The EMU Integration structure and the Spillover dynamics towards the IAS Harmonization

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Abstract

This paper investigates the relationship between the European Monetary Union (**EMU**) financial markets both in the long or in the short run term, with respect to the harmonization procedure of the International Accounting Standards (**IAS**). According to many analysts, the **IAS** could possible contribute to the transparency of the transmitted information, the direct accessibility to the fundamentals of listed firms and the uniform manipulation of accounting data not only within exchanges but also between them. Based on the above, it is expected that the financial markets should react to the **IAS** harmonization with tighter relationships either in the expectations of their long run structure or in the transmission of new information which is expressed by the second moment dynamics. This paper examines empirically the **IAS** harmonization procedure in the **EMU** area and its impact on the relationship of the financial markets involved. By application of regime shift methodologies, the empirical findings of the paper offer evidence consistent with the hypothesis that the IAS harmonization process contributed to the informational efficiency and the transparency of long and short run expectations into financial markets, with higher degrees of interdependencies.

Keywords: Cointegration, Spillover Effects, Regime Shift.

JEL Classification: C22, C52, C53, G15.

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1. Introduction

The European Monetary Union (**EMU**) was established on 1st January 1999 for eleven European Union members. The common currency was the euro and since then, the exchange rates were fixed for the **EU-12**, including Greece, which formally joined the **EMU**, two years later, on 1st January 2001. In the **EMU** environment, the European Central Bank monetary policy is uniform among all countries and this contributes to the convergence of the money and the bond markets. However, a research question that arises is the investigation of the level of cointegration for the **EMU** financial markets.

On the other hand, in September 2002, the International Accounting Standards Board (**IASB**) and the Financial Accounting Standards Board (**FASB**) decided to contribute to the development of high quality, fully compatible financial reporting standards that could be applied either for domestic or foreign purposes. The result is the convergence between the US Generally Accepted Accounting Principles (**US GAAP**) and the International Financial Reporting Standards (**IFRS**)[4], which imposes two pillars:

i. Short term directions, which fill the gap between the **IFRS** and **US GAAP** at an individual level, such as accounting treatments of nonmonetary exchanges, discontinued operations, income taxes and interim reporting, and

ii. Long term perspectives from the **IASB - FASB** point of view which could constitute a significant improvement in terms of accounting guidance, such as the joint projects on revenue recognition and purchase method procedures and the coordinated project on share-based payments.

[4] IFRS, includes International Accounting Standards (**IAS**) issued by the predecessor body to the IASB

Thus, after the resolution of the European Parliament on June 2002, regarding the compulsory adoption of the International Financial Reporting Standards (**IFRS**) by all EU listed companies by 2005, European Union countries were presented with the following alternatives: i. require or permit **IFRSs** for unlisted companies, ii. require or permit **IFRSs** in parent company (unconsolidated) financial statements, iii. permit companies whose only listed securities are debt securities, delay **IFRS** adoption until 2007, and iv. permit companies that are listed on exchanges outside of the EU and that currently prepare their primary financial statements using a **non-EU GAAP** (in most cases this would be **US GAAP**) to delay **IFRS** adoption until 2007.

The objective of this paper is to investigate the relationship between the EMU financial markets within the framework of the **IAS** adoption. Moreover, we examine the hypothesis that financial markets, through a common established accounting basis, do jointly contribute to their long run cointegrated structure with tighter relationships. In addition, we examine the hypothesis that the **IAS** environment is more likely to allow for short run dynamics, the so-called spillover effects, between the EMU financial markets, since the IAS could possible contribute to the informational efficiency.

The rest of the paper is organized as follows. Section 2 includes the theoretical framework of our objective. Section 3 provides a brief discussion of the literature, while section 4 describes the data and the econometric methodology. Section 5 presents the empirical findings, while Section 6 concludes our analysis.

2. Financial Considerations (i. European Union, ii. IAS)

i. European Union

The current form of the **EMU** has its origin in the 1960's, where the European Economic Community (**EEC**) was part of the '**Bretton Woods system**', an international monetary system with fixed and adjustable exchange rates. In 1969 the '**Barre Plan**' which resulted in the publication of the '**Werner Report**' in 1970, proposed to establish an **EMU** in the next decade, which was not effected owing to the first oil crisis and the consequent instability of the financial markets. Later on, in March 1979 the nine members of the **EEC** established the European Monetary System (**EMS**), an international monetary system which was based on a dynamic economic stabilization policy. In 1986, the adoption of the Single European Act, underlined the importance of the **EMU**. 1n 1988 the '**Delors Repor**t' recommended that the **EMU** process should be achieved in three steps, which had taken place from 1st July 1990 (step 1) to 1st January 1999 (step 3).

The **EMU** and the common currency have contributed to the reduction of interest rates, the price transparency, the removal of transaction costs and the stability of exchange rates. Moreover, the most significant contribution of the **EMU** is the financial integration, which causes higher economic growth rates, enhances the effective transmission of monetary policy impulses and finally, assures a stable financial environment.

ii. IAS

The aim of the International Accounting Standards Board (**IASB**) and the Financial Accounting Standards Board (**FASB**) convergence efforts was to make US

Generally Accepted Accounting Principles (**US GAAP**) and International Financial Reporting Standards (**IFRS**) very close together between the financial markets involved, as well as improving the overall performance of their application. The convergence activities of the **IASB** and the **FASB** depend on the worldwide economic conditions and the regulative activity of the international financial system authorities, the origins of which have been proposed many years ago by the International Accounting Standards Committee (IASC). The motivation for the establishment of the (IASC) was the introduction of a common international language of accounting to serve capital markets. A common set of accounting standards improves the comparability of listed companies across countries. The importance of the **IAS** is enhanced especially for those countries which lack an established set of national accounting standards. The IASC had not the power to enforce adoption of its standards, and hence, it had to rely on persuading individual companies or national regulators.

3. Literature Review

There are many researchers who have investigated the relationship between the EU capital and financial markets. More specifically, **Haung**, **MacKinnon** and **Michelis** (**2000**), concluded that not all of the twelve countries could form a successful EMU over time without the adoption of significant adjustments, which are focused on the potential painful long run policy structural changes. Moreover, **Hardouvelis**, **Malliaropoulos** and **Priestley** (**2006**), concluded that there exist significant cointegration specifications between the EU financial markets which are

Eurozone-specific phenomenon, independent of a possible simultaneous world-market integration.

On the other hand there are many researchers who have investigated the importance and the role of the IAS adoption. Among them, **Gray** (**1980**) in an empirical study, investigated differences of international accounting practices and their possible impact on the financial environment in the Eurozone, with respect to the profits. The consequences is that accounting principles tend to be applied in practice is such a way that the disclosure of company performance is based in the direction of relative conservatism or optimism as user needs indicate and managerial interests dictate. **Hopwood** (**1994**), investigated the IAS harmonization procedure with many implications on the understanding of supranational accounting policy-making and the significant role played by the audit industry and its agents. **Sunder** (**2002**), investigated the regulatory competition between the local monopoly in financial reporting standards and the structure of optional application of two or more sets of competing standards, with respect to the corporate financial environment. His empirical study, sheds much light on the debate regarding the merits of quality and the efficiency of available information in the financial market. **Whittington** (**2005**), investigated the structure of the IASB and its role as a global standard setter with many implications for the reporting financial performance. **Schipper** (**2005**), investigated the implementation effects of the mandated adoption of IAS in EU and underlined the necessity for detailed implementation guidance and for a single European securities regulator. **Meulen**, **Gaeremynck** and **Willekens** (**2007**) investigated the harmonization process in accounting standard setting from the market-based earnings point of view and concluded that the US GAAP accounting information outperforms IFRS, a result which is not fully valued by investors.

Dewing and **Russell** (**2008**) in an empirical study examine the harmonization procedure of the IAS and concluded that there exist significant difficulties in forming a European view, since the IAS seem to reflect Anglo-Saxon accounting practices rather than European practices. **Al-Shiab** (**2008**) examined empirically through a VECM model, the consequences of the implementation of the IAS adoption on the cost of capital in Jordanian companies listed on the Amman Stock Exchange and found insignificant relationships. **Armstrong**, **Barth**, **Jagolinzer** and **Riedl**, examined empirically the reaction of European Stock Markets to sixteen events associated with the adoption of the IAS in Europe. According to their findings they concluded that there exists an incrementally positive reaction for firms with lower quality pre-adoption information, an incrementally negative reaction for firms domiciled in code law countries and a positive reaction for firms with high quality pre-adoption information.

4. Data and Research Methodology

For the purposes of our analysis we drew data from the EU-12, as well as the UK and US financial markets. Although, the accounting regulation applies not only to full members of the European Union but also to members of the European Economic Areas, this paper focuses on the EU-12, in order to filter the analysis from spurious results, since the EMU impact is very likely to influence our empirical findings. The data correspond to weekly spot prices of the major financial indices of the countries under investigation, covering a period from 01/01/2000 to 14/08/2009, as shown in **Table 1**, below:

Table 1. Financial Markets and Financial Indices

1	Austria	***ATX***
2	Belgium	***BEL20***
3	Finland	***OMX Helsinki 25***
4	France	***CAC 40***
5	Germany	***DAX***
6	Greece	***Athex 20***
7	Ireland	***ISEQ 20***
8	Italy	***S&P/MIB***
9	Luxembourg	***LuxX Index***
10	Netherlands	***AEX index***
11	Portugal	***PSI-20***
12	Spain	***IBEX 35***
13	UK	***FTSE 100***
14	US	***S&P 500***

The econometric part of this paper consists of two parts; the investigation of the long term structure and the short term dynamics as well as the possible structural changes in the volatility dynamics between the EU-12 financial markets, as shown below:

Long Run Analysis

Unit Root / Stationarity Tests

Initially we examined the existence of a unit root & the stationarity of the time series using the DF (**Dickey** & **Fuller** (**1979**)) and the KPSS (**Kwiatkowski**, **Phillips**, **Schmidt** & **Shin** (**1992**)) tests, respectively, using weekly frequency of the data.[5]

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[5] **ADF** test:

$$\Delta x_t = a + \beta \cdot t + (\rho - 1) \cdot x_{t-1} + \sum_{i=1}^{q} \psi_i \cdot \Delta x_{t-i} + \varepsilon_t$$

(*The estimation of the values of p, q is based on AIC and/or BIC criterion*)

H_0: the x_t time series has a unit root on the characteristic polynom or |ρ| = 1

H_1: the x_t time series is stationary or |ρ| < 1, Statistic-t = $\left(1-\hat{\rho}\right)/ s.e.\left(\hat{\rho}\right)$

KPPS test:

$x_t = f(r,t) + \varepsilon_t$ (The function $f(.,.)$ is a linear filter of the mean and trend of the time series)

H_0: the x_t time series is stationary vs. **H_1**: the x_t time series is not stationary

$$LM = \frac{\sum_{t=1}^{T}\left(\sum_{r=1}^{t}\hat{\varepsilon}_{t\,r}\right)^2}{T^2 \cdot f_0}$$, where f_0 is the frequency domain estimation of the residuals at *0*.

Cointegration Analysis

The examination of the stationarity conditions, is followed by the investigation of the long run relationship under the **Johansen**'s (**1988, 1991**) cointegration framework. The statistical notion of cointegration of a set of non-stationary time series is derived by a linear combination of the time series vectors which is stationary. Thus, a set of cointegrated financial markets implies the existence of a common trend. The existence of r cointegrating relations in a set of n variables means that there must also exist n-r common stochastic trends that are nonstationary and move the system in short run adjustments around their equilibrium state(s).

The cointegration mehtodology was extended by **Johansen** and **Juselius** (**1990**), **Johansen** and **Juselius** (**1992**, **1994**) and **Gonzalo** and **Granger** (**1995**) who considered the restrictions that should be imposed in the VAR cointegration analysis, as shown below:

$$x_t = \mu + \Pi_1 x_{t-1} + \Pi_2 x_{t-2} + \ldots + \Pi_k x_{t-k} + \varepsilon_t \qquad (1)$$

$$\text{or } \Delta x_t = \Pi \cdot x_{t-1} + \sum_{i=1}^{N} \sum_{j=1}^{k-1} \Gamma_{ij} \cdot \Delta x_{i,t-j} + \varepsilon_t \qquad (2)$$

where:

$$\{\varepsilon_t\} \sim iid\ Gaussian_p[E(\varepsilon_t)=0, E(\varepsilon_t)=0] \qquad (3)$$

$$A(z) = 1 - \Pi_1 z - \ldots - \Pi_k z^k \qquad (4)$$

$$|A(z)| = 0 \text{ for } z = 1 \qquad (5)$$

$$A(z)|_{z=1} = \Pi = 1 - \Pi_1 + \Pi_2 + \ldots + \Pi_k = \alpha \beta', \alpha_{p,r}, \beta_{r,p} \qquad (6)$$

$$rank(r, m) = r < p \qquad (7)$$

The Π, Γ matrices consist of the cointegration coefficients of the system. More precisely, the Π matrix is partitioned into the 'β' coefficients that represent the long run equilibrium state of the system and into the 'α' coefficients that represent the short run adjustmnents around the common trend(s). According to equations (1)-(7) the x_t time series is cointegrated of order r, with cointegration vector 'β'. In order to estimate the cointegration vector 'β' the Maximum Likelihood Estimation is used:

i. estimate the r higher squared correlations of the residuals (ε_t) of x_{t-1} and Δx_{t-1} on Δx_{t-1}, …, Δx_{t-k} and calculate the S_{ij} term: $S_{ij} = \frac{1}{T} \cdot \sum_{t=1}^{T} \varepsilon_{it} \cdot \varepsilon_{jt}^{'}$ (8)

ii. define the pair of the tested hypothesis

H_0: $rank(\Pi) \leq r$ or $\Pi = \alpha \beta'$

H_1: $rank(\Pi) = r+1$

iii. under the validity of the H_0 the MLE estimators of the α, β coefficients are derived by the minimization of the following term (8) with respect to the equinvalue 'β': $| S_{00} - S_{0k} \cdot \beta \cdot \left(\beta' \cdot S_{kk} \cdot \beta\right)^{-1} \cdot \beta' \cdot S_{k0} |$ (9)

where $\widehat{\beta}$ is a vector with the highest r equinvalues that derive by the maximization of the term $S_{k0} \cdot \beta \cdot S_{0k}$ with respect to the S_{kk} standardized term ($\widehat{\beta}' \cdot S_{0k} \cdot \widehat{\beta} = I$) and $\hat{a} = S_{0k} \cdot \widehat{\beta}$ (10)

