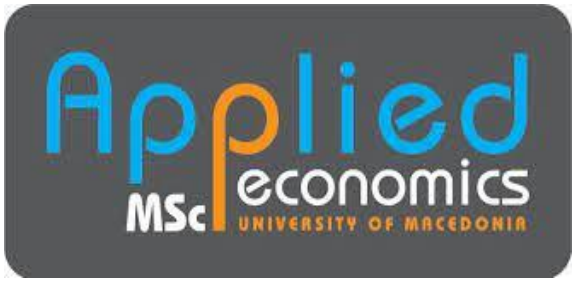

A macroeconomic uncertainty index for Greece and Europe based on Google Trends

by

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Abstract

The aim of this paper is the creation of a macroeconomic uncertainty index for the European Union countries based on Google Trends, for fifteen years, from January 2008 to December 2022. Monthly data were collected for the 27 countries for four different word-terms, as well as for unemployment rate, inflation and the 10-year Government Bond yield. For the simplicity of the research the investigated keywords were in English and not translated in each country's language. Our findings were then compared to existing uncertainty indices. Lastly, each country's uncertainty index was Impulse Response Functioned (IRF) with the forementioned economic indicators, showing what effect a one standard deviation shock on the uncertainty index has on all three indicators and its ability to accurately depict the future precariousness of the country.

Contents

Introduction

Epistemic scenarios with incomplete or ambiguous knowledge are referred to as uncertain. This applies to physical measurements that have previously been performed, to the unknown, and to projections of future events. In partially observable or stochastic circumstances, as well as from ignorance, complacency, or both, uncertainty can develop and it can appear in a wide variety of fields. Several events in the recent years have attracted the economists' attention to the economic uncertainty worldwide, including the global financial crisis in 2008, the pandemic crisis of COVID19 that lasted two years, from 2019 to 2021, as well as the Russia's invasion to Ukraine, leading to war between the two countries. Alongside with fluctuations in uncertainty comes often extreme volatility in a variety of economic indicators, such as unemployment rate, inflation, GDP, long-term government bond yields, uncertainty indices and many more.

The purpose of this study is to examine whether the creation of a macroeconomic uncertainty index for the European Union countries based on Google Trends, can be accurate and reliable in depicting the uncertainty levels existing in a community in periods of precariousness. Google Trends is a website that tracks the most popular Google Search terms across various geographies and languages. The time horizon for our research is fifteen years, from January 2008 until December 2022.

The construction of our Uncertainty Index was achieved with the use of Google Trends. With four words as benchmark, we were able to find monthly data for all 27 EU countries. The uncertainty index for each country was created, which then helped in the construction of the Aggregated Uncertainty Index for both the European Union (27 countries) and the Eurozone (19 countries). Our uncertainty index was also compared to the existing Economic Policy Uncertainty index (Baker, Bloom & Davis, 2016) and the Consumer Confidence Index to check for its validity. With the use of the econometric program STATA, we were able of conducting Vector Autoregressive (VAR) models for every country and later on Impulse Response Function (IRF) graphs, where the effect of one standard deviation shock on the uncertainty of the country has on the economic indicators unemployment rate, inflation and long-term government bond yield was depicted. For countries excluded from the Eurozone, their currency over euro was also used as a variable for analysis.

In the second section of the paper, an extensive reference of Google Trends' background and utility takes place. The third section is focused on the literature review of our research. A variety of papers regarding Google Trends, Economic Policy Uncertainty, construction of uncertainty indices and many more are covered in the pursuit of providing a better understanding of the topic in concern. In the fourth section, we offer a widespread explanation of the steps that were taken while conducting the research. The methods that were followed, as well as the tests that were harnessed, are analyzed thoroughly. The fifth section is focused on depicting the data and the results of the study. All countries are presented in alphabetical order. Tables, figures and Impulse Response Function (IRF) graphs are presented for every country and the results are deeply explained. In the last section, the results of our research are commented, conclusions are drawn and suggestions for future research are presented.

Google Trends

Google Trends is a helpful search trends tool that displays the frequency of a certain search phrase in relation to the overall volume of searches made on the website over a specified time period. Google Trends may be used to find event-driven increases in keyword search traffic and do comparative keyword research. Google Trends offers geographical statistics on search engine users as well as keyword-related data such as the search volume index. It was first introduced on May 11, 2006. Google then released Google Insights for Search on August 5, 2008, an advanced and more detailed service that provided data on search trends to the users. In the concrete study the first version of Google Trends is harnessed.

Providing free access to its vast and almost instant updated data, its use as an auxiliary object for conducting researches in many fields has increased, with papers regarding Google Trends arousing in the past years. Google Trends data is pulled from a random, unbiased sample of Google searches. This means that it does not provide exact numbers for any terms or topics. In order to give a value to terms, each term fluctuates from 1-100, where 100 is the maximum search interest for the time and location selected by the individual.

Regarding the exclusions in the data, Google Trends excludes certain data from the searches. It eliminates repeated searches made from a single user over a short-time period for more accurate results. Also, searches done from a small group of individuals are excluded, appearing with the value of 0 for the investigated period, as Google Trends only analyzes data for popular terms. Special characters are as well eliminated, like inquiries with apostrophes. It is important to note that all the queries fall into categories relative to their origin.

Literature Review

A few studies have demonstrated that business cycle components are impacted by financial performers' susceptibility. Schütze, F. (2020) in 'Google Trends Topic-Based Uncertainty: A Multi-National Approach' uses subject searches from Google Trends to develop an uncertainty proxy that may be used in any country where Google has a presence. The impulse-response functions of the key economic indicators to a shock of one standard deviation to the created indicator are compared to those of the EPU, an existing uncertainty proxy, in this research using a VAR technique. Both Russia and the G7 countries, which are Canada, France, Germany, Italy, Japan, the United Kingdom and the United States; additionally, the European Union (EU) is a "non-enumerated member", can attest to this. The uncertainty indicator created for this study yields, on average, higher statistically significant answers when compared to the EPU. This article so shows that Google Trends is a good instrument for acquiring timely information on the uncertainty of economic participants. The primary improvement is the independence of this uncertainty proxy from language. It's noteworthy to note that current uncertainty measuring methods rely on certain buzzwords that regularly change across different countries.

Castelnuovo, E., & Tran, T. D. (2017) used freely available to public, real-time Google Trends data to create uncertainty indices for the United States and Australia. In their research 'Google it up! a Google Trends-based uncertainty index for the United States and Australia', the terms used in the creation of the uncertainty index were provided by economic documents like the Federal Reserve Beige Book for the US and the Reserve Bank Monetary Policy Statement for Australia. A number of other proxies for uncertainty that are available for these two nations are shown to favorably correlate with the author's Google Trends Uncertainty (GTU) indices, like VXO used by Bloom and EPU index constructed by Baker Bloom and Davis. Investigations using VAR show that GTU shocks in the United States have a statistically and economically substantial impact on the dynamics of unemployment. Contrarily, it is discovered that GTU shocks have a significantly smaller and less significant impact on Australian unemployment dynamics than do shocks related to monetary policy.

Based on the frequency of Google searches for the terms "US stock market", "US politics" and "US Fed", Donadelli, M. (2015) in his study 'Google search-based metrics, policy-related uncertainty and macroeconomic conditions' suggested three unique metrics of policy-related uncertainty. He discovered that a Google search-based uncertainty shock has a significant negative impact on US macroeconomic circumstances in a VAR environment. In particular, it reduces the industrial production, the consumers' confidence, the equity prices, the long-term rates, and the consumers' credit. Donadelli also found that the uncertainty shocks increase the unemployment rate. These results were essentially the same as those brought on by a shock to a common policy-related uncertainty measure. The empirical results indicate that a rise in the number of online searches for themes linked to economic policy is a sign of rising uncertainty. The suggested Google-search-based measures actually satisfy common policy-related uncertainty indicators, the index developed by Baker et al. (EPU) and the VIX (Volatility Index).

Yono, K., Izumi, K., Sakaji, H., Matsushima, H., & Shimada, T. (2019) conducted the research 'Analysis of the macroeconomic uncertainty based on the news-based textual data with financial market', aiming to develop a model for calculating macroeconomic uncertainty based on news content. They found that the acquisition or sale of financial assets can be significantly impacted by the financial market's uncertainty, the US-China trade war's potential impact on the global economy, Federal Reserve Board policy to raise interest rates, and other comparable macroeconomic developments. The authors suggested an enhanced topic model that includes numerical data as a trained signal for each news story in addition to text data from the news. Then they created four macroeconomic uncertainty indices using the suggested approach. All of these indices matched those seen in past macroeconomic events, and their link with market volatility was stronger.

For Australia, Moore, A. (2017) created a monthly indicator of economic uncertainty. During the global financial crisis, economic uncertainty reached previously high levels and persisted there until 2013. In 'Measuring economic uncertainty and its effects' it is shown that the index of economic uncertainty tends to grow quicker than it falls, it is influenced by both local and international causes, and is greater around recessions, elections, monetary policy shocks, and some significant geopolitical events. The author evaluates in the paper how uncertainty impacts the Australian economy using the index. He finds that it inhibits investment and job development, which is consistent with the real options' channel of uncertainty. Similar to the 'precautionary savings' channel of uncertainty, uncertainty increases the household saving ratio and lowers consumption growth for durable goods.

Bilgin, M. H., Demir, E., Gozgor, G., Karabulut, G., & Kaya, H. (2019) in 'A New Method to Measure Economic and Financial Uncertainty in Turkey', aimed to gauge Turkey's level of economic and financial instability. In order to cover the period from January 2004 to December 2018, they created a search-based "Turkish Economic and Financial Uncertainty Index" (TEFUI) and used real-time monthly Google Trends data. In order to create the baseline TEFUI, the paper takes into account more than 400 possible terms. The results of the Vector Autoregression models, Impulse-Response shocks and correlation analysis showed that the TEFUI is substantially correlated with a number of domestic economic uncertainty indicators and global uncertainty indices.

'The impact of uncertainty shocks in Spain: SVAR approach with sign restrictions' study of Albert, J. F., & Gómez Fernández, N. (2018) uses data from January 2001 to June 2018 to employ a SVAR technique with sign limitations in order to estimate the effects of economic uncertainty shocks on some of the main macroeconomic variables in Spain. The authors examined both transient and long-lasting shocks related to economic uncertainty. In order to detect possible changes in the consequences of the uncertainty depending on its origin, they also isolate the uncertainty shocks whose origin is simply political. Their findings imply that increases in economic and political uncertainty result in higher unemployment rates as well as declines in company and consumer confidence, the IBEX 35 Index, and industrial production. Additionally, these unfavorable consequences of uncertainty persist for a long period of time, particularly in the cases of industrial output and unemployment. According to these results, the authors can conclude that economic uncertainty shocks have a significant negative impact on the Spanish economy. It is important to note that the findings suggested that the Spanish

economy responds in a consistent manner regardless of whether it encounters a significant political event, such as the Brexit, or an international or domestic economic uncertainty shock. Therefore, the research suggested that politics is very important for avoiding uncertainty and achieving better economic results, which raise population well-being.

According to the preliminary data in the literature, the U.S. economic cycle may be influenced by shifts in uncertainty. However, a problem remains "uncertain" even when it is adequately quantified by the many accessible markers of uncertainty. The two objectives of the study 'A new index of uncertainty based on internet searches: A friend or foe of other indicators?' of Bontempi, M. E., Golinelli, R., & Squadrani, M. (2016), are to establish a new uncertainty indicator (GT) based on Internet searches and compare the key characteristics and macroeconomic consequences of several uncertainty measures, including the authors' index. According to the comparison research, the type of shocks represented by the indicator utilized has a significant impact on how uncertainty affects the economic cycle. For instance, short-lived financial shocks are a common cause of financial uncertainty (as indicated by the VIX, for example), which in theory shouldn't necessitate extremely persistent reactions. Accordingly, they capture a variety of historical events that occurred across the sample period in an easy-to-understand manner. News-based and search-based uncertainty measures are determined by all types of shock, provided that such shocks are perceived to be relevant by journalists or by newspaper readers. The findings imply that GT shocks, sometimes sooner than other indices, convey relevant information regarding people's perceptions of uncertainty. Furthermore, parameter breakdowns caused by in sample events have a greater impact on the effect of uncertainty shocks on output than does model specification. The consequence is that an all-comprehensive indicator able to weight different sources of uncertainty is preferable.

Building on the methodology used by Baker, Bloom, and Davis (2016), Arbatli, E. C., Davis, S. J., Ito, A., & Miake, N. (2017) created new economic policy uncertainty (EPU) indices for Japan starting in January 1987, for their study 'Policy uncertainty in Japan'. Each indicator measures the frequency of words related to the economy, politics, and uncertainty appearing in newspaper stories. Approximately 56 percent of all articles that fit their EPU criteria contained terms relevant to fiscal policy. About 24% of the phrases were related to monetary policy, whereas terms connected to trade and exchange rate policy were used less frequently. These findings indicated that fiscal policy issues are the primary near-term source of policy uncertainty in Japan. Trade policy issues were the second-most cited source from mid-2018 to the end of 2019, accounting for 28% of all EPU stories in the Japanese publications as of June 2019. The total EPU index positively correlated with implied volatility for Japanese stocks, interest rates, and currency rates, as well as with a survey-based indicator of political unpredictability. The EPU index increased in response to disputed national elections, significant leadership changes in Japan, the Asian financial crisis, the bankruptcy of Lehman Brothers, the U.S. debt downgrade in 2011, the Brexit vote, and Japan's decision to delay a consumption tax increase. The authors' uncertainty indices for monetary, trade, fiscal, and exchange rate policy positively co-vary but also exhibit unique patterns. As an illustration, when the United States withdrew from the Trans-Pacific Partnership in January 2017, the authors' trade policy uncertainty (TPU) score skyrocketed. VAR models predicted that upward EPU innovations, as seen by impulse response functions for investment, employment, and

output, indicated declines in Japan's macroeconomic performance. The research provides more proof that, in part through lowering policy uncertainty, solid policy frameworks and convincing policy programs may positively impact macroeconomic performance.

Bonciani, D. (2018) 'Uncertainty and the Macroeconomy', using a Dynamic Stochastic General Equilibrium (DSGE) model with heterogeneous agents and a stylized banking sector, examined the effects of uncertainty shocks on economic activity in the euro region. The author demonstrated how the effects of uncertainty shocks on economic activity are amplified by frictions in the credit supply. The stickiness of bank lending rates was found the fundamental cause of this application channel. The effectiveness of the monetary policy transmission mechanism was decreased by this stickiness. Then the empirical proof that, depending on the stage of the business cycle, uncertainty shocks have significant, asymmetric effects on economic activity is presented in the paper. In particular, the impulse responses computed using the local projection method on a smooth-transition model demonstrated how substantially economic activity is dampened by uncertainty shocks during recessions. The effects are reversed during an expansion, and uncertainty shocks had favorable macroeconomic effects. One argument was that uncertainty encourages investments and economic activity during expansions via the "growth options" channel, whereas it discourages investments during recessions via the "wait-and-see" channel. Lastly, it is demonstrated how shocks to macroeconomic uncertainty have a detrimental long- and short-term impact on economic activity. In a New Keynesian model with endogenous growth via investment in R&D, volatility shocks have negative effects both in the short and long runs due to cautious saving, a decreased inclination to make risky investments, and increased markups. Agents become more risk-averse when there are long-run fluctuations in consumption, which significantly amplifies the effects of uncertainty shocks.

The goal of the study 'A novel index of macroeconomic uncertainty for Turkey based on Google-Trends' is to gauge Turkey's level of economic and financial instability. The methodology employed creates the "Turkish Economic and Financial Uncertainty Index" (TEFUI), which is based on an internet search-based technique. The results show that TEFUI performs noticeably well to anticipate several indices of the Turkish economy as well as global uncertainty, based on the real-time monthly Google Trends data for the period from January 2004 to December 2018. The authors Bilgin, M. H., Demir, E., Gozgor, G., Karabulut, G., & Kaya, H. (2019), compare their index, which employs terms and phrases relevant to the Turkish economy, with an index created in another nation, such as the United States, in order to assess the relative performance of the measure. Correlation analysis and a thorough VAR analysis supported the findings, which point to TEFUI's ability to effectively capture uncertainty in Turkey.

In the recently developed sustainable information society, information is now accessed online in addition to being consumed. The online conduct of society is monitored, documented, analyzed, compiled, and monetized. Individuals are increasingly being studied, and decision-makers can learn a lot from how people use the internet. In order to correlate the developments of home prices in Poland between 2010 and 2021, the study uses Google Trends to gauge the societal interest in the housing market. The interrelationships (including Granger causality) were identified using the vector autoregressive model, which was also used to predict house

prices. The study of Bełej, M. (2022) 'Does Google Trends Show the Strength of Social Interest as a Predictor of Housing Price Dynamics?', demonstrated that surfing the internet using the phrase "dwelling" impacts the dynamics of housing prices and offers a compelling alternative to the traditional factors traditionally employed in predicting housing market values. It appeared that Poland's housing costs at the start of 2022 have been vastly overstated and were becoming less and less in line with the average household income. This was due to the fact that one may purchase a flat of 50 square meters for an average net wage. The very low main rate interest, extremely low bank deposit rate returns, growing inflation at the same time as profits from deposits from other financial investments, and rising interest in investing capital in real estate were the causes of such high prices in 2021. So, the demand for investments had been the main driver of recent increases in house prices.

Kropiński, P., & Anholcer, M. (2022) in 'How Google Trends can improve market predictions—the case of the Warsaw Stock Exchange' examine the relationships between the WIG20 index and phrases linked to economic policy uncertainty (EPU) as measured by a Google Trends search index. Testing was done for two time periods, January 2015 through December 2019 and June 2016 through May 2021. This made it possible to discern between the time of relative stability and the period of economic shock brought on by the COVID-19 epidemic crisis and its aftermath of the various government-imposed restrictions. Selected search phrases and the value of the WIG20 index were subjected to a bivariate VAR model. The Granger causality test was run after using AIC to determine the ideal number of delays. Twelve EPU-related keywords and changes in the WIG20 index were verified to have an enhanced empirical association in the second period compared to six terms in the pre-COVID era. Additionally, it was shown that the severity of reversal relations rose throughout the post-COVID era.

Numerous industries, including banking, tourism, the economy, fashion, the entertainment industry, the oil trade, and healthcare, have made substantial use of Google Trends. The objective of the scoping assessment of Zayed, B. A., Talaia, A. M., Gaaboobah, M. A., Amer, S. M., & Mansour, F. R. (2023) in 'Google Trends as a predictive tool in the era of COVID-19: a scoping review', is to provide an overview of Google Trends' function as a monitoring and forecasting tool for the COVID-19 pandemic. Original English-language peer-reviewed research publications on the COVID-19 pandemic that were published in 2020 and used Google Trends as a search engine were the inclusion criteria for this scoping study. Articles that did not describe the use of Google Trends during the COVID-19 epidemic, were written in a language other than English, or were solely in abstract form, were eliminated. These criteria led to the inclusion of 81 papers in total to span the first year following the crisis' emergence. It was suggested from the autos that health authorities may benefit from using Google Trends to plan and manage pandemics sooner and reduce infection risks among individuals.

Consumer behavior and policy on renewable and clean energy are significantly influenced by public interest in these issues. Using freely available, search frequency data from the Google search engine, through the Google Trends service, is a way to determining the public interest for particular topics based on the data provided. The frequency of searches may be used to gauge public opinion on a range of issues, including health care, global warming

and environmental issues, money and economics. The article 'Assessing public interest towards renewable wind energy using Google Trends', reports on research of public interest in wind energy subjects. The Perju-Mitran, A., Zirra, D., & Mitran, R. A. (2022) used six Google search terms from 2004 to 2020: "wind power", "wind energy", "offshore wind", "wind farm", "wind turbine" and "wind generator". All keywords—aside from "offshore wind"—display a consistent decline from a high between 2008 and 2010 up to 2015, followed by a brief shift in the range between 2015 and 2020. Similar to this pattern, interest in offshore wind subjects also rises in frequency starting in 2015 and peaks in 2018. In general, the Google Trends statistics show a decline in public interest in most wind energy subjects between 2004 and 2020, with the exception of "offshore wind" for English-speaking users. It is important to note that the global interest for wind energy topics is significant for both developed and developing countries.

The use of Google Trends data to enhance real estate market forecasting is illustrated in 'Use of Google Trends to Predict the Real Estate Market: Evidence from the United' by Bulczak, G. M. (2021). Online searches generate useful information that comes before financial choices. This study investigates how well Google search engine data may be used to forecast real estate markets. The findings suggest that Google data might be a further source of knowledge for investors and decision-makers. This study expands on the body of research already done on how behavioral variables play a part in decision-making. Data from Google Trends have been found to be a reliable indicator of real estate market pricing and sales volume.

In the study 'Can Google Trends Improve Housing Market Forecasts?', the authors Limnios, A. C., & You, H. (2021) employed Google Trends data to supplement linear pricing models for the housing market that are often used in the literature in order to determine whether or not crowd-sourced search query data may enhance the models' forecasting abilities. To evaluate statistical fit, they estimated both sets of models (with and without the search query data). Then, they evaluated the out-of-sample, dynamic predictions of the enhanced linear model against a baseline version using a variety of performance metrics. They discovered that enhancing the models to take use of the accessibility of Google Trend data does not materially enhance the models' predicting capabilities.

The promising potential of web-based search data for forecasting macroeconomic statistics is highlighted by the Ettredge, Gerdes, and Karuga (2005) research 'Using web-based search data to predict macroeconomic statistics'. By using the enormous quantity of data produced by internet search activity, researchers quickly got new insights into consumer attitude and behavior. Despite the fact that the strategy had many benefits, it is important to recognize its drawbacks and keep improving the analytical methodology. Integrating online search data into macroeconomic forecasting models could help better understand the economy and produce predictions that are increasingly accurate as technology develops and data availability increases.

Following significant shocks like the OPEC I oil price shock, the 9/11 terrorist attacks, the JFK assassination, the Cuban Missile Crisis, and the killing of JFK, uncertainty seems to spike. A structural framework is provided in this research to examine the effects of these uncertainty shocks. Bloom, N. (2009), 'The impact of uncertainty shocks', constructed a time-varying second moment model that uses firm-level data to estimate it and solve it numerically.

