Hayo, Bernd; Kutan, Ali M.

Working Paper
Investor panic, IMF actions, and emerging stock market returns and volatility: A panel investigation

ZEI working paper, No. B 27-2001

Provided in Cooperation with:
ZEI - Center for European Integration Studies, University of Bonn


This Version is available at:
http://hdl.handle.net/10419/39476

Terms of use:
Documents in EconStor may be saved and copied for your personal and scholarly purposes.
You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.
Investor Panic, IMF Actions, and Emerging Stock Market Returns and Volatility: A Panel Investigation
Investor Panic, IMF Actions, and Emerging Stock Market Returns and Volatility: A Panel Investigation

by

Bernd Hayo* and Ali M. Kutan**

* Department of Economics, Georgetown University, Washington, D.C. 20057. Phone: 202-687-6286 Fax: 202-687-6102 Email: bh22@georgetown.edu

** Department of Economics and Finance, Southern Illinois University, Edwardsville, IL 62026-1102. Phone: 618-650-3473 Fax: 618-650-3047 Email: akutan@siue.edu

We would like to thank Josef Brada for his useful comments and suggestions. The usual disclaimer applies.
Abstract

In this paper, we examine the reaction of stock market returns and volatility in a diverse group of six emerging markets to a set of IMF events. In particular, we test within a panel framework whether there was an “investor panic” causing a significant drop in stock market returns on the days of negative IMF events. We find that on average negative (positive) IMF news reduce (increase) daily stock returns by about one percentage point. The most influential single event is the delay of loans from the IMF, which reduces stock returns by about one and a half percentage points. IMF news do not have a significant impact on the volatility of stock markets. Thus, it appears that IMF actions and events primarily have an effect on pay-offs but not on risk, and do not appear to support the hypothesis of IMF induced “investor panics”.

JEL: F300, G100

Keywords: IMF news, stock market returns, emerging markets
I. Introduction

International Monetary Fund (IMF) policies during the Asian financial crisis were severely criticized by some observers and the debate on the effectiveness of IMF policies has intensified since the crisis (see, for instance, Katz, 1998 and Naim, 2000). Indeed, some have argued that that the Asian crisis has, in part, resulted from a “creditor panic” created by IMF actions. Foreign creditors panic because they realize that the domestic banks cannot act as a lender of resort for dollar-denominated debts and therefore they try to move their assets out of the country as fast as possible. Sachs (1999) argues that “… provocative IMF actions have probably contributed to the [creditor] panics” (p. 389).

During the first half of the 1990s, the developing countries of East Asia were able to borrow substantial amounts from international banks. By mid-1997, an amount roughly corresponding to half of the total loans consisted of short-term debts and these significantly exceeded the level of foreign exchange reserves. In 1996, foreign creditors’ concerns about the debtor countries’ overvalued currencies, declining exports, and overcapacity led international banks to begin to reduce their lending to the region. After the devaluation of the Thai bath in mid-1997, these banks almost stopped lending to this region. The IMF’s declaration that Asia needed drastic financial reforms is thought to have led investor withdrawal from the region. According to this view, declining confidence investor in the region was an important factor, among other things, in initiating the crisis. IMF statements and poor IMF advise further contributed to the crisis (Sachs 1999).

In this paper, we examine whether IMF statements and actions had a similar impact on investors in emerging stock markets by studying the reaction of stock markets to a set of IMF events. We test whether there was a corresponding “investor panic” in stock markets, causing a significant drop in market returns on the days of negative IMF
statements and other IMF-related events and vice versa. To the extent that foreign banks and creditors affected by the Asian crisis also invest in emerging stock markets, this would contribute to the investor panic. In addition, withdrawal of foreign loans from an emerging market may increase the country risk in that country, affecting the local stock market negatively, and that risk may easily spread to other emerging markets.

A finding that stock market returns decline significantly on the days of specific negative IMF events would indicate that IMF actions undermine investor confidence in markets, because of expected liquidity shortage in markets due to IMF statements, such as delay of loans by IMF, and hence result in negative returns as investors sell off their assets quickly. Further, we also analyze whether IMF news contribute to the overall volatility of the stock markets.

The rest of the paper is organized as follows. In the next section, we briefly summarize previous work on this topic. Section III describes the construction of IMF events while in section IV we report our results. The last section concludes the paper and discusses policy implications of our findings.

**II. Previous literature and our contribution**

There is scant literature on the effects of IMF events on financial markets. Kho and Stulz (1999) use an events study to examine the impact of IMF assistance on the value of bank stocks. Their focus is on Asian markets during the financial crisis. They conclude that the IMF program announcements increased bank shareholder wealth. In a related study, Dong, Kho and Stulz (2000) examine the impact of the announcement dates of IMF support programs on the abnormal returns of the U.S. banks during crises.

---

It is well known that volatility linkages among bond, money, and stock markets are highly strong. Thus panics in emerging credit markets may easily get transmitted to stock markets in such countries. For evidence on this issue, see Fleming et al. (1998) and the references cited therein.
and they report similar results in that these banks tend to earn high abnormal returns. Overall, IMF news is found to have a significant influence on returns.

Brealey and Kaplanis (2000) look at a broad sample of IMF programs, other than those implemented during the Asian crisis, and they cover a wider range of financial assets than those included in Kho and Stulz (1999) and Dong, Kho and Stulz (2000). They find substantial declines in asset prices in the weeks leading up to the announcement of the IMF programs, but there is no evidence that the announcement of the IMF support causes any part of these wealth losses to be reversed.

Ganapolsky and Schmukler (2001) examine the impact of the IMF agreement announcement during the Tequila crisis in Argentina. They find the announcement had a positive impact on stock and bond returns. They also show that the agreement announcement played an instrumental role in reverting the dynamics of the crisis.

These four previous studies focus on a particular IMF event. For example, Kho, Lee and Stulz (2000) investigate IMF bailout news, while Kho and Stulz (1999) concentrate on IMF program announcements. In another study, Kaminsky and Schmukler (1999) and Ganapolsky and Schmukler (2001) study, among other news, debtor country agreements with international organizations, including IMF agreements. Besides IMF assistance, Brealey and Kaplanis (2000) also cover the progress of negotiations with the IMF by separating news into "good" and "bad" news.²

Our analysis differs from the previous ones in several ways. The earlier studies focus on a particular event or some selected events. This may not capture the overall impact of IMF actions. In this paper, we collect, categorize, and use a wide spectrum of the available information about IMF-related actions and events that occurred during our sample period (see next section).
Another common feature of the previous studies is that, except for Kaminsky and Schmukler 1999, they use abnormal returns as the dependent variable. Instead, we examine stock market returns, because we test the hypothesis that some IMF actions can create dramatic negative shocks to markets, as argued by Sachs (1999), and investors react to these by selling off their assets quickly. In other words, our focus is on the wealth effects of IMF actions. Because a typical risk-averse investor tends to hold a portfolio of assets from different sectors, rather than concentrating on one or a few sectors, returns are best captured by utilizing a composite index.

A second common factor of the earlier studies is that they all focus on returns, and they do not investigate how IMF events affect the conditional volatility of markets. But if stock market volatility is a measure of stock market risk or uncertainty, then a multi-country investigation of how IMF actions affect the volatility can broaden our general understanding of the determinants of such risk and allow us to price such risk more efficiently. Policymakers may take appropriate policy actions to reduce the risk to the extent that IMF policies significantly affect stock market volatility. Finally, better knowledge of the determinants of conditional second moments of asset returns is crucial for improving our understanding of asset pricing and effective asset allocation decisions. Thus, this paper provides evidence whether the stock market volatility is affected by IMF actions and related events.