Hence, the likelihood ratio statistic of the H_0 that there exist at most r cointegration vectors is the following:

$$-2 \cdot ln\left(Q\right) = -T \cdot \sum_{i=r+1}^{p} ln\left(1 - \widehat{\lambda}_i\right) \qquad (11)$$

where $\widehat{\lambda}_{r+1}$, …, $\widehat{\lambda}_p$ are the 'p-r' lowest squared normal equinvalues. The rank of the cointegration vector is based on the following two statistics:

$$\lambda_{trace} = -T \cdot \sum_{i=r+1}^{p} ln\left(1 - \widehat{\lambda}_i\right), \qquad \lambda_{\max} = -T \cdot ln\left(1 - \widehat{\lambda}_{r+1}\right) \qquad (12)$$

The Likelihood Ratio test Statistic of the H_0 is given by the following equation

$$L = -T \cdot \sum_{i=r+1}^{p} ln\left[\left(1 - \widehat{\lambda}^{*}_{i+(m-p)}\right) \Big/ \left(1 - \widehat{\lambda}_i\right)\right] \sim X^2_{(n-r)(n-k)} \qquad (13)$$

Price Discovery

The cointegration analysis is fulfilled by the VECM model (**Davidson**, **Hendry**, **Srba** and **Yeo** (**1978**); Vector Error Correction Model) according to the equation (14):

$$\Delta x_t = \sum_{v=1}^{N-r} \alpha_v \cdot VECM_{v,t-1} + \sum_{i=1}^{N} \sum_{j=1}^{k-1} \Gamma_{ij} \cdot \Delta x_{i,t-j} + \varepsilon_t \qquad (14)$$

According to the VECM model it is possible to decompose the contribution of a single financial market or a group of them in the formulation of the equilibrium state. In order to account for the stochastic regimes in the adjustment around of the equilibrium state the MS-VECM model (**Krozlig1996**,**1997**) is applied, according to equation (15):

$$\Delta x_t = \sum_{v=1}^{N-r} \alpha_v \left(s_t\right) \cdot VECM_{v,t-1} + \sum_{i=1}^{N} \sum_{j=1}^{k-1} \Gamma_{ij} \left(s_t\right) \cdot \Delta x_{i,t-j} + \varepsilon_t \qquad (15)$$

Short Run Analysis

In order to investigate the impact of the IAS adoption, on the volatility of the financial markets the SWARCH model of **Hamilton** & **Susmel** (**1994**) is applied. According to the SWARCH model there exists a latent variable (S_t) which represent the states of the whole process:

$$\varepsilon_t = \sqrt{g_{S_t}} \cdot w_t \qquad (16)$$

$$w_t \sim ARCH - L\left(2\right) \qquad (17)$$

$$w_t = z_t \cdot \sqrt{h_t}\ ,\ z_t \sim Student - t(d.f) \qquad (18)$$

$$h_t = a_0 + a_1 \cdot w_{t-1}^2 + a_2 \cdot w_{t-2}^2 + \xi \cdot w_{t-1}^2 \qquad (19)$$

where g_{St} is the parameter which governs stochastically[6] the ARCH process (g_1 is normalized to unity), h_t is the conditional volatility, α_i the rate of information flow parameters and ξ the leverage effect parameter. The latent variable S_t corresponds to

[6] Conventional econometric approaches might be insufficient to explain the relationship between European Financial Markets due to the forward-looking nature of investors who set prices based on their expectations.

the ‘State’ or ‘Regime’ that the ARCH process is at time t and can be described by a Markov Chain, as follows:

$$P\left(S_t = j \mid S_{t-1} = i, \ldots, y_{t-1}, y_{t-1}, \ldots\right) = P\left(S_t = j \mid S_{t-1} = i\right) \quad (20)$$

$$P = \begin{bmatrix} p_{11} & p_{21} & p_{31} \\ p_{12} & p_{22} & p_{32} \\ p_{13} & p_{23} & p_{33} \end{bmatrix}, \sum_{j}^{3} p_{ij} = 1 \quad (21)$$

where $P\ \{p_{ij}\}$ is the transition matrix of the above states.

The spillover effects which might have taken place during the IAS adoption procedure could be investigated either in a multivariate framework, among EU-12, or a bivariate level examining the UK and US effect. For that reason we apply the **Ledoit**, **Pedro** and **Wolf** (**2002**) Flexible Diagonal VECH model.

$$x_t = f(z_t) + \varepsilon_t \quad (22)$$

$$\varepsilon_t \mid \Psi_{t-1} \sim F\left[0, H_t\right] \quad (23)$$

$$H_t = \Sigma + A \cdot \left(\varepsilon_{t-1}\varepsilon_{t-1}^{'}\right) + B \cdot H_{t-1} \quad (24)$$

where the f function demeans the data, the Σ denotes the unconditional covariance matrix, and the $H_{(.)}$ represents the conditional covariance matrix.

5. Empirical Results

In **Figures 1** and **2**, are shown the levels and the returns of the major financial indices of the EU-12, the UK and the US. As is obvious, with an exception of the ATX index, there are two peak periods, in 2001 and in 2008 which are characterized by high volatility regimes. In Tables **2a**,**b** and **c** are the descriptive statistics for the whole, the pre and post IAS period. According to these statistics, the OMXH financial index is the most volatile time series, the financial indices are negatively skewed, evidence of risk averted investing profile, and their distribution is much more leptokurtic than the normal one. Tables **3a**,**b** and **c** contain the pairwise correlations between the returns of the financial indices for the whole, and the pre and post IAS periods. As is shown, the post IAS period is characterized by high correlations, indicating tighter relationships in the second sub period. More specifically, only 9% of the pairwise correlations exceeds the threshold value of *0,8* in the pre IAS period and more than 47% for the post IAS period. According to the Unit Root and Stationarity tests of **Table 4**, the time series in levels are not stationary, in contrast to their returns which do not have Unit Roots. In **Table 5** are the results of the Johansen cointegration analysis for the whole and the pre and post time periods. According to the Maximum Likelihood statistic (**λ Max**) there exist 3 common stochastic trends for the whole time periods, a result which seems to be inflated for the pre IAS period, reaching the value 5, while for the post IAS period there are only two cointegration equations. This is very interesting, since it is strong evidence of tighter cointegration structures in the post IAS time period, indicating that the informational efficiency and the direct transparency of new information due to the IAS system has improved. **Tables 6a**,**b** and **c** show the relevant informational value of the financial indices in the formulation procedure. **Figure 3**, illustrates the smoothed probabilities of the regime shifts of the MS-VECM model, according to which the short run readjustments around the common stochastic trends are governed by a non-observable variable of the structural changes. According to this figure, in the period around the obligatory adoption of the IAS (2004-2006), the second regime of the VECM model governs the system, indicating an intenseness of the short run readjustments around the equilibrium state of the financial markets, which are in line with the informational efficiency of the financial system. **Tables 7** and **8** present the coefficients A and B of the Multivariate GARCH models. According to a comparative analysis between the pre and post IAS period the rate of the accumulated new information has increased due to the adoption of the IAS structure, in contrast to the volatility persistence which is reduced. Finally according to **Figures 4** to **15**, where the SWARCH smoothed regime probabilities are shown, there is an increase in volatility in all financial indices around the date of the IAS obligatory adoption (1/1/05) in a range of one to two years, excepting the ATX index.

6. Conclusion

The objective of our paper was the investigation of the implications of the IAS harmonization on the interdependences of the EU financial markets, the informational efficiency and the spillover effects. To this end, we applied regime shift econometric methods and found evidence that the common accepted accounting platform, which was adopted obligatory in 2005, has affected the way EU financial markets inter-react with each other. More specifically, the long run equilibrium structure is better determined, due to the IAS adoption, since the cointegration vectors are reduced from five to two in the post IAS period. This is very important with many implications for international finance, because the arbitrage opportunities due to diversification benefits are eliminated. Moreover, the spillover effect dynamics show a higher rate of anticipated information, with lower persistence of volatility.

Appendix

Tables

Table 2a. Descriptive statistics for the EU-12, US & UK financial markets in returns

	ATX	BEL20	OMXH	CAC40	DAX30	FTSE20	ISEQ20	SPBMI	LUXX	AEX	PSI20	IBEX35	FTSE100	SP500
Mean	0.001375	-0.000766	-0.001785	-0.001012	-0.000539	-0.001724	-0.000873	-0.001154	-0.000310	-0.001686	-0.000894	-0.000131	-0.000768	-0.000758
Median	0.004644	0.002379	0.002902	0.001857	0.003030	-0.000137	0.003763	0.002208	0.001704	0.000948	0.000534	0.003104	0.001402	0.000958
Maximum	0.172263	0.129057	0.168428	0.123448	0.149421	0.207474	0.144709	0.186417	0.126315	0.135816	0.085059	0.118234	0.125845	0.113559
Minimum	-0.341341	-0.261109	-0.231629	-0.202068	-0.243470	-0.218591	-0.328958	-0.243455	-0.273516	-0.287546	-0.205700	-0.238266	-0.236317	-0.200837
Std. Dev.	0.034744	0.031333	0.045442	0.030532	0.036309	0.038596	0.037514	0.031993	0.034452	0.035354	0.025980	0.031478	0.027328	0.028078
Skewness	-2.298168	-1.462173	-0.641156	-0.831120	-0.618116	-0.251649	-1.746534	-1.305200	-1.811048	-1.249718	-1.434566	-1.102396	-1.185988	-0.858234
Kurtosis	24.78419	14.01975	5.533140	8.207364	8.171460	8.389638	16.41695	14.26408	17.32962	12.41098	12.72945	10.62998	15.85723	10.06843
Jarque-Bera	10367.91	2718.891	168.6118	624.9833	591.3616	612.8898	4020.520	2796.424	4569.402	1983.187	2152.203	1319.376	3575.381	1106.678
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 2b. Descriptive statistics for the EU-12, US & UK financial markets in returns for the pre IAS period

	ATX	BEL20	OMXH	CAC40	DAX30	FTSE20	ISEQ20	SPBMI	LUXX	AEX	PSI20	IBEX35	FTSE100	SP500
Mean	0.002712	-0.000499	-0.003259	-0.001666	-0.001883	-0.002420	0.001198	-0.000763	-0.000299	-0.002517	-0.001737	-0.000952	-0.001396	-0.000738
Median	0.004272	0.002358	0.001572	0.000403	0.000832	-0.002138	0.003503	0.001707	0.000365	0.000146	-0.001140	0.001604	0.001339	0.000780
Maximum	0.050319	0.129057	0.168428	0.123448	0.128874	0.207474	0.080632	0.186417	0.126315	0.135816	0.078558	0.118234	0.100695	0.074923
Minimum	-0.081942	-0.103193	-0.231629	-0.136874	-0.139190	-0.159544	-0.123690	-0.140628	-0.259954	-0.130679	-0.121329	-0.111516	-0.088644	-0.123304
Std. Dev.	0.019909	0.028792	0.053772	0.031258	0.036874	0.036162	0.027594	0.028893	0.033766	0.034615	0.023440	0.029569	0.023836	0.026231
Skewness	-0.690992	-0.197775	-0.463824	-0.175079	-0.044765	0.481329	-0.711427	0.021793	-1.456347	-0.332737	-0.449220	0.028545	-0.130082	-0.569627
Kurtosis	4.408739	6.035073	4.422858	5.330613	4.004345	8.103397	5.615132	12.34919	16.85879	4.772437	6.288741	4.073035	4.922064	5.898764
Jarque-Bera	42.35186	101.8784	31.37498	60.40377	11.05688	293.3137	96.38976	950.5760	2180.980	38.98022	126.4002	12.55697	40.91192	105.4955
Probability	0.000000	0.000000	0.000000	0.000000	0.003972	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001876	0.000000	0.000000

Table 2c. Descriptive statistics for the EU-12, US & UK financial markets in returns for the post IAS period

	ATX	BEL20	OMXH	CAC40	DAX30	FTSE20	ISEQ20	SPBMI	LUXX	AEX	PSI20	IBEX35	FTSE100	SP500
Mean	-7.31E-05	-0.001055	-0.000190	-0.000304	0.000917	-0.000970	-0.003116	-0.001578	-0.000322	-0.000786	1.97E-05	0.000758	-8.74E-05	-0.000781
Median	0.004996	0.002399	0.004578	0.002645	0.004759	0.002590	0.004450	0.004109	0.002937	0.001409	0.001786	0.004889	0.001536	0.001280
Maximum	0.172263	0.090698	0.103822	0.085000	0.149421	0.186496	0.144709	0.084688	0.105345	0.124751	0.085059	0.111005	0.125845	0.113559
Minimum	-0.341341	-0.261109	-0.179758	-0.202068	-0.243470	-0.218591	-0.328958	-0.243455	-0.273516	-0.287546	-0.205700	-0.238266	-0.236317	-0.200837
Std. Dev.	0.045678	0.033929	0.034254	0.029775	0.035707	0.041133	0.045860	0.035099	0.035250	0.036188	0.028498	0.033463	0.030701	0.030006
Skewness	-1.974288	-2.268372	-0.978984	-1.645939	-1.296593	-0.801365	-1.736058	-2.067082	-2.146328	-2.125952	-2.031669	-1.956527	-1.708480	-1.056732
Kurtosis	16.93229	17.86607	6.551316	12.09857	13.52658	8.439549	14.25086	14.35183	17.69726	19.49807	15.49333	14.92597	19.02978	12.41525
Jarque-Bera	2105.737	2425.888	165.1400	940.1056	1180.233	322.9143	1392.152	1465.635	2354.133	2914.746	1733.131	1581.971	2697.487	935.0161
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 3a. Correlations of the EU-12, US & UK financial markets in returns