Then, a macro uncertainty shock was simulated using the parameterized model, leading to a sharp decline and subsequent rebound in total production and employment. This happened as a result of businesses temporarily pausing their employment and investment due to increased uncertainty. Because of the freezing of reallocation among units caused by this activity stop, productivity growth also declined. Overshoot in production was caused in the medium term by the shock's increased volatility. Because of the freezing of reallocation among units caused by this activity stop, productivity growth also declines. The shock's heightened volatility causes production, employment, and productivity to overshoot in the medium run. Uncertainty shocks can cause swift, short-lived recessions and recoveries. Vector autoregression calculations on actual data were compared to this simulated impact of an uncertainty shock, and the results demonstrated a good match in terms of size and time. Convex and nonconvex labour and capital adjustment costs were jointly estimated in the article. It had been demonstrated that disregarding labour adjustment costs does not result in bias, however ignoring capital adjustment costs does.

The amount of inflation is thought to be a measure of the degree of monetary policy uncertainty, according to Bali's (1992) explanation of the positive association between inflation and inflation uncertainty. If shocks to aggregate demand have transient actual impacts, then inflation is a measure of how unpredictable real economic activity is. Hayford, M. D. (2000), 'Inflation uncertainty, unemployment uncertainty and economic activity', demonstrates that concern about future unemployment—a proxy for doubt about future actual economic activity—increases with inflation in addition to inflation uncertainty itself. Furthermore, regression results imply that slower production growth occurs briefly when both inflation uncertainty and unemployment uncertainty increase. Additional impulse response functions show that the impacts of inflation and unemployment uncertainty on real GDP growth are of the same magnitude. This shows that increased inflation uncertainty's cost of higher unemployment may be comparable to inflation uncertainty itself.

Methodology

To begin with our research, we constructed our monthly Uncertainty Index (UI) through Google Trends. For the simplicity of the research, the chosen and investigated words were in English and not translated in each country's language. For the creation of the uncertainty index, we chose words-phrases that individuals would be most interested in seeking information for in the most popular search engine worldwide, Google, in periods of escalating uncertainty. These four terms were "minimum wage", "energy price", "bank crisis" and "home price". The time frame for all of our monthly data is from January 2008 to December 2022.

In Google Trends data we are not looking at the total number of searches, but instead at the percentage of searches for that topic, as a proportion of all searches at that time and location. Google Trends data is pulled from a random, unbiased sample of Google searches, for this reason we collected the data for the investigated words for all 27 countries on the same day, as results vary from day to day. For every value received close to 1, on all of the four terms investigated, we rounded it up to 1 for the simplicity of our study. Having chosen Greece as the benchmark country in the Google Trends data, it being our dominant interest, we collected data for each country using the same four words and added as the fifth search the term "home price" for Greece. Following this method, we were able to rescale the countries needed, so the index took values up to 100. Furthermore, we separated and categorized the countries in two groups, the European Union group and the Eurozone group. We created the Aggregate Uncertainty Index for EU and the Aggregate Uncertainty Index for EA (Euro Area). To accomplish that, firstly, we downloaded the annual Real Gross Domestic Product (RGDP) for all the countries from 2008 to 2022. In doing so, we managed to derive the weight of each country relative to the whole using the following formula:

Real Gross Domestic Product for country i at 2008 / Total for all EU Real Gross Domestic Product at 2008 * (Uncertainty Index for country i for every month at 2008)

for every country and then aggregating all of them the Aggregate Uncertainty Indices were constructed. It is critical to consider that we hypothesized a stable RGDP throughout the year for all countries.

After collecting the data and constructing our monthly Uncertainty Index (UI), we gathered monthly data for "unemployment rate", "inflation" and "long-term government bond yield 10 year" for every country from January 2008 to December 2022. For countries in the European Union but not in the Eurozone, we also collected monthly data for their currency over euro. These countries were Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania and Sweden. It is important to note that Croatia joined the Eurozone on January 2023, a fact that this study remained unaffected by. The correlation of these economic indicators and our Uncertainty Index was then examined. The Uncertainty Index of every country was also correlated with the UI of the other countries for both EU and EA, in tables clearly presented in the Appendix A section. Our main source of data for these variables was

the Federal Reserve Economic Data (FRED) St. Louis FED website. Regarding the "long term government bond yield 10 years", data for Bulgaria, Croatia, Malta and Romania were collected from the website Investing.com, Financial News website. We did not come across data for the specific economic indicator for Estonia and Cyprus. Now, concerning the "unemployment rate", data for Romania, Malta, Cyprus, Croatia, Lithuania, Latvia and Bulgaria were found in the YCharts–Financial Research and Proposal Platform website.

After finding the correlation between our Uncertainty Index and the economic indicators for each country, we proceeded to finding the correlation of our Uncertainty Index and the existing well-known Economic Policy Uncertainty index (EPU), by Baker, Bloom & Davis (2016), and the Consumer Confidence Index (CCI). These indices are easy and free to access through their websites and are constantly used in many research fields. Data for CCI were not found for the countries Bulgaria, Croatia, Cyprus, Malta and Romania, while data for EPU were only found for 9 out of 27 countries – Belgium, Croatia, France, Germany, Greece, Ireland, Italy, Netherlands and Spain. A significance test was run for all correlations to check for the validity of the values received.

Lastly, we proceeded to the conduction of Vector Autoregressive (VAR) models, through the STATA econometric program, fact that allowed us to gauge the interaction between the employed variables – unemployment rate, inflation and long-term government bond yield 10 years – and our Uncertainty Index. The VAR results are presented in the Appendix B. Tests for unit-roots were harnessed – Augmented Dickey Fuller and Phillips Perron – and first differences were taken whenever needed. A series of commands – Varsoc, Varstable and Varlmar – were harnessed for deriving the optimal lags for the VAR model. For every country, we started from 12 lags, meaning 12 months as we operate with monthly data, reaching down to 2 lags. Starting with Varsoc, it reports the final prediction error (FPE), Akaike's information criterion (AIC), Schwarz's Bayesian information criterion (BIC), and the Hannan and Quinn information criterion (HQIC) lag-order selection statistics for a series of vector autoregressions of order 1 through a requested maximum lag. A sequence of likelihood-ratio test statistics for all the full VARs of order less than or equal to the highest lag order is also reported. Varstable checks the eigenvalue stability condition after estimating the parameters of a vector autoregression using VAR or SVAR. Lastly, Varlmar implements a Lagrange multiplier (LM) test for autocorrelation in the residuals of VAR models, which was presented in Johansen (1995). For the optimal lag to be chosen, we wanted more tests to show optimal lags on Varsoc, all eigenvalues to lie inside the unit circle so VAR can satisfy stability condition and for the second lag on Varlmar to be greater than 0,05 so as to eliminate autocorrelation.

With the use of Impulse Response Function (IRF) graphs we were able to delve into the effect of one standard deviation shock on the uncertainty of the country to the economic indicators. All IRFs were set to forecast 12 periods ahead. Also, we tested the effect that the level of uncertainty of a strong economy, Germany, could have on the economic indicators and uncertainty of the other European countries. In the last section we compare again the Uncertainty Index of Germany with the UI European Union and the UI Euro Area, alongside with a correlation test between the three variables. The results are succinctly presented in the next section. All countries are displayed and commented on separately, accompanied by multiple graphs and tables.

Data & Results

In this section the data and the results from our research are being depicted, with the assistance of figures and tables. The results are presented and commented on separately by country and the ranking of the countries is in alphabetical order. The countries' Uncertainty Indices are also compared and correlated with Germany's Uncertainty Index, it being one of Europe's largest economies. At the end of the section, the results from the European Union and the Eurozone are also presented. For the countries not included in the Euro Area, marked with '*', their currency over euro is added in the pool of the variables for analysis.

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Starting with Austria, having created the Uncertainty Index based on Google Trends and gathered the data for the economic indicators – unemployment rate, inflation and long-term government bond –the graph of the variables is presented below, as well as their correlations in Table 1.1. The negative correlation between the Uncertainty Index and the unemployment rate does not line up with the theory, as high uncertainty may induce a drop in the number of vacancies and in the job finding rate, ultimately resulting in a rise in unemployment, but it is considered to be a very weak correlation.

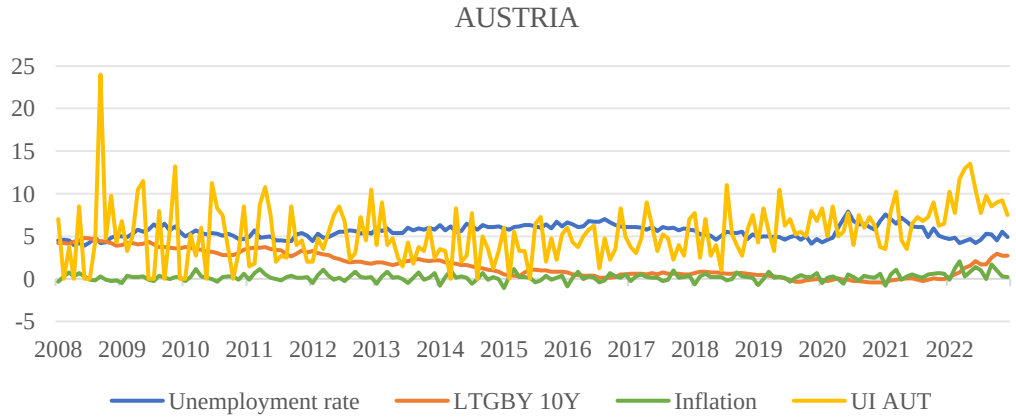

Figure 1.1. Austria – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Austria*
Unemployment rate	1			
LTGBY 10Y	-0,434895999	1		
Inflation	-0,16963067	-0,007424974	1	
UI Austria	-0,187562541	-0,061869347	0,137563423	1

Table 1.1. Austria – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield of the country.

For the correlation between our Uncertainty Index and other existing uncertainty indices, we only came across data for the Consumer Confidence Index (CCI) for Austria. The correlation of -0,2019 in Table 1.2.1, indicates a negative relationship between the two indices, a desirable result that lines up with theory, showing that in every spike in the consumer's uncertainty, its confidence diminishes. The Table 1.2.2 presents the t-statistic of the correlation, which was found to be statistically significant in the 1% confidence level.

	UI AUT	*CCI*
UI AUT	1	
CCI AUT	**-0,2019734**	1

Table 1.2.1. Austria – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI AUT) and the Consumer Confidence Index (CCI AUT).

	t-statistic	*p-value*
CCI/UI	-2,751364727	0,006548769

Table 1.2.2. Austria – T-statistic and p-value prices from correlations.

The following graph compares the Google Trends based Uncertainty Index for Austria and Germany, one of Europe's greatest economies. The table reports their correlation at 0,3132 – a weak correlation – with the t-statistic absolute value at 4,40 and the p-value less than 0,01, posing it statistically significant at the 1% confidence level.

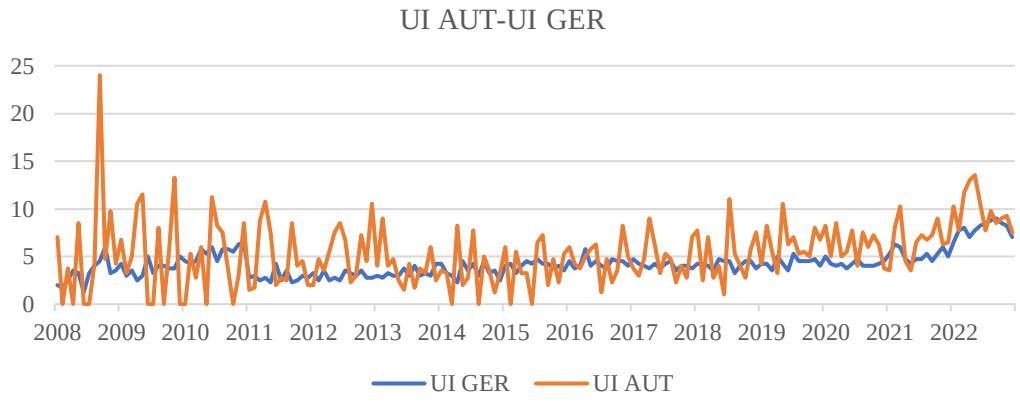

Figure 1.2. Austria – Google Trends based Uncertainty Index of Austria and Germany.

	UI GER	*UI AUT*
UI GER	1	
UI AUT	**0,31325174**	1

Table 1.3.1. Austria – Correlation between Austria's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI AUT/UI GER	4,400790665	1,85474E-05

Table 1.3.2. Austria – T-statistic and p-value prices from correlations.

Regarding the Impulse Response Function (IRF) graphs, we start from the conduction of the VAR model. Knowing that a VAR model can only work if each variable is stationary, we tested all the variables for unit-roots. We performed the Augmented Dickey-Fuller test and the Phillips Perron test, both having as null hypothesis the variable containing a unit root, and as an alternative the variable was generated by a stationary process. For Austria, the variable LTGBY10Y was found containing unit-root, so the first differences were taken. The optimal lags for the VAR model that satisfied all the tests were found to be 6. Tables 1.4, 1.5 and 1.6 in appendix present analytically the results of the commands ran. Based on this the IRF graphs were conducted. The first IRF graph depicts the one-standard deviation impulse of our Uncertainty Index of Austria (UIAUT) to the Inflation, the Uncertainty Index itself, the Unemploymentrate and the dLTGBY10Y of the country. Such a shock generates a small and almost inconsiderable reaction in the Austrian economic indices, with the inflation's response moving around 0,01% and 0,04% price level in the span of 12 periods. Regarding the UIAUT on UIAUT, the initial shock happens in the first period and then quickly dies as the impact returns to 0,90% and slightly decreases to 0,85% after 1 year. For Unemploymentrate the shock remains positive at 0,01% price level and for dLTGBY10Y a small fall occurs on the 3-4 period but the price level rises immediately the next period. The Forecast Error Variance Decomposition table, which divides the changes or the variation in an endogenous variable into the component shocks of the Panel VAR model, is presented in the Table 1.7 in the appendix.

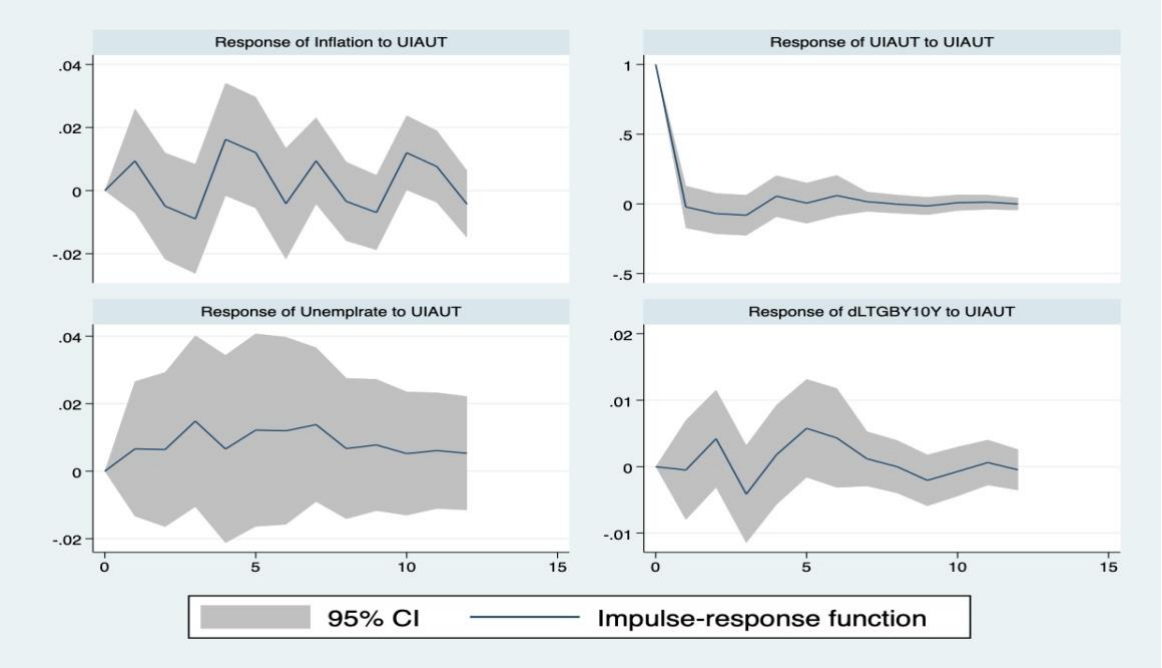

Figure 1.3.1. Austria – Impulse Response Functions to a UIAUT shock. Sample: 2008M1 – 2022M12. VAR (6) estimated with an exogenous variable (UIGER). 95% confidence interval.

For the second IRF graph, a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The exogenous variable in our case is the Germany's Uncertainty Index. The following graph depicts the one-standard deviation impulse of UIGER to the AUT Inflation, the UIAUT, the AUT Unemplrate and the AUT dLTGBY10Y. The UIGER shock seems to generate a greater response on the indicators than the UIAUT previously. The AUT Inflation quickly jumps to 0,03% and by the second period it converges back to zero. The shock on UIAUT begins at 0,4% and then falls and remains around 0,1% and 0,02%. For AUT Unemplrate a negative impact is observed for all 12 periods, showing the decrease in Austria's unemployment with that shock on Germany's Uncertainty Index. Lastly, the AUT dLTGBY10Y remains positive for a short period, and then fluctuates around zero. The Table 1.8. in appendix, reports the dynamic- multiplier function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

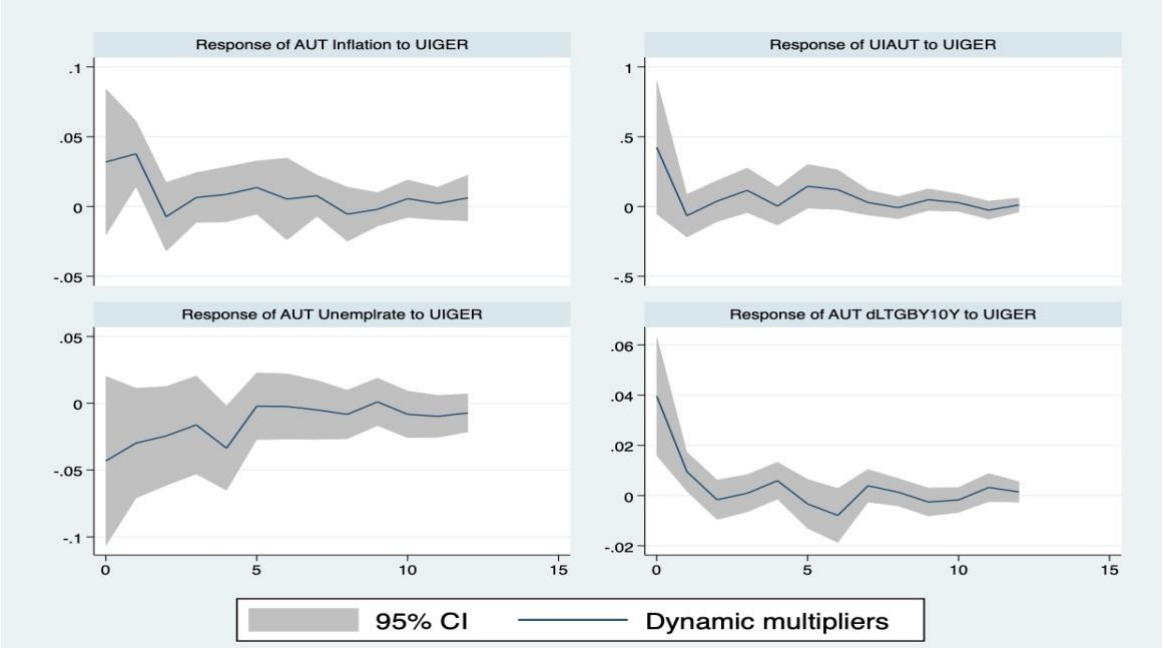

Figure 1.3.2. Austria – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (6) estimated with an exogenous variable (UIGER). 95% confidence interval.

▪ BELGIUM

For Belgium the inflation and unemployment rate seem to remain steady throughout the fifteen years span, unlike the long-term government bond yield 10 year and the Uncertainty Index, which appear to drop and rise respectively just after half of the time horizon. The correlations between the indicators are shown in the Table 2.1. Here, the negative correlation 0f -0,50 between unemployment rate and the Uncertainty Index is considered moderate. Also,

the -0,22 weak correlation between inflation and unemployment rate and the 0,39 weak correlation between unemployment rate and long-term government bond yield 10 years line with the economic theory, as an increase in unemployment rate tends to decrease inflation and increase the high-yield bond spreads.

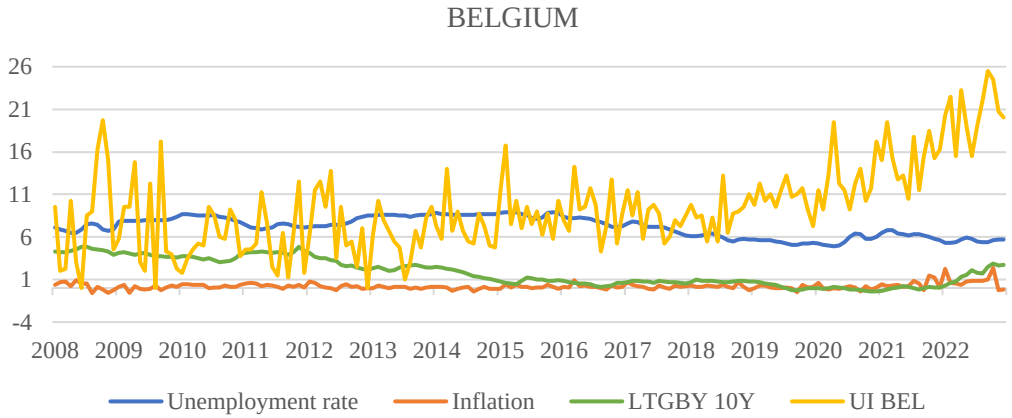

Figure 2.1. Belgium – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*Inflation*	*LTGBY 10Y*	*UI Belgium*
Unemployment rate	1			
Inflation	-0,228293421	1		
LTGBY 10Y	0,390578592	0,016806041	1	
UI Belgium	-0,506568979	0,28430013	-0,340880245	1

Table 2.1. Belgium – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield of the country.