Finally, the previous papers use an event study whereas we use a regression approach following Kaminsky and Schmukler (1999), who utilize both approaches. Because we cover “all” IMF news, a regression approach is more effective and also avoids such potential shortcomings of an event study as discussed in Kho, Lee and Stulz (2000) and Brealey and Kaplanis (2000). We also attempt to overcome some of the

---

2 Brealey and Kaplanis (2000) also study returns on currencies and emerging bond indexes.
methodological shortcomings of the Kaminsky and Schmukler study, which uses an OLS equation with pooled data. Such an estimation procedure ignores the typical finding of time-varying volatility observed in emerging stock market returns.\(^3\) Moreover, Kaminsky and Schmukler do not provide any information about the statistical validity of their model, and they do not include a control variable to capture the general evolution of stock markets.

We employ a panel data model with country fixed effects and use a GARCH model to capture the autoregressive conditional heteroscedasticity inherent in financial data. Moreover, we include returns based on the Standards & Poor stock market index as a control variable. Finally, we provide a number of statistical tests to ensure the adequacy of our models.

### III. Construction of IMF news

IMF news covering the interactions between the IMF and the countries searching for help in a regional or global crisis or for reasons unique to each country were collected from the IMF website, the Washington Post, and BBC News. The news were then categorized according to different types of IMF actions. Because consistency is crucial for categorization, a substantial effort was made to put similar news under the same heading. The different categories were constructed from the basic news observations. They are listed and described in Table 1.

After completing the categorization process, the dates for which this news was published were matched with the dates for the daily stock return data of the corresponding country. A dummy variable was created for each different category such

\(^3\) Bekaert and Harvey (1997) and Aggarwal et al. (1999) provide evidence that emerging market stock returns also exhibit time-varying volatility, similar to more mature, developed markets.
that the variable was equal to one on the day the particular news was published, and zero otherwise.

Over and above categorizing the variables in a neutral way, it is also useful to group IMF events into “good” and “bad” from the point of view of the respective country. The guiding idea is that IMF news conveys information that is similar to either a positive or negative shock to the value of stocks. There are two basic hypotheses.

First, it could be the case that stockholders are neutral or even negative about an IMF intervention, as the loan part of IMF programs has to be paid back later.\(^4\) The money to pay back the loans has to be obtained by the government either through collecting taxes, printing money or selling bonds. The first alternative may reduce net dividends in the country, the second alternative may generate high inflation, and the third alternative may lead to a public sector debt problem. Because the second and third alternatives are usually ruled out by the non-loan parts of IMF stabilization programs, it is usually by taxation that governments pay back the loans. But it is not clear \textit{a priori} that IMF loans will have a positive impact on stock returns if investors know that they have to pay back the money later.

Second, one can argue that a supportive IMF intervention will, in general, be beneficial to the country in question and to equity holders. We subscribe to this view, because countries asking for help are often liquidity constrained, but their assets still outweigh their liabilities. The cash inflow from IMF loans keeps the system working until liquidity has been restored, enabling the economy to keep going by itself. A similar view is suggested by Sachs (1999) who emphasizes the liquidity crisis as a major factor for the worsening of the Asian crisis as foreign investors withdrew their assets due to a financial

\(^4\) To our knowledge, so far every IMF credit has been paid back to involved countries, usually with market interest rates.
panic. Thus, by injecting liquidity into the markets, IMF actions can positively influence market returns. On the other hand, a delay of loans by the IMF may signal future liquidity constraints, thus causing a decline in market returns today. It may also represent an unfavorable external evaluation of a country’s macroeconomic policies. Further, the IMF is usually market-oriented, and the loan part of programs always comes with obligations to de-regulate the economy, which, on average, is good for business.

IV. Data and econometric methodology

The analysis is based on daily closing stock returns for six countries, Indonesia, South Korea, Argentina, Brazil, Pakistan, and Russia over the time period 1 July 1997 to 31 December 1999. The data for the closing stock prices were obtained from the Yahoo finance website, [http://finance.yahoo.com/m2](http://finance.yahoo.com/m2). Countries are chosen to represent different regional groups. The first two countries were hit by the Asian financial crisis countries while the next two were affected by the crisis in South America. The last one belongs to a diverse group of other countries whose crises were more *sui generis*. Composite stock returns (Returns) are computed by taking the first differences of logged daily stock price indices and multiplying by 100. As a control variable and to capture the impact of general market developments, we also include the Standard & Poors Stock Price Index daily returns in our estimations.

Descriptive statistics for both variables can be found in Table 2. The mean return is about four times as high in the U.S. as it is in the emerging countries over our sample period, while the standard deviation is less than half as big. The returns series exhibits excess kurtosis but almost no skewness. Excess kurtosis signals a typical problem with financial data, namely that the series do not conform to a normal distribution. Another problem is that time periods with high volatility are followed by periods of low volatility,
which is also called volatility clustering. The existence of volatility clustering implies that classical methods of estimation are not efficient. In the literature, a class of statistical models has been developed that helps to address this situation, namely ARCH models (Engle, 1982). We employ a more general specification based on Bollerslev (1986), called GARCH, to cope with volatility clustering.

Daily data on the six countries were combined into one panel data set. We then specify a GARCH-model with country fixed effects. A model that works well for our sample with regard to eliminating ARCH effects is the following GARCH (1,1) model with student-t distributed residuals (see Bollerslev, 1987):

\[
\begin{align*}
\text{Returns}_t &= \mu + \sum_{i=1}^{5} \delta_i \text{Returns}_{t-i} + \sum_{i=0}^{5} \gamma_i \text{S \\& P}_t + \phi \text{ Dummies} + u_t, \\
\text{u}_t &= \varepsilon_t \sqrt{h_t}, \\
\text{h}_t &= \alpha_0 + \alpha_1 \text{u}_{t-1}^2 + \beta_1 \text{h}_{t-1},
\end{align*}
\]

with: \(\alpha, \beta, \delta, \gamma\) parameters, \(\phi\) a vector of parameters, \(\text{Dummies}\) is a matrix containing country and IMF news dummies, and \(\varepsilon_t | \Gamma_{t-1} = t[\nu]\); with \(\Gamma_{t-1}\) capturing all information up to \(t-1\) and \(t[\nu]\) a t-distribution with \(\nu\) degrees of freedom.

The use of a panel framework is necessary as otherwise it would not be possible to obtain enough relevant data points for IMF news. In particular, the aggregation of IMF events in the panel allows us not only to test for the effects of good versus bad IMF news but also to analyze the more detailed categorization outlined above. In the next section, we commence the analysis by studying the effects of good versus bad IMF-related news.