	AEX	ATX	BEL20	CAC40	DAX30	FTSE100	FTSE20	IBEX35	ISEQ20	LUXX	OMXH	PSI20	SP500	SPBMI
AEX	1.000000	0.634283	0.857076	0.842694	0.880881	0.873313	0.570976	0.815389	0.681213	0.698820	0.656628	0.652051	0.762105	0.854463
ATX	0.634283	1.000000	0.643473	0.603645	0.590142	0.670355	0.551828	0.622977	0.621061	0.608878	0.408898	0.580385	0.566173	0.634869
BEL20	0.857076	0.643473	1.000000	0.739236	0.763062	0.805822	0.538566	0.734295	0.678168	0.660233	0.480465	0.597217	0.682522	0.769194
CAC40	0.842694	0.603645	0.739236	1.000000	0.837727	0.800318	0.601993	0.780165	0.634540	0.739945	0.642397	0.645269	0.729558	0.829693
DAX30	0.880881	0.590142	0.763062	0.837727	1.000000	0.849491	0.576240	0.847022	0.636773	0.655942	0.661363	0.687745	0.800291	0.847310
FTSE100	0.873313	0.670355	0.805822	0.800318	0.849491	1.000000	0.536910	0.806643	0.663266	0.644020	0.644223	0.655058	0.811573	0.842411
FTSE20	0.570976	0.551828	0.538566	0.601993	0.576240	0.536910	1.000000	0.559998	0.497411	0.529204	0.432228	0.535260	0.492114	0.558665
IBEX35	0.815389	0.622977	0.734295	0.780165	0.847022	0.806643	0.559998	1.000000	0.603795	0.639580	0.627793	0.736398	0.733199	0.843664
ISEQ20	0.681213	0.621061	0.678168	0.634540	0.636773	0.663266	0.497411	0.603795	1.000000	0.602787	0.416370	0.508851	0.593989	0.640315
LUXX	0.698820	0.608878	0.660233	0.739945	0.655942	0.644020	0.529204	0.639580	0.602787	1.000000	0.450071	0.553768	0.615381	0.705330
OMXH	0.656628	0.408898	0.480465	0.642397	0.661363	0.644223	0.432228	0.627793	0.416370	0.450071	1.000000	0.569061	0.644025	0.603223
PSI20	0.652051	0.580385	0.597217	0.645269	0.687745	0.655058	0.535260	0.736398	0.508851	0.553768	0.569061	1.000000	0.571550	0.693333
SP500	0.762105	0.566173	0.682522	0.729558	0.800291	0.811573	0.492114	0.733199	0.593989	0.615381	0.644025	0.571550	1.000000	0.748636
SPBMI	0.854463	0.634869	0.769194	0.829693	0.847310	0.842411	0.558665	0.843664	0.640315	0.705330	0.603223	0.693333	0.748636	1.000000

Table 3b. Correlations of the EU-12, US & UK (returns) for the pre IAS period

	AEX	ATX	BEL20	CAC40	DAX30	FTSE100	FTSE20	IBEX35	ISEQ20	LUXX	OMXH	PSI20	SP500	SPBMI
AEX	1.000000	0.299580	0.806947	0.830113	0.868110	0.820200	0.433580	0.781749	0.594938	0.518117	0.578745	0.532775	0.690360	0.825327
ATX	0.299580	1.000000	0.325500	0.309901	0.294967	0.299222	0.265235	0.316604	0.324590	0.247975	0.071405	0.184073	0.202394	0.252958
BEL20	0.806947	0.325500	1.000000	0.667893	0.683559	0.697634	0.324225	0.615714	0.556864	0.439735	0.308965	0.365293	0.540455	0.652008
CAC40	0.830113	0.309901	0.667893	1.000000	0.818939	0.768144	0.485549	0.761477	0.607849	0.662151	0.578106	0.532657	0.687834	0.818931
DAX30	0.868110	0.294967	0.683559	0.818939	1.000000	0.791170	0.439494	0.796496	0.579532	0.525028	0.593264	0.598479	0.735309	0.830593
FTSE100	0.820200	0.299222	0.697634	0.768144	0.791170	1.000000	0.345499	0.719426	0.529362	0.450656	0.562466	0.492737	0.741046	0.781090
FTSE20	0.433580	0.265235	0.324225	0.485549	0.439494	0.345499	1.000000	0.411716	0.306591	0.371671	0.312863	0.396927	0.331246	0.406185
IBEX35	0.781749	0.316604	0.615714	0.761477	0.796496	0.719426	0.411716	1.000000	0.489436	0.494186	0.565013	0.659106	0.634878	0.799837
ISEQ20	0.594938	0.324590	0.556864	0.607849	0.579532	0.529362	0.306591	0.489436	1.000000	0.467247	0.264825	0.295213	0.508923	0.537270
LUXX	0.518117	0.247975	0.439735	0.662151	0.525028	0.450656	0.371671	0.494186	0.467247	1.000000	0.280627	0.346630	0.458698	0.604151
OMXH	0.578745	0.071405	0.308965	0.578106	0.593264	0.562466	0.312863	0.565013	0.264825	0.280627	1.000000	0.515498	0.599549	0.507377
PSI20	0.532775	0.184073	0.365293	0.532657	0.598479	0.492737	0.396927	0.659106	0.295213	0.346630	0.515498	1.000000	0.420895	0.582730
SP500	0.690360	0.202394	0.540455	0.687834	0.735309	0.741046	0.331246	0.634878	0.508923	0.458698	0.599549	0.420895	1.000000	0.660486
SPBMI	0.825327	0.252958	0.652008	0.818931	0.830593	0.781090	0.406185	0.799837	0.537270	0.604151	0.507377	0.582730	0.660486	1.000000

Table 3c. Correlations of the EU-12, US & UK (returns) for the post IAS period

	AEX	ATX	BEL20	CAC40	DAX30	FTSE100	FTSE20	IBEX35	ISEQ20	LUXX	OMXH	PSI20	SP500	SPBMI
AEX	1.000000	0.850127	0.904987	0.858106	0.895832	0.924390	0.696754	0.847186	0.767828	0.878619	0.832830	0.756647	0.829036	0.884936
ATX	0.850127	1.000000	0.812593	0.830691	0.811511	0.839118	0.713188	0.800040	0.711450	0.832717	0.811245	0.770591	0.757643	0.819784
BEL20	0.904987	0.812593	1.000000	0.817128	0.847550	0.885186	0.712464	0.831874	0.760596	0.856719	0.783642	0.773880	0.796868	0.857993
CAC40	0.858106	0.830691	0.817128	1.000000	0.859792	0.845636	0.722833	0.804504	0.697385	0.826714	0.790001	0.759466	0.777536	0.852734
DAX30	0.895832	0.811511	0.847550	0.859792	1.000000	0.916149	0.714053	0.901877	0.719436	0.798232	0.816860	0.777654	0.870580	0.875463
FTSE100	0.924390	0.839118	0.885186	0.845636	0.916149	1.000000	0.679868	0.874131	0.742340	0.806509	0.843386	0.767384	0.866289	0.886500
FTSE20	0.696754	0.713188	0.712464	0.722833	0.714053	0.679868	1.000000	0.684419	0.623032	0.674045	0.653750	0.643732	0.626246	0.679428
IBEX35	0.847186	0.800040	0.831874	0.804504	0.901877	0.874131	0.684419	1.000000	0.690492	0.774368	0.784004	0.797684	0.816035	0.880433
ISEQ20	0.767828	0.711450	0.760596	0.697385	0.719436	0.742340	0.623032	0.690492	1.000000	0.714230	0.676635	0.636884	0.659063	0.707208
LUXX	0.878619	0.832717	0.856719	0.826714	0.798232	0.806509	0.674045	0.774368	0.714230	1.000000	0.761053	0.734141	0.758745	0.795594
OMXH	0.832830	0.811245	0.783642	0.790001	0.816860	0.843386	0.653750	0.784004	0.676635	0.761053	1.000000	0.712711	0.777667	0.813485
PSI20	0.756647	0.770591	0.773880	0.759466	0.777654	0.767384	0.643732	0.797684	0.636884	0.734141	0.712711	1.000000	0.689999	0.775993
SP500	0.829036	0.757643	0.796868	0.777536	0.870580	0.866289	0.626246	0.816035	0.659063	0.758745	0.777667	0.689999	1.000000	0.818041
SPBMI	0.884936	0.819784	0.857993	0.852734	0.875463	0.886500	0.679428	0.880433	0.707208	0.795594	0.813485	0.775993	0.818041	1.000000

Table 4. Unit Root tests: ADF (H_0: has a unit root) & KPSS (H_0: stationarity)

Unit Root & Stationarity Tests for the EM-12, US & UK financial markets												
	whole sample 01/01/00-14/08/09				**pre IAS sample 01/01/00-01/01/05**				**post IAS sample 01/01/05-14/08/09**			
	ADF*		**KPSS****		**ADF***		**KPSS****		**ADF***		**KPSS****	
	level	**1st d**	**level**	**1st d**	**level**	**1st d**	**level**	**1st d**	**level**	**1st d**	**level**	**1st d**
ATX	-0,469	-21,611	0,302	0,176	0,604	-15,929	0,445	0,101	-1,481	-15,129	0,431	0,080
BEL20	-1,030	-22,196	0,292	0,223	-1,079	-13,076	0,328	0,082	-1,325	-9,262	0,456	0,115
OMX	-2,125	-24,057	0,412	0,110	-2,005	-17,583	0,440	0,042	-1,131	-15,546	0,429	0,105
CAC40	0,837	-23,055	0,384	0,155	-1,196	-16,943	0,419	0,103	-1,526	-15,647	0,459	0,09
DAX	-1,688	-22,848	0,441	0,134	-1,050	-15,375	0,414	0,085	-1,346	-16,854	0,425	0,082
ATHEX20	0,595	-20,916	0,346	0,284	-1,266	-13,420	0,507	0,037	-1,286	-14,510	0,431	0,094
ISEQ20	-0,555	-23,845	0,317	0,170	-1,316	-15,434	0,260	0,137	-1,354	-17,451	0,454	0,162
S&P/MIB	-1,125	-21,520	0,320	0,168	-0,903	-14,115	0,435	0,089	-1,481	-9,548	0,461	0,112
LUXX	-1,268	-12,642	0,310	0,164	-0,512	-14,625	0,438	0,096	-1,233	-8,336	0,438	0,096
AEX	-1,641	-22,058	0,408	0,136	-1,473	-16,184	0,350	0,087	-1,383	-9,043	0,444	0,074
PSI-20	-1,458	-20,051	0,368	0,161	-0,557	-13,965	0,490	0,062	-0,960	-8,887	0,431	0,121
IBEX-35	-1,766	-14,505	0,346	0,157	-1,038	-15,636	0,476	0,034	-1,494	-9,729	0,437	0,105
FTSE-100	0,521	-24,354	0,372	0,139	-1,505	-17,001	0,411	0,062	-1,798	-17,338	0,444	0,067
S&P500	0,657	-24,376	0,302	0,124	-1,315	-18,379	0,460	0,064	-1,362	-16,257	0,414	0,088
* crit.values:	-3,976 (1%), -3,418 (5%), -3,131 (10%)				-3,993 (1%), --3,427 (5%), -3,136 (10%)				-3,996 (1%), -3,428 (5%), -3,137 (10%)			
** **crit.values**:	0,216 (1%), 0,146 (5%), 0,119 (10%)				0,216 (1%), 0,146 (5%), 0,119 (10%)				0,216 (1%), 0,146 (5%), 0,119 (10%)			

Table 5. Cointegration Analysis

Johansen's Cointegration Test for the EU-12, US & UK financial markets												
	whole sample 01/01/2000 - 14/08/2010				**pre IAS period 01/01/2000 - 01/01/2005**				**post IAS period 01/01/2005 - 14/08/2009**			
	λ Trace		**λ Max**		**λ Trace**		**λ Max**		**λ Trace**		**λ Max**	
	critical values	**L**	**critical values**	**L**	**critical values**	**L**	**critical values**	**L**	**critical values**	**L**	**critical values**	**L**
λ<1 (*5*%), (*1*%)*	-	587,150	-	111,722	-	696,214	-	119,336	-	412,812	-	78,519
λ<2 (*5*%), (*1*%)*	-	475,428	-	84,682	-	576,878	-	112,156	*(295,99), (312,58)*	334,292	*(71,68), (78,51)*	73,938
λ<3 (*5*%), (*1*%)*	-	390,745	-	67,899	-	464,722	-	98,804	*(250,84), (263,94)*	260,354	*(66,10), (72,96)*	**51,450**
λ<4 (*5*%), (*1*%)*	*(295,99), (312,58)*	322,846	*(71,68), (78,51)*	**57,772**	*(295,99), (312,58)*	365,917	*(71,68), (78,51)*	80,914	*(208,97), (222,46)*	**208,903**	*(60,29), (66,91)*	46,872
λ<5 (*5*%), (*1*%)*	*(250,84), (263,94)*	265,073	*(66,10), (72,96)*	50,043	*(250,84), (263,94)*	285,002	*(66,10), (72,96)*	63,230	*(170,80), (182,51)*	162,031	*(54,25), (60,81)*	37,778
λ<6 (*5*%), (*1*%)*	*(208,97), (222,46)*	215,030	*(60,29), (66,91)*	47,585	*(208,97), (222,46)*	221,771	*(60,29), (66,91)*	**60,208**	*(136,61), (146,99)*	124,253	*(48,45), (54,48)*	33,367
λ<7 (*5*%), (*1*%)*	*(170,80), (182,51)*	**167,445**	*(54,25), (60,81)*	37,994	*(170,80), (182,51)*	**161,563**	*(54,25), (60,81)*	41,857	*(104,94), (114,36)*	90,885	*(42,48), (48,17)*	26,129
λ<8 (*5*%), (*1*%)*	*(136,61), (146,99)*	129,451	*(48,45), (54,48)*	30,949	*(136,61), (146,99)*	119,705	*(48,45), (54,48)*	37,851	*(77,74), (85,78)*	64,755	*(36,41), (41,58)*	24,568