Regarding the correlation of our Uncertainty Index with existing measures of uncertainty, we take the following Table 2.2. The signs of the correlation between UI BEL, CCI BEL and EPU BEL are considered punctual to theory. A negative correlation is always expected between an uncertainty index and the Consumer's Confidence Index. Table 2.2.2 reports the t-statistics and p-values of the correlations, posing them statistically significant at the 1% confidence level.

	UI BEL	*CCI BEL*	*EPU BEL*
UI BEL	1		
CCI BEL	**-0,3171053**	1	
EPU BEL	**0,36288483**	-0,4453187	1

Table 2.2.1. Belgium – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI BEL), the Consumer Confidence Index (CCI BEL) and the Economic Policy Uncertainty index (EPU BEL).

	t-statistic	*p-value*
CCI/UI	-4,460940427	1,44281E-05
EPU/UI	5,195654514	5,54546E-07
CCI/EPU	-6,635556658	3,75682E-10

Table 2.2.2 Belgium – T-statistic and p-value prices from correlations.

It is important to note the different behavior of each country's Uncertainty Index regarding the period of the COVID19 epidemic crisis. The UIBEL almost doubles from 2019 to 2022, while UIGER slightly increases in 2022. Table 2.3.1 reports the correlation between UIBEL and UIGER. A positive and strong correlation of 0,622 between the countries, with an upstanding t-statistic of 10,62 and a p-value well less than 0,01.

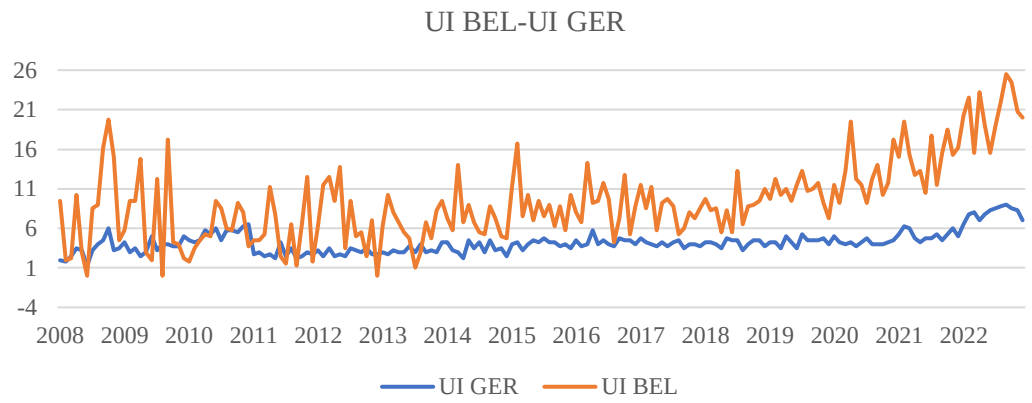

Figure 2.2. Belgium – Google Trends based Uncertainty Index of Belgium and Germany.

	UI GER	*UI BEL*
UI GER	1	
UI BEL	**0,62294019**	1

Table 2.3.1. Belgium – Correlation between Belgium's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI BEL/UI GER	10,62429146	9,89426E-21

Table 2.3.2. Belgium – T-statistic and p-value prices from correlations.

For the Belgian variables, the Augmented Dickey Fuller and Phillips Perron tests were harnessed. It was found that the Unemploymentrate and the LTGBY10Y contained a unit-root. In order to make them stationary we took their first differences, creating the variables dUnemplrate and dLTGBY10Y. For the conduction of the VAR model, as the tables 2.4, 2.5 and 2.6 indicate in the appendix, 4 lags were needed. The first IRF graph depicts the one-standard deviation effect of our Uncertainty Index of Belgium (UIBEL) to the Inflation, the Uncertainty Index itself, the dUnemplrate and the dLTGBY10Y of the country. It appears that the Inflation's price levels remained mainly negative, despite of three periods that turned

slightly positive. Regarding the UIBEL, its maximum level was on the second period at 0,26% and then it fluctuated around 10% until the sixth period before it dies out and converges to zero. The dLTGBY10Y was the only variable that remained negative throughout the whole 12 periods. Now, dUnemplrate started of negative just for the first period and then spiked to 0,01%, marking it its highest price level. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 2.7 in the appendix.

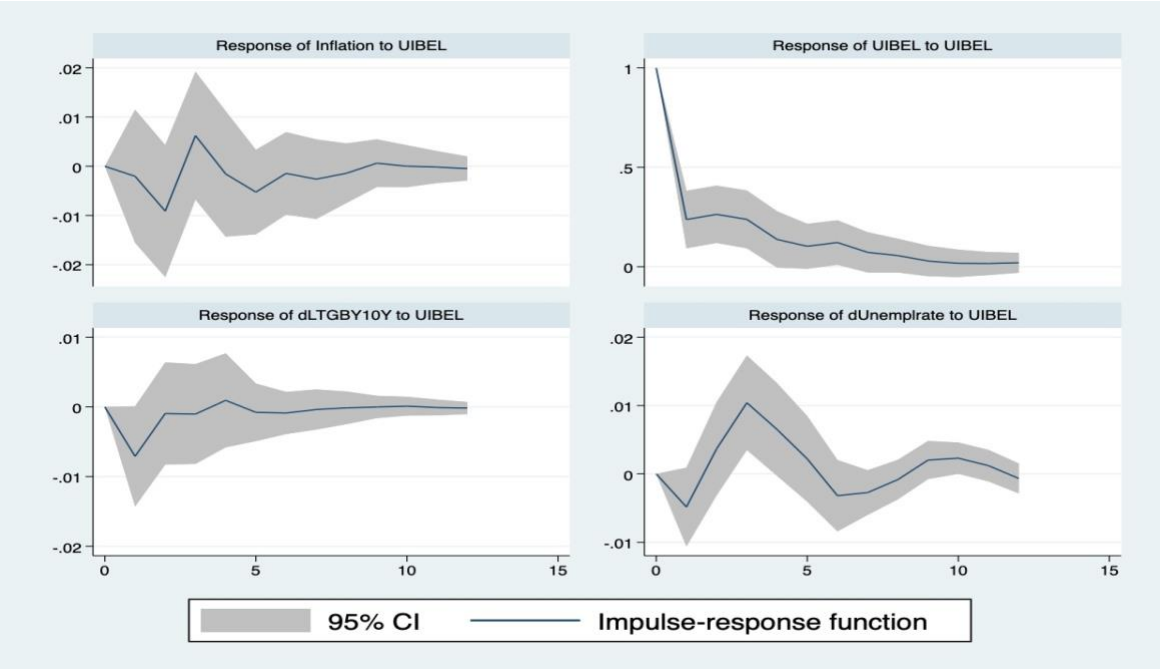

Figure 2.3.1. Belgium – Impulse Response Functions to a UIBEL shock. Sample: 2008M1 – 2022M12. VAR (4) estimated with an exogenous variable (UIGER). 95% confidence interval.

Regarding the second IRF graph, a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The exogenous variable being the Germany's Uncertainty Index and the endogenous being the BEL Inflation, the UIBEL, the BEL dUnemplrate and the BELdLTGBY10Y. Again, it appears that the UIGER has a greater influence in the Belgian economic indicators than the UIBEL. The BEL Inflation, UIBEL and BEL dUnemplrate seem to have a similar graph. All three start of positive in the first period, first months, with UIBEL only managing to remain positive throughout all 12 periods. Both BEL Inflation and BEL dUnemplrate turn negative around the same time, at the third period, and turn a little positive before they move closer to zero. In the case of BEL dLTGBY10Y, it is clear that UIGER constitutes a greater impact as the range covered is from nearly -0,02% to 0,01% in contrast with UIBEL that reached a maximum -0,007%. The Table 2.8. in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

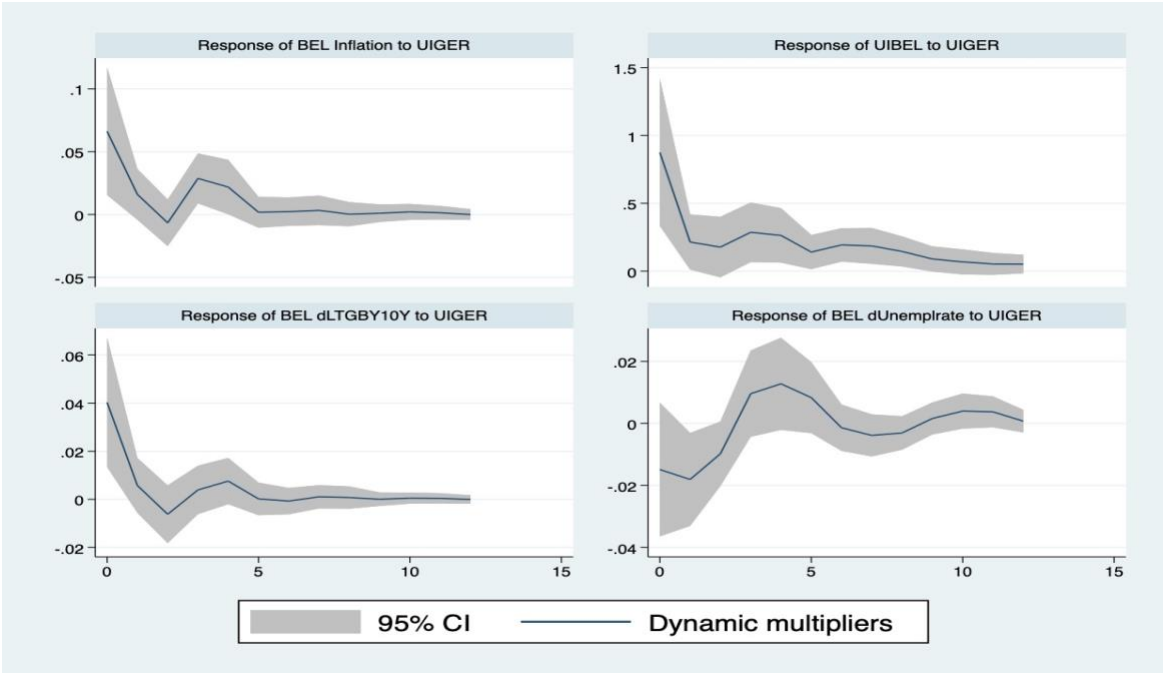

Figure 2.3.2. Belgium – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (4) estimated with an exogenous variable (UIGER). 95% confidence interval.

▪ BULGARIA*

In the case of Bulgaria, the economic indicators, our Uncertainty Index, as well as the country's currency over the euro is analyzed. The country's official currency is the Bulgarian lev (BGN), which is approximately 0,50 Euros in today's data. A moderate negative correlation of -0,425 is reported in the Table 3.1 between unemployment rate and the Uncertainty Index of the country. The signs of the correlations for inflation and long-term government bond yield 10 years line with the economic theory. Regarding the BGN/EUR currency, it is known that low unemployment rates mean a strong economy, which increases the demand for the currency. If a low unemployment rate is reported, then investors may believe the economy of that country is good. Therefore, they may seek investment opportunities in that country, causing a rise in the value of that currency. So, a negative correlation is expected in this case, which matches the results we retrieved from the analysis.

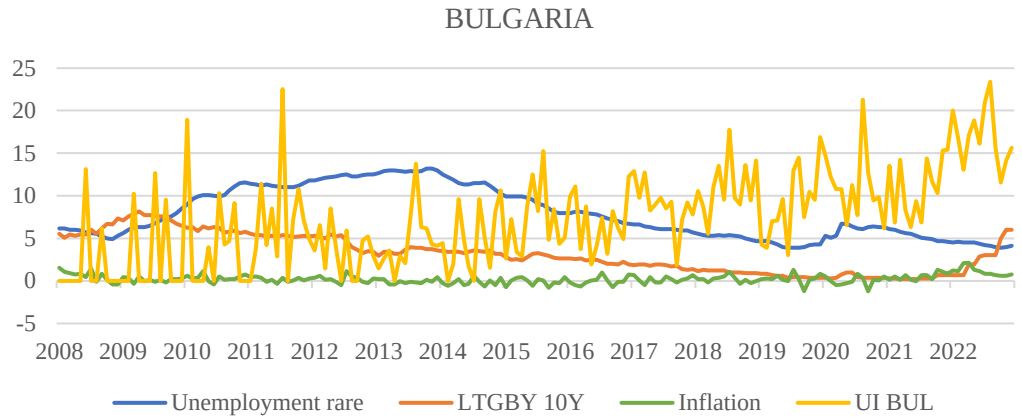

Figure 3.1. Bulgaria – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rare	*LTGBY 10Y*	*Inflation*	*UI Bulgaria*	*BGN/EUR*
Unemployment rare	1				
LTGBY 10Y	0,420474172	1			
Inflation	-0,301871059	-0,021181425	1		
UI Bulgaria	-0,425526596	-0,474859479	0,242434193	1	
BGN/EUR	-0,024512157	-0,160558464	-0,025539508	0,099983647	1

Table 3.1. Bulgaria – Correlation between the Uncertainty Index (UI), unemployment rate, inflation, long-term government bond 10-year yield and the currency of the country over euro (BGN/EUR).

For Bulgaria, we did not come across data for either Economic Policy Uncertainty (EPU) or Consumer Confidence Index. Based on that fact, we move on to the next graphs annotation. The comparison of the two Uncertainty Indices, UIBUL and UIGER, is shown in the Figure 3.2. Their positive correlation of 0,438 is statistically significant based on the p-value. It is of note, the extreme fluctuations on the UIBUL, a minor economy, in contrast to the smoother ones in UIGER, a significant economy.

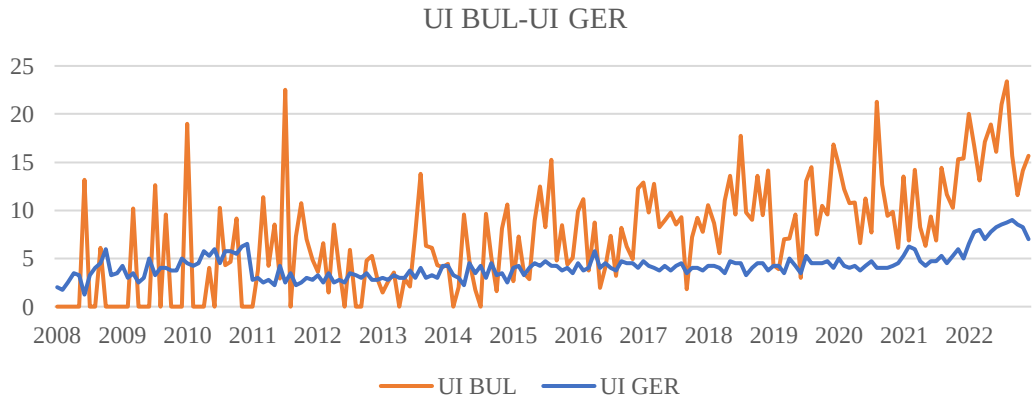

Figure 3.2. Bulgaria – Google Trends based Uncertainty Index of Bulgaria and Germany.

	UI GER	*UI BUL*
UI GER	1	
UI BUL	**0,43856062**	1

Table 3.2.1. Bulgaria – Correlation between Bulgaria's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI BUL/UI GER	6,51064641	7,3799E-10

Table 3.2.2. Bulgaria – T-statistic and p-value prices from correlations.

For the Bulgarian variables the Augmented Dickey Fuller and the Phillips Perron tests were harnessed. It was found that the Unemploymentrate and the LTGBY10Y contained a unit-root. In order to make them stationary we took their first differences, creating the variables dUnemplrate and dLTGBY10Y. The tables 3.4, 3.5 and 3.6 indicate number optimal lags 3 for the VAR model in the case of Bulgaria. The following Figure 3.3.1, presents the one-standard deviation impulse on UIBUL to the Inflation, the Uncertainty Index itself, the BGN/EUR currency, the dLTGBY10Y and the dUnemplrate of the country. The first graph shows the almost nil response of the BGN/EUR to UIBUL. Inflation reacts negatively the first couple of periods, but then turns positive before it converges to zero. The UIBUL quickly drops to 0,10% and rebounds close to 0,25% the next period. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 3.7 in the appendix.

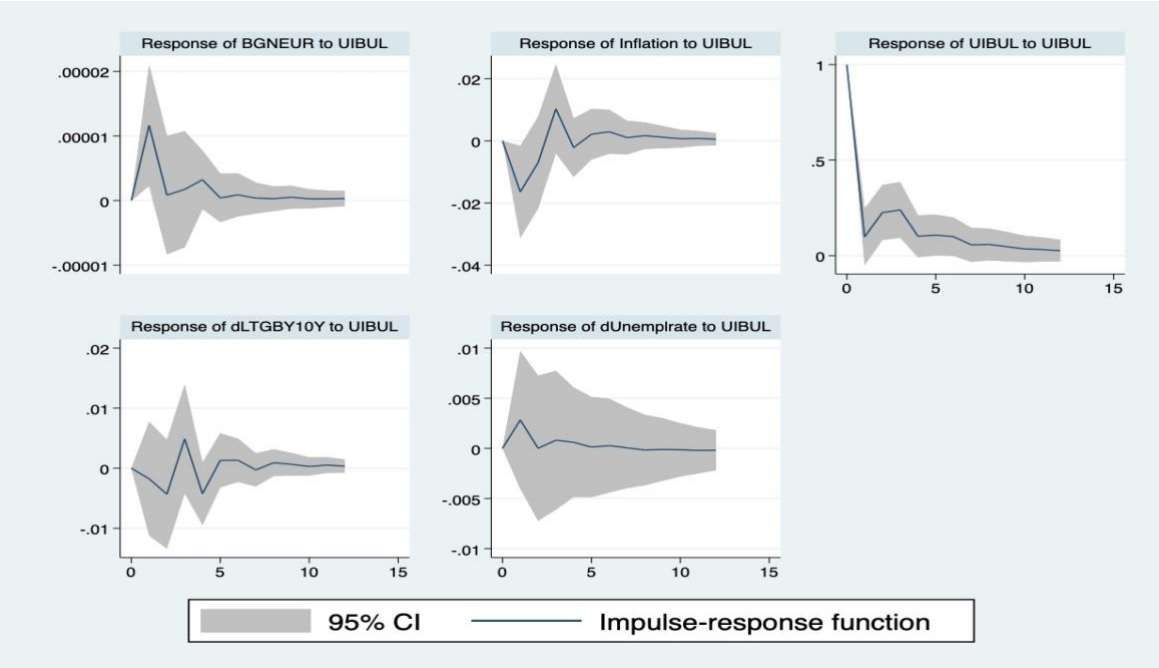

Figure 3.3.1. Bulgaria – Impulse Response Functions to a UIBUL shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

The second IRF figure is a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. The effect of UIGER on the Bulgarian economic indicators and UIBUL does not seem to be of greater importance than the effect of UIBUL on them. The Table 3.8 in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

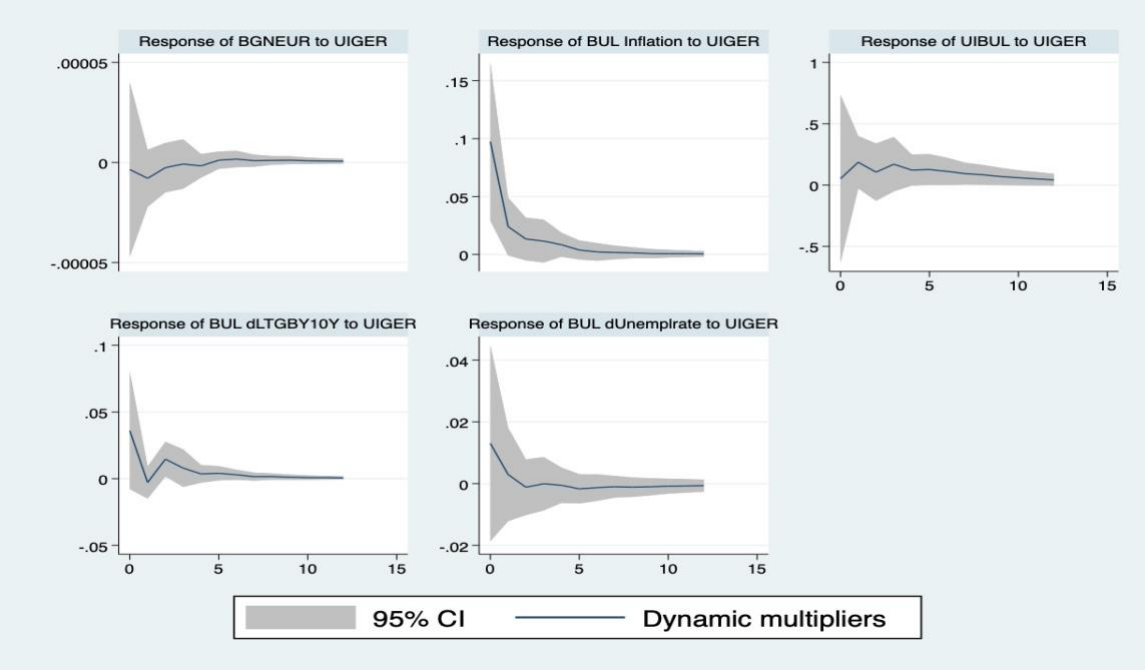

Figure 3.3.2. Bulgaria – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **CROATIA***

For Croatia, despite the economic indicators and our Uncertainty Index, the country's currency was also in the pool for analysis. The country's official currency from May 1994 until December 2022 was Kuna and as of January 2023 Croatia officially entered the Eurozone, adopting Euro as its currency. Since our time horizon indeed stops on December 2022, this fact leaves the study unaffected. Now, regarding the signs of the correlations on Table 4.1, we have desirable results for every variable, except from the Uncertainty Index of Croatia which provided a weak negative correlation of -0,279. Also, it is significant to observe that the Croatian's unemployment rate almost tripled from 2008 to 2014, while the other indicators remained quite steady.