V. Analyzing the effect of IMF news on stock returns

Our benchmark model initially included five lags of the dependent variable, the same number of lags for the Standard \\& Poors’ returns, and country dummies. It has been estimated as a GARCH (1,1) model with student-t distributed residuals using quasi-
maximum likelihood techniques over the time period 1 July 1997 to 31 December 1999. Then, reducing the number of variables in a consistent testing-down process (\(\text{Chi}^2(10) = 7.9\)), we have arrived at a more parsimonious model (Model 1) given in Table 3. We find that all parameters of the GARCH(1,1) are significant. A sufficient condition for the conditional variance \(h_t\) to be non-negative is that \(\alpha_0, \alpha_1, \) and \(\beta_1\) are non-negative, which is fulfilled here. Moreover, the sum of \(\alpha_1\) and \(\beta_1\) is below unity, ruling out that the model is an integrated GARCH (see Nelson, 1990). The estimate of the student-t points towards a distribution with four degrees of freedom, which has fatter tails than a normal distribution. The diagnostics tests for Model 1 indicate that there is neither any trace of ARCH left nor is the Portmanteau-type test for autocorrelation (for 60 lags) significant. The only problem is non-normality of the residuals. However, a non-parametric estimate of the residual density indicates that it is uni-modal and symmetric around zero, and therefore testing should not be too adversely affected. Moreover, we use robust standard errors based on Bollerslev and Wooldridge (1992) in Table 2. In any case, for most variables both types of standard errors are quite similar.

We also find that both lags of the dependent variable as well as Standard & Poors’ returns matter. Judging from the country dummies, only Indonesia shows a significant, below average performance of its stock market. With regard to our variables of interest, we find significant coefficient estimates for both positive and negative IMF events. In line with our expectations, positive (negative) news have a positive (negative) effect on returns. The size of the estimates suggests that there is some asymmetry, namely that negative IMF news have a larger absolute impact than do positive ones. Testing the absolute size of the coefficient for equality, however, reveals that the data does not reject

---

5 Estimates of ARFIMA models show no evidence of fractional integration (results omitted). Thus, the model is both strictly stationary as well as covariance stationary.
such a hypothesis ($\chi^2(1) = 1.77$). Thus, we conclude that IMF news effects are symmetric.

Given that the size of the coefficients for both and good news is close to 1, one may conjecture that the economic significance of these news on returns is very similar (1 percent) on stock returns. Testing the coefficient for good news against the hypothesis that it is equal to one, we are unable reject the hypothesis at a 5% but 10% level ($\chi^2(1) = 3.3$). In the case of bad news, we cannot reject that the coefficient is equal to unity in absolute terms ($\chi^2(1) = 0.66$), and neither do we have to reject the hypothesis when testing the hypotheses jointly ($\chi^2(2) = 3.96$). This is not necessarily the result of a weak testing procedure, as testing the joint hypotheses that both news coefficients are equal to zero in absolute terms can be easily rejected ($\chi^2(2) = 8.78^*$$). Although there remain some indications that negative shocks tend to have an absolutely greater effect, based on the statistical tests, we conclude that the data is consistent with a statement that positive (negative) IMF news on average increase (decrease) stock returns by about one percentage point.

Next, we replace the simple dichotomy good versus bad IMF news with a detailed classification of IMF-related news items. These categories include signed agreements, delay of loans or talks between the countries and the IMF, IMF supportive announcements, loan approvals, request of funds, talks/negotiations, resume of negotiations, visits, anti-IMF government policies, and favorable and unfavorable IMF statements about the countries’ economic performance. The detailed explanation of these categories is given in Table 1.

Again we start with the general model outlined above and remove all insignificant variables that are of no particular interest for this study in a testing-down process
(Chi²(10) = 8.19), and the outcome is Model 2 in Table 3. With regard to diagnostics, everything said for Model 1 carries over to Model 2.

The impacts of different news categories turn out to be insignificant except for “delay in loans”. We cannot reject (Chi²(10) = 11.2) the hypothesis that all IMF news items have a zero coefficient apart from “delays”. Because we cannot reject the hypothesis that the impact of delay news is 1.5 (Chi²(1) = 0.005), we conclude that an announcement of a delay in loans on average reduces stock returns by about one and a half percentage points.⁶

Finally, there is the question whether IMF news have an impact on the volatility of stock markets. Or, more technically, whether news enters the variance equation significantly (see Bollerslev and Ghysels, 1996).⁷ We constructed two aggregate news categories. First is based on the categories good and bad news, and the second one on the other items displayed in Table 1. Table 4 lists the estimation results, the diagnostics of which are very similar to those in Table 3.

We find that the first news aggregate, based on good and bad news events, which were included in Model 4, does not enter the variance equation significantly. The same conclusion is true for the news variable computed using all available IMF news categories, displayed in Model 4. In addition, relaxing the restriction that all news items contribute to the same extent to volatility does not yield any significant parameter estimates (results omitted).

---

⁶ This finding seems paradoxical in light of our results for the simple good and bad news category. An obvious explanation for such finding is that good news and bad news, when disaggregated into different categories, comes in clumps. In other words, a whole number of different good things happen within a week or two, affecting our estimation results significantly.

⁷ As another robustness check, we also considered modeling within an EGARCH framework (Nelson, 1991). However, for our sample, estimating an EGARCH with a non-normal distribution did not lead to converging estimates. The EGARCH with normal distribution turned out to be inferior to the model in Table 4 with regard to log likelihood value and Akaike information criterion. In any case, point estimates were of similar magnitude.
Moreover, neither the statistical nor the economic significance of IMF events on stock returns is affected by including the news variables into the variance equation. To summarize, in our framework, IMF news do not significantly contribute to stock market volatility.

VI. Policy Implications and Conclusions

We have analyzed the impact of IMF-related events on six emerging stock market returns over the period of recent financial crises and IMF bailouts. During such difficult times, IMF can be viewed as a lender of last resort and investors trading in these markets form their actions based on their anticipation of the actions of the IMF in the near future. Our hypothesis was that these expectations are directly reflected in stock market returns as investors trade securities based on their expectations about the outcome of future IMF events. To test this hypothesis, we have constructed a panel data set covering six emerging markets and found that good and bad news have a statistically significant effect on stock market returns. This finding suggests that IMF actions have important wealth effects for investors. On average, bad (good) IMF news decrease (increase) stock returns by one percentage point. These results are consistent with earlier studies that also report significant effects of IMF announcements on asset returns.

Among the different categories of the IMF actions, we have found that markets react only to delays in making loans or talks, suggesting that “liquidity concerns” have played a very significant role in emerging markets during financial crises. As a rule of thumb, delays in loans reduce stock market returns by about one and a half percentage points.

This finding is only partially consistent with Sachs (1999) who stresses the importance of the liquidity crisis during the Asian crisis as foreign short-term credit was
withdrawn due to the creditor panic. We do find that returns go down as a result of negative IMF news. But since the absolute effect of IMF news is relatively modest compared to the overall variation of returns in the data (in our sample, returns fluctuate between –26.6 and + 28.8 percent), we do not find support for the hypothesis of IMF induced “investor panics”. Further, we did not find strong evidence that IMF news increase market volatility. Hence, although IMF news has wealth effects, they do not appear to contribute significantly to overall market uncertainty. Based on these results, we would argue that IMF actions and events primarily have an effect on pay-offs but not on risk. 8

With regard to policy conclusions, we would recommend that the IMF attempts to be particularly sensitive about its announcements and actions. If stock market wealth effects play an important role in the current economic situation of a country, then delays in processing loans should be avoided. This really amounts to a rather passive role of the IMF in the sense that it has to be aware of the consequences of its decisions. With respect to this aspect, it is not obvious whether the IMF needs a special reminder.

One can also imagine a more active role of IMF news in shaping stock market returns. Assuming super-exogeneity of the estimated parameters (see Engle et al., 1983), the IMF can in principle exploit its position to manipulate stock market returns in both directions. We are not very favorable with regard to this alternative.