* Osterwald Lennum 1992 crit. Values

Table 6a. Vector Error Correction Model for the whole period

Error Correction:	D(AEX)	D(ATX)	D(BEL20)	D(CAC40)	D(DAX30)	D(FTSE100)	D(FTSE20)	D(IBEX35)	D(ISEQ20)	D(LUXX)	D(OMXH)	D(PSI20)	D(SP500)	D(SPBMI)
CointEq1	0.028807	0.394117	-0.038864	0.641661	1.035407	1.021390	-0.309747	1.541833	0.082353	0.070587	5.366474	1.192778	0.098896	0.074688
CointEq2	-0.002437	-0.005166	0.000614	-0.029307	-0.039289	-0.013464	0.010427	-0.071919	0.004419	-0.005853	-0.109584	-0.048797	-0.003380	-0.002853
CointEq3	0.002472	0.015736	0.000390	0.031807	0.056556	0.047829	-0.016678	0.101382	-0.002504	0.001431	0.192084	0.071202	0.006410	0.004288
D(AEX(-1))	0.067835	1.511234	1.962405	1.797328	2.891996	2.379416	0.553360	3.773163	0.194497	0.740516	0.286583	0.060808	0.663184	0.084128
D(AEX(-2))	-0.160614	0.532152	-0.280341	-1.337158	-0.949401	-1.652226	-1.080847	-1.819564	-0.088857	0.237977	-4.758947	-2.560156	-0.156524	-0.092799
D(ATX(-1))	0.013445	-0.006109	0.141818	0.032467	0.134827	0.170868	0.003265	0.016577	0.011240	0.045968	0.566591	0.035698	0.043060	-0.000403
D(ATX(-2))	0.010674	-0.072384	0.051626	0.035163	0.037258	-0.061149	0.042929	-0.010300	-0.004357	0.007079	0.314927	-0.006370	-0.025082	0.006285
D(BEL20(-1))	-0.005358	-0.042530	-0.111306	-0.030802	-0.097605	-0.084046	0.056663	-0.392942	0.024973	-0.001808	-0.604606	-0.023146	-0.030242	-0.009484
D(BEL20(-2))	-0.007923	0.056761	-0.090049	0.171688	-0.074322	0.029811	0.081973	-0.056698	0.026435	-0.017949	0.849252	0.057548	0.003581	0.001267
D(CAC40(-1))	-0.008032	-0.168967	-0.120955	-0.566914	-0.225063	-0.171288	-0.130520	-0.097720	-0.006297	-0.080807	-0.468288	-0.406898	-0.042360	-0.012701
D(CAC40(-2))	0.008223	-0.153841	0.017101	-0.129872	-0.053675	-0.072496	-0.034993	-0.087276	0.003747	-0.043817	0.228610	-0.014027	-0.007309	0.002080
D(DAX30(-1))	0.006281	0.054016	-0.041557	0.218048	-0.029171	0.039339	0.042361	0.188160	-0.000519	0.036829	0.291748	0.172247	0.013438	0.012677
D(DAX30(-2))	-0.014367	-0.067623	-0.091663	-0.048125	-0.134743	-0.047498	-0.039010	-0.549114	-0.039514	-0.029354	-0.355355	-0.199749	-0.023314	-0.003487
D(FTSE100(-1))	0.000382	-0.015202	0.019004	0.046864	-0.089871	-0.041528	-0.064785	-0.048898	-0.017705	-0.022074	0.005021	-0.137406	0.041071	0.001154
D(FTSE100(-2))	0.008421	-0.031446	-0.024280	0.102383	0.132975	0.125887	0.005095	0.169865	-0.030501	-0.063346	0.266178	0.212736	0.032129	0.008351
D(FTSE20(-1))	3.34E-05	0.063311	0.084765	0.085672	-0.022083	-0.035367	0.001982	0.311022	-0.004935	0.017159	-0.484998	0.086105	-0.013052	-0.002513
D(FTSE20(-2))	-0.024649	-0.000489	-0.048118	-0.337557	-0.352437	-0.250498	-0.113934	-0.438021	-0.033616	-0.023346	-1.392944	-0.320818	-0.044777	-0.023621
D(IBEX35(-1))	-0.015220	-0.080053	-0.114165	-0.144034	-0.156866	-0.169224	-0.001191	-0.265336	-0.019660	-0.049556	-0.217321	-0.049898	-0.025929	-0.008109
D(IBEX35(-2))	-0.000398	0.023756	0.013852	0.017691	0.032436	0.006775	0.013280	0.157070	0.015980	0.007213	-0.046044	0.060848	0.006022	0.001991
D(ISEQ20(-1))	-0.035745	-0.232250	-0.302367	-0.456961	-0.500529	-0.268764	-0.060745	-1.156939	-0.235647	-0.147364	0.126114	-0.158288	0.002756	-0.022331
D(ISEQ20(-2))	-0.017201	-0.002914	-0.174207	-0.338488	-0.269758	-0.075785	-0.061769	-0.156835	-0.173045	-0.021399	-1.598466	-0.038757	-0.034188	-0.015373
D(LUXX(-1))	-0.011477	0.175603	0.026998	0.032893	-0.013954	-0.289638	0.046936	0.437203	0.042003	-0.012370	-1.190258	-0.063171	-0.039972	0.003179
D(LUXX(-2))	0.009608	0.458525	0.149306	0.175498	0.473698	0.324825	0.019583	0.946482	0.029728	0.106296	0.257380	0.511019	0.081788	0.012753
D(OMXH(-1))	-0.004865	-0.006832	-0.030545	-0.010917	-0.018101	-0.045389	0.021111	-0.088280	-0.002116	0.001006	-0.092017	0.030281	-0.006069	-0.001102
D(OMXH(-2))	-0.002347	-0.001538	-0.003657	-0.008644	-0.057522	-0.008033	0.004518	-0.084423	-0.000620	-0.000486	-0.053508	-0.017679	-0.002329	-0.001251
D(PSI20(-1))	0.011858	0.025150	0.064846	0.086821	0.089652	0.098438	0.022167	0.160381	0.000702	0.032032	0.001473	0.085070	0.003707	0.007805
D(PSI20(-2))	0.001898	-0.012480	-0.020240	0.007119	0.042572	0.054654	0.005700	0.067969	-0.008050	0.010028	0.067305	0.094787	0.001707	-0.000295
D(SP500(-1))	0.075853	0.976211	0.704882	0.470644	1.340386	1.385306	0.116379	1.806286	0.265001	0.170364	2.091711	0.761940	-0.088953	0.019188
D(SP500(-2))	0.103428	0.596402	0.788183	0.580766	0.892304	0.812280	0.324713	2.357965	0.311313	0.371485	0.440787	0.891518	0.049296	0.030224
D(SPBMI(-1))	0.161491	-0.853651	0.546540	3.774738	1.970222	1.054520	-0.227553	-1.653789	0.101918	0.492512	9.882793	4.262321	0.018142	0.108691
D(SPBMI(-2))	0.228597	0.685254	1.166452	1.955866	3.052868	0.869878	1.606799	4.987301	0.534108	0.869862	10.06903	3.131511	0.491083	0.102687
C	-1.518923	11.81587	1.314362	-5.181576	-17.28191	-9.153951	-7.299498	-11.39041	3.701844	1.553729	-64.81125	-24.13700	-1.580993	0.035777
R-squared	0.103684	0.135793	0.135585	0.192679	0.110526	0.147023	0.133830	0.143088	0.130475	0.180293	0.137426	0.104479	0.085026	0.125234
Adj. R-squared	0.042266	0.076576	0.076353	0.137359	0.049577	0.088575	0.074478	0.084370	0.070893	0.124125	0.078321	0.043116	0.022330	0.065293
Sum sq. resids	80787.93	3511252.	3034766.	6555707.	14130443	7557088.	1741689.	38866632	365350.3	864177.4	86896352	22582946	442605.9	35094.83
S.E. equation	13.15270	86.71068	80.61282	118.4817	173.9480	127.2093	61.06984	288.4895	27.97025	43.01729	431.3624	219.9034	30.78578	8.668883
F-statistic	1.688174	2.293124	2.289049	3.483011	1.813419	2.515452	2.254844	2.436875	2.189842	3.209871	2.325093	1.702628	1.356153	2.089279
Log likelihood	-1980.713	-2923.688	-2887.228	-3079.779	-3271.778	-3115.316	-2748.409	-3524.729	-2357.970	-2573.201	-3725.874	-3388.994	-2405.926	-1772.270
Akaike AIC	8.054852	11.82675	11.68091	12.45112	13.21911	12.59327	11.12563	14.23092	9.563881	10.42480	15.03550	13.68797	9.755704	7.221078
Schwarz SC	8.333016	12.10492	11.95908	12.72928	13.49728	12.87143	11.40380	14.50908	9.842045	10.70297	15.31366	13.96614	10.03387	7.499242
Mean dependent	-0.735160	2.367220	-1.708520	-4.294240	-3.728220	-3.888420	-3.005300	-0.564200	-0.524200	-0.481960	-17.30588	-9.195480	-0.922140	-0.334640
S.D. dependent	13.43979	90.23435	83.87858	127.5664	178.4272	133.2473	63.47948	301.4880	29.01773	45.96443	449.3165	224.8030	31.13536	8.966549