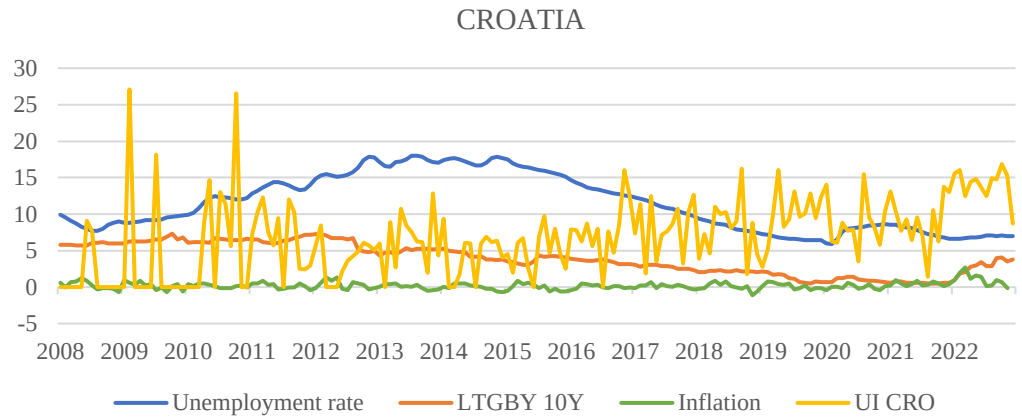

Figure 4.1. Croatia – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Croatia*	*HRK/EUR*
Unemployment rate	1				
LTGBY 10Y	0,494555346	1			
Inflation	-0,203754696	-0,045200316	1		
UI Croatia	-0,279447721	-0,381778392	0,126060852	1	
HRK/EUR	-0,434301629	0,339408494	0,02439626	-0,149068669	1

Table 4.1. Croatia – Correlation between the Uncertainty Index (UI), unemployment rate, inflation, long-term government bond 10-year yield and the currency of the country over euro (HRK/EUR).

For Croatia, data for the Economic Policy Uncertainty index was found and correlated with our Google Trends based Uncertainty Index. The positive correlation between UI CRO and EPU CRO indicates that our constructed uncertainty index follows the anticipation of the theory. The correlation of 0,2733 was found statistically significant at 1% confidence level, with t-statistic of 3,79 and p-value of 0,0002.

	UI CRO	*EPU CRO*
UI CRO	1	
EPU CRO	**0,27330827**	1

Table 4.2.1. Croatia – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI CRO) and the Economic Policy Uncertainty index (EPU CRO).

	t-statistic	*p-value*
EPU/UI	3,790712794	0,000205466

Table 4.2.2. Croatia – T-statistic and p-value prices from correlations.

The Croatian Uncertainty Index (UICRO) records two extreme spikes, one in 2009 and the other at the end of 2010. The death of six people and 55 injured in the Rudine train derailment in 2009 as well as the high levels of corruption reported in Croatia in 2010, could be the leading cause of these spikes. The Table 4.3.2. shows a positive correlation of 0,385, which is statistically significant based on the next table.

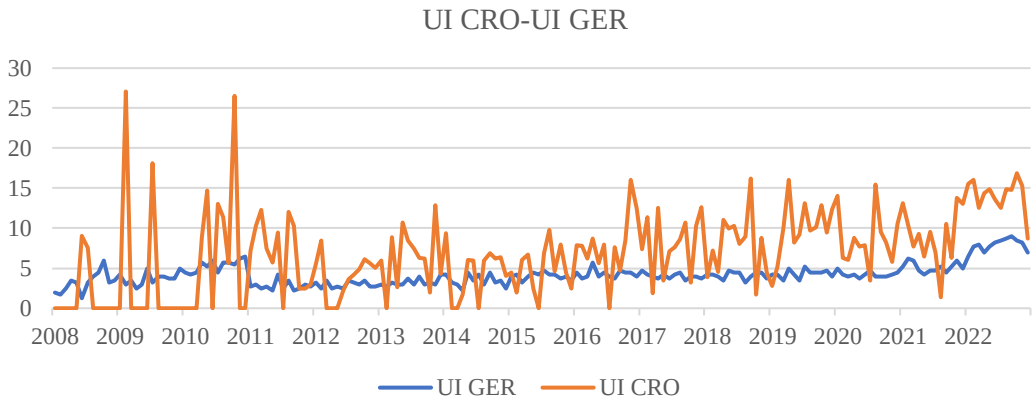

Figure 4.2. Croatia – Google Trends based Uncertainty Index of Croatia and Germany.

	UI GER	*UI CRO*
UI GER	1	
UI CRO	**0,38509149**	1

Table 4.3.1. Croatia – Correlation between Croatia's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI CRO/UI GER	5,567105348	9,40523E-08

Table 4.3.2. Croatia – T-statistic and p-value prices from correlations.

The tests Augmented Dickey Fuller and Phillips Perron were harnessed. The variables Unemploymentrate, LTGBY10Y and HRK/EUR were containing a unit-root. We took their first differences to eliminate that problem and convert them to stationary variables. The new variables were dUnemplrate, dLTGBY10Y and dHRK/EUR. Following the indications of the Varsoc, Varstable and Varlmar, tables 4.4., 4.5. and 4.6. in appendix, the number of optimal lags for the VAR model of Croatia was 5. Below the Figure 4.3.1. presents the one-standard deviation impulse on UICRO to the Inflation, the Uncertainty Index itself, the dHRK/EUR currency, the dLTGBY10Y and the dUnemplrate of the country. The effect of a UI CRO shock to Inflation is negative up until the third period, where it converges to zero and begins to die out by the last period. Response of the Uncertainty Index itself is positive in the first three periods, slightly turning negative for only 0,05% and converting positive reaching its maximum price in the next period at 0,31%. Regarding the dHRK/EUR, the response is assumed to be inconsiderable. Insignificant is also the response of dUnemplrate to the one-standard deviation

impulse on UI CRO, although showing that it is been negatively affected throughout the periods. Lastly, dLTGBY10Y appeared to converge to zero reaching as high as 0,02%. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 4.7. in the appendix.

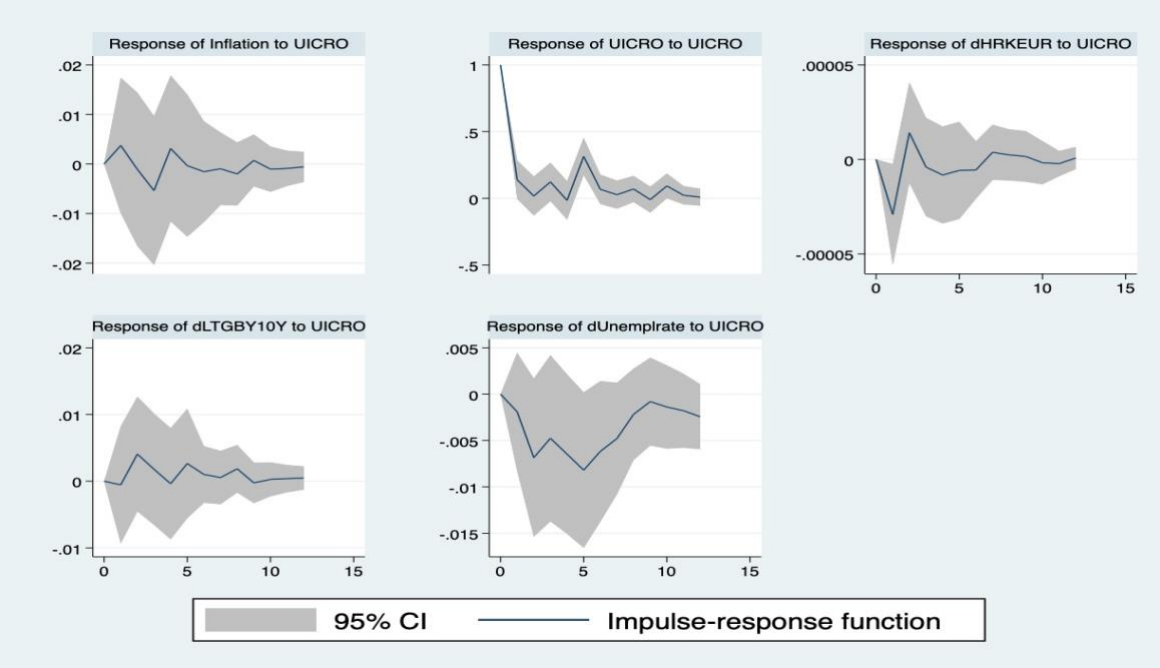

Figure 4.3.1. Croatia – Impulse Response Functions to a UICRO shock. Sample: 2008M1 – 2022M12. VAR (5) estimated with an exogenous variable (UIGER). 95% confidence interval.

The next IRF figure is a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. The impulse of UI GER is much more effective and clearer on the indicators than UI CRO is, meaning that negative events of a strong economy are capture in the economy of the weaker country. For CRO Inflation we observe a positive effect in the beginning, smoothly converging to zero, same as the UI CRO with a strong rebound in the fifth period of 0,3% before a fall of -0,07%. As for the dHRK/EUR the effect was again minor but greater than the UI CRO's one. Regarding the last two variables, dLTGBY10Y and dUnemplrate, we observe that they share both almost equal negative and positive periods. The Table 4.8. in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

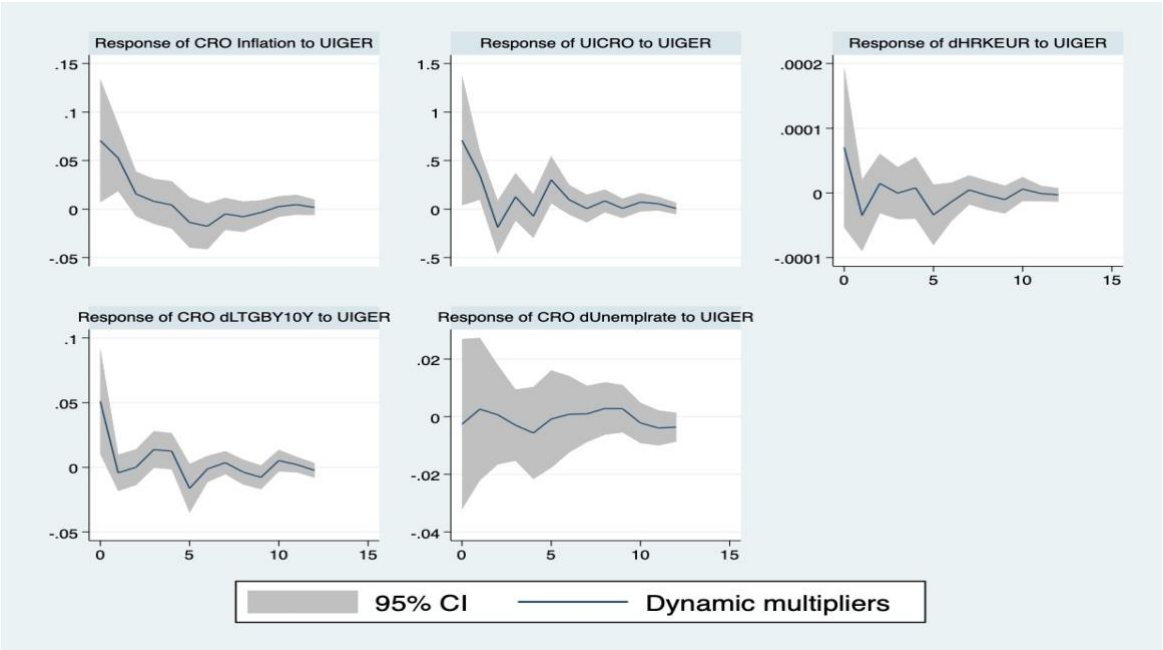

Figure 4.3.2. Croatia – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (5) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **CYPRUS**

For Cyprus data was only found about the unemployment rate and the inflation. Regarding the long-term government bond 10-year yield, data was only available from November 2015 and onwards. For this reason, it was not included in the pool of variables for analysis. The maximum level of unemployment reached was in 2014, around 15%. The correlation between unemployment rate and inflation was found negative, fact that as mentioned before aligns with the economic theory.

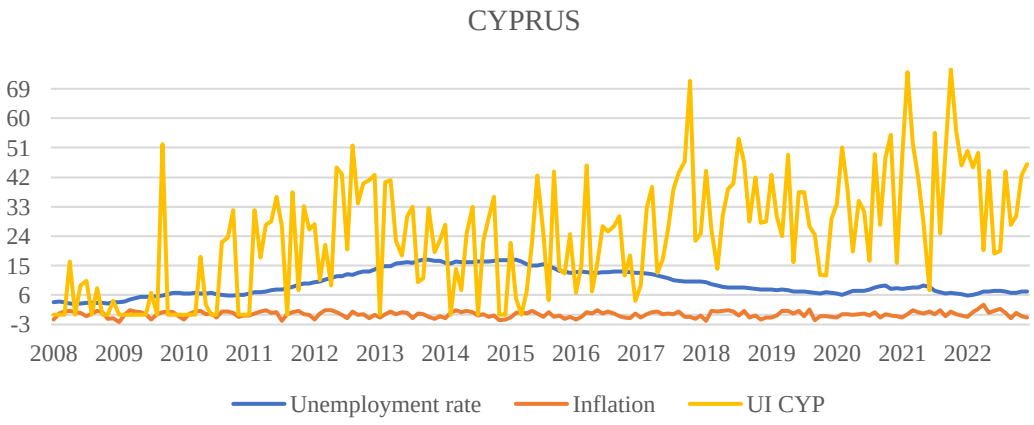

Figure 5.1. Cyprus – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*Inflation*	*UI Cyprus*
Unemployment rate	1		
Inflation	-0,105181057	1	
UI Cyprus	-0,180726647	0,163672085	1

Table 5.1. Cyprus – Correlation between the Uncertainty Index (UI), unemployment rate and inflation.

Data for Cyprus regarding the Economic Policy Uncertainty (EPU) or Consumer Confidence Index (CCI) were not available in any platform. The Figure 5.2. represents the comparison of the Uncertainty Indices for the countries Cyprus and Germany. The insistence of UICYP to extreme fluctuate, mainly from 2017 onwards, is of no concern for UIGER. The correlation between the two variables is at 0,217, a relatively weak correlation in contrast to the previous countries analyzed. The t-statistic is in absolute value at 2,97, as seen in Table 5.2.2. and the p-value less than 1%.

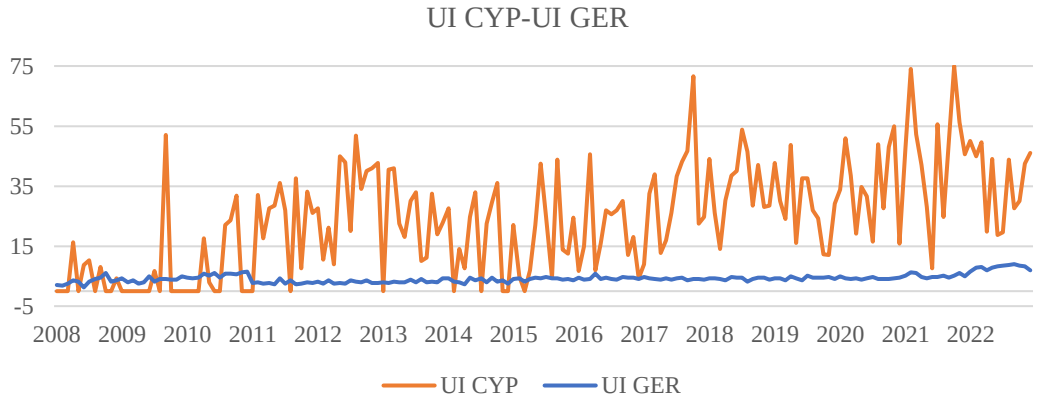

Figure 5.2. Cyprus – Google Trends based Uncertainty Index of Cyprus and Germany.

	UI GER	*UI CYP*
UI GER	1	
UI CYP	**0,21733556**	1

Table 5.2.1. Cyprus – Correlation between Cyprus's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI CYP/UI GER	2,97062497	0,00338241

Table 5.2.2. Cyprus – T-statistic and p-value prices from correlations.

The Figure 5.3.1. is the first IRF graph for Cyprus. The Augmented Dickey Fuller and Phillips Peron tests were run on the variables to test for unit-roots. For Cyprus we only had three variables, Inflation, Unemploymentrate and the Uncertainty Index (UI CYP). The only variable found containing a unit-root was Unemploymentrate, of which we took the first differences and converted it to a stationary variable, dUnemplrate. According to the tables 5.3., 5.4. and 5.5. in appendix, the optimal number of lags for the VAR model of Cyprus was 3. As seen in the figure, the one-standard deviation of UI CYP on Inflation and dUnemplrate is very

similar, with both variables jumping in the second period and then converging to zero before they die out. One the other hand, the impulse of UI CYP on UI CYP looks positive for the whole twelve periods length. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 5.6. in the appendix.

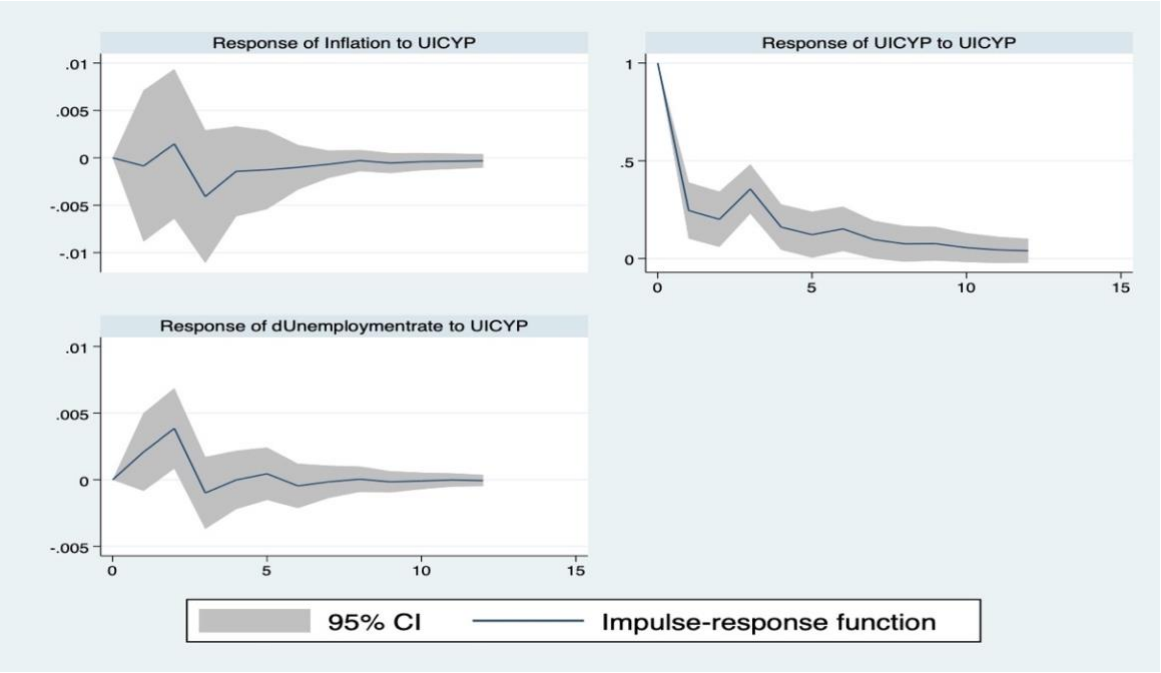

Figure 5.3.1. Cyprus – Impulse Response Functions to a UICYP shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

Figure 5.3.2 is a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. Regarding the CYP Inflation, it started off positive, turning as negative a -0,02% before it converged to zero. For UICYP's reaction to the UIGER impulse, it reached its maximum level at 0,38% in the third period, managing to remain positive until the end of the periods investigated. On the other hand, CYP dUnemplrate stayed negative or very close to zero throughout the twelve periods. The Table 5.7. in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

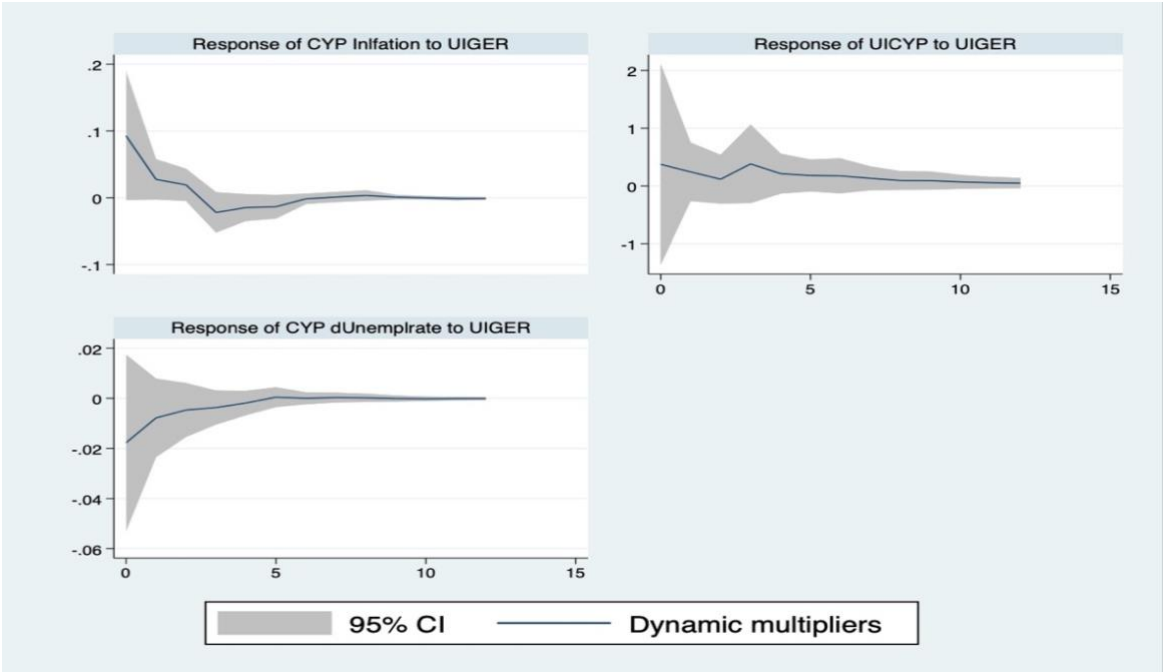

Figure 5.3.2. Cyprus – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **CZECH REPUBLIC***

Regarding Czech Republic, the following graph and table depict the economic indicators' and Uncertainty Index's historical route and correlation respectively. Due to Czech Republic not being an official member of the Eurozone, but only included in the European Union, its official currency is also assessed. The koruna, or crown, has been the currency of the Czech Republic since 1993. In today's data 1 koruna is equal to 0,41 euros. Now, concerning the variables, UICZ appears to have been quite affected by the 2008 financial crisis, while not at least with the same attitude during the COVID19 epidemic crisis or the Russian-Ukrainian war in the beginning of 2022. The economic indicators' signs of correlations provide a desirable outcome, with the strongest being the correlation between unemployment rate and the long-term government bond yield 10 years with 0,342.

