 0.002877832 | 28778.32332 | 1 | 1 | 1 | 1 |
| 521 | 17-Feb-14 | 615.614 | 0.010847854 | 108478.541 | 1 | 1 | 1 | 1 |
| 522 | 18-Feb-14 | 615.1 | -0.000835288 | -8352.875321 | 1 | 1 | 1 | 1 |
| 523 | 19-Feb-14 | 621.734 | 0.010727492 | 107274.9232 | 1 | 1 | 1 | 1 |
| 524 | 20-Feb-14 | 622.158 | 0.000681731 | 6817.312378 | 1 | 1 | 1 | 1 |
| 525 | 21-Feb-14 | 626.968 | 0.007701423 | 77014.22874 | 1 | 1 | 1 | 1 |
| 526 | 24-Feb-14 | 621.944 | -0.008045446 | -80454.46116 | 1 | 1 | 1 | 1 |
| 527 | 25-Feb-14 | 614.478 | -0.01207693 | -120769.2963 | 1 | 1 | 1 | 1 |
| 528 | 26-Feb-14 | 606.032 | -0.013840337 | -138403.3694 | 1 | 1 | 1 | 1 |
| 529 | 27-Feb-14 | 612.839 | 0.011169469 | 111694.6874 | 1 | 1 | 1 | 1 |
| 530 | 28-Feb-14 | 626.864 | 0.022627353 | 226273.5251 | 1 | 1 | 1 | 1 |
| 531 | 3-Mar-14 | 618.984 | -0.012650187 | -126501.87 | 1 | 1 | 1 | 1 |
| 532 | 4-Mar-14 | 620.047 | 0.001715857 | 17158.57409 | 1 | 1 | 1 | 1 |
| 533 | 5-Mar-14 | 628.002 | 0.01274807 | 127480.6956 | 1 | 1 | 1 | 1 |
| 534 | 6-Mar-14 | 631 | 0.004762511 | 47625.11365 | 1 | 1 | 1 | 1 |
| 535 | 7-Mar-14 | 631.743 | 0.001176803 | 11768.03333 | 1 | 1 | 1 | 1 |
| 536 | 10-Mar-14 | 632.91 | 0.001845566 | 18455.66066 | 1 | 1 | 1 | 1 |
| 537 | 11-Mar-14 | 635.354 | 0.003854092 | 38540.91932 | 1 | 1 | 1 | 1 |
| 538 | 12-Mar-14 | 633.168 | -0.003446534 | -34465.34099 | 1 | 1 | 1 | 1 |
| 539 | 13-Mar-14 | 641.309 | 0.01277561 | 127756.1028 | 1 | 1 | 1 | 1 |
| 540 | 14-Mar-14 | 661.737 | 0.031356796 | 313567.9598 | 1 | 1 | 1 | 1 |
| 541 | 17-Mar-14 | 663.863 | 0.003207607 | 32076.06854 | 1 | 1 | 1 | 1 |
| 542 | 18-Mar-14 | 651.323 | -0.019070124 | -190701.2397 | 0 | 1 | 1 | 1 |
| 543 | 19-Mar-14 | 655.45 | 0.006316344 | 63163.43728 | 1 | 1 | 1 | 1 |
| 544 | 20-Mar-14 | 634.165 | -0.03301285 | -330128.497 | 0 | 1 | 1 | 1 |