Table 6b. Vector Error Correction Model for the pre IAS period

Error Correction:	D(AEX)	D(ATX)	D(BEL20)	D(CAC40)	D(DAX30)	D(FTSE100)	D(FTSE20)	D(IBEX35)	D(ISEQ20)	D(LUXX)	D(OMXH)	D(PSI20)	D(SP500)	D(SPBMI)
CointEq1	-0.305275	-0.120710	-1.141170	-1.390365	-0.653897	-2.669227	-1.509246	-3.412204	-0.545359	-0.518329	-0.912990	-0.654941	-0.847756	-0.121831
CointEq2	0.008218	-0.034744	0.007045	0.213958	0.118011	-0.124778	0.082878	0.547643	-0.008370	0.070482	0.251486	0.418382	-0.010204	0.007171
CointEq3	-0.004664	0.010516	-0.015413	-0.102563	-0.224516	0.181202	-0.021280	-0.238585	-0.003576	-0.045056	-0.330417	-0.057978	0.004107	0.000139
CointEq4	0.027175	-0.006863	0.039144	0.040908	0.138065	0.304996	0.016436	0.331769	0.036832	-0.034309	0.645493	0.016621	0.093726	0.013887
CointEq5	0.008292	0.003236	0.037817	0.079003	-0.120990	0.114017	0.094066	0.036867	0.018624	0.050290	-0.136481	0.148016	0.015029	0.004016
D(AEX(-1))	0.147965	0.567082	2.344486	2.137879	1.671636	3.037456	0.717040	5.261065	0.306886	0.645779	-6.348713	-0.868480	0.671729	0.184176
D(AEX(-2))	-0.119238	0.074397	1.039097	-1.056629	-0.851733	-0.912425	-1.338810	0.765200	0.232227	0.402346	-9.873160	-4.868178	-0.146836	-0.047781
D(ATX(-1))	-0.037485	-0.127127	0.080334	-0.418899	-0.579049	-0.387688	-0.188516	-0.270027	-0.007477	-0.099290	-1.912816	-0.553674	-0.023500	-0.015588
D(ATX(-2))	0.019181	-0.012220	-0.084866	-0.024782	-0.033478	-0.058108	-0.107627	0.140923	-0.036187	-0.062332	1.243794	0.426194	0.041270	0.018653
D(BEL20(-1))	0.021694	0.042407	-0.102431	0.149655	0.309282	-0.029995	0.059110	-0.076111	0.041301	0.062019	0.520831	-0.089341	0.029015	-0.000688
D(BEL20(-2))	-0.001163	-0.032012	-0.305477	0.161335	0.041400	0.077672	0.125412	-0.304716	-0.028239	-0.059340	2.175457	0.199335	0.060277	-0.001835
D(CAC40(-1))	-0.026184	0.002446	-0.172040	-0.598517	-0.348862	-0.235581	-0.211118	-0.547712	-0.050965	-0.125571	-0.897145	-0.443246	-0.103361	-0.018966
D(CAC40(-2))	0.019058	0.008890	0.148853	-0.121344	0.174521	-0.068619	-0.041899	-0.049915	0.001128	-0.055311	0.320793	0.050972	0.000251	0.004526
D(DAX30(-1))	0.002513	-0.009285	-0.063153	0.055360	-0.073001	-0.042891	-0.013478	0.252300	-0.002619	0.007346	0.426085	0.277236	0.014281	0.007844
D(DAX30(-2))	-0.014162	-0.009670	-0.076561	-0.068827	-0.076784	-0.041209	-0.036109	-0.394801	-0.016749	-0.015336	-0.351404	-0.045061	-0.010884	-0.003613
D(FTSE100(-1))	-0.023287	-0.077695	-0.047152	-0.016808	-0.390898	-0.125793	-0.087031	-0.483360	-0.059349	-0.001537	-0.754121	-0.148250	0.000676	-0.014287
D(FTSE100(-2))	-0.014887	0.005309	-0.019769	-0.027852	-0.192047	0.018808	-0.007231	-0.016371	-0.027260	-0.056626	-0.248486	0.087307	-0.005310	0.000505
D(FTSE20(-1))	0.005657	0.024568	0.163765	0.100192	0.022634	0.063883	0.097402	0.346074	0.029040	0.016065	-0.606616	-0.335288	-0.017352	-0.004332
D(FTSE20(-2))	-0.044654	0.015833	-0.078940	-0.433553	-0.581495	-0.338726	-0.143748	-0.482393	-0.046643	-0.026382	-2.634306	-0.478773	-0.092525	-0.031453
D(IBEX35(-1))	-0.007041	-0.011661	-0.062192	-0.056195	0.002651	-0.078653	0.099112	0.036327	-0.005410	0.011343	0.027837	0.273517	-0.006987	-0.001271
D(IBEX35(-2))	-0.007776	-0.009640	-0.042995	0.029718	-0.047169	-0.058732	-0.014679	-0.004495	0.008451	0.018289	-0.290049	0.021378	-0.015893	-0.002026
D(ISEQ20(-1))	0.023931	-0.144348	0.133530	0.111696	0.412541	0.175554	0.256800	0.718226	-0.111950	-0.017525	3.440784	0.710643	0.141768	0.016853
D(ISEQ20(-2))	-0.018007	-0.008055	-0.226318	0.023665	-0.246885	0.132131	0.209240	0.641722	-0.052630	0.084663	-2.264102	0.390586	-0.118424	-0.009567
D(LUXX(-1))	-0.029637	-0.010019	-0.135291	-0.061154	-0.432817	-0.666282	0.041773	0.045958	0.004129	-0.031800	-2.949982	-0.190558	-0.102775	-0.002721
D(LUXX(-2))	-0.034394	0.011555	-0.176426	0.146043	-0.154018	0.061058	-0.157543	0.449541	-0.077373	0.058946	-0.172313	0.185225	0.042764	-0.001244
D(OMXH(-1))	-0.005284	-0.008485	-0.034502	-0.012849	-0.020053	-0.069049	0.022184	-0.068359	-0.007267	0.000820	-0.050772	0.012049	-0.006974	-0.001013
D(OMXH(-2))	-0.001696	-0.004640	-0.010388	0.008941	-0.044469	-0.002535	0.012587	-0.051834	-0.004238	0.002962	-0.003044	0.012652	0.000920	-0.000611
D(PSI20(-1))	0.017361	0.012631	0.068150	0.127666	0.153173	0.135071	-0.022587	0.180317	0.007305	0.032848	-0.098441	-0.023498	0.012653	0.011026
D(PSI20(-2))	0.002445	-0.008391	-0.023939	-0.025022	0.042803	0.051482	0.013425	0.046104	-0.003520	0.010329	0.394898	0.124615	0.010968	-0.001474
D(SP500(-1))	0.046012	0.274799	0.167077	-0.193856	0.663608	0.823906	-0.395410	-0.320393	0.223609	-0.270606	1.492331	-0.812929	-0.131197	-0.038246
D(SP500(-2))	0.127273	0.196166	0.540661	0.387527	0.790801	0.712816	-0.017240	1.155979	0.218572	0.097728	-0.296870	-0.026158	0.071072	0.021436
D(SPBMI(-1))	0.253170	0.298741	1.303624	5.625357	5.732212	2.584974	0.533839	3.488195	0.455009	0.707598	20.07196	4.298159	0.510919	0.185247
D(SPBMI(-2))	0.395214	0.142315	0.352943	2.546938	4.861737	1.191931	2.811197	7.226634	0.204138	0.600406	19.69876	5.360634	0.443647	0.194035
C	-3.254162	-5.570375	-16.55633	-19.55977	-44.25629	-30.57866	-22.65298	-48.63745	-0.482469	-4.758370	-153.6517	-63.10591	-7.152586	-1.552478
R-squared	0.185956	0.248767	0.266506	0.249009	0.166515	0.233806	0.294542	0.221946	0.188734	0.386594	0.261911	0.227118	0.262421	0.203587
Adj. R-squared	0.062395	0.134741	0.155172	0.135020	0.040004	0.117508	0.187464	0.103849	0.065596	0.293487	0.149879	0.109806	0.150467	0.082703
Sum sq. resids	44144.01	144578.2	906657.6	3504259.	5977580.	2771681.	699911.3	12035935	104687.2	230759.6	62387908	8835275.	176199.8	16130.48
S.E. equation	14.03821	25.40548	63.62058	125.0760	163.3574	111.2366	55.89816	231.8013	21.61836	32.09637	527.7475	198.6031	28.04650	8.485934
F-statistic	1.504978	2.181662	2.393757	2.184489	1.316212	2.010412	2.750716	1.879350	1.532699	4.152172	2.337830	1.936012	2.344003	1.684151
Log likelihood	-1032.926	-1186.560	-1424.315	-1599.395	-1668.553	-1569.024	-1390.799	-1759.187	-1144.752	-1247.108	-1972.276	-1719.153	-1212.175	-902.5522
Akaike AIC	8.246532	9.432895	11.26884	12.62081	13.15485	12.38628	11.01003	13.85473	9.110051	9.900451	15.50020	13.54558	9.630693	7.239785
Schwarz SC	8.727184	9.913547	11.74949	13.10146	13.63550	12.86694	11.49068	14.33538	9.590704	10.38110	15.98085	14.02623	10.11135	7.720438
Mean dependent	-1.187336	4.733822	-0.756293	-7.247645	-11.26309	-7.119228	-4.555714	-8.120463	1.026757	-0.558224	-32.33359	-17.89181	-0.977761	-0.244131
S.D. dependent	14.49780	27.31205	69.21713	134.4841	166.7263	118.4111	62.01206	244.8642	22.36431	38.18527	572.3818	210.4959	30.42905	8.860223

Table 6c. Vector Error Correction Model for the post IAS period

Error Correction:	D(AEX)	D(ATX)	D(BEL20)	D(CAC40)	D(DAX30)	D(FTSE100)	D(FTSE20)	D(IBEX35)	D(ISEQ20)	D(LUXX)	D(OMXH)	D(PSI20)	D(SP500)	D(SPBMI)
CointEq1	-0.026274	-0.162659	-0.223704	-0.144490	-0.736054	-0.438723	-0.034118	-1.074202	-0.027418	-0.081197	-0.544835	-0.217231	-0.108938	-0.038930
CointEq2	0.003508	0.022507	0.029487	0.020946	0.083875	0.051177	0.006123	0.121009	0.000977	0.010528	0.041881	0.022773	0.011938	0.004310
D(AEX(-1))	-0.088698	1.044082	0.260766	0.512465	1.544672	-0.105124	0.347868	-1.155188	-0.434160	-0.094599	8.205003	0.781703	0.486807	-0.028942
D(AEX(-2))	-0.021815	1.733860	0.725850	0.067800	-0.384765	-0.193379	1.199032	1.529819	-0.247633	0.184462	1.524144	1.414393	0.522950	0.137910
D(ATX(-1))	0.003187	-0.113277	0.005245	0.044537	0.085320	0.095976	-0.028645	-0.057269	0.027903	0.046300	0.132186	-0.251509	0.015744	-0.007223
D(ATX(-2))	-0.003838	-0.189007	-0.092171	-0.114980	-0.239910	-0.271672	-0.005258	-0.297124	-0.001197	-0.023964	-0.000407	-0.305606	-0.054020	-0.008672
D(BEL20(-1))	-0.001202	-0.062533	-0.043538	0.125367	0.496670	0.093586	0.057371	0.459048	0.001468	0.025862	-0.673056	0.182125	-0.003551	0.015190
D(BEL20(-2))	0.026276	0.277086	0.206627	0.496464	0.524196	0.366053	0.086011	1.304778	0.102672	0.144789	0.748976	0.375521	0.042790	0.041173
D(CAC40(-1))	-0.021847	-0.509543	-0.231728	-0.815983	-0.626828	-0.408433	-0.158350	-0.589686	-0.009915	-0.096918	-1.087903	-0.411686	-0.087934	-0.037076
D(CAC40(-2))	-0.005926	-0.259380	-0.066408	-0.213276	-0.286814	-0.007090	-0.011095	-0.152561	0.015359	-0.024039	-0.245259	0.104150	-0.024260	0.000431
D(DAX30(-1))	0.020143	0.274091	0.128388	0.422042	0.356046	0.305940	0.136264	0.401619	-0.001282	0.057973	0.137616	-0.034236	0.052373	0.024664
D(DAX30(-2))	-0.007073	-0.053352	-0.027821	-0.055113	-0.139142	0.005542	-0.047467	-0.656464	-0.078817	-0.078372	-0.289530	-0.528007	-0.013377	-0.003382
D(FTSE100(-1))	-0.000657	-0.006041	0.052984	0.027149	0.091744	-0.142965	0.005361	0.477311	0.010388	0.006648	0.011349	-0.195088	0.015373	0.020261
D(FTSE100(-2))	0.012729	-0.029921	-0.051463	0.180243	0.425979	0.136407	0.052847	0.330375	-0.024663	-0.008878	0.173943	0.402363	0.024698	0.011349
D(FTSE20(-1))	0.006964	0.244357	0.057442	0.228680	0.089863	-0.103720	-0.106960	0.465666	-0.068809	0.115693	0.189771	0.885032	0.009278	0.005045
D(FTSE20(-2))	-0.002167	0.001399	-0.070921	-0.007606	0.003874	-0.259797	-0.084947	-0.231401	-0.072233	0.006349	-0.281980	-0.124553	-0.044985	-0.007310
D(IBEX35(-1))	-0.021983	-0.173518	-0.166282	-0.187082	-0.276755	-0.245024	-0.074539	-0.426313	-0.026406	-0.082486	-0.262552	-0.196194	-0.041342	-0.013254
D(IBEX35(-2))	-0.000707	0.038500	0.008333	0.025559	0.018797	0.015357	0.034741	0.243597	0.020305	-0.000507	0.190919	0.154037	0.005809	0.004350
D(ISEQ20(-1))	-0.039333	-0.277889	-0.474898	-0.509118	-0.788595	-0.487038	-0.053276	-1.558928	-0.316464	-0.108395	-0.662920	-0.320066	-0.051414	-0.028056
D(ISEQ20(-2))	-0.027663	-0.126747	-0.314727	-0.486294	-0.479803	-0.327235	-0.137239	-0.721640	-0.273708	-0.119982	-1.027783	-0.252585	-0.030028	-0.026585
D(LUXX(-1))	0.020626	0.207610	0.243979	0.055727	-0.272017	0.153288	-0.003701	0.166121	0.068305	-0.000135	-0.427515	-0.119771	0.035457	-0.007215
D(LUXX(-2))	0.024827	0.578681	0.108717	-0.062973	0.243991	0.210809	-0.079686	0.108419	0.064569	0.083037	-0.121604	0.457529	0.056553	-0.019854
D(OMXH(-1))	0.006446	0.072147	0.042251	0.094365	0.126920	0.126060	0.027631	0.146535	0.034622	0.026494	0.222055	0.308204	0.031829	0.006676
D(OMXH(-2))	-0.016163	-0.130590	-0.100938	-0.121175	-0.172165	-0.138478	-0.107612	-0.409728	-0.025912	-0.045406	-0.331943	-0.164950	-0.033614	-0.009322
D(PSI20(-1))	0.006559	0.053097	0.053298	0.002755	-0.018296	0.042657	0.047572	0.018323	-0.004231	0.015451	0.128016	0.065566	0.001281	0.001650
D(PSI20(-2))	0.004668	-0.029448	0.003383	0.034532	0.086351	0.061297	0.001821	0.058809	-0.006625	0.006352	-0.113033	-0.017212	-0.001144	0.000141
D(SP500(-1))	0.168600	1.748362	1.216010	1.248319	2.139514	2.114773	0.720379	4.335965	0.425555	0.679869	4.490720	3.110652	0.106250	0.080679
D(SP500(-2))	0.071191	0.633718	0.489118	0.266960	0.489470	0.411605	0.454193	2.030538	0.368995	0.539818	1.663530	1.308918	-0.004866	-0.001968
D(SPBMI(-1))	0.025239	-1.249238	0.604936	0.838425	-3.060572	-0.612656	-0.912262	-9.599317	0.165093	-0.480190	-3.401247	-2.044169	-0.460623	-0.070824
D(SPBMI(-2))	0.167136	2.761781	3.920367	2.734435	4.094333	2.679822	1.115855	5.818493	1.339377	1.131197	5.148329	1.871592	1.063149	0.013149
C	1.898858	26.69484	16.05365	21.95326	30.00499	17.28427	12.33655	53.27366	4.240679	11.00130	70.98698	34.02713	2.438784	1.179621
R-squared	0.277477	0.276927	0.291724	0.300178	0.309155	0.288983	0.257757	0.303955	0.238084	0.274392	0.293112	0.244992	0.248682	0.286742
Adj. R-squared	0.169274	0.168641	0.185654	0.195373	0.205696	0.182502	0.146600	0.199716	0.123981	0.165727	0.187249	0.131924	0.136166	0.179926
Sum sq. resids	25829.59	2793245.	1605814.	2412753.	5991721.	3721387.	753330.9	20779621	220103.8	491869.9	11370422	10344305	183489.3	14155.85
S.E. equation	11.17053	116.1634	88.07698	107.9621	170.1338	134.0810	60.32644	316.8354	32.60833	48.74611	234.3706	223.5453	29.77284	8.269566
F-statistic	2.564395	2.557365	2.750287	2.864172	2.988170	2.713944	2.318850	2.915949	2.086566	2.525102	2.768794	2.166754	2.210187	2.684440
Log likelihood	-898.7224	-1458.393	-1392.241	-1440.894	-1549.593	-1492.677	-1301.794	-1698.202	-1154.761	-1250.852	-1626.149	-1614.847	-1133.018	-826.8559
Akaike AIC	7.788472	12.47191	11.91834	12.32547	13.23509	12.75880	11.16146	14.47868	9.931050	10.73517	13.87572	13.78114	9.749108	7.187079
Schwarz SC	8.253940	12.93738	12.38381	12.79094	13.70055	13.22427	11.62692	14.94415	10.39652	11.20063	14.34119	14.24661	10.21458	7.652547
Mean dependent	-0.270753	-0.148159	-2.864226	-1.234854	4.505230	-0.446904	-1.628954	7.852720	-2.349833	-0.420209	-1.185439	-0.213891	-0.754937	-0.449247
S.D. dependent	12.25588	127.4017	97.60180	120.3577	190.8961	148.2941	65.30272	354.1698	34.83949	53.36859	259.9707	239.9311	32.03354	9.131795