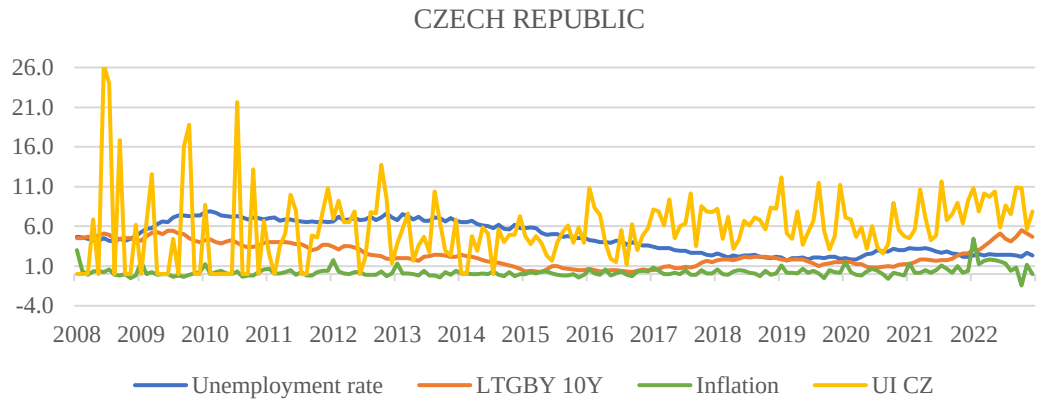

Figure 6.1. Czech Republic – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Czech Rep.*	*CZK/EUR*
Unemployment rate	1				
LTGBY 10Y	0,342193735	1			
Inflation	-0,216912114	0,13658306	1		
UI Czech Rep.	-0,199739333	0,0628717	0,12564364	1	
CZK/EUR	-0,014342281	0,59334271	0,19617951	0,237956567	1

Table 6.1. Czech Republic – Correlation between the Uncertainty Index (UI), unemployment rate, inflation, long-term government bond 10-year yield and the currency of the country over euro.

Moving on, we correlate our Uncertainty Index of Czech Republic (UICZ) with the existing Consumer Confidence Index (CCI CZ). Data for the EPU were not found. The correlation was found -0,037, a desirable but quite weak outcome. The value of the t-statistic and the p-value on the other hand, as seen in Table 6.2.2., pose the value of the correlation statistically insignificant.

	UI CZ	*CCI CZ*
UI CZ	1	
CCI CZ	**-0,0374822**	1

Table 6.2.1. Czech Republic – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI CZ) and the Consumer Confidence Index (CCI CZ).

	t-statistic	*p-value*
CCI/UI	-0,500426767	0,617392768

Table 6.2.2. Czech Republic – T-statistic and p-value prices from correlations.

The Figure 6.2. compares the UICZ with UIGER. As seen and commented above, UICZ reports extreme spikes in the period of 2008-2010. However, it seems to comply after 2013 and move almost along with the Germany's Uncertainty Index. The correlation of 0,107 between the two variables is considered weak, while again it is reported as statistically insignificant. This is demonstrated in the Table 6.3.2.

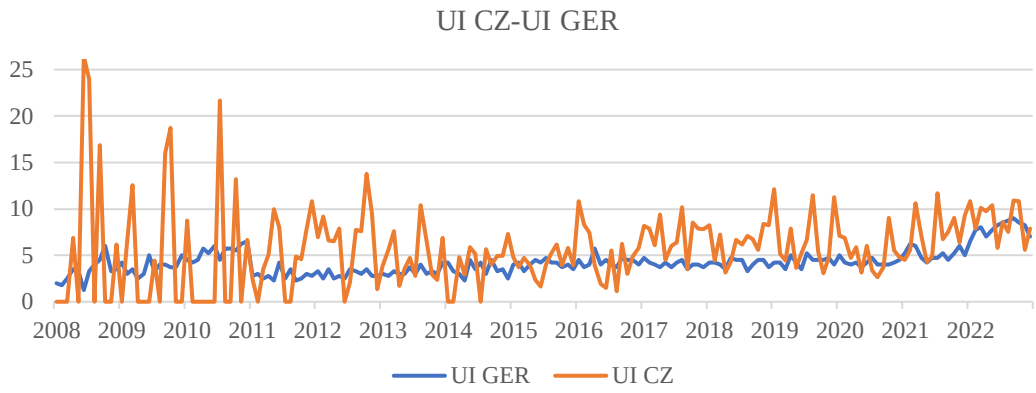

Figure 6.2. Czech Republic – Google Trends based Uncertainty Index of Czech Republic and Germany.

	UI GER	*UI CZ*
UI GER	1	
UI CZ	**0,1071141**	1

Table 6.3.1. Czech Republic – Correlation between Czech Republic's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI CZ/UI GER	1,437349837	0,152374164

Table 6.3.2. Czech Republic – T-statistic and p-value prices from correlations.

For Czech Republic, the IRF analysis was harnessed for five variables. These were the Inflation, the Uncertainty Index itself, the CZK/EUR currency, the long-term government bond yield 10 years (LTGBY10Y) and the Unemploymentrate of the country. The stationarity tests Augmented Dickey Fuller and Phillips Perron were run on the variables to test for any existing unit-root. It was found that Unemploymentrate, LTGBY10Y and CZK/EUR were containing a unit-root. The new stationary versions of the variable were dUnemplrate, dLTGBY10Y and DCZK/EUR. According to tables 6.4., 6.5. and 6.6. in the appendix, the optimal lags for the VAR model were 4. Now, regarding the one-standard deviation impulse on UICZ to the variables we obtained the following figure. It appears that the effect of UICZ on the currency of the country is minor. Also, we observe that both dLTBGY10Y and dUnemplrate follow an identical path during the twelve periods in concern. For the Inflation of the country, it is persistent on its spikes until it converges to zero at around the tenth period. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 6.7. in the appendix.

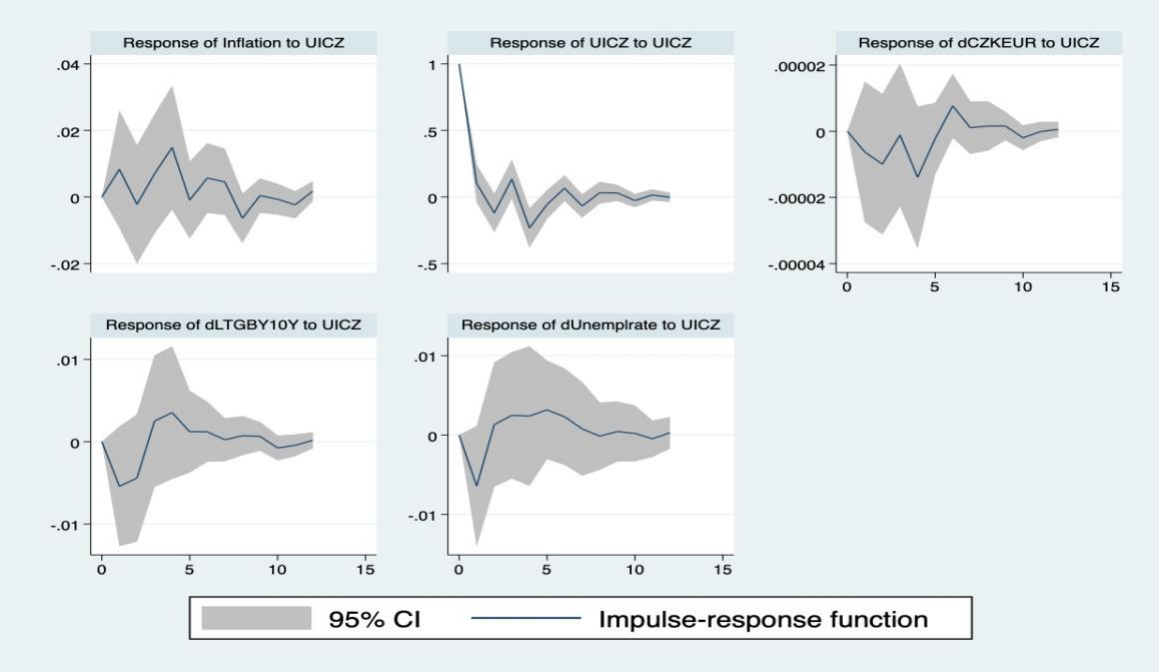

Figure 6.3.1. Czech Republic – Impulse Response Functions to a UICZ shock. Sample: 2008M1 – 2022M12. VAR (4) estimated with an exogenous variable (UIGER). 95% confidence interval.

The figure in the next page is a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. We observe that CZ Inflation responds more clearly to an UIGER shock that o an UICZ one. The effect of UIGER to the currency of the country is almost as minor as previously, with the only difference of it remaining positive throughout the year in concern. The same applies to the CZ dLTGBY10Y, which started and remained positive before it converged to zero. UICZ's maximum price was recorded in the second period with 0,21% and another high of 0,19% in the fourth period. The Table 6.8. in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

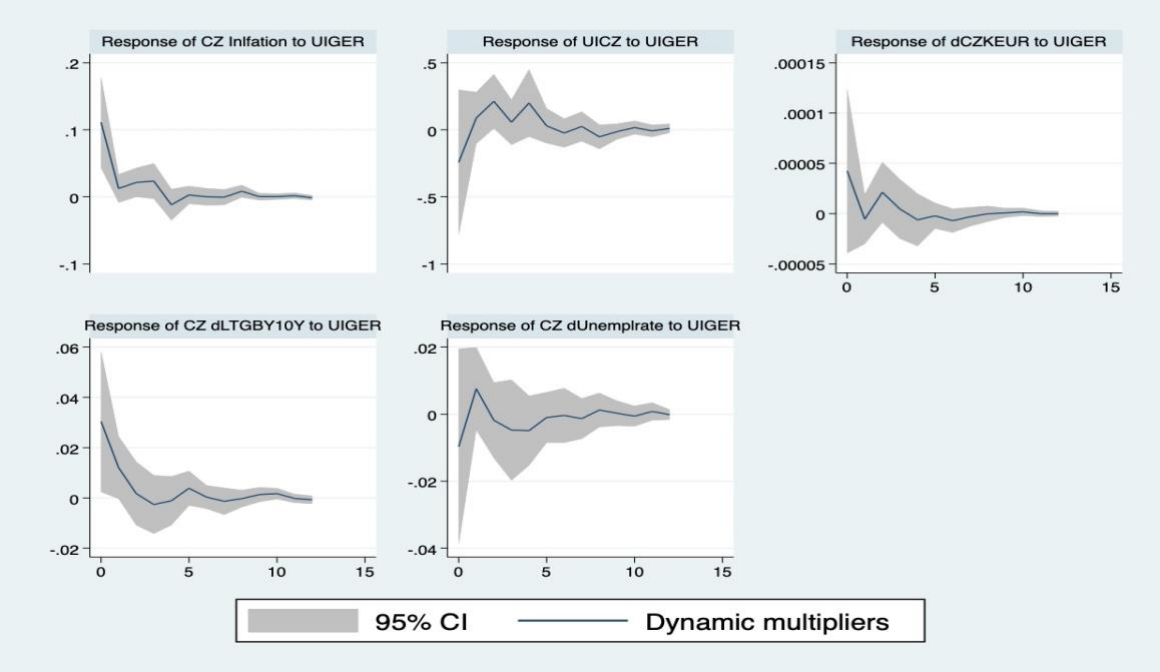

Figure 6.3.2. Czech Republic – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (4) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **DENMARK***

In the case of Denmark, the variables inflation, unemployment rate, long-term government bond yield 10 years and our Uncertainty Index were analyzed. Denmark's unemployment rate reached its high in 2012 at almost 9%, and it took ten years for it to return to levels before the 2008 financial crisis. The correlations are weak, but are considered to be covetable.

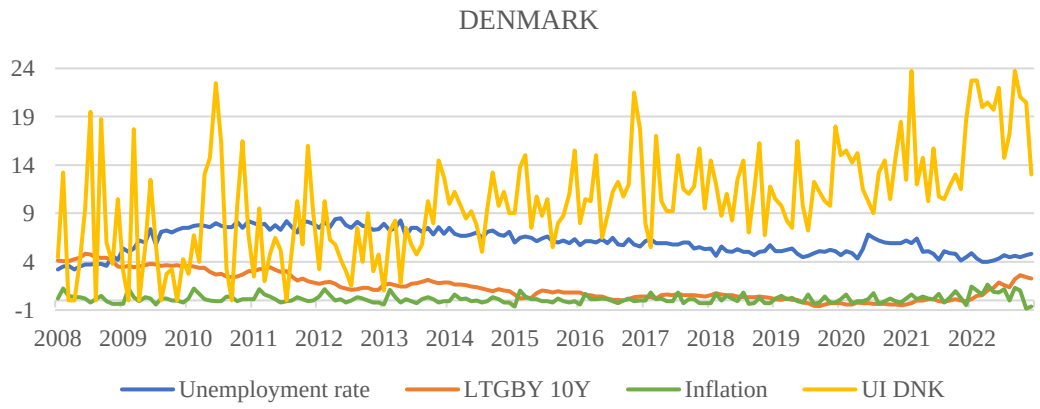

Figure 7.1. Denmark – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Denmark*
Unemployment rate	1			
LTGBY 10Y	0,143112397	1		
Inflation	-0,127429593	0,090722941	1	
UI Denmark	-0,373124703	-0,38144277	0,16586882	1

Table 7.1. Denmark – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

For Denmark we only came across data for the CCI of the country and not for the EPU. We received a negative correlation of -0,309, which was also found to be statistically significant. For the Consumers Confidence Index, we expect a negative sign when correlated with any Uncertainty Index, as the individual's confidence gradually decreases in periods of high precariousness.

	UI DNK	*CCI DNK*
UI DNK	1	
CCI DNK	**-0,3095253**	1

Table 7.2.1. Denmark – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI DNK) and the Consumer Confidence Index (CCI DNK).

	t-statistic	*p-value*
CCI/UI	-4,34285444	2,35685E-05

Table 7.2.2. Denmark – T-statistic and p-value prices from correlations.

Regarding the Uncertainty Index of both Denmark and Germany, they note many differences. Denmark's UI is accompanied by continuous jumps, with the highest being first in 2010 and then in 2021-2022. The 2010 spike, could be due to the fact that on the sixth months of that year Denmark reported the highest prices for food and non-alcoholic drinks in the European Union, according to the latest survey from Eurostat. The 2021-2022 jump on the other hand, could be the aftermath of the COVID19 epidemic crisis. The correlation is considered strong at 0,554, and it is statistically significant.

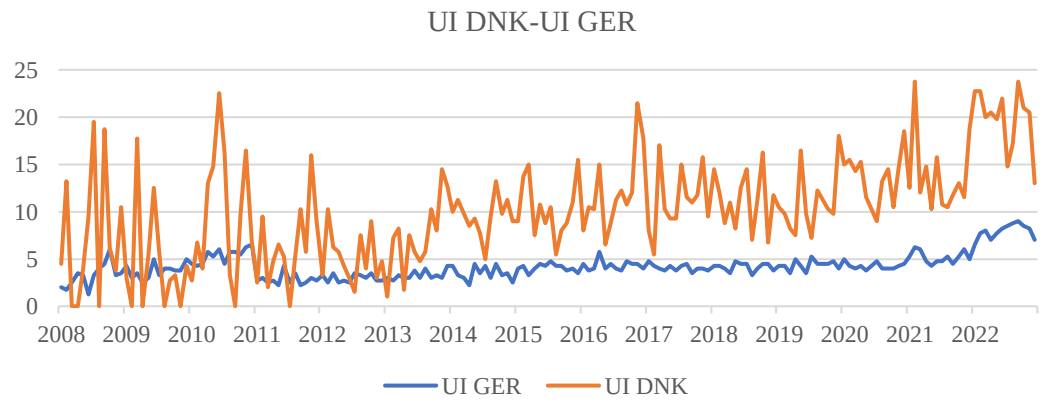

Figure 7.2. Denmark – Google Trends based Uncertainty Index of Denmark and Germany.

	UI GER	*UI DNK*
UI GER	1	
UI DNK	**0,55462418**	1

Table 7.3.1. Denmark – Correlation between Denmark's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI DNK/UI GER	8,8926823	6,57932E-16

Table 7.3.2. Denmark – T-statistic and p-value prices from correlations.

Figure 7.3.1. presents the first IRF graphs for Denmark. Again, the tests Augmented Dickey Fuller and Phillips Perron were harnessed for stationarity. It was found that two of the variables contained a unit-root, Unemploymentrate and LTGBY10Y. To convert them to stationary variables we took their first differences, creating dUnemplrate and dLTGBY10Y. Regarding the optimal lags needed for conducting the VAR model for Denmark, the tables 7.4., 7.5. and 7.6. showed 4 lags. Inflation while starting off negative managed to come back and move around zero before it died out. The UIDNK response to UIDNK remained positive during the periods. The dUnemplrate persisted on turning negative up until the eighth period, then converging to zero. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 7.7. in the appendix.

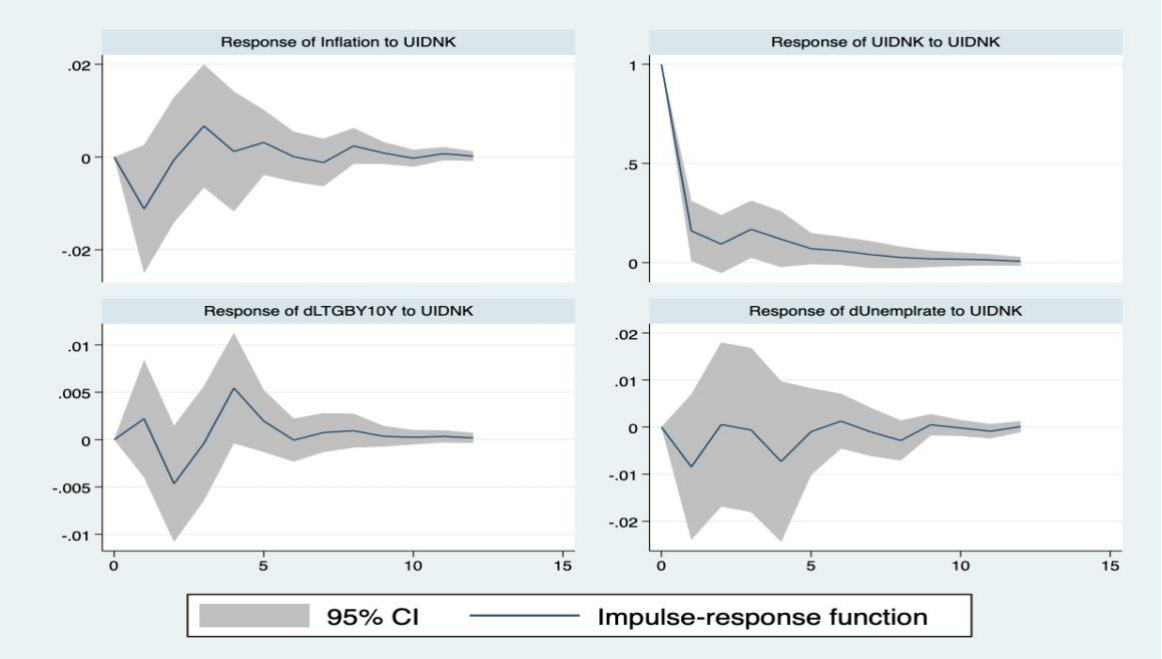

Figure 7.3.1. Denmark– Impulse Response Functions to a UIDNK shock. Sample: 2008M1 – 2022M12. VAR (4) estimated with an exogenous variable (UIGER). 95% confidence interval.