First, based on our estimates, the IMF is not able to dramatically alter market returns or volatility. Moreover, it is not clear whether super-exogeneity is a reasonable

---

8 We have recently received a paper by Peter Tilmann (2001) who test the hypothesis of moral hazard induced by IMF crisis lending. Under moral hazard argument, the relationship between risk and return weakens during a crisis. Using daily bond market data, Tilmann shows that IMF lending does not lead to IMF induced moral hazard problem, but he finds that such IMF actions assist investors to calculate the riskiness of their assets carefully. Our result that IMF news did not have much impact on stock market volatility, which is a proxy for risk, complements Tilmann’s findings.
assumption, and further research would be necessary to establish such a result. Thus, in view of the relatively modest absolute effects of IMF actions compared to the movements of returns during crises, and doubts about its ability to exploit its influence on market returns, we cannot recommend using IMF news actively to affect stock market returns.
References


Table 1: Defining IMF news categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
<th>No. of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreements</td>
<td>Signing of agreements to implement a new economic program over a period of time.</td>
<td>9</td>
</tr>
<tr>
<td>Delays</td>
<td>Delay of loans or talks between the countries and the IMF as a result of disagreements between the counter-parties on issues such as the reforms that should be made, or the conditions that must be fulfilled in order to achieve an agreement.</td>
<td>6</td>
</tr>
<tr>
<td><strong>IMF supportive announcements</strong></td>
<td>Positive statements made by the countries’ government officials towards IMF policies or announcements of economic program that favor IMF policies or necessary to be eligible for new loans.</td>
<td>23</td>
</tr>
<tr>
<td>Loan Approval</td>
<td>Credits and loans extended by the IMF to the member countries with payment problems through stand-by arrangements, extended fund facility, reserve tranche policies, credit tranche policies, and policy on emergency assistance.</td>
<td>35</td>
</tr>
<tr>
<td>Request of funds from the IMF</td>
<td>Request of loans, including &quot;bail-out&quot; loans. Such requests usually come from the president of the country, usually in a situation of financial or economical crisis, in search of support funds to make reforms in the economy.</td>
<td>4</td>
</tr>
<tr>
<td>Talks / negotiations</td>
<td>Negotiations that take place between a country and the IMF on a loan approval or implementation of an economic program.</td>
<td>14</td>
</tr>
<tr>
<td>Anti-IMF policies / statements</td>
<td>Government announced policies and statements that do not comply with or support IMF policies.</td>
<td>7</td>
</tr>
<tr>
<td><strong>Resumptions</strong></td>
<td>This captures the resume of the negotiations between a country and the IMF following a period of delay of loans or talks.</td>
<td>5</td>
</tr>
<tr>
<td><strong>Visits</strong></td>
<td>Each year a team of four or five IMF staff members travels to the capitals of the countries that it is helping and spend some time gathering information and holding discussions with government officials about the countries’ economic policies. Statements, agreements or loan approvals usually accompany these visits.</td>
<td>12</td>
</tr>
<tr>
<td><strong>Favorable statements</strong></td>
<td>Statements made by the IMF officials praising the reform measures taken by the countries, the developments in the economical or financial situation of the country.</td>
<td>28</td>
</tr>
<tr>
<td><strong>Unfavorable statements</strong></td>
<td>Statements made by the IMF officials usually for the countries that did not fulfill or that did not put enough effort to satisfy the restrictive conditions brought by an agreement or a loan approval.</td>
<td>10</td>
</tr>
<tr>
<td><strong>Bad news</strong></td>
<td>Combines the above categories “delays” and “unfavorable statements”, and partially “talks”.</td>
<td>17</td>
</tr>
<tr>
<td><strong>Good news</strong></td>
<td>Combines the above categories “agreements”, “loan approval”, “resumptions”, “visits”, “favorable statements”, and partially “talks”.</td>
<td>90</td>
</tr>
</tbody>
</table>
Table 2: Descriptive Statistics of Returns and S&P

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>St.Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Skewness</th>
<th>Excess kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returns</td>
<td>0.02</td>
<td>3.33</td>
<td>-26.6</td>
<td>28.8</td>
<td>-0.09</td>
<td>8.7</td>
</tr>
<tr>
<td>S&amp;P</td>
<td>0.08</td>
<td>1.24</td>
<td>-7.1</td>
<td>5.0</td>
<td>-0.48</td>
<td>4.1</td>
</tr>
</tbody>
</table>
Table 3: Explaining stock returns using a GARCH (1,1) model with t-student distribution

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>SE</td>
<td>Coeff.</td>
<td>SE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\alpha_0$</td>
<td>0.35**</td>
<td>0.09</td>
<td>0.35</td>
<td>0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\alpha_1$</td>
<td>0.22**</td>
<td>0.03</td>
<td>0.22</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\beta_1$</td>
<td>0.78**</td>
<td>0.03</td>
<td>0.78</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-t degrees of freedom ($\nu$)</td>
<td>4.33</td>
<td></td>
<td>4.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Returns$_{t-1}$</td>
<td>0.06**</td>
<td>0.02</td>
<td>0.06**</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Returns$_{t-4}$</td>
<td>-0.05**</td>
<td>0.02</td>
<td>-0.05**</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S&amp;P$_t$</td>
<td>0.41**</td>
<td>0.04</td>
<td>0.41**</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S&amp;P$_{t-1}$</td>
<td>0.19**</td>
<td>0.03</td>
<td>0.19**</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S&amp;P$_{t-4}$</td>
<td>0.08*</td>
<td>0.03</td>
<td>0.08*</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S&amp;P$_{t-5}$</td>
<td>0.08*</td>
<td>0.03</td>
<td>0.08*</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>-0.15*</td>
<td>0.08</td>
<td>-0.16*</td>
<td>0.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive IMF news</td>
<td>0.54*</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative IMF news</td>
<td>-1.64**</td>
<td>0.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favorable IMF statement</td>
<td></td>
<td></td>
<td>0.93</td>
<td>0.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Request from the IMF</td>
<td></td>
<td></td>
<td>-0.13</td>
<td>1.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMF-supportive announcement by gov.</td>
<td>0.65</td>
<td>0.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan approval</td>
<td></td>
<td></td>
<td>0.46</td>
<td>0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visit by IMF delegation</td>
<td></td>
<td></td>
<td>-0.05</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfavorable statement by the IMF</td>
<td>-1.47</td>
<td>1.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreement</td>
<td></td>
<td></td>
<td>0.64</td>
<td>0.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talks or Negotiations</td>
<td></td>
<td></td>
<td>0.26</td>
<td>0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-IMF announcements by governm.</td>
<td>-1.34</td>
<td>1.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delay of loans or talks</td>
<td></td>
<td></td>
<td>-1.42**</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resumption of loans</td>
<td></td>
<td></td>
<td>1.41</td>
<td>2.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of observations</td>
<td>3497</td>
<td></td>
<td>3497</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log-likelihood</td>
<td>-8272.4</td>
<td></td>
<td>-8240.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normality test</td>
<td>$\chi^2(2) = 2315**$</td>
<td></td>
<td>$\chi^2(2) = 2277**$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCH 1-2 test</td>
<td>$F(2, 3480) = 0.53$</td>
<td></td>
<td>$F(2, 3471) = 0.54$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portmanteau (60) test</td>
<td>$\chi^2(58) = 74.5$</td>
<td></td>
<td>$\chi^2(58) = 74.9$</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: * (**) indicates significance at a 5% (1%) level. Standard errors are heteroscedasticity-consistent.
Table 4: Explaining stock returns with IMF news in the variance equation