Table 7a The A coefficient of the Flexible Multivariate GARCH model for the whole sample

Flexible Diagonal VECH model - the A coefficient (whole period)														
	ATX	**BEL**	**OMX**	**CAC**	**DAX**	**Athex**	**ISEQ**	**SP/MIB**	**LuxX**	**AEX**	**PSI**	**IBEX**	**FTSE100**	**S&P500**
ATX	**0,111**	0,109	0,059	0,076	0,083	0,090	0,086	0,097	0,095	0,088	0,099	0,091	0,098	0,044
BEL		**0,134**	0,067	0,076	0,096	0,099	0,099	0,114	0,109	0,104	0,107	0,108	0,116	0,075
OMX			**0,035**	0,045	0,050	0,053	0,052	0,058	0,056	0,054	0,058	0,056	0,060	0,035
CAC				**0,089**	0,056	0,073	0,070	0,065	0,081	0,070	0,075	0,063	0,070	0,025
DAX					**0,094**	0,071	0,073	0,085	0,074	0,054	0,080	0,079	0,085	0,057
Athex						**0,100**	0,076	0,085	0,080	0,081	0,083	0,080	0,087	0,041
ISEQ							**0,089**	0,085	0,083	0,080	0,082	0,082	0,088	0,053
SP/MIB								**0,100**	0,089	0,089	0,097	0,096	0,102	0,066
LuxX									**0,117**	0,088	0,086	0,081	0,092	0,045
AEX										**0,103**	0,090	0,087	0,093	0,053
PSI											**0,110**	0,095	0,097	0,055
IBEX												**0,093**	0,097	0,064
FTSE100													**0,105**	0,068
S&P500														**0,068**

Table 7b The A coefficient of the Flexible Multivariate GARCH model for the pre IAS period

Flexible Diagonal VECH model - the A coefficient (pre IAS period)														
	ATX	**BEL**	**OMX**	**CAC**	**DAX**	**Athex**	**ISEQ**	**SP/MIB**	**LuxX**	**AEX**	**PSI**	**IBEX**	**FTSE100**	**S&P500**
ATX	**0,083**	0,078	-0,009	0,064	0,052	0,065	0,069	0,059	0,074	0,067	0,059	0,061	0,036	0,020
BEL		**0,161**	-0,017	0,078	0,113	0,114	0,095	0,114	0,066	0,126	0,090	0,107	0,065	0,076
OMX			**0,034**	-0,002	-0,016	-0,007	-0,013	-0,028	0,005	-0,014	-0,007	-0,011	-0,057	-0,007
CAC				**0,086**	0,053	0,079	0,062	0,053	0,086	0,072	0,048	0,060	0,027	0,030
DAX					**0,089**	0,072	0,065	0,085	0,026	0,090	0,068	0,079	0,051	0,066
Athex						**0,152**	0,065	0,061	0,065	0,095	0,061	0,069	0,040	0,024
ISEQ							**0,083**	0,073	0,069	0,078	0,057	0,067	0,045	0,036
SP/MIB								**0,094**	0,043	0,090	0,070	0,081	0,070	0,061
LuxX									**0,141**	0,060	0,041	0,051	0,015	0,003
AEX										**0,102**	0,074	0,087	0,052	0,060
PSI											**0,081**	0,070	0,034	0,041
IBEX												**0,078**	0,044	0,055
FTSE100													**0,104**	0,028
S&P500														**0,066**

Table 7c The A coefficient of the Flexible Multivariate GARCH model for the post IAS period

Flexible Diagonal VECH model - the A coefficient (post IAS period)														
	ATX	**BEL**	**OMX**	**CAC**	**DAX**	**Athex**	**ISEQ**	**SP/MIB**	**LuxX**	**AEX**	**PSI**	**IBEX**	**FTSE100**	**S&P500**
ATX	**0,143**	0,111	0,108	0,102	0,121	0,113	0,087	0,055	0,117	0,124	0,140	0,119	0,054	0,067
BEL		**0,119**	0,090	0,079	0,102	0,091	0,053	-0,002	0,100	0,105	0,114	0,118	0,092	0,064
OMX			**0,089**	0,074	0,097	0,089	0,068	0,040	0,092	0,100	0,111	0,097	0,047	0,060
CAC				**0,117**	0,083	0,089	0,064	0,041	0,095	0,085	0,110	0,080	0,039	0,013
DAX					**0,111**	0,101	0,078	0,047	0,107	0,115	0,126	0,110	0,051	0,073
Athex						**0,107**	0,076	0,047	0,097	0,104	0,116	0,100	0,044	0,055
ISEQ							**0,069**	0,066	0,075	0,080	0,091	0,065	0,004	0,047
SP/MIB								**0,103**	0,047	0,048	0,057	0,014	-0,060	0,027
LuxX									**0,117**	0,110	0,121	0,103	0,049	0,059
AEX										**0,118**	0,129	0,114	0,053	0,075
PSI											**0,150**	0,124	0,056	0,070
IBEX												**0,123**	0,083	0,073
FTSE100													**0,103**	0,032
S&P500														**0,080**

Table 8a The B coefficient of the Flexible Multivariate GARCH model for the whole sample

Flexible Diagonal VECH model - the B coefficient (whole period)														
	ATX	**BEL**	**OMX**	**CAC**	**DAX**	**Athex**	**ISEQ**	**SP/MIB**	**LuxX**	**AEX**	**PSI**	**IBEX**	**FTSE100**	**S&P500**
ATX	**0,873**	0,861	0,913	0,886	0,880	0,877	0,885	0,830	0,869	0,763	0,874	0,792	0,875	0,897
BEL		**0,855**	0,904	0,877	0,871	0,869	0,876	0,822	0,861	0,755	0,865	0,784	0,866	0,888
OMX			**0,964**	0,930	0,928	0,920	0,928	0,890	0,912	0,771	0,916	0,857	0,924	0,941
CAC				**0,905**	0,896	0,894	0,901	0,845	0,885	0,777	0,890	0,807	0,891	0,914
DAX					**0,900**	0,887	0,894	0,867	0,879	0,729	0,883	0,838	0,893	0,907
Athex						**0,887**	0,892	0,837	0,877	0,769	0,881	0,798	0,882	0,904
ISEQ							**0,902**	0,844	0,884	0,776	0,888	0,805	0,890	0,912
SP/MIB								**0,893**	0,829	0,577	0,833	0,889	0,865	0,855
LuxX									**0,871**	0,762	0,873	0,791	0,874	0,896
AEX										**0,897**	0,766	0,492	0,722	0,787
PSI											**0,879**	0,795	0,879	0,901
IBEX												**0,900**	0,836	0,816
FTSE100													**0,891**	0,902
S&P500														**0,926**

Table 8b The B coefficient of the Flexible Multivariate GARCH model for the pre IAS period

Flexible Diagonal VECH model - the B coefficient (pre IAS period)														
	ATX	**BEL**	**OMX**	**CAC**	**DAX**	**Athex**	**ISEQ**	**SP/MIB**	**LuxX**	**AEX**	**PSI**	**IBEX**	**FTSE100**	**S&P500**
ATX	**0,859**	0,835	0,830	0,872	0,873	0,789	0,859	0,857	0,816	0,820	0,871	0,846	0,864	0,879
BEL		**0,831**	0,809	0,864	0,865	0,782	0,859	0,855	0,818	0,824	0,864	0,847	0,856	0,876
OMX			**0,966**	0,859	0,852	0,779	0,856	0,786	0,815	0,693	0,855	0,734	0,853	0,845
CAC				**0,904**	0,903	0,817	0,897	0,887	0,854	0,849	0,902	0,876	0,894	0,913
DAX					**0,906**	0,817	0,897	0,890	0,855	0,856	0,903	0,881	0,894	0,914
Athex						**0,741**	0,811	0,802	0,773	0,767	0,816	0,791	0,809	0,825
ISEQ							**0,896**	0,881	0,854	0,843	0,897	0,869	0,888	0,908
SP/MIB								**0,897**	0,839	0,880	0,888	0,900	0,878	0,906
LuxX									**0,816**	0,803	0,854	0,828	0,846	0,865
AEX										**0,890**	0,852	0,901	0,839	0,877
PSI											**0,904**	0,878	0,893	0,913
IBEX												**0,917**	0,865	0,901
FTSE100													**0,886**	0,903
S&P500														**0,929**

Table 8c The B coefficient of the Flexible Multivariate GARCH model for the post IAS period

Flexible Diagonal VECH model - the B coefficient (post IAS period)														
	ATX	**BEL**	**OMX**	**CAC**	**DAX**	**Athex**	**ISEQ**	**SP/MIB**	**LuxX**	**AEX**	**PSI**	**IBEX**	**FTSE100**	**S&P500**
ATX	**0,850**	0,772	0,812	0,860	0,862	0,867	0,716	0,759	0,863	0,726	0,847	0,843	0,631	0,880
BEL		**0,871**	0,714	0,782	0,785	0,795	0,424	0,618	0,785	0,775	0,772	0,804	0,650	0,800
OMX			**0,904**	0,823	0,824	0,828	0,770	0,886	0,827	0,825	0,810	0,760	0,374	0,842
CAC				**0,873**	0,874	0,879	0,725	0,769	0,875	0,736	0,858	0,855	0,640	0,892
DAX					**0,878**	0,881	0,726	0,769	0,877	0,737	0,861	0,858	0,644	0,894
Athex						**0,888**	0,722	0,772	0,882	0,746	0,865	0,863	0,649	0,899
ISEQ							**0,931**	0,799	0,728	0,519	0,711	0,645	0,340	0,742
SP/MIB								**0,897**	0,772	0,780	0,756	0,683	0,263	0,787
LuxX									**0,880**	0,739	0,862	0,858	0,642	0,895
AEX										**0,876**	0,726	0,695	0,328	0,753
PSI											**0,846**	0,842	0,631	0,878
IBEX												**0,865**	0,721	0,874
FTSE100													**0,897**	0,654
S&P500														**0,913**