The following figure presents a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. UIDNK holds a positive response in a UIGER one-standard deviation impulse until the end of the periods in concern, remaining above 0,15% till the fourth period. Both DNK Inflation and dLTGBY10Y turn slightly negative in the first and second period respectively, for them to converge to zero soon after. The Table 7.8. in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

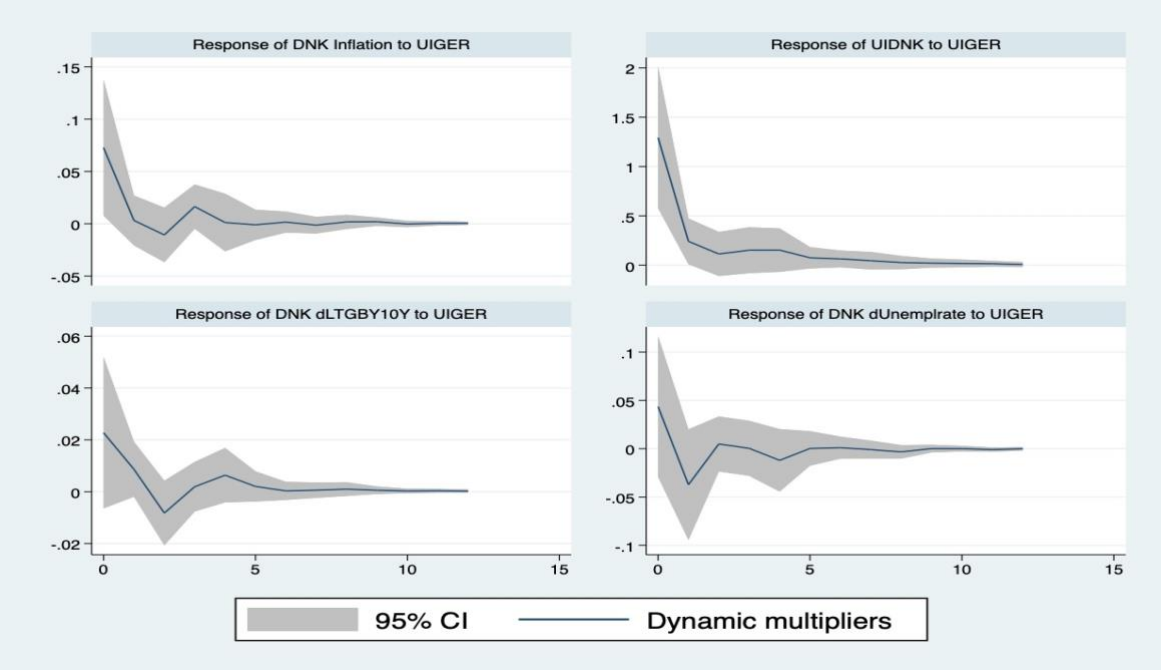

Figure 7.3.2. Denmark – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (4) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **ESTONIA**

For Estonia, data only for inflation and unemployment rate were found. Estonia constitutes the second and lest country that the variable long-term government bond yield 10 years was not examined and presented in this study. It is of note that Estonia entered the Eurozone in January 2011. The kroon (EEK) was the official currency of Estonia for two periods in history: 1928–1940 and 1992–2011. Its former currency over the euro was not examined in the research, as the analysis would be only for three years, considering our time

horizon is from 2008 to 2022. Nonetheless, the adoption of the euro was captured in the Uncertainty Index of Estonia, as the transition from one currency to another would probably have individuals looking up the terms this index was initially constructed by – "minimum wage", "home price", etc. The unemployment rate reached its high at 20% in 2010, and gradually reached its 2008 levels by 2015. The correlation between inflation and unemployment rate is very weak and negative, as is the correlation between UI Estonia and unemployment rate.

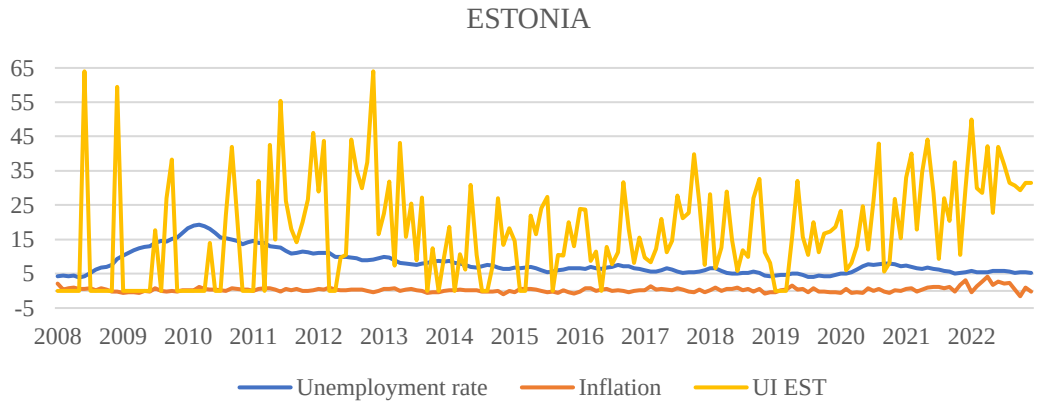

Figure 8.1. Estonia – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*Inflation*	*UI Estonia*
Unemployment rate	1		
Inflation	-0,085318874	1	
UI Estonia	-0,121391905	0,132224462	1

Table 8.1. Estonia – Correlation between the Uncertainty Index (UI), unemployment rate and inflation

Data for the CCI of Estonia were found, in contrast to data for EPU. The correlation between the two indices in negative, -0,190, and weak. The p-value of the t-statistic is slightly over 0,01, posing the correlation statistically significant in the 5% confidence level.

	UI EST	*CCI EST*
UI EST	1	
CCI EST	**-0,1903611**	1

Table 8.2.1. Estonia – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI EST) and the Consumer Confidence Index (CCI EST).

	t-statistic	*p-value*
CCI/UI	-2,587040602	0,010478691

Table 8.2.2. Estonia – T-statistic and p-value prices from correlations.

As forementioned, UIEST' s jumps in 2011-2013 were due to the country's adoption of the euro. Unlike Estonia, Germany's Uncertainty Index appear to move smoother during the fifteen-year time horizon. The correlation between the variables is weak and statistically significant.

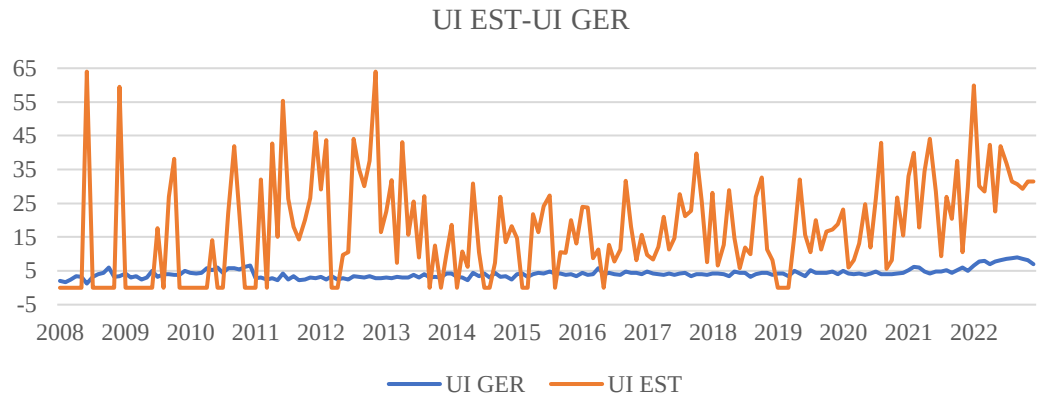

Figure 8.2. Estonia – Google Trends based Uncertainty Index of Estonia and Germany.

	UI GER	*UI EST*
UI GER	1	
UI EST	**0,15413797**	1

Table 8.3.1. Estonia – Correlation between Estonia's and Germany's Uncertainty Indices

	t-statistic	*p-value*
UI EST/UI GER	2,081330261	0,038834755

Table 8.3.2. Estonia – T-statistic and p-value prices from correlations.

For Estonia Figure 8.3.1. in the next page presents the first IRF graphs for examination. The stationarity test Augmented Dickey Fuller and Phillips Perron were run for all variables, Inflation, Unemploymentrate and the Uncertainty Index of Estonia. The Unemployment rate was found containing a unit-root. Taking the first differences we created a new variable, dUnemplrate. Based on the tables 8.4., 8.5. and 8.6. in the appendix, the optimal number of lags for the conduction of the VAR model was 2. It appears that the reaction path followed by Inflation is mirrored to the dUnemplrate's graph, with both variables starting at 0%. Regarding the response of UIEST to UIEST, it converges to zero just after the fifth period. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 8.7. in the appendix.

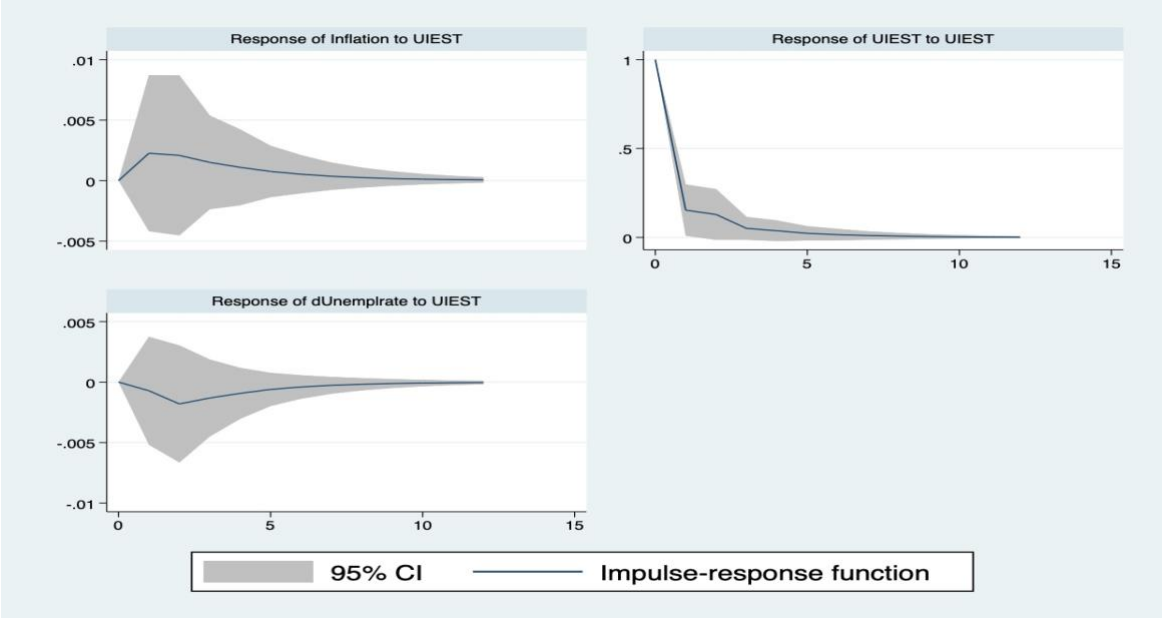

Figure 8.3.1. Estonia– Impulse Response Functions to a UIEST shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

Regarding the second IRF graphs figure, it is a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. For the response of UIEST to UIGER, we observe that it moves close to zero for the majority of the periods, recording a jump in the second period at 0,32%. Unlike Inflation's previous response to UIEST, EST Inflation's response to UIGER begins at 0,06%. EST dUnemplrate remained negative for all the whole year in concern, like seen in the previous analysis. The Table 8.8. in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

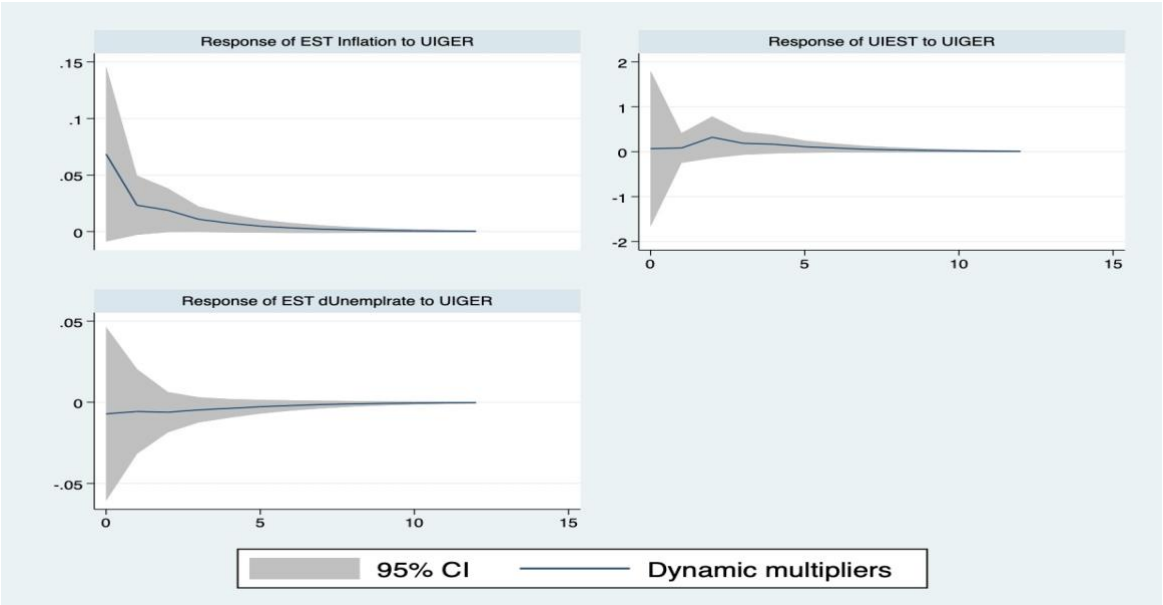

Figure 8.3.2. Estonia – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **FINLAND**

The following graph is a depiction of Finland's inflation, unemployment rate, long-term government bond yield 10 years and our constructed Uncertainty Index of the country. The Uncertainty Index reaches its maximum price in the 2008 financial crisis, while 2021-2022 marks a period of increase uncertainty as well, the aftermath of COVID19 crisis. Unemployment rate appears to be steady for a long period, reaching its 2008 level just over a decade later. All the correlations are reported negative and weak in Table 9.1.

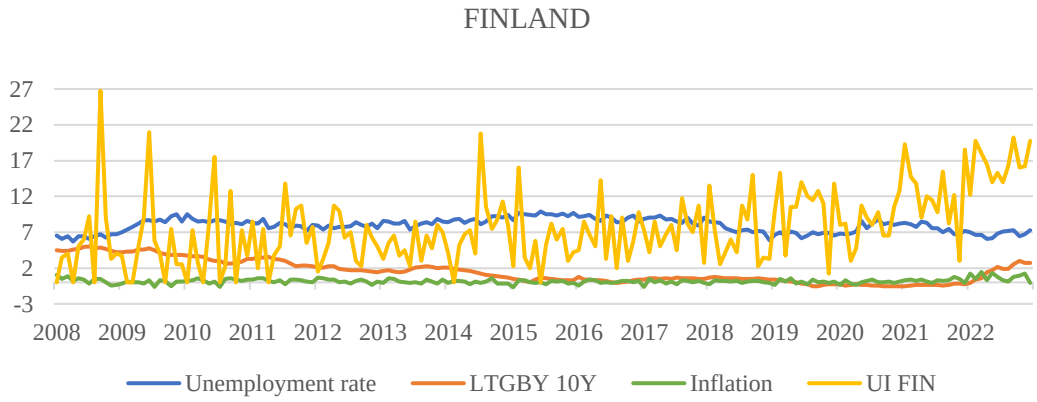

Figure 9.1. Finland – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Finland*
Unemployment rate	1			
LTGBY 10Y	-0,133259754	1		
Inflation	-0,260016808	0,09665814	1	
UI Finland	-0,233854465	-0,215197104	0,19575778	1

Table 9.1. Finland – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

For Finland, again, the Consumer Confidence Index was found, with no data for the Economic Policy Uncertainty Index. A negative correlation is the covetable outcome in this case. The correlation of -0,190 is statistically significant at the 5% confidence level.

	UI FIN	*CCI FIN*
UI FIN	1	
CCI FIN	**-0,1905386**	1

Table 9.2.1. Finland – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI FIN) and the Consumer Confidence Index (CCI FIN).

	t-statistic	*p-value*
CCI/UI	-2,589542738	0,010405644

Table 9.2.2. Finland – T-statistic and p-value prices from correlations

The Figure 7.2. presents the comparison of the two Uncertainty Indices between the two countries. The correlation of UIFIN and UIGER is assumed to be strong at 0,475, Nonetheless, the p-value of the t-statistic is equal to 1, posing the value of the correlation statistically insignificant.

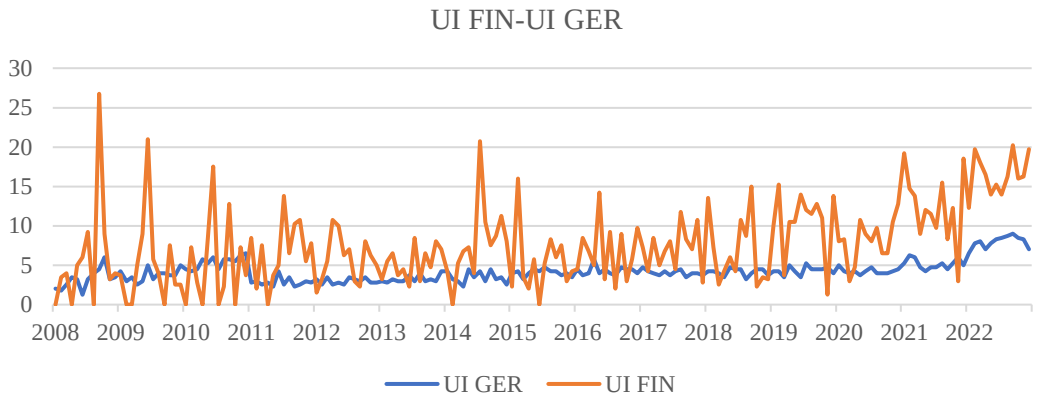

Figure 9.2. Finland – Google Trends based Uncertainty Index of Finland and Germany.

	UI GER	*UI FIN*
UI GER	1	
UI FIN	**0,47522197**	1

Table 9.3.1. Finland – Correlation between Finland's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI FIN/UI GER	7,205929379	1

Table 9.3.2. Finland – T-statistic and p-value prices from correlations.

The tests Augmented Dickey Fuller and Phillips Perron were harnessed to test for the stationarity of the variables. For Finland only the LTGBY10Y was found to contain a unit-root. We took the first differences of the variable, creating a new variable named dLTGBY10Y. The tables 9.4., 9.5. and 9.6. in the appendix suggested a number of optimal values for the VAR model of Finland equal to 2. The following IRF graphs concern the response of the four variables to a UIFIN one-standard deviation shock. It is of note the negative response of both Unemplrate and dLTGBY10Y. However, the latter has a much less reaction in terms of magnitude, and it manages to return and move around zero by the fourth period. In contrast to Unemplrate that remain negative for all the twelve periods. On the other hand, the UIFIN response to UIFIN quickly dies out after the fifth period. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 9.7. in the appendix.

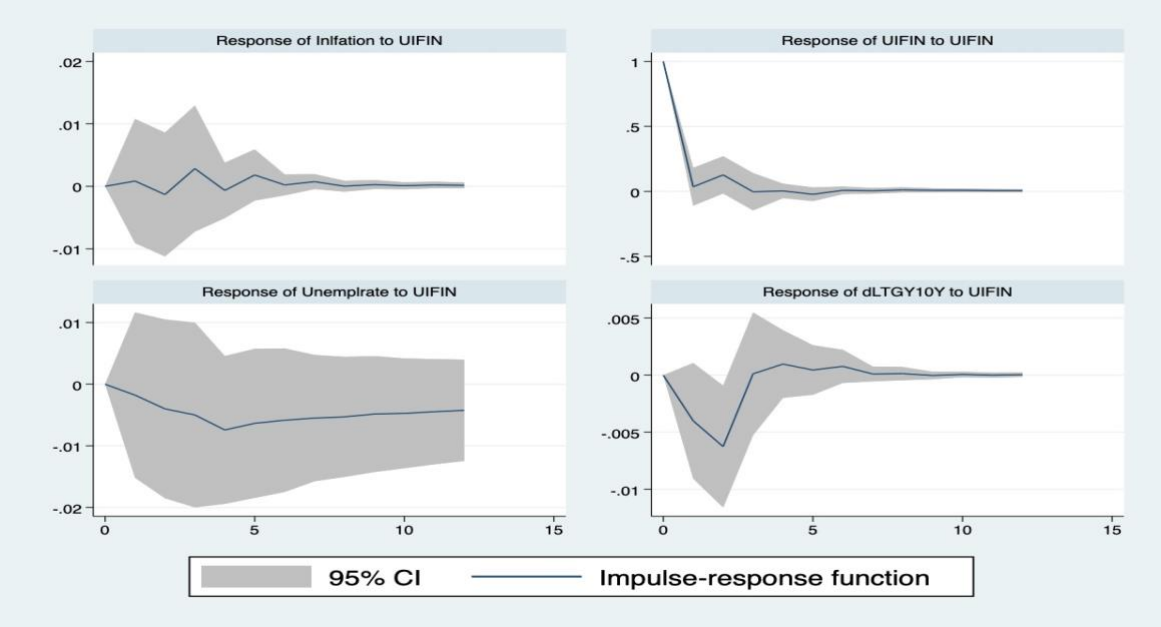

Figure 9.3.1. Finland– Impulse Response Functions to a UIFIN shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

The next set of IRF graphs concern the dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. It is clear that also in this case the Unemplrate remained under zero over the whole period. Unlike dLTGBY10Y that only recorded a negative value twice. FIN Inflation on the other hand, recorded positive values with its maximum value at 0,017% in the second period. Lastly, the response of UIFIN to UIGEIR after falling under zero in the first period it rebounded to 0,19%after two periods. The Table 9.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

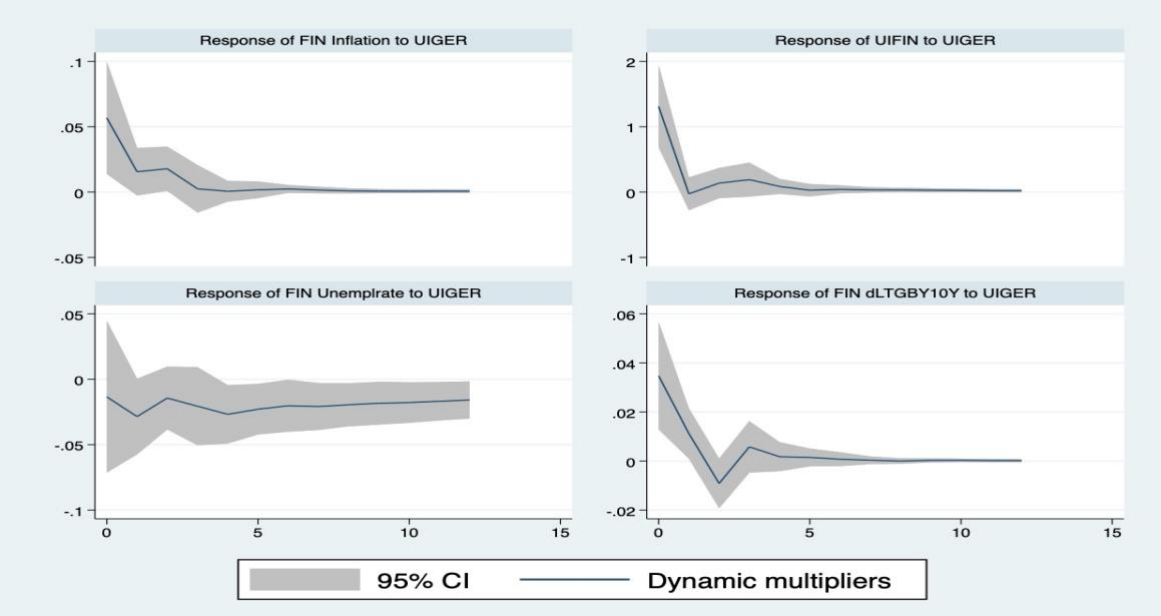

Figure 9.3.2. Finland – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **FRANCE**

For France the following figure depicts the economic indicators and our Uncertainty Index of the country. Unlike the countries examined till now, France is the only country that its unemployment rate remained higher than its Uncertainty Index for the whole period of fifteen years in concern. It is also important to notice that is seems the aftermath of COVID19 epidemic crisis was more perceptible in the country's uncertainty. The correlation between UIFRA and unemployment rate is strong at -0,463, while quite weak and almost zero between LTGBY10Y at -0,006.