<table>
<thead>
<tr>
<th></th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>SE</td>
</tr>
<tr>
<td>$\alpha_0$</td>
<td>0.34**</td>
<td>0.09</td>
</tr>
<tr>
<td>$\alpha_1$</td>
<td>0.23**</td>
<td>0.03</td>
</tr>
<tr>
<td>$\beta_1$</td>
<td>0.77**</td>
<td>0.03</td>
</tr>
<tr>
<td>Student-t degrees of freedom (v)</td>
<td>4.32</td>
<td></td>
</tr>
<tr>
<td>Returns$^t_{-1}$</td>
<td>0.06**</td>
<td>0.02</td>
</tr>
<tr>
<td>Returns$^t_{-4}$</td>
<td>-0.05**</td>
<td>0.02</td>
</tr>
<tr>
<td>S&amp;P$_t$</td>
<td>0.41**</td>
<td>0.04</td>
</tr>
<tr>
<td>S&amp;P$_{t-1}$</td>
<td>0.19**</td>
<td>0.03</td>
</tr>
<tr>
<td>S&amp;P$_{t-4}$</td>
<td>0.08*</td>
<td>0.03</td>
</tr>
<tr>
<td>S&amp;P$_{t-5}$</td>
<td>0.07*</td>
<td>0.03</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-0.15*</td>
<td>0.08</td>
</tr>
<tr>
<td>Positive IMF news</td>
<td>0.54*</td>
<td>0.26</td>
</tr>
<tr>
<td>Negative IMF news</td>
<td>-1.63*</td>
<td>0.65</td>
</tr>
<tr>
<td>Delay of loans or talks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMF News aggregate based on good and bad in variance equation</td>
<td>0.96</td>
<td>0.93</td>
</tr>
<tr>
<td>IMF News aggregate based on all items in variance equation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of observations</td>
<td>3497</td>
<td></td>
</tr>
<tr>
<td>Log-likelihood</td>
<td>-8271.6</td>
<td></td>
</tr>
<tr>
<td>Normality test</td>
<td>$\chi^2(2) = 2336**$</td>
<td>$\chi^2(2) = 2380**$</td>
</tr>
<tr>
<td>ARCH 1-2 test</td>
<td>$F(2, 3479) = 0.54$</td>
<td>$F(2, 3480) = 0.52$</td>
</tr>
<tr>
<td>Portmanteau (60) test</td>
<td>$\chi^2(58) = 73.4$</td>
<td>$\chi^2(58) = 73.4$</td>
</tr>
</tbody>
</table>

Notes: * (**) indicates significance at a 5% (1%) level. Standard errors are heteroscedasticity-consistent.
2008
B01-08 Euro-Diplomatie durch gemeinsame „Wirtschaftsregierung“
Martin Seidel

2007
B03-07 Löhne und Steuern im Systemwettbewerb der Mitgliedstaaten der Europäischen Union
Martin Seidel
B02-07 Konsolidierung und Reform der Europäischen Union
Martin Seidel
B01-07 The Ratification of European Treaties - Legal and Constitutional Basis of a European Referendum.
Martin Seidel

2006
B03-06 Financial Frictions, Capital Reallocation, and Aggregate Fluctuations
Jürgen von Hagen, Haiping Zhang
B02-06 Financial Openness and Macroeconomic Volatility
Jürgen von Hagen, Haiping Zhang
B01-06 A Welfare Analysis of Capital Account Liberalization
Jürgen von Hagen, Haiping Zhang

2005
B11-05 Das Kompetenz- und Entscheidungssystem des Vertrages von Rom im Wandel seiner Funktion und Verfassung
Martin Seidel
B10-05 Die Schutzklauseln der Beitrittsverträge
Martin Seidel
B09-05 Measuring Tax Burdens in Europe
Guntram B. Wolff
B08-05 Remittances as Investment in the Absence of Altruism
Gabriel González-König
B07-05 Economic Integration in a Multicone World?
Christian Volpe Martincus, Jennifer Pédussel Wu
B06-05 Banking Sector (Under?)Development in Central and Eastern Europe
Jürgen von Hagen, Valeriya Dinger
B05-05 Regulatory Standards Can Lead to Predation
Stefan Lutz
B04-05 Währungspolitik als Sozialpolitik
Martin Seidel
B03-05 Public Education in an Integrated Europe: Studying to Migrate and Teaching to Stay?
Panu Poutvaara
B02-05 Voice of the Diaspora: An Analysis of Migrant Voting Behavior
Jan Fidrmuc, Orla Doyle
B01-05 Macroeconomic Adjustment in the New EU Member States
Jürgen von Hagen, Iulia Traistaru

2004
B33-04 The Effects of Transition and Political Instability On Foreign Direct Investment Inflows: Central Europe and the Balkans
Josef C. Brada, Ali M. Kutan, Tanner M. Yigit
B32-04 The Choice of Exchange Rate Regimes in Developing Countries: A Multinominal Panel Analysis
Jürgen von Hagen, Jizhong Zhou
B31-04 Fear of Floating and Fear of Pegging: An Empirical Analysis of De Facto Exchange Rate Regimes in Developing Countries
Jürgen von Hagen, Jizhong Zhou
B30-04 Der Vollzug von Gemeinschaftsrecht über die Mitgliedstaaten und seine Rolle für die EU und den Beitrittsprozess
Martin Seidel
B29-04 Deutschlands Wirtschaft, seine Schulden und die Unzulänglichkeiten der einheitlichen Geldpolitik im Eurosystem
Dieter Spethmann, Otto Steiger
B28-04 Fiscal Crises in U.S. Cities: Structural and Non-structural Causes
Guntram B. Wolff
B27-04 Firm Performance and Privatization in Ukraine
Galyna Grygorenko, Stefan Lutz
B26-04 Analyzing Trade Opening in Ukraine: Effects of a Customs Union with the EU
Oksana Harbuzyuk, Stefan Lutz
B25-04 Exchange Rate Risk and Convergence to the Euro
Lucjan T. Orlowski
B24-04 The Endogeneity of Money and the Eurosystem
Otto Steiger
B23-04 Which Lender of Last Resort for the Eurosystem?
Otto Steiger
B22-04 Non-Discretionary Monetary Policy: The Answer for Transition Economies?
Elham-Mafi Kreft, Steven F. Kreft
B21-04 The Effectiveness of Subsidies Revisited: Accounting for Wage and Employment Effects in Business R+D
Volker Reinhthal, Guntram B. Wolff
B20-04 Money Market Pressure and the Determinants of Banking Crises
Jürgen von Hagen, Tai-kuang Ho
B19-04 Die Stellung der Europäischen Zentralbank nach dem Verfassungsvertrag
Martin Seidel
B18-04  Transmission Channels of Business Cycles Synchronization in an Enlarged EMU
Iulia Traistaru

B17-04  Foreign Exchange Regime, the Real Exchange Rate and Current Account Sustainability: The Case of Turkey
Sübidey Togan, Hasan Ersel

Harry P. Bowen, Jennifer Pédussel Wu

B15-04  Do Economic Integration and Fiscal Competition Help to Explain Local Patterns?
Christian Volpe Martincus

B14-04  Euro Adoption and Maastricht Criteria: Rules or Discretion?
Jiri Jonas

B13-04  The Role of Electoral and Party Systems in the Development of Fiscal Institutions in the Central and Eastern European Countries
Sami Yläoutinen

B12-04  Measuring and Explaining Levels of Regional Economic Integration
Jennifer Pédussel Wu

B11-04  Economic Integration and Location of Manufacturing Activities: Evidence from MERCOSUR
Pablo Sanguinetti, Iulia Traistaru, Christian Volpe Martincus