Figures

Figure 1. EU-12, US & UK financial markets in levels

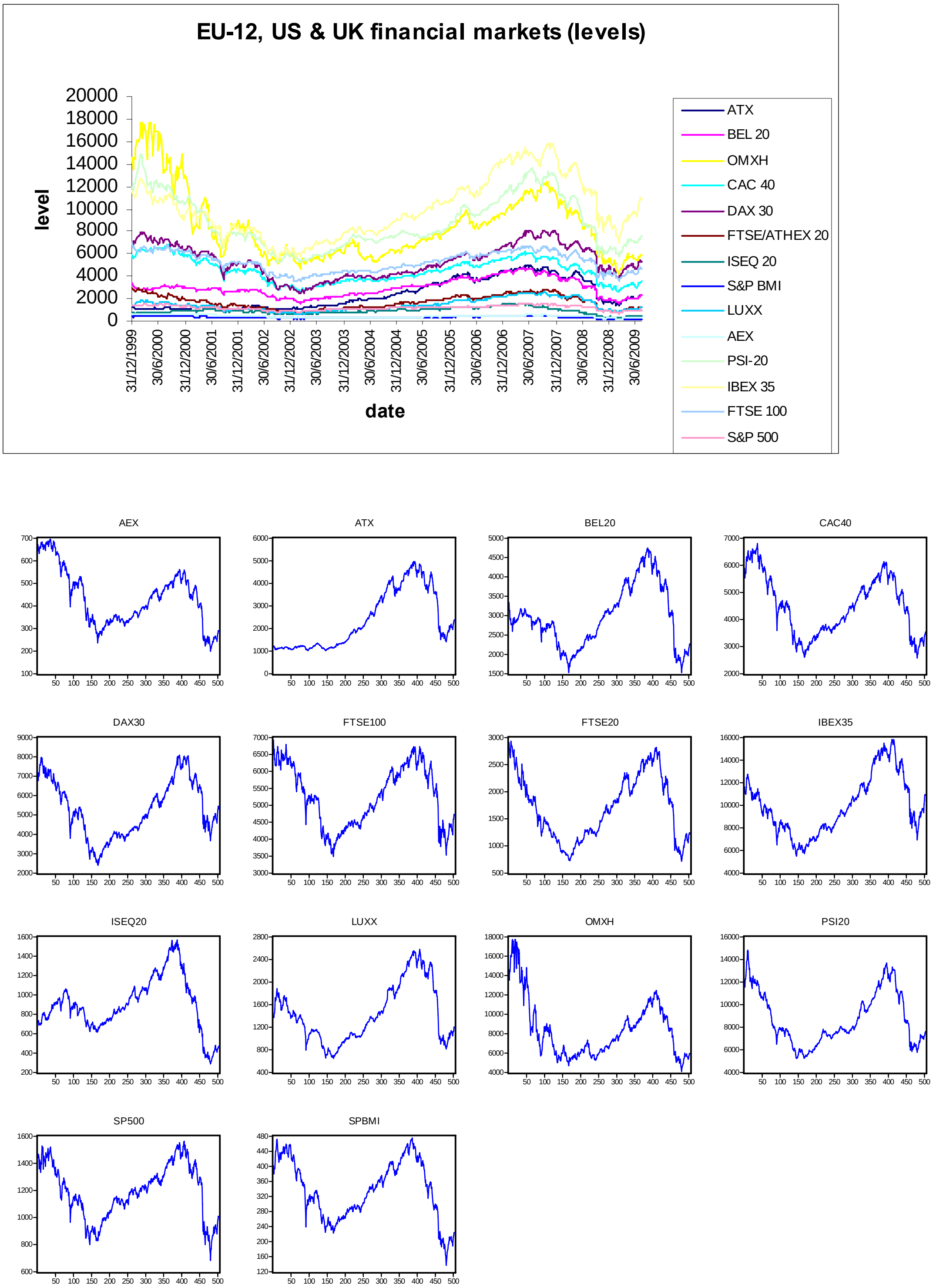


Figure 2. EU-12, US & UK financial markets in returns

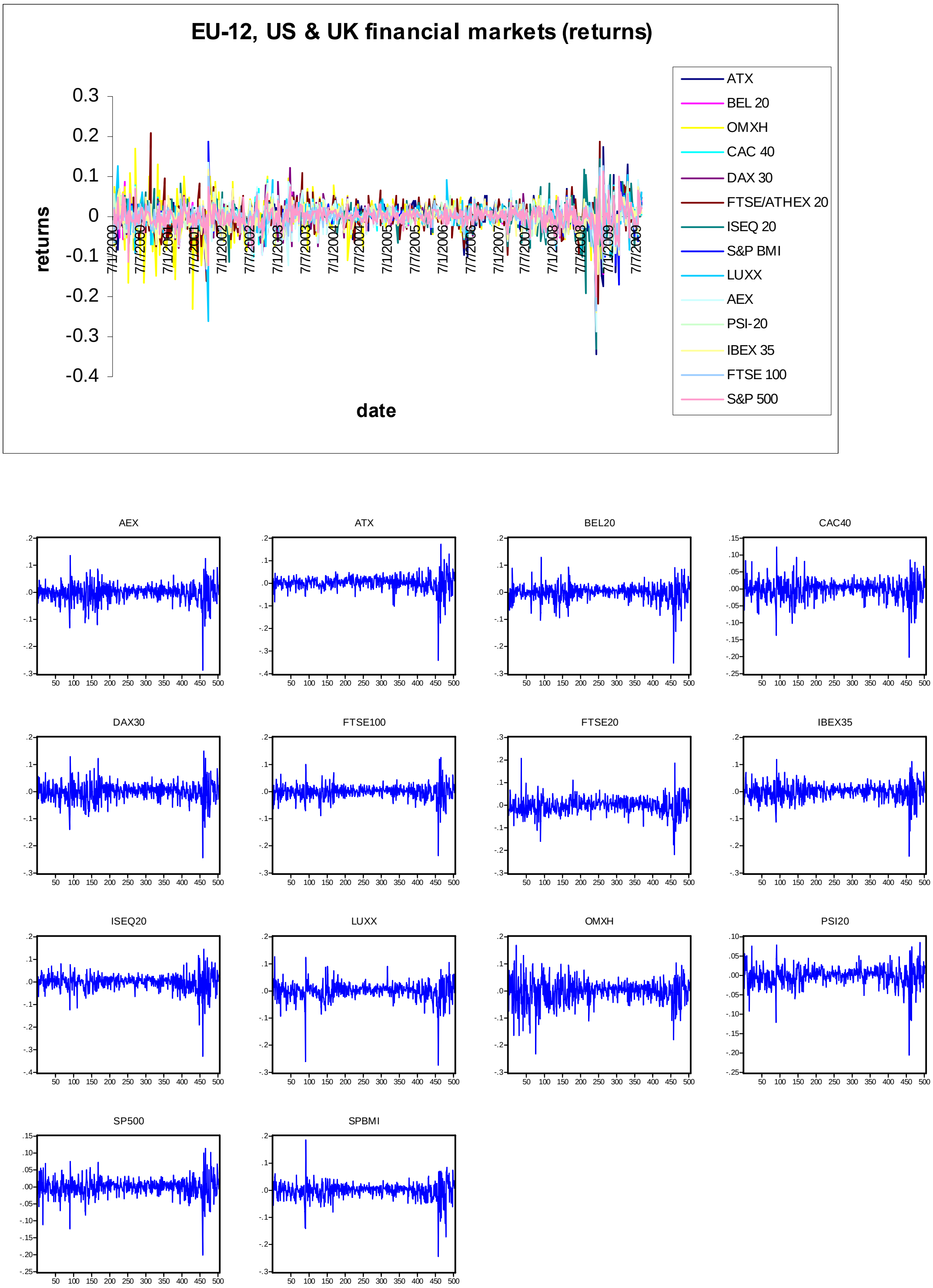


Figure 3. Smoothed Regime probabilities of the MS-VECM model

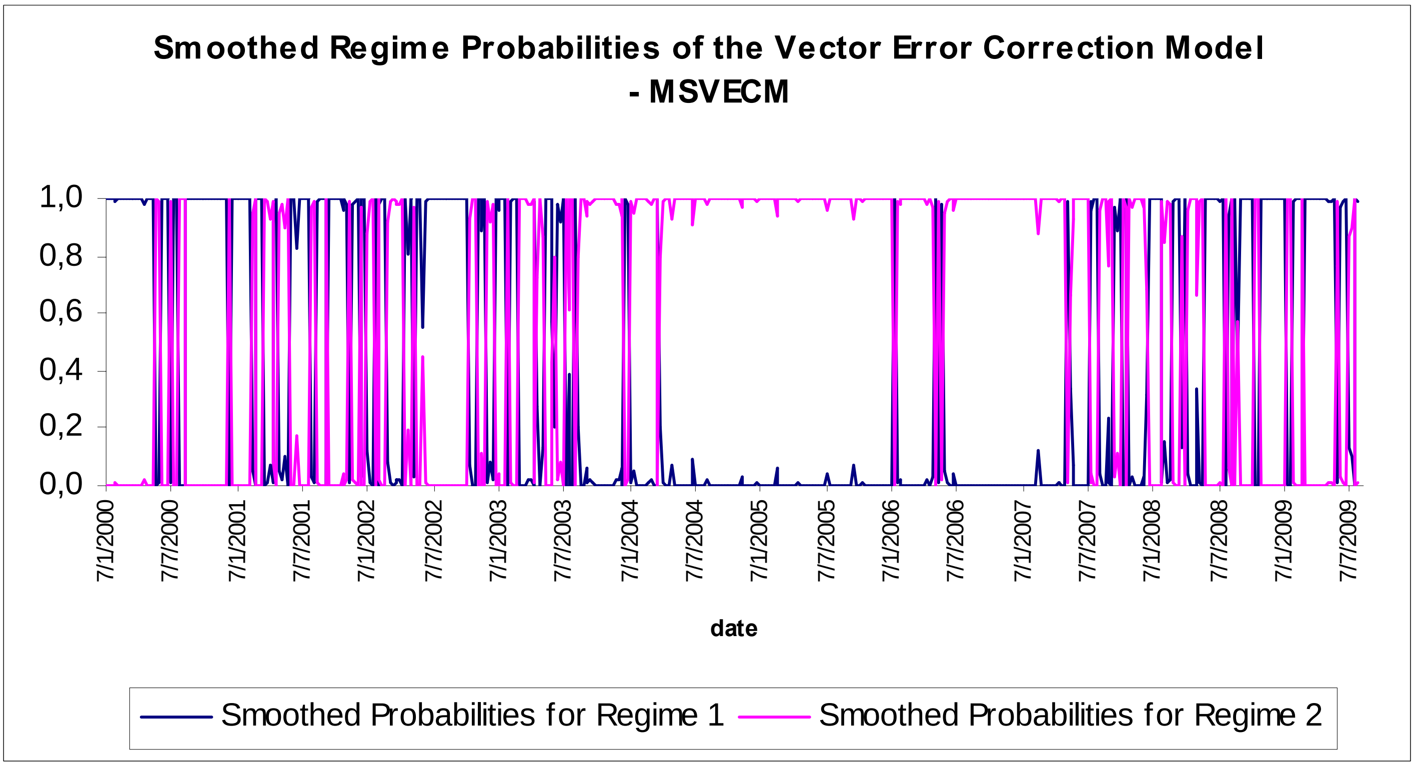


Figure 4. Regime Shift probabilities of the volatility process of *ATX*

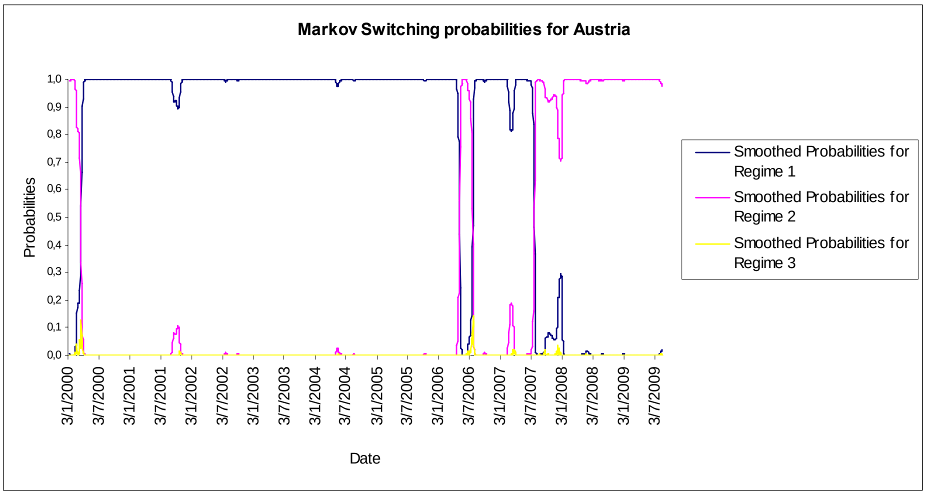


Figure 5. Regime Shift probabilities of the volatility process of *Bel20*

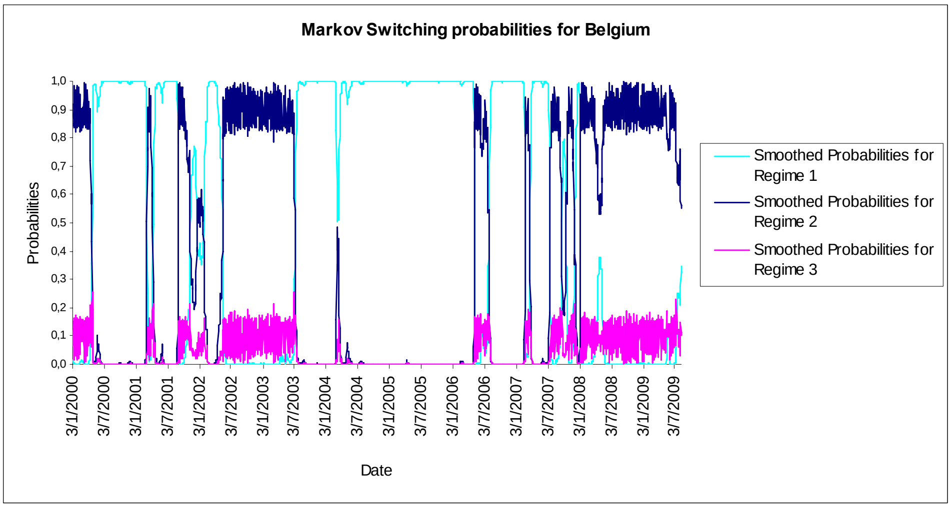


Figure 6. Regime Shift probabilities of the volatility process of *OMX Helsinki 25*