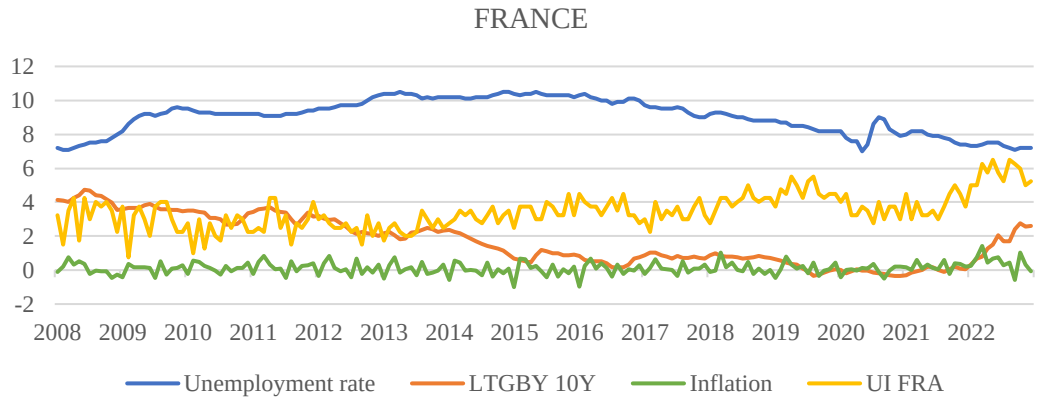

Figure 10.1. France – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI France*
Unemployment rate	1			
LTGBY 10Y	-0,006390864	1		
Inflation	-0,186177492	0,013406709	1	
UI France	-0,463433287	-0,379678472	0,169435258	1

Table 10.1. France – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

France is one of the nine European countries that Economic Policy Uncertainty index (EPU), by Baker, Bloom & Davis (2016) has data for. Data for CCI were also available for France. While the correlation between EPU FRA and UI FRA is a desirable outcome at 0,222, the positive correlation between CCI FRA and UI FRA is not covetable. It appears though in Table 9.2.1., that the t-statistic an p-value pose the correlation CCI FRA/UI FRA statistically insignificant, and EPU FRA/UI FRA statistically significant.

	UI FRA	*CCI FRA*	*EPU FRA*
UI FRA	1		
CCI FRA	**0,10285576**	1	
EPU FRA	**0,22254198**	0,05580796	1

Table 10.2.1. Finland – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI FIN), Economic Policy Uncertainty index (EPU) and the Consumer Confidence Index (CCI FIN).

	t-statistic	*p-value*
CCI/UI	1,379583955	0,169445408
EPU/UI	3,045450743	0,002676319
CCI/EPU	0,74573333	0,456812169

Table 10.2.2. France – T-statistic and p-value prices from correlations

The following figure depicts the Uncertainty Indices of France and Germany. The two indices follow almost the exact same path throughout the fifteen years, with two exceptions in 2010-2011 and 2022, an expected fact as these countries constitute two of the biggest economies across Europe. The correlation of 0,538is statistically significant at the 1% confidence level.

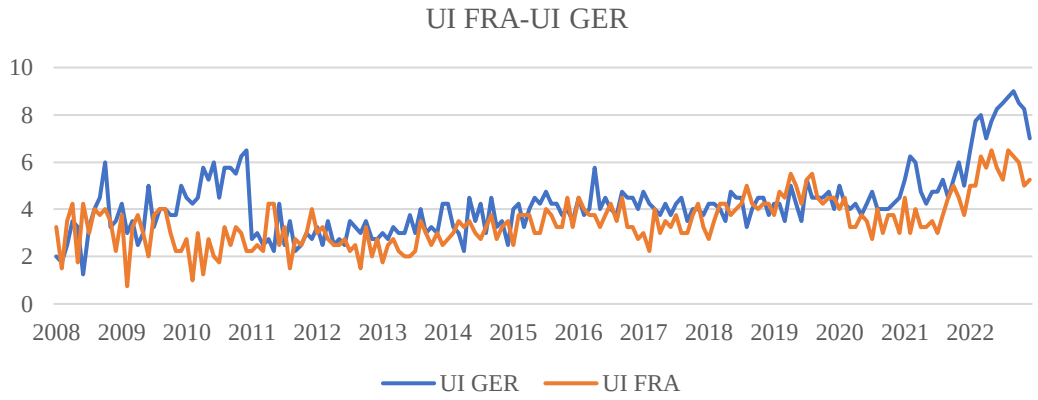

Figure 10.2. France – Google Trends based Uncertainty Index of France and Germany.

	UI GER	*UI FRA*
UI GER	1	
UI FRA	**0,53805842**	1

Table 10.3.1. France – Correlation between France's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI FRA/UI GER	8,516467387	6,73576E-15

Table 10.3.2. France – T-statistic and p-value prices from correlations.

The first IRF graphs concern the response of the variables Inflation, Unemploymentrate, LTGBY10Y and UIFRA to one-standard deviation shock in UIFRA. Again, the tests Augmented Dickey Fuller and Phillips Perron were harnessed for stationarity. It was found that two of the variables contained a unit-root, Unemploymentrate and LTGBY10Y. The new stationary variables were dUnemplrate and dLTGBY10Y. According to the Varsoc, Varstable and Varlmar tables in appendix (10.4, 10.5. and 10.6.), the number of optimal lags was 2. Thereafter we proceeded to the conduction of the VAR model for France. It is observed that dUnemplrate and dLTGBY10Y tend to move similarly to a UIFRA's shock. Inflation turns slightly positive in the beginning, turning negative just after the second period not managing to move above zero for the rest of the periods. UIFRA seems to insist on staying quite high for the first five periods after a UIFRA shock, in contrast to the other European countries analyzed till now that record a sharp fall soon after the first or second period. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 10.7. in the appendix.

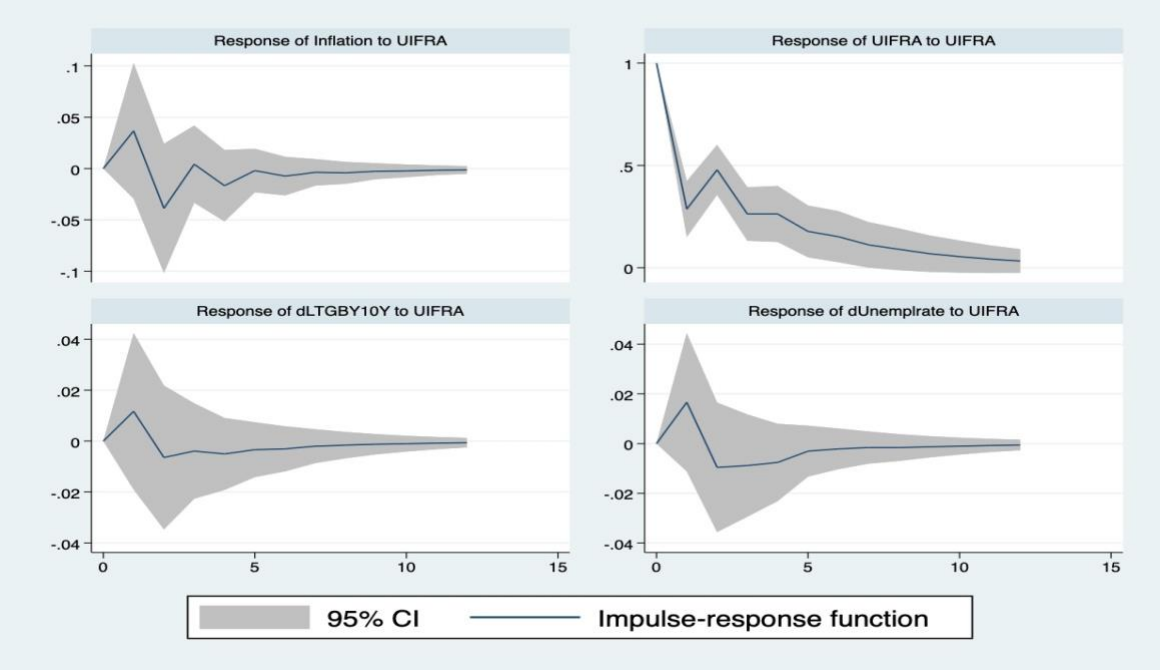

Figure 10.3.1. France– Impulse Response Functions to a UIFRA shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

The second IRF graphs indicate the dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. FRA dUnemplrate managed to move below zero for all the periods in concern. The same applied to the dLTGBY10Y, which only recorded positive values the first two periods. It is important to note that for the first time the impact of UIGER is less than that of another Uncertainty Index, UIFRA in our case. The response of UIFRA to UIGER is almost ten times less than its response to UIFRA. This is due to the fact France being one of the greatest economies amongst the European countries. The Table 10.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes

or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

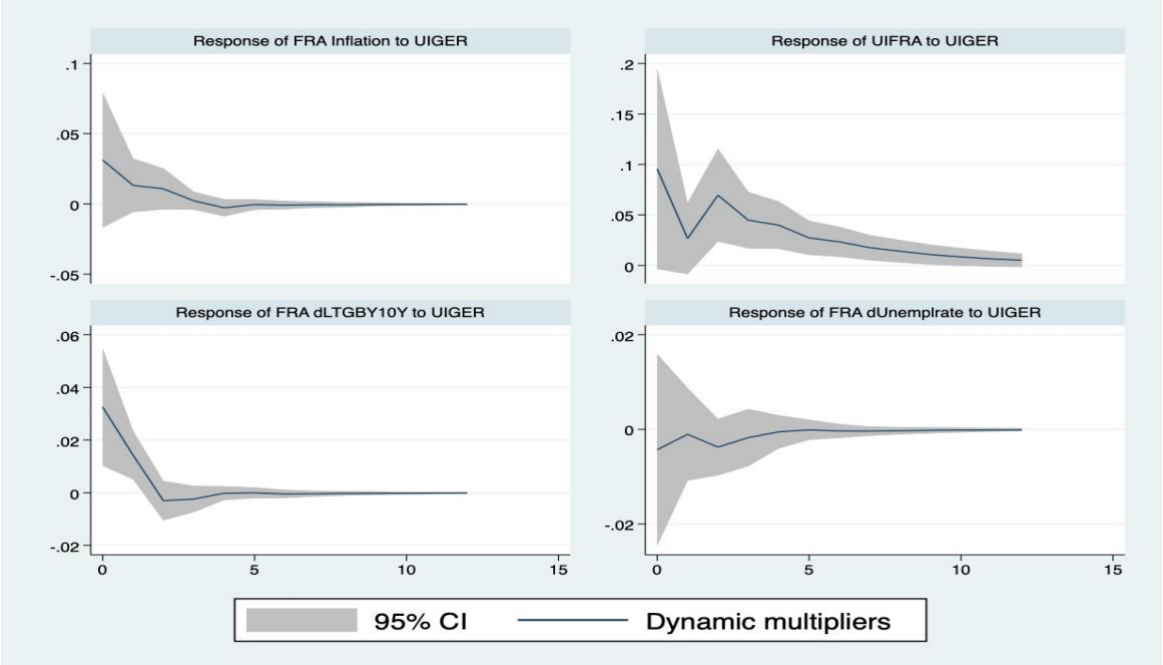

Figure 10.3.2. France – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **GERMANY**

Germany's economic indicators and Uncertainty Index is pictured in the following figure. The unemployment rate marked its highest level at 8% in the beginning of 2008, and although the COVID19 epidemic crisis and the Russian invasion to Ukraine it declined reaching the level of just over 3% by the end of 2022. This is an interesting fact, given that a couple of precariousness periods existed in the examined time horizon and some would expect the exact opposite outcome. The correlations of the variables line with the economic theory. A very strong correlation of 0,894 is reported between unemployment rate and the long-term government bond yield 10 years, and a negative correlation of -0,121 between unemployment rate and inflation. As forementioned in the beginning of the study, an increase in unemployment rate tends to decrease inflation and increase the high-yield bond spreads.

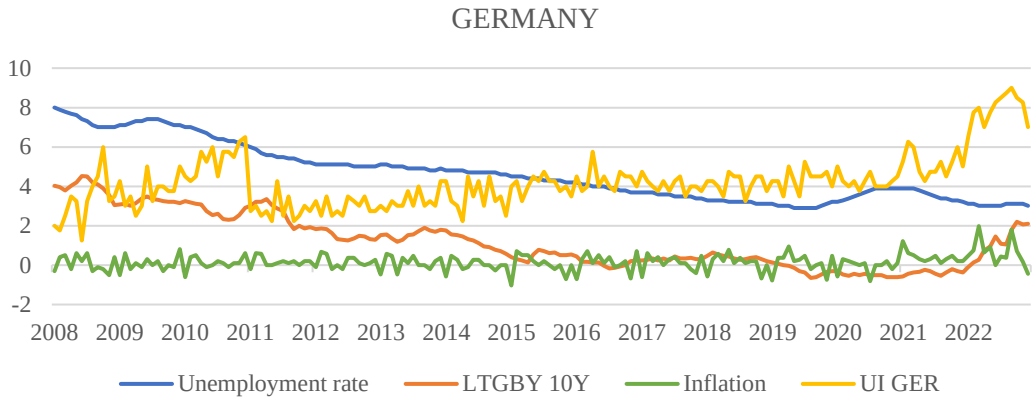

Figure 11.1. Germany – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Germany*
Unemployment rate	1			
LTGBY 10Y	0,894308655	1		
Inflation	-0,121393722	-0,04426441	1	
UI Germany	-0,383694292	-0,217736884	0,25633993	1

Table 11.1. Germany – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

Germany's existing uncertainty indices were both available online. The correlations are as expected, negative and moderate for the CCI GER/UI GER and positive and strong for EPU GER/UIGER. As seen in Table 11.2.2., all the values of the correlations are statistically significant with p-values well less than 0,01.

	UI GER	*CCI GER*	*EPU GER*
UI GER	1		
CCI GER	**-0,3808019**	1	
EPU GER	**0,68906979**	-0,5001428	1

Table 11.2.1. Germany – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI GER), the Consumer Confidence Index (CCI GER) and the Economic Policy Uncertainty index (EPU GER).

	t-statistic	*p-value*
CCI/UI	-5,4945047	1,33883E-07
EPU/UI	12,68580277	1,10373E-26
CCI/EPU	-7,705747471	8,77322E-13

Table 11.2.2. Germany – T-statistic and p-value prices from correlations.

For Germany we only have one set of IRF graphs, concerning the impulse on the Uncertainty Index of the country to the economic indicators and the Uncertainty Index itself, as it is the exogenous variable used in the Dynamic-Multiplier Functions, as already forementioned. The response of UIGER to a one-standard deviation of UIGER is of great importance as it insists on staying well above 0,20% over the period in analysis. All the economic indicators show a positive reaction to the UIGER shock, with the response of dUnemplrate being the least significant. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 11.7. in the appendix.

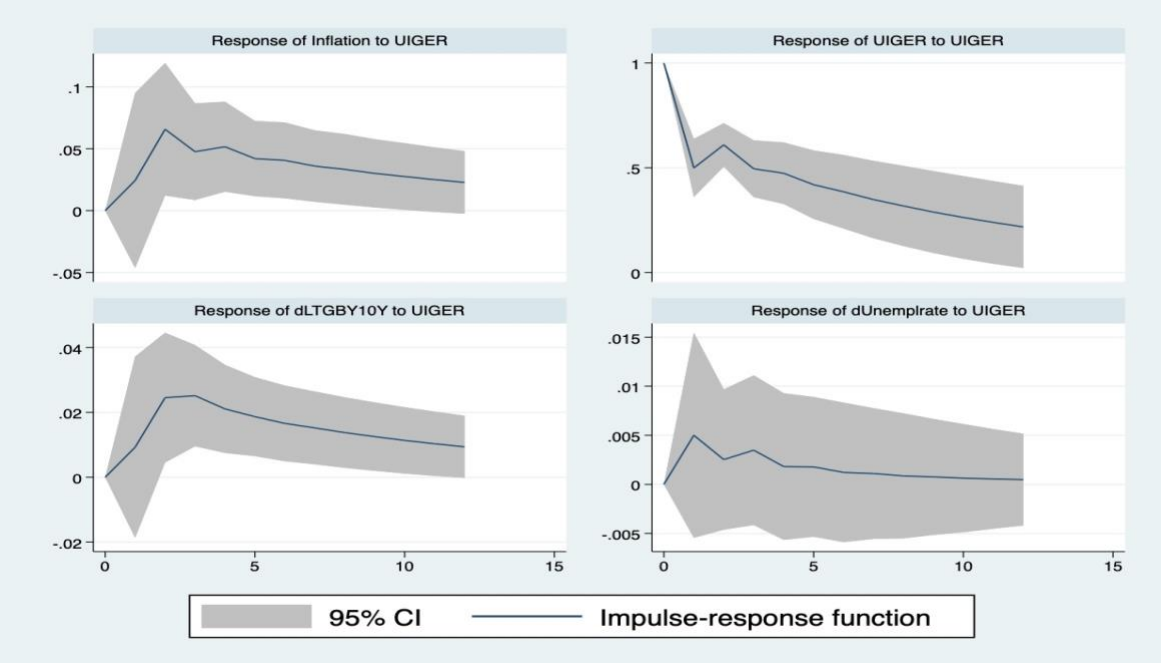

Figure 11.3.1. France– Impulse Response Functions to a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **GREECE**

Regarding Greece's economic indicators, it is of concern the levels of unemployment rate the country reached by 2013. A 26% unemployment rate was reported that took almost a decade to half. It is also important to note the prodigious effect the 2008 financial crisis had on the country's uncertainty, in contrast to the COVID19 epidemic crisis. Such fact could denote the public's healed confidence towards the government after many years in unreliability. The correlations of the inflation and the long-term government bond yield 10 years seem to align with theory, providing the appropriate signs,

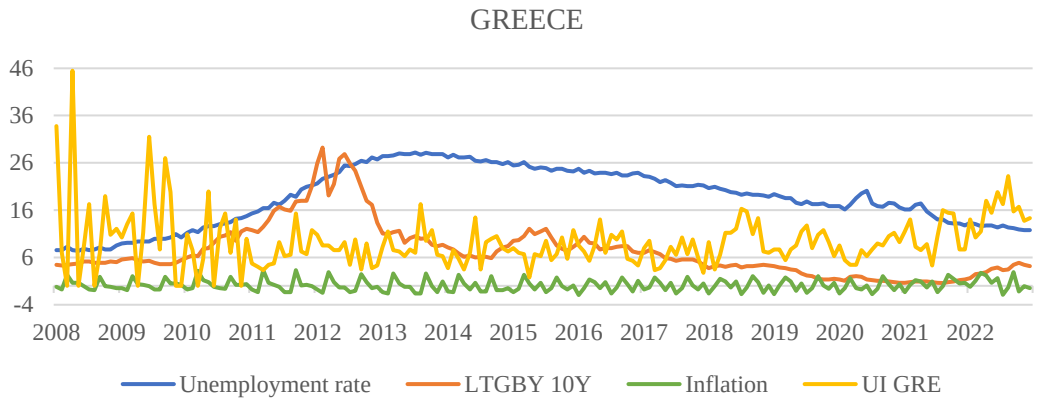

Figure 12.1. Greece – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Greece*
Unemployment rate	1			
LTGBY 10Y	0,420297043	1		
Inflation	-0,1250371	-0,052882408	1	
UI Greece	-0,326040337	-0,17805485	-0,005446191	1

Table 12.1. Greece – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

The correlation between our Uncertainty Index and the existing uncertainty indices is presented below. Greece had available data for both CCI and EPU indices. Table 12.2.2. reports the t-statistics and p-values of the correlations. The CCI/UI is statistically significant in contrast to the EPU/UI. The correlation of 0,152 may be weak but it stands right. A positive correlation, although it does not comply with the economic theory, could indicate that individuals will consume less and save more, as in some economies there is no security in the sector of insurances, fact that motivates people to continue to consume.

	UI GRC	*CCI GRC*	*EPU GRC*
UI GRC	1		
CCI GRC	**0,15205435**	1	
EPU GRC	**-0,0903901**	-0,2117684	1

Table 12.2.1. Greece – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI GRE), the Consumer Confidence Index (CCI GRE) and the Economic Policy Uncertainty index (EPU GRE).

	t-statistic	*p-value*
CCI/UI	2,052524498	0,041582465
EPU/UI	-1,210911222	0,227534737
CCI/EPU	-2,89090931	0,004319737

Table 12.2.2. Greece – T-statistic and p-value prices from correlations.

Greece's Uncertainty Index appears to closely follow the route of the Germany's Uncertainty Index. Despite the first three years of analysis, the rest of the years Greece's UI paradoxical fluctuates very close to Germany's UI. The correlation of 0,258 is considered weak and it is statistically significant in the 1% confidence level.