B10-04  Economic Integration and Industry Location in Transition Countries
Laura Resmini

Ayse Y. Evrensel, Ali M. Kutan

B08-04  European Integration, Productivity Growth and Real Convergence
Tanner M. Yigit, Ali M. Kutan

B07-04  The Contribution of Income, Social Capital, and Institutions to Human Well-being in Africa
Mina Baliamoune-Lutz, Stefan H. Lutz

B06-04  Rural Urban Inequality in Africa: A Panel Study of the Effects of Trade Liberalization and Financial Deepening
Mina Baliamoune-Lutz, Stefan H. Lutz

B05-04  Money Rules for the Eurozone Candidate Countries
Lucjan T. Orlowski

B04-04  Who is in Favor of Enlargement? Determinants of Support for EU Membership in the Candidate Countries’ Referenda
Orla Doyle, Jan Fidrmuc

B03-04  Over- and Underbidding in Central Bank Open Market Operations Conducted as Fixed Rate Tender
Ulrich Bindseil

B02-04  Total Factor Productivity and Economic Freedom Implications for EU Enlargement
Ronald L. Moomaw, Euy Seok Yang

B01-04  Die neuen Schutzklauseln der Artikel 38 und 39 des Beitrittsvertrages: Schutz der alten Mitgliedstaaten vor Störungen durch die neuen Mitgliedstaaten
Martin Seidel

2003

B29-03  Macroeconomic Implications of Low Inflation in the Euro Area
Jürgen von Hagen, Boris Hofmann

B28-03  The Effects of Transition and Political Instability on Foreign Direct Investment: Central Europe and the Balkans
Josef C. Brada, Ali M. Kutan, Tanner M. Yigit

B27-03  The Performance of the Euribor Futures Market: Efficiency and the Impact of ECB Policy Announcements (Electronic Version of International Finance)
Kerstin Bernoth, Juergen von Hagen

B26-03  Souverain Risk Premia in the European Government Bond Market (überarbeitete Version zum Herunterladen)
Kerstin Bernoth, Juergen von Hagen, Ludger Schulknecht

B25-03  How Flexible are Wages in EU Accession Countries?
Anna Iara, Iulia Traistaru

B24-03  Monetary Policy Reaction Functions: ECB versus Bundesbank
Bernd Hayo, Boris Hofmann

B23-03  Economic Integration and Manufacturing Concentration Patterns: Evidence from Mercosur
Iulia Traistaru, Christian Volpe Martincus

B22-03  Reformzwänge innerhalb der EU angesichts der Osterweiterung
Martin Seidel

B21-03  Reputation Flows: Contractual Disputes and the Channels for Inter-Firm Communication
William Pyle

B20-03  Urban Primacy, Gigantism, and International Trade: Evidence from Asia and the Americas
Ronald L. Moomaw, Mohammed A. Alwosabi

B19-03  An Empirical Analysis of Competing Explanations of Urban Primacy Evidence from Asia and the Americas
Ronald L. Moomaw, Mohammed A. Alwosabi
| B01-03          | The Effects of Regional and Industry-Wide FDI Spillovers on Export of Ukrainian Firms | Stefan H. Lutz, Oleksandr Talave-ra, Sang-Min Park |
| B02-03          | Determinants of Inter-Regional Migration in the Baltic States                      | Mihails Hazans |
| B03-03          | South-East Europe: Economic Performance, Perspectives, and Policy Challenges       | Iulia Traistaru, Jürgen von Hagen |
| B04-03          | Employed and Unemployed Search: The Marginal Willingness to Pay for Attributes in Lithuania, the US and the Netherlands | Jos van Ommeren, Mihails Hazans |
| B05-03          | FCIs and Economic Activity: Some International Evidence                             | Charles Goodhart, Boris Hofmann |
| B06-03          | The IS Curve and the Transmission of Monetary Policy: Is there a Puzzle?           | Charles Goodhart, Boris Hofmann |
| B07-03          | What Makes Regions in Eastern Europe Catching Up? The Role of Foreign Investment, Human Resources, and Geography | Gabriele Tondl, Goran Vuksic |
| B08-03          | Die Weisungs- und Herrschaftsmacht der Europäischen Zentralbank im europäischen System der Zentralbanken - eine rechtliche Analyse | Martin Seidel |
| B09-03          | Foreign Direct Investment and Perceptions of Vulnerability to Foreign Exchange Crises: Evidence from Transition Economies | Josef C. Brada, Vladimír Tomsík |
| B10-03          | The European Central Bank and the Eurosystem: An Analysis of the Missing Central Monetary Institution in European Monetary Union | Gunnar Heinsohn, Otto Steiger |
| B11-03          | The Determination of Capital Controls: Which Role Do Exchange Rate Regimes Play? | Jürgen von Hagen, Jizhong Zhou |
| B12-03          | Nach Nizza und Stockholm: Stand des Binnenmarktes und Prioritäten für die Zukunft | Martin Seidel |
| B13-03          | Fiscal Discipline and Growth in Euroland. Experiences with the Stability and Growth Pact | Jürgen von Hagen |
| B14-03          | Reconsidering the Evidence: Are Eurozone Business Cycles Converging?               | Michael Massmann, James Mitchell |
| B15-03          | Do Ukrainian Firms Benefit from FDI?                                              | Stefan H. Lutz, Oleksandr Talave-ra |
| B16-03          | Europäische Steuerkoordination und die Schweiz                                     | Stefan H. Lutz |
| B17-03          | Commuting in the Baltic States: Patterns, Determinants, and Gains                 | Mihails Hazans |
| B18-03          | Die Wirtschafts- und Währungsunion im rechtlichen und politischen Gefüge der Europäischen Union | Martin Seidel |