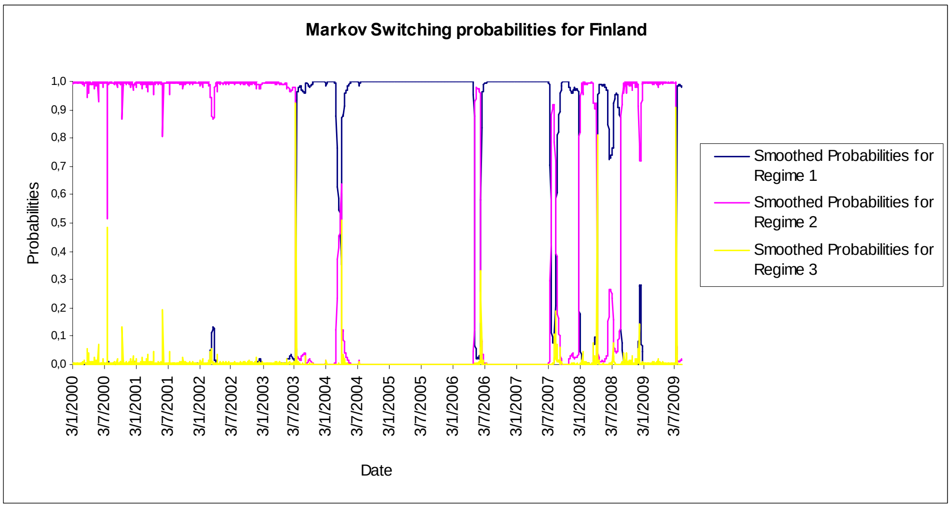


Figure 7. Regime Shift probabilities of the volatility process of *CAC 40*

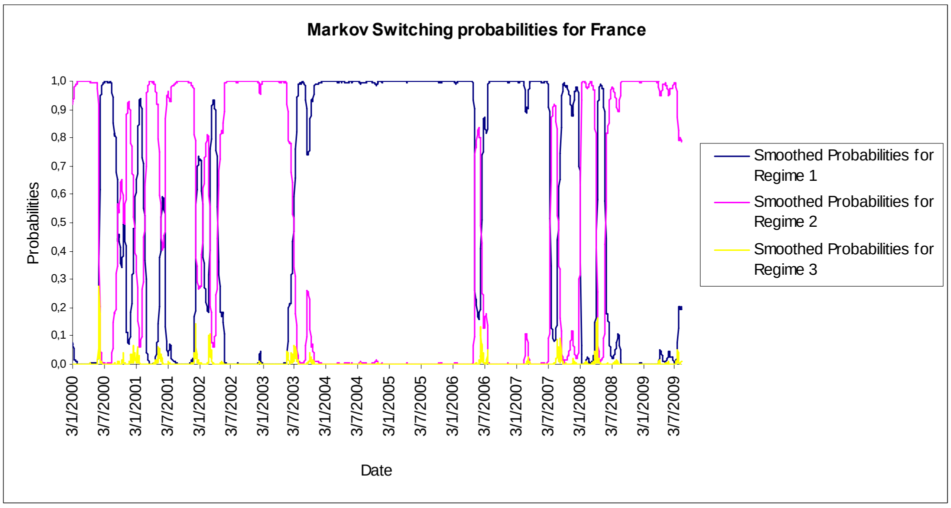


Figure 8. Regime Shift probabilities of the volatility process of *DAX*

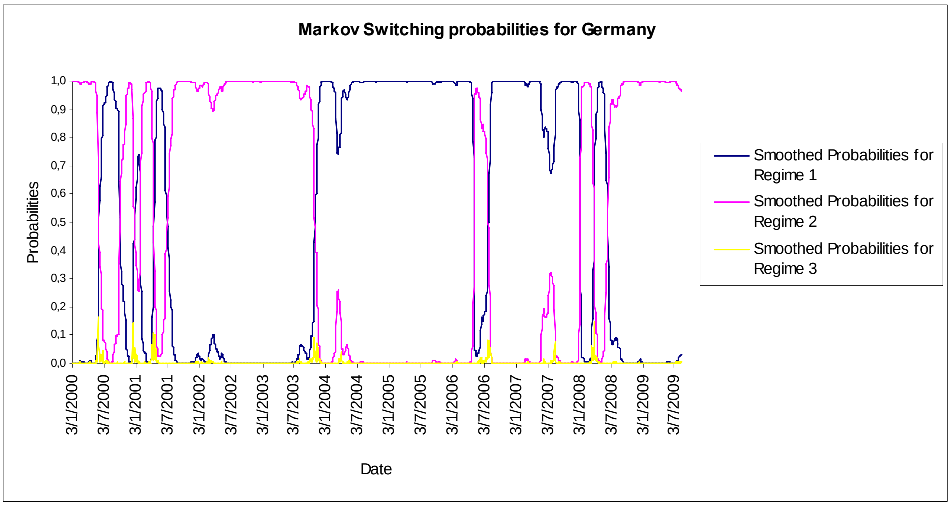


Figure 9. Regime Shift probabilities of the volatility process of *Athex 20*

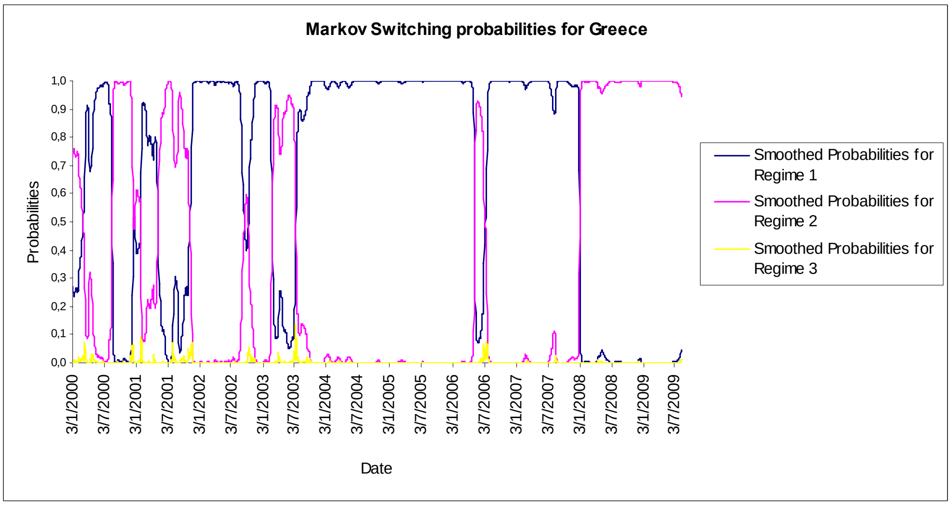


Figure 10. Regime Shift probabilities of the volatility process of *ISEQ 20*

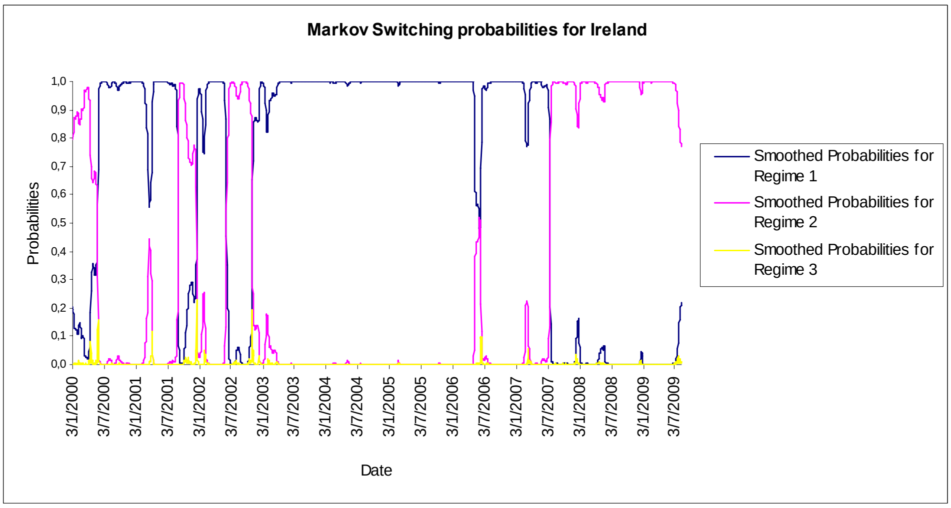


Figure 11. Regime Shift probabilities of the volatility process of *S&P/MIB*

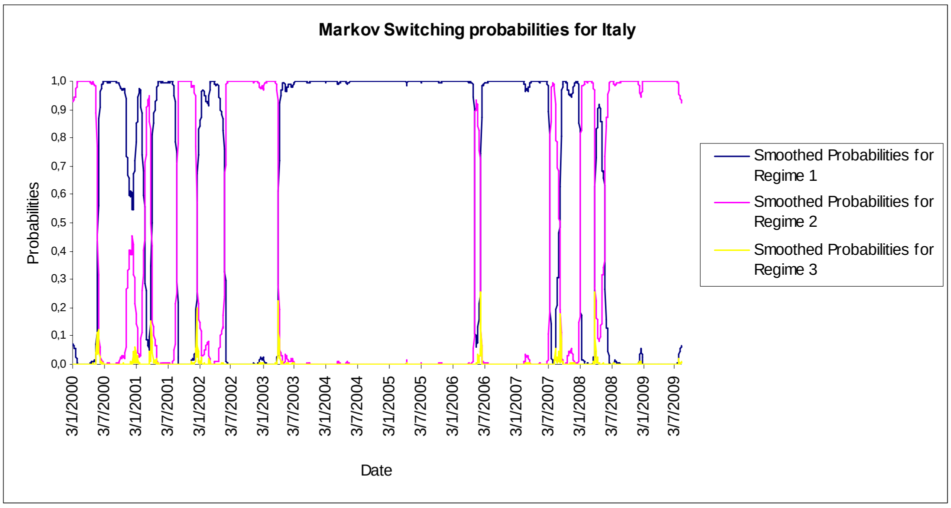


Figure 12. Regime Shift probabilities of the volatility process of *LuxX Index*

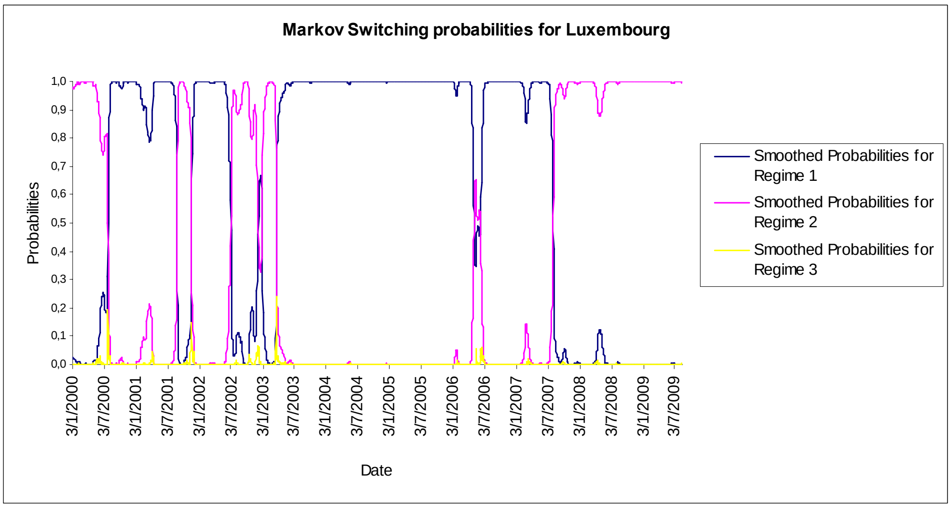


Figure 13. Regime Shift probabilities of the volatility process of *AEX index*

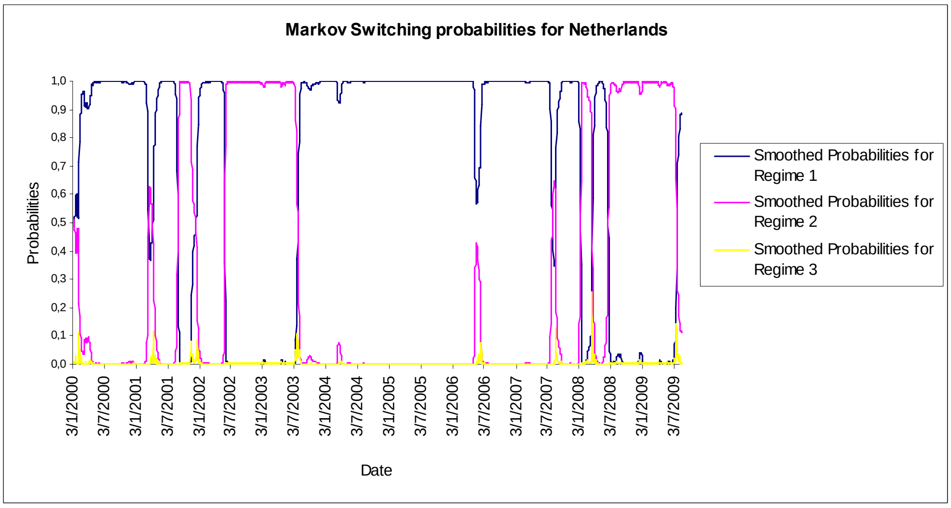


Figure 14. Regime Shift probabilities of the volatility process of *PSI-20*

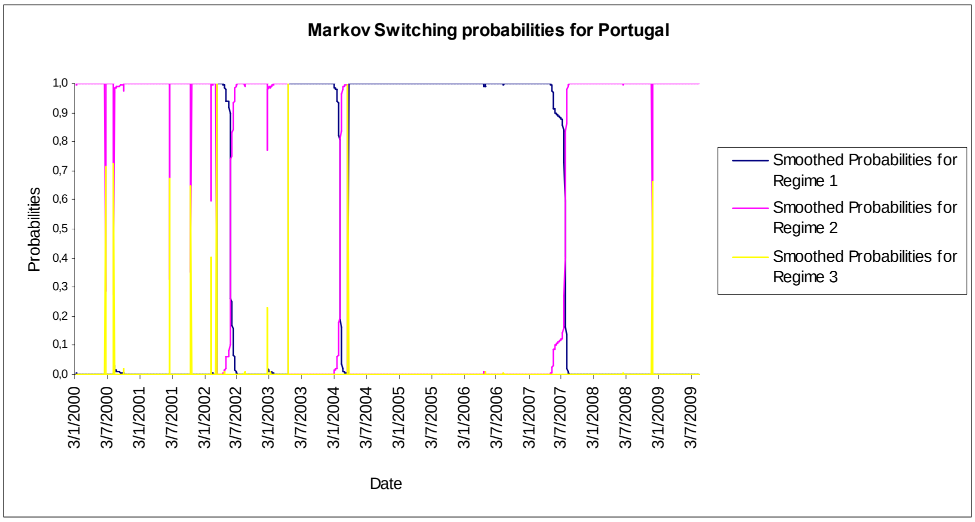
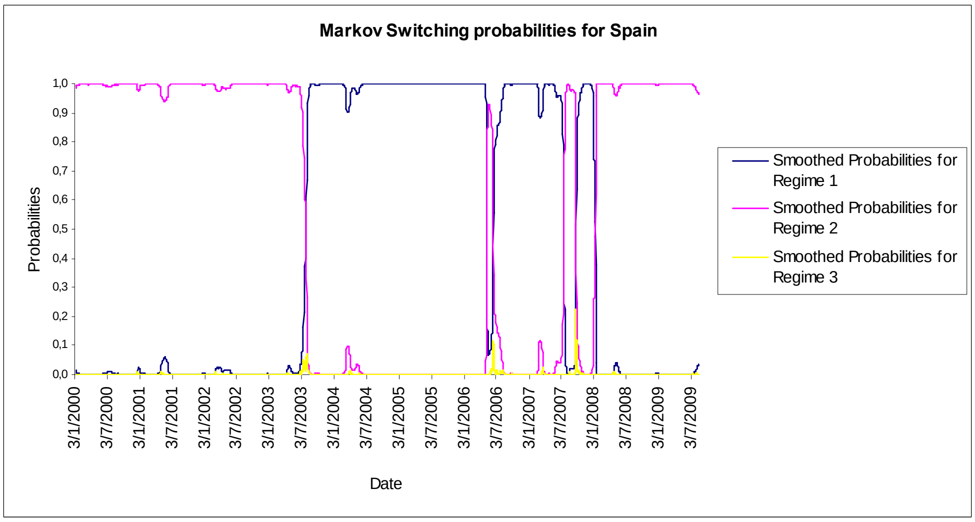


Figure 15. Regime Shift probabilities of the volatility process of *IBEX 35*



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