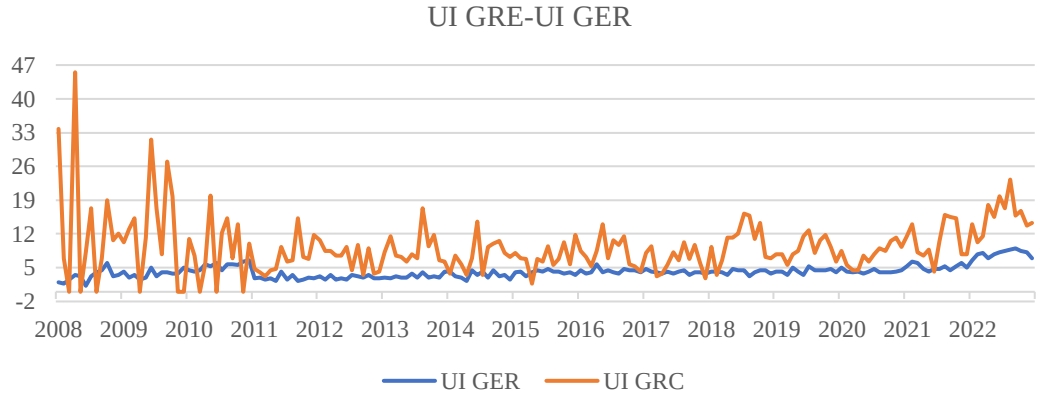

Figure 12.2. Greece – Google Trends based Uncertainty Index of Greece and Germany.

	UI GER	*UI GRC*
UI GER	1	
UI GRC	**0,25806665**	1

Table 12.3.1. Greece – Correlation between Greece's and Germany's Uncertainty Indices

	t-statistic	*p-value*
UI GRC/UI GER	3,56375314	0,000469391

Table 12.2.2. Greece– T-statistic and p-value prices from correlations.

For Greece Figure 12.3.1. in the next page presents the first IRF graphs for examination. The stationarity test Augmented Dickey Fuller and Phillips Perron were run for all variables, Inflation, Unemploymentrate, LTGBY10Y and the Uncertainty Index of Greece. The Unemploymentrate and LTGBY10Y were found containing a unit-root. Taking the first differences we created new variables, dUnemplrate and dLTGBY10Y. Based on the tables 12.4., 12.5. and 12.6. in the appendix, the optimal number of lags for the conduction of the VAR model were 9. It is observed that all variables are very volatile, providing equally positive and negative values. Regarding Inflation, it records its maximum value of 0,02% sometime later around the ninth period. Furthermore, Greece constitutes the first country its UI response to UI shock turns negative so early in the time horizon of a year. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 12.7. in the appendix.

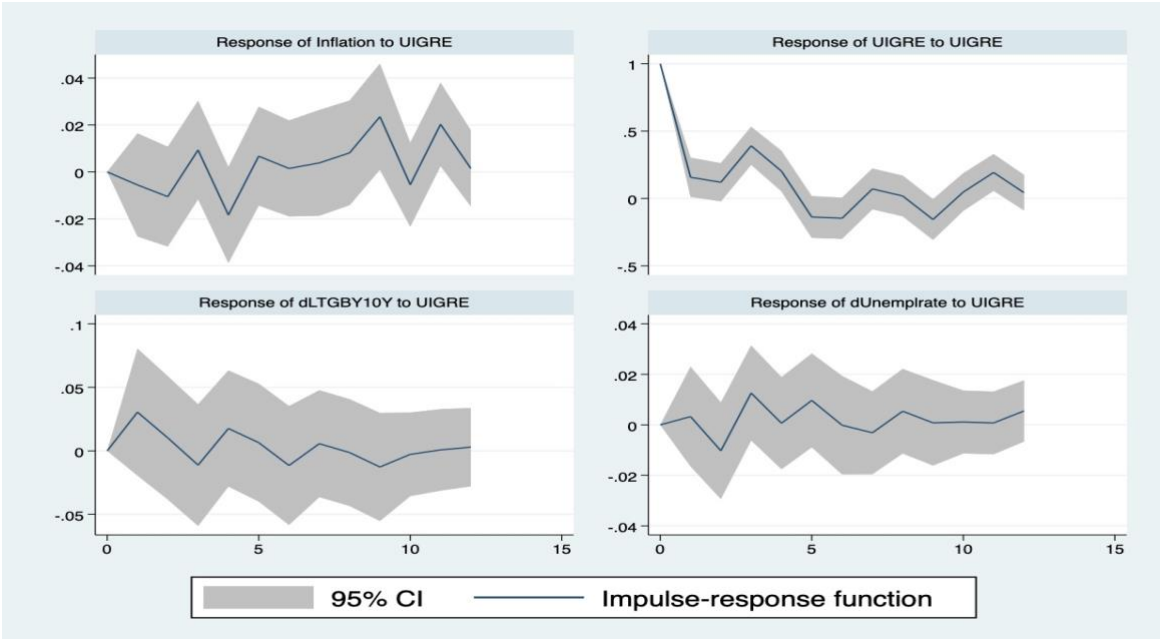

Figure 12.3.1. Greece– Impulse Response Functions to a UIGRE shock. Sample: 2008M1 – 2022M12. VAR (9) estimated with an exogenous variable (UIGER). 95% confidence interval.

The following IRF graphs concern the dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. The variables seem to move around zero for almost the whole twelve periods. Again, Greece is the first country that its UI falls below zero over time after a one unit increase in UIGER. The Table 12.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

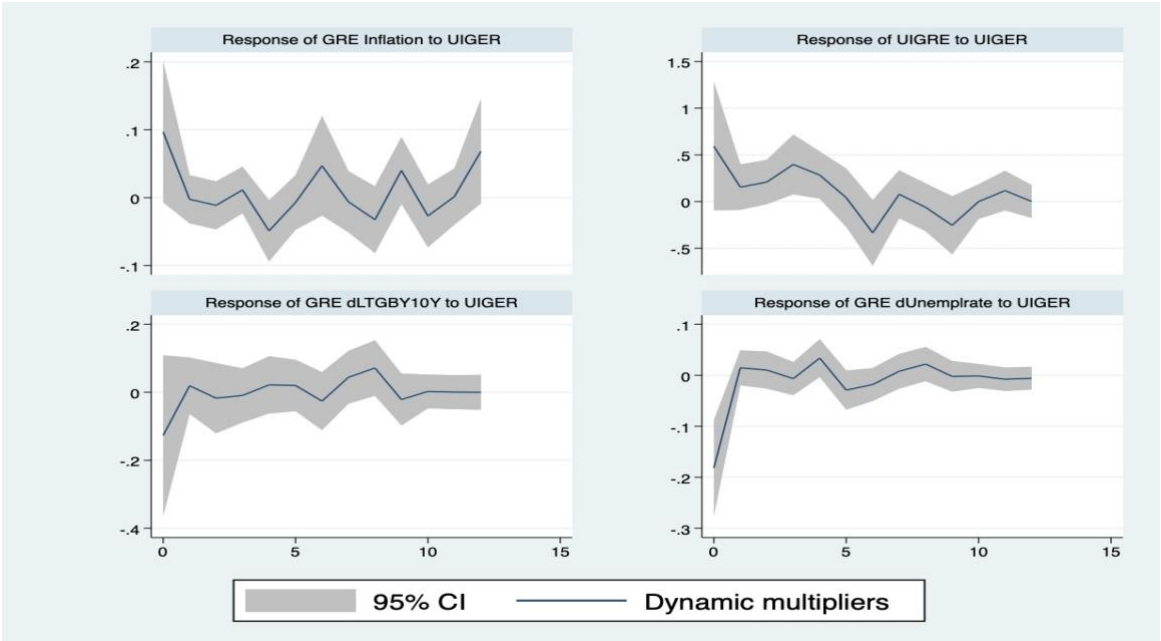

Figure 12.3.2. Greece – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **HUNGARY***

Concerning Hungary's following graph, the economic indicators and our Uncertainty Index for the country is depicted. Also, because Hungary is not included in the Eurozone, the country's official currency was examined. The forint (HUF) has been the currency of Hungary since 1946. In today's data one forint equals 0,0026 Euros. The correlations of the economic indicators seam to follow the theory. Unlike the economic indicators, the HUF/EUR currency was expected to provide a negative sign in the correlation. In contrast, it is reported a strong and positive at 0,714.

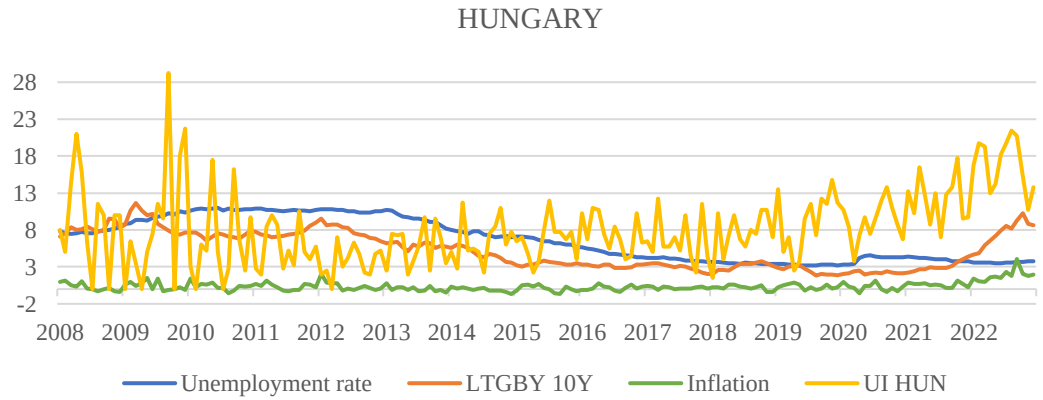

Figure 13.1. Hungary – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Hungary*	*HUF/EUR*
Unemployment rate	1				
LTGBY 10Y	0,719561703	1			
Inflation	-0,153056496	0,299237586	1		
UI Hungary	-0,326990244	-0,048983564	0,287771322	1	
HUF/EUR	0,714493618	0,479369534	-0,33871159	-0,32734428	1

Table 13.1. Hungary – Correlation between the Uncertainty Index (UI), unemployment rate, inflation, long-term government bond 10-year yield and the currency of the country over euro.

For Hungary only the Consumers Confidence Index was available online. The tables below report the negative correlation between our Uncertainty Index of Hungary and the CCI. It is also reported than the correlation is statistically insignificant with t-statistic in absolute value less than 1,96 and a p-value greater than 0,05.

	UI HUN	*CCI HUN*
UI HUN	1	
CCI HUN	**-0,008934678**	1

Table 13.2.1. Hungary – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI HUN) and the Consumer Confidence Index (CCI HUN).

	t-statistic	*p-value*
CCI/UI	-0,119208231	0,905244816

Table 13.2.2. Hungary – T-statistic and p-value prices from correlations.

Hungary's Uncertainty Index seem to behave in a completely different way than the Germany's one. UIHUN is characterized with extreme fluctuations and quick jumps throughout the whole time horizon for analysis. Hungary's Uncertainty Index reaction to the aftermath of crises seems to hold for a couple of years after each crisis took place. We notice a strong and statistically significant correlation of 0,480 between UIHUN and GER, in Tables 13.3.1 and 13.3.2.

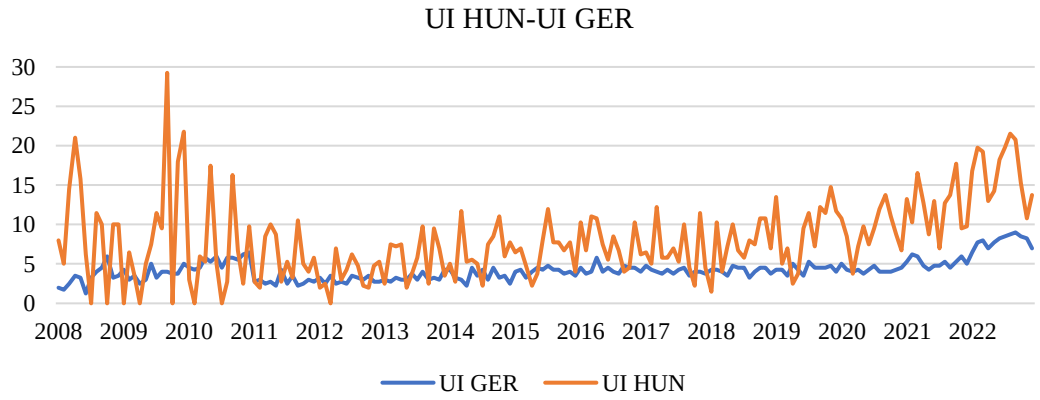

Figure 13.2. Hungary– Google Trends based Uncertainty Index of Hungary and Germany.

	UI GER	*UI HUN*
UI GER	1	
UI HUN	**0,480661885**	1

Table 13.3.1. Hungary – Correlation between Hungary's and Germany's Uncertainty Indices

	t-statistic	*p-value*
UI HUN/UI GER	7,313017956	8,55519E-12

Table 13.3.2. Hungary – T-statistic and p-value prices from correlations.

The Augmented Dickey Fuller and Phillips Perron stationarity tests were run on all five variables of Hungary. It was found that three of them, Unemploymentrate, LTGBY10Y and HUF/EUR currency, contained a unit-root. We took the first differences of the variables and created the dHUF/EUR, dUnemplrate and dLTGBY10Y. Based on the tables 13.4., 13.5. and 13.6. in the appendix, the optimal lags were found to be 3 for the VAR model of Hungary. The response of dHUF/EUR to UIHUN is of minor significance. Now, Inflation and LTGBY10Y seem to move in the same pattern, both slightly jumping in the beginning before they converge to zero. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 13.7. in the appendix.

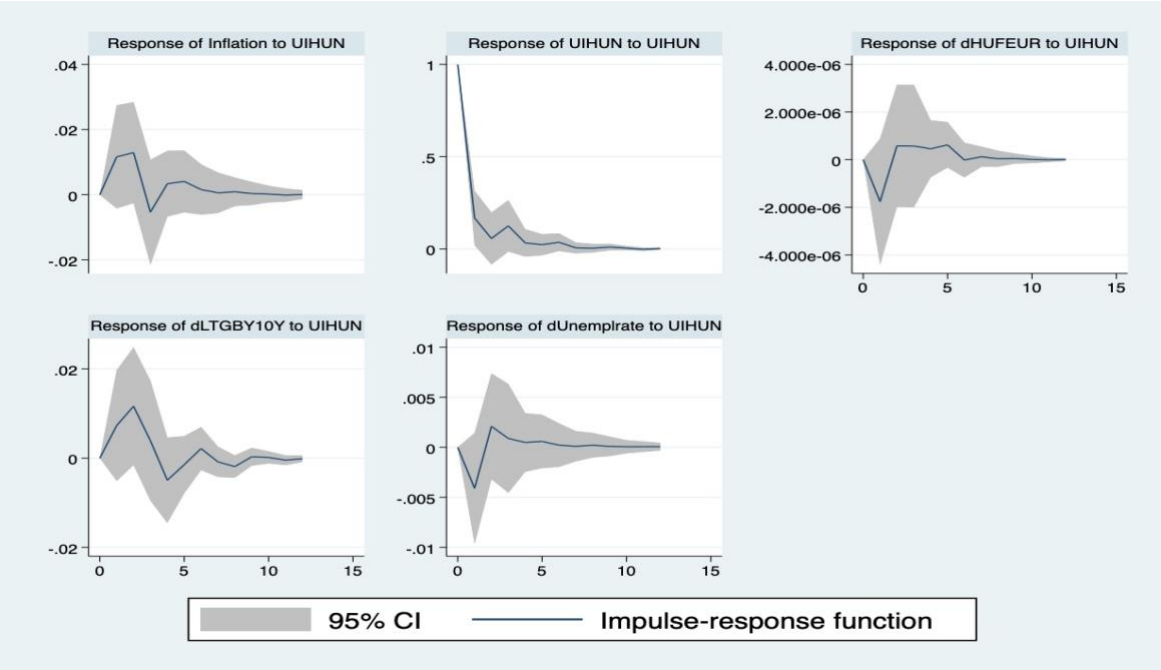

Figure 13.3.1. Hungary– Impulse Response Functions to a UIHUN shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

Regarding the second IRF graphs figure, a dynamic-multiplier function was used that measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. The response of the HUN Inflation to UIGER is of great interest. It appears that Hungary's Inflation is affected more by the UI of Germany's rather than its own UI. HUN dLTGBY10Y record a sharp fall in the second period, moving from 0,06% to -0,004% in the next period. As for the UIHUN response to UIGER, its maximum value is recorded in the fourth period with 0,16%. The Table 13.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

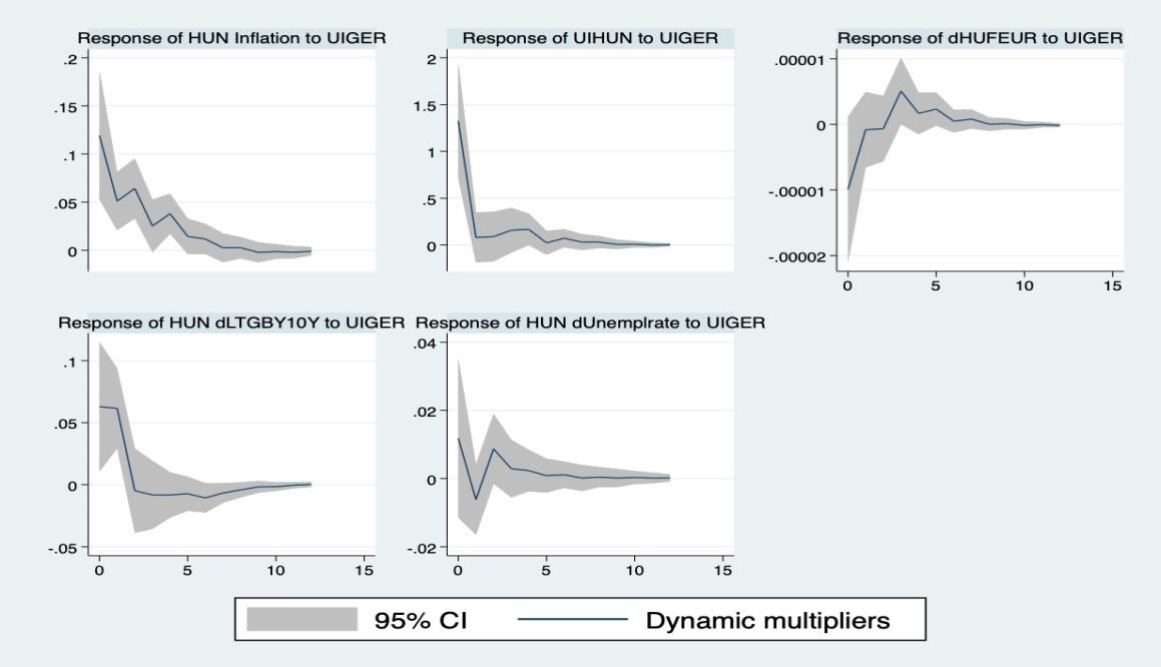

Figure 13.3.2. Hungary – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

▪ IRELAND

For Ireland the Figure 14.1. depicts the economic indicators and the constructed Uncertainty Index. Ireland's unemployment rate marked its highest price at around 15% in 2010 and it did not decrease until after 2013, reaching its 2008 levels by 2018. The signs of the correlations in the Table 14.1. appear to comply with the economic theory.

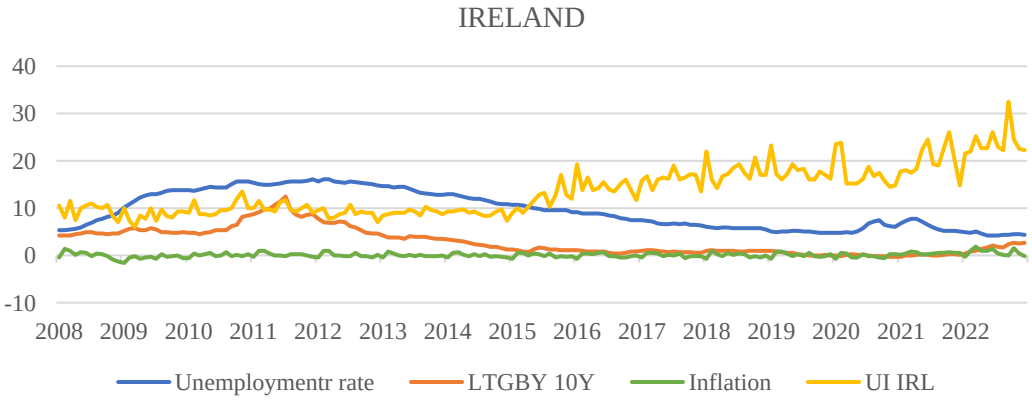

Figure 14.1. Ireland – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemploymentr rate	*LTGBY 10Y*	*Inflation*	*UI Ireland*
Unemploymentr rate	1			
LTGBY 10Y	0,786847454	1		
Inflation	-0,149745054	-0,04827397	1	
UI Ireland	-0,763712695	-0,598559992	0,235645325	1

Table 14.1. Ireland – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

Ireland is one of the nine European countries that data for Economic Policy Uncertainty (EPU), by Baker, Bloom & Davis (2016), exist. The correlation between CCI IRL and UI IRL is positive and statistically significant at 0,397. Between EPU IRL and UI IRL it is positive and statistically significant again, at 0,508. As forementioned, the desirable sign for CCI/UI is negative, but some countries provide a positive sign maybe due to the fact that there is no significant security in the country's insurance sector and individuals prefer to consume rather than save money.

	UI IRL	*CCI IRL*	*EPU IRL*
UI IRL	1		
CCI IRL	**0,39730098**	1	
EPU IRL	**0,5089474**	-0,035703	1

Table 14.2.1. Ireland – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI IRL), the Consumer Confidence Index (CCI IRL) and the Economic Policy Uncertainty index (EPU IRL).

	t-statistic	*p-value*
CCI/UI	5,776096057	3,3474E-08
EPU/UI	7,888271462	2,98666E-13
CCI/EPU	-0,476641189	0,634202247

Table 14.2.2. Ireland – T-statistic and p-value prices from correlations.

The graph shows the Uncertainty Indices of Ireland and Germany. It is clear that the UIIRL remained the whole analyzed period above the UIGER. Just after 2015 UIIRL almost doubled, while by the end of 2022 it had tripled its 2008 level price. Unlike Ireland's, Germany's Uncertainty Index double only for a short-period in 2010 and 2022. The p-value in Table 14.3.2 poses the correlation of 0,651 statistically significant.