**2002**

| B19-02          | An Adverse Selection Model of Optimal Unemployment Insurance                       | Marcus Hagedorn, Ashok Kaul, Tim Mennel |
| B20-02          | Trade Agreements as Self-protection                                               | Jennifer Pédussel Wu |
| B21-02          | Growth and Business Cycles with Imperfect Credit Markets                           | Debajyoti Chakrabarty |
| B22-02          | Inequality, Politics and Economic Growth                                           | Debajyoti Chakrabarty |
| B23-02          | Poverty Traps and Growth in a Model of Endogenous Time Preference                 | Debajyoti Chakrabarty |
| B24-02          | Monetary Convergence and Risk Premiums in the EU Candidate Countries               | Lucjan T. Orlowski |
| B25-02          | Economic Factors                                                                  | Stefan Lutz |
| B26-02          | Legal Aspects of European Economic and Monetary Union                              | Martin Seidel |
| B27-02          | Der Staat als Lender of Last Resort - oder: Die Achillesverse des Eurosystems     | Otto Steiger |
| B28-02          | Nominal and Real Stochastic Convergence Within the Transition Economies and to the European Union: Evidence from Panel Data | Ali M. Kutan, Taner M. Yigit |
B19-02  East Germany: Transition with Unification, Experiments and Experiences  Jürgen von Hagen, Rolf R. Strauch, Guntram B. Wolff
B18-02  Regional Specialization and Employment Dynamics in Transition Countries  Iulia Traistaru, Guntram B. Wolff
B17-02  Specialization and Growth Patterns in Border Regions of Accession Countries  Laura Resmini
B16-02  Regional Specialization and Concentration of Industrial Activity in Accession Countries  Iulia Traistaru, Peter Nijkamp, Simonetta Longhi
B15-02  Does Broad Money Matter for Interest Rate Policy?  Matthias Brückner, Andreas Schaber
B14-02  The Long and Short of It: Global Liberalization, Poverty and Inequality  Christian E. Weller, Adam Hersch
B13-02  De Facto and Official Exchange Rate Regimes in Transition Economies  Jürgen von Hagen, Jizhong Zhou
B12-02  Argentina: The Anatomy of A Crisis  Jiri Jonas
B11-02  The Eurosystem and the Art of Central Banking  Gunnar Heinsohn, Otto Steiger
B09-02  Monetary Policy in the Euro Area - Lessons from the First Years  Volker Clausen, Bernd Hayo
B08-02  Has the Link Between the Spot and Forward Exchange Rates Broken Down? Evidence From Rolling Cointegration Tests  Ali M. Kutan, Su Zhou
B07-02  Perspektiven der Erweiterung der Europäischen Union  Martin Seidel
B06-02  Is There Asymmetry in Forward Exchange Rate Bias? Multi-Country Evidence  Su Zhou, Ali M. Kutan
B05-02  Real and Monetary Convergence Within the European Union and Between the European Union and Candidate Countries: A Rolling Cointegration Approach  Josef C. Brada, Ali M. Kutan, Su Zhou
B04-02  Asymmetric Monetary Policy Effects in EMU  Volker Clausen, Bernd Hayo
B03-02  The Choice of Exchange Rate Regimes: An Empirical Analysis for Transition Economies  Jürgen von Hagen, Jizhong Zhou
B02-02  The Euro System and the Federal Reserve System Compared: Facts and Challenges  Karlheinz Ruckriegel, Franz Seitz
B01-02  Does Inflation Targeting Matter?  Manfred J. M. Neumann, Jürgen von Hagen

2001
B29-01  Is Kazakhstan Vulnerable to the Dutch Disease?  Karlygash Kuralbayeva, Ali M. Kutan
B28-01  Political Economy of the Nice Treaty: Rebalancing the EU Council. The Future of European Agricultural Policies  Michael L. Wyzan
B26-01  Regional Effects of Terrorism on Tourism: Evidence from Three Mediterranean Countries  Konstantinos Drakos, Ali M. Kutan
B25-01  Monetary Convergence of the EU Candidates to the Euro: A Theoretical Framework and Policy Implications  Lucjan T. Orlowski
B24-01  Disintegration and Trade  Jarko and Jan Fidrmuc
B23-01  Migration and Adjustment to Shocks in Transition Economies  Jan Fidrmuc
B22-01  Strategic Delegation and International Capital Taxation  Matthias Brückner
B20-01  An Empirical Inquiry of the Efficiency of Intergovernmental Transfers for Water Projects Based on the WRDA Data  Anna Rubinchik-Pessach
**B18-01** Monetary Policy in Unknown Territory. The European Central Bank in the Early Years  
Jürgen von Hagen, Matthias Brückner

**B17-01** Executive Authority, the Personal Vote, and Budget Discipline in Latin American and Carribean Countries  
Mark Hallerberg, Patrick Marier

**B16-01** Sources of Inflation and Output Fluctuations in Poland and Hungary: Implications for Full Membership in the European Union  
Selahattin Dibooglu, Ali M. Kutan

**B15-01** Programs Without Alternative: Public Pensions in the OECD  
Christian E. Weller

**B14-01** Formal Fiscal Restraints and Budget Processes As Solutions to a Deficit and Spending Bias in Public Finances - U.S. Experience and Possible Lessons for EMU  
Rolf R. Strauch, Jürgen von Hagen

**B13-01** German Public Finances: Recent Experiences and Future Challenges  
Jürgen von Hagen, Rolf R. Strauch

**B12-01** The Impact of Eastern Enlargement On EU-Labour Markets. Pensions Reform Between Economic and Political Problems  
Deutsch-Französisches Wirtschaftspolitisches Forum

**B11-01** Inflationary Performance in a Monetary Union With Large Wage Setters  
Lilia Cavallar

**B10-01** Integration of the Baltic States into the EU and Institutions of Fiscal Convergence: A Critical Evaluation of Key Issues and Empirical Evidence  
Ali M. Kutan, Niina Pautola-Mol

**B09-01** Democracy in Transition Economies: Grease or Sand in the Wheels of Growth?  
Jan Fidrmuc

**B08-01** The Functioning of Economic Policy Coordination  
Jürgen von Hagen, Susanne Mundschenk

**B07-01** The Convergence of Monetary Policy Between Candidate Countries and the European Union  
Josef C. Brada, Ali M. Kutan

**B06-01** Opposites Attract: The Case of Greek and Turkish Financial Markets  
Konstantinos Drakos, Ali M. Kutan

**B05-01** Trade Rules and Global Governance: A Long Term Agenda. The Future of Banking.  
Deutsch-Französisches Wirtschaftspolitisches Forum

**B04-01** The Determination of Unemployment Benefits  
Rafael di Tella, Robert J. MacCulloch

**B03-01** Preferences Over Inflation and Unemployment: Evidence from Surveys of Happiness  
Rafael di Tella, Robert J. MacCulloch, Andrew J. Oswald

**B02-01** The Konstanz Seminar on Monetary Theory and Policy at Thirty  
Michele Fratianni, Jürgen von Hagen

**B01-01** Divided Boards: Partisanship Through Delegated Monetary Policy  
Etienne Farvaque, Gael Lagadec

**2000**

**B20-00** Breakin-up a Nation, From the Inside  
Etienne Farvaque

**B19-00** Income Dynamics and Stability in the Transition Process, general Reflections applied to the Czech Republic  
Jens Hölscher

**B18-00** Budget Processes: Theory and Experimental Evidence  
Karl-Martin Ehrhart, Roy Gardner, Jürgen von Hagen, Claudia Keser, Martin Seidel

**B17-00** Rückführung der Landwirtschaftspolitik in die Verantwortung der Mitgliedstaaten? - Rechts- und Verfassungsfragen des Gemeinschaftsrechts  
Christa Randzio-Plath, Tomasso Padoa-Schioppa

**B16-00** The European Central Bank: Independence and Accountability  
Jürgen von Hagen, Ralf Hepp

**B15-00** Regional Risk Sharing and Redistribution in the German Federation  
Selahattin Dibooglu, Ali M. Kutan

**B14-00** Sources of Real Exchange Rate Fluctuations in Transition Economies: The Case of Poland and Hungary  
Nauro F. Campos

**B13-00** Back to the Future: The Growth Prospects of Transition Economies Reconsidered
B12-00  Rechtsetzung und Rechtsangleichung als Folge der Einheitlichen Europäischen Währung  
Martin Seidel

B11-00  A Dynamic Approach to Inflation Targeting in Transition Economies  
Lucjan T. Orlowski

B10-00  The Importance of Domestic Political Institutions: Why and How Belgium Qualified for EMU  
Marc Hallerberg

B09-00  Rational Institutions Yield Hysteresis  
Rafael Di Tella, Robert MacCulloch

B08-00  The Effectiveness of Self-Protection Policies for Safeguarding Emerging Market Economies from Crises  
Kenneth Kletzer

B07-00  Financial Supervision and Policy Coordination in The EMU  
Deutsch-Französisches Wirtschaftspolitisches Forum

B06-00  The Demand for Money in Austria  
Jan Fidrmuc

B05-00  Liberalization, Democracy and Economic Performance during Transition  
Christa Randzio-Plath