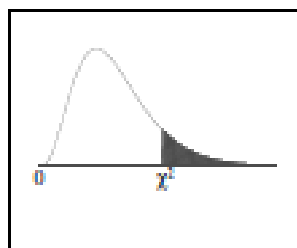
| No | Date | close | Return Jakarta Islamic Index | Return*10juta | T1 | T2 | T3 | T4 |
|-----|-----------|---------|------------------------------|---------------|----|----|----|----|
| 545 | 21-Mar14 | 636.549 | 0.003752226 | 37522.25595 | 1 | 1 | 1 | 1 |
| 546 | 24-Mar14 | 637.79 | 0.001947677 | 19476.77019 | 1 | 1 | 1 | 1 |
| 547 | 25-Mar14 | 632.444 | -0.008417396 | -84173.96424 | 1 | 1 | 1 | 1 |
| 548 | 26-Mar14 | 636.476 | 0.006355032 | 63550.31948 | 1 | 1 | 1 | 1 |
| 549 | 27-Mar14 | 635.018 | -0.002293366 | -22933.66133 | 1 | 1 | 1 | 1 |
| 550 | 28-Mar14 | 640.411 | 0.008456813 | 84568.12792 | 1 | 1 | 1 | 1 |
| 551 | 1-Apr-14 | 657.09 | 0.025710838 | 257108.3766 | 1 | 1 | 1 | 1 |
| 552 | 2-Apr-14 | 655.267 | -0.002778209 | -27782.09241 | 1 | 1 | 1 | 1 |
| 553 | 3-Apr-14 | 658.533 | 0.004971848 | 49718.4766 | 1 | 1 | 1 | 1 |
| 554 | 4-Apr-14 | 653.274 | -0.008017991 | -80179.90717 | 1 | 1 | 1 | 1 |
| 555 | 7-Apr-14 | 667.22 | 0.021123184 | 211231.8351 | 1 | 1 | 1 | 1 |
| 556 | 8-Apr-14 | 666.518 | -0.001052681 | -10526.80609 | 1 | 1 | 1 | 1 |
| 557 | 10-Apr-14 | 643.145 | -0.035696942 | -356969.4175 | 0 | 1 | 1 | 1 |
| 558 | 11-Apr-14 | 653.278 | 0.015632562 | 156325.6183 | 1 | 1 | 1 | 1 |
| 559 | 14-Apr-14 | 659.705 | 0.009789999 | 97899.99311 | 1 | 1 | 1 | 1 |
| 560 | 15-Apr-14 | 659.78 | 0.000113681 | 1136.807165 | 1 | 1 | 1 | 1 |
| 561 | 16-Apr-14 | 657.858 | -0.002917344 | -29173.43554 | 1 | 1 | 1 | 1 |
| 562 | 17-Apr-14 | 663.592 | 0.0086784 | 86784.00224 | 1 | 1 | 1 | 1 |
| 563 | 21-Apr-14 | 663.521 | -0.000106999 | -1069.99178 | 1 | 1 | 1 | 1 |
| 564 | 22-Apr-14 | 664.132 | 0.000920421 | 9204.212895 | 1 | 1 | 1 | 1 |
| 565 | 23-Apr-14 | 664.142 | 1.50571E-05 | 150.571343 | 1 | 1 | 1 | 1 |
| 566 | 24-Apr-14 | 663.179 | -0.001451043 | -14510.43371 | 1 | 1 | 1 | 1 |
| 567 | 25-Apr-14 | 663.206 | 4.07122E-05 | 407.1216126 | 1 | 1 | 1 | 1 |
| 568 | 28-Apr-14 | 650.317 | -0.019625715 | -196257.1451 | 0 | 1 | 1 | 1 |
| 569 | 29-Apr-14 | 645.254 | -0.007815899 | -78158.98587 | 1 | 1 | 1 | 1 |
| 570 | 30-Apr-14 | 647.674 | 0.003743446 | 37434.45615 | 1 | 1 | 1 | 1 |

Hasil perhitungan likelihood ratio test

| selang periode | VaR-GJR(1,1) | N | X | Likelihood Rasio | P* |
|----------------|--------------|-----|----|-------------------|------|
| 1 | 184887.0295 | 570 | 41 | 83.38615429 | 0.05 |
| 7 | 489165.1007 | 570 | 1 | 25.19672232 | 0.05 |
| 30 | 1012667.966 | 570 | 0 | Tidak terdefinisi | 0.05 |
| 120 | 2025335.933 | 570 | 0 | Tidak terdefinisi | 0.05 |

Lampiran 11 *Chi Square Distribution Table*

Chi-Square Distribution Table



The shaded area is equal to α for $\chi^2 = \chi^2_{\alpha}$.