B04-00  A New Political Culture in The EU - Democratic Accountability of the ECB  
Jarko Fidrmuc, Jan Fidrmuc

B03-00  Integration, Disintegration and Trade in Europe: Evolution of Trade Relations during the 1990's  
Josef C. Brada, Arthur E. King, Ali M. Kutan

B02-00  Inflation Bias and Productivity Shocks in Transition Economies: The Case of the Czech Republic  
Kenneth Kletzer, Jürgen von Hagen

B01-00  Monetary Union and Fiscal Federalism  

1999

Stefan Lutz, Alessandro Turrini

B25-99  Micro and Macro Determinants of Public Support for Market Reforms in Eastern Europe  
Bernd Hayo

B24-99  What Makes a Revolution?  
Rafael Di Tella, Robert MacCulloch

B23-99  Informal Family Insurance and the Design of the Welfare State  
Rafael Di Tella, Robert MacCulloch

B22-99  Partisan Social Happiness  

B21-99  The End of Moderate Inflation in Three Transition Economies?  
Josef C. Brada, Ali M. Kutan

B20-99  Subnational Government Bailouts in Germany  
Helmut Seitz

B19-99  The Evolution of Monetary Policy in Transition Economies  
Ali M. Kutan, Josef C. Brada

B18-99  Why are Eastern Europe's Banks not failing when everybody else's are?  
Christian E. Weller, Bernard Morzuch

B17-99  Stability of Monetary Unions: Lessons from the Break-Up of Czechoslovakia  
Jan Fidrmuc, Julius Horvath and Jarko Fidrmuc

B16-99  Multinational Banks and Development Finance  
Christian E. Weller and Mark J. Scher

B15-99  Financial Crises after Financial Liberalization: Exceptional Circumstances or Structural Weakness?  
Christian E. Weller

B14-99  Industry Effects of Monetary Policy in Germany  
Bernd Hayo and Birgit Uhlenbrock

B13-99  Financial Fragility or What Went Right and What Could Go Wrong in Central European Banking?  
Christian E. Weller and Jürgen von Hagen

B12-99  Size Distortions of Tests of the Null Hypothesis of Stationarity: Evidence and Implications for Applied Work  
Mehmet Caner and Lutz Kilian

B11-99  Financial Supervision and Policy Coordination in the EMU  
Deutsch-Französisches Wirtschaftspolitisches Forum

B10-99  Financial Liberalization, Multinational Banks and Credit Supply: The Case of Poland  
Christian Weller

B09-99  Monetary Policy, Parameter Uncertainty and Optimal Learning  
Volker Wieland

B08-99  The Connection between more Multinational Banks and less Real Credit in Transition Economies  
Christian Weller
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Comovement and Catch-up in Productivity across Sectors: Evidence from the OECD</td>
<td>Christopher M. Cornwell and Jens-Uwe Wächter</td>
</tr>
<tr>
<td></td>
<td>Productivity Convergence and Economic Growth: A Frontier Production Function Approach</td>
<td>Christopher M. Cornwell and Jens-Uwe Wächter</td>
</tr>
<tr>
<td></td>
<td>Tumbling Giant: Germany's Experience with the Maastricht Fiscal Criteria</td>
<td>Jürgen von Hagen and Rolf Strauch</td>
</tr>
<tr>
<td></td>
<td>The Finance-Investment Link in a Transition Economy: Evidence for Poland from Panel Data</td>
<td>Christian Weller</td>
</tr>
<tr>
<td></td>
<td>The Macroeconomics of Happiness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Consequences of Labour Market Flexibility: Panel Evidence Based on Survey Data</td>
<td>Rafael Di Tella, Robert MacCulloch and Andrew J. Oswald</td>
</tr>
<tr>
<td></td>
<td>The Excess Volatility of Foreign Exchange Rates: Statistical Puzzle or Theoretical Artifact?</td>
<td>Robert B.H. Hauswald</td>
</tr>
<tr>
<td>1997</td>
<td>Labour Market + Tax Policy in the EMU</td>
<td>Deutsch-Französisches Wirtschaftspolitisches Forum</td>
</tr>
<tr>
<td></td>
<td>Can Taxing Foreign Competition Harm the Domestic Industry?</td>
<td>Stefan Lutz</td>
</tr>
<tr>
<td></td>
<td>Free Trade and Arms Races: Some Thoughts Regarding EU-Russian Trade</td>
<td>Rafael Reuveny and John Maxwell</td>
</tr>
<tr>
<td></td>
<td>Fiscal Policy and Intranational Risk-Sharing</td>
<td>Jürgen von Hagen</td>
</tr>
<tr>
<td></td>
<td>Price Stability and Monetary Policy Effectiveness when Nominal Interest Rates are Bounded at Zero</td>
<td>Athanasios Orphanides and Volker Wieland</td>
</tr>
<tr>
<td></td>
<td>Die Bewertung der &quot;dauerhaft tragbaren öffentlichen Finanzlage&quot; der EU Mitgliedstaaten beim Übergang zur dritten Stufe der EWWU</td>
<td>Rolf Strauch</td>
</tr>
<tr>
<td></td>
<td>Exchange Rate Regimes in theTransition Economies: Case Study of the Czech Republic: 1990-1997</td>
<td>Julius Horvath and Jiri Jonas</td>
</tr>
<tr>
<td></td>
<td>Der Wettbewerb der Rechts- und politischen Systeme in der Europäischen Union</td>
<td>Martin Seidel</td>
</tr>
<tr>
<td></td>
<td>U.S. Monetary Policy and Monetary Policy and the ESCB</td>
<td>Robert L. Hetzel</td>
</tr>
<tr>
<td></td>
<td>Money-Output Granger Causality Revisited: An Empirical Analysis of EU Countries (überarbeitete Version zum Herunterladen)</td>
<td>Bernd Hayo</td>
</tr>
<tr>
<td></td>
<td>Designing Voluntary Environmental Agreements in Europe: Some Lessons from the U.S. EPA's 33/50 Program</td>
<td>John W. Maxwell</td>
</tr>
<tr>
<td></td>
<td>Monetary Union, Asymmetric Productivity Shocks and Fiscal Insurance: an Analytical Discussion of Welfare Issues</td>
<td>Kenneth Kletzer</td>
</tr>
<tr>
<td></td>
<td>Estimating a European Demand for Money (überarbeitete Version zum Herunterladen)</td>
<td>Bernd Hayo</td>
</tr>
<tr>
<td></td>
<td>The EMU's Exchange Rate Policy</td>
<td>Deutsch-Französisches Wirtschaftspolitisches Forum</td>
</tr>
<tr>
<td></td>
<td>Central Bank Policy in a More Perfect Financial System</td>
<td>Jürgen von Hagen / Ingo Fender</td>
</tr>
<tr>
<td></td>
<td>Trade with Low-Wage Countries and Wage Inequality</td>
<td>Jaleel Ahmad</td>
</tr>
<tr>
<td></td>
<td>Budgeting Institutions for Aggregate Fiscal Discipline</td>
<td>Jürgen von Hagen</td>
</tr>
<tr>
<td></td>
<td>Macroeconomic Stabilization with a Common Currency: Does European Monetary Unification Create a Need for Fiscal Insurance or Federalism?</td>
<td>Kenneth Kletzer</td>
</tr>
<tr>
<td></td>
<td>Employment and EMU</td>
<td>Deutsch-Französisches Wirtschaftspolitisches Forum (a Forum organized by ZEI)</td>
</tr>
</tbody>
</table>