| df | $\chi^2_{.995}$ | $\chi^2_{.990}$ | $\chi^2_{.975}$ | $\chi^2_{.950}$ | $\chi^2_{.900}$ | $\chi^2_{.850}$ | $\chi^2_{.800}$ | $\chi^2_{.750}$ | $\chi^2_{.700}$ | $\chi^2_{.650}$ |
|------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1 | 0.000 | 0.000 | 0.001 | 0.004 | 0.016 | 2.706 | 3.841 | 5.024 | 6.635 | 7.879 |
| 2 | 0.010 | 0.020 | 0.061 | 0.103 | 0.211 | 4.605 | 5.991 | 7.378 | 9.210 | 10.597 |
| 3 | 0.072 | 0.116 | 0.216 | 0.362 | 0.584 | 6.251 | 7.815 | 9.348 | 11.345 | 12.838 |
| 4 | 0.207 | 0.297 | 0.484 | 0.711 | 1.064 | 7.779 | 9.488 | 11.143 | 13.277 | 14.860 |
| 5 | 0.412 | 0.554 | 0.831 | 1.145 | 1.610 | 9.236 | 11.070 | 12.833 | 15.086 | 16.750 |
| 6 | 0.676 | 0.872 | 1.237 | 1.635 | 2.204 | 10.545 | 12.592 | 14.449 | 16.812 | 18.548 |
| 7 | 0.989 | 1.239 | 1.690 | 2.167 | 2.833 | 12.017 | 14.067 | 16.013 | 18.475 | 20.278 |
| 8 | 1.344 | 1.646 | 2.180 | 2.733 | 3.490 | 13.362 | 15.507 | 17.535 | 20.090 | 21.955 |
| 9 | 1.735 | 2.088 | 2.700 | 3.326 | 4.168 | 14.684 | 16.919 | 19.023 | 21.666 | 23.589 |
| 10 | 2.156 | 2.558 | 3.247 | 3.940 | 4.865 | 15.987 | 18.307 | 20.483 | 23.209 | 25.188 |
| 11 | 2.603 | 3.053 | 3.816 | 4.575 | 5.578 | 17.275 | 19.675 | 21.920 | 24.726 | 26.757 |
| 12 | 3.074 | 3.571 | 4.404 | 5.226 | 6.304 | 18.549 | 21.026 | 23.337 | 26.217 | 28.300 |
| 13 | 3.565 | 4.107 | 5.009 | 5.892 | 7.042 | 19.812 | 22.362 | 24.736 | 27.688 | 29.819 |
| 14 | 4.075 | 4.660 | 5.629 | 6.571 | 7.790 | 21.064 | 23.685 | 26.119 | 29.141 | 31.319 |
| 15 | 4.601 | 5.229 | 6.262 | 7.261 | 8.547 | 22.307 | 24.996 | 27.488 | 30.578 | 32.801 |
| 16 | 5.142 | 5.812 | 6.908 | 7.962 | 9.312 | 23.542 | 26.296 | 28.845 | 32.000 | 34.267 |
| 17 | 5.697 | 6.408 | 7.564 | 8.672 | 10.085 | 24.769 | 27.587 | 30.191 | 33.409 | 35.718 |
| 18 | 6.265 | 7.016 | 8.231 | 9.390 | 10.865 | 25.989 | 28.869 | 31.526 | 34.805 | 37.156 |
| 19 | 6.844 | 7.633 | 8.907 | 10.117 | 11.651 | 27.204 | 30.144 | 32.852 | 36.191 | 38.582 |
| 20 | 7.434 | 8.260 | 9.591 | 10.851 | 12.443 | 28.412 | 31.410 | 34.170 | 37.566 | 39.997 |
| 21 | 8.034 | 8.897 | 10.283 | 11.591 | 13.240 | 29.615 | 32.671 | 35.479 | 38.932 | 41.401 |
| 22 | 8.643 | 9.542 | 10.982 | 12.338 | 14.041 | 30.813 | 33.924 | 36.781 | 40.289 | 42.796 |
| 23 | 9.260 | 10.196 | 11.689 | 13.091 | 14.848 | 32.007 | 35.172 | 38.076 | 41.638 | 44.181 |
| 24 | 9.886 | 10.856 | 12.401 | 13.848 | 15.659 | 33.196 | 36.415 | 39.364 | 42.980 | 45.559 |
| 25 | 10.520 | 11.524 | 13.120 | 14.611 | 16.473 | 34.382 | 37.652 | 40.646 | 44.314 | 46.928 |
| 26 | 11.160 | 12.198 | 13.844 | 15.379 | 17.292 | 35.563 | 38.885 | 41.923 | 45.642 | 48.290 |
| 27 | 11.808 | 12.879 | 14.573 | 16.151 | 18.114 | 36.741 | 40.113 | 43.196 | 46.963 | 49.645 |
| 28 | 12.461 | 13.565 | 15.308 | 16.928 | 18.939 | 37.916 | 41.337 | 44.461 | 48.278 | 50.993 |
| 29 | 13.121 | 14.256 | 16.047 | 17.708 | 19.768 | 39.087 | 42.557 | 45.722 | 49.588 | 52.336 |
| 30 | 13.787 | 14.953 | 16.791 | 18.493 | 20.599 | 40.256 | 43.773 | 46.979 | 50.892 | 53.672 |
| 40 | 20.707 | 22.164 | 24.433 | 26.509 | 29.051 | 51.805 | 55.758 | 59.342 | 63.691 | 66.766 |
| 50 | 27.991 | 29.707 | 32.357 | 34.764 | 37.689 | 63.167 | 67.505 | 71.420 | 76.154 | 79.490 |
| 60 | 36.584 | 37.485 | 40.482 | 43.188 | 46.459 | 74.397 | 79.082 | 83.298 | 88.379 | 91.962 |
| 70 | 45.275 | 46.442 | 48.758 | 51.739 | 55.329 | 85.527 | 90.531 | 95.023 | 100.425 | 104.215 |
| 80 | 54.172 | 55.540 | 57.153 | 60.391 | 64.278 | 96.578 | 101.879 | 106.629 | 112.329 | 116.321 |
| 90 | 63.196 | 64.754 | 65.647 | 69.126 | 73.291 | 107.565 | 113.145 | 118.136 | 124.116 | 128.299 |
| 100 | 72.328 | 74.065 | 74.222 | 77.929 | 82.358 | 118.498 | 124.342 | 129.561 | 135.807 | 140.169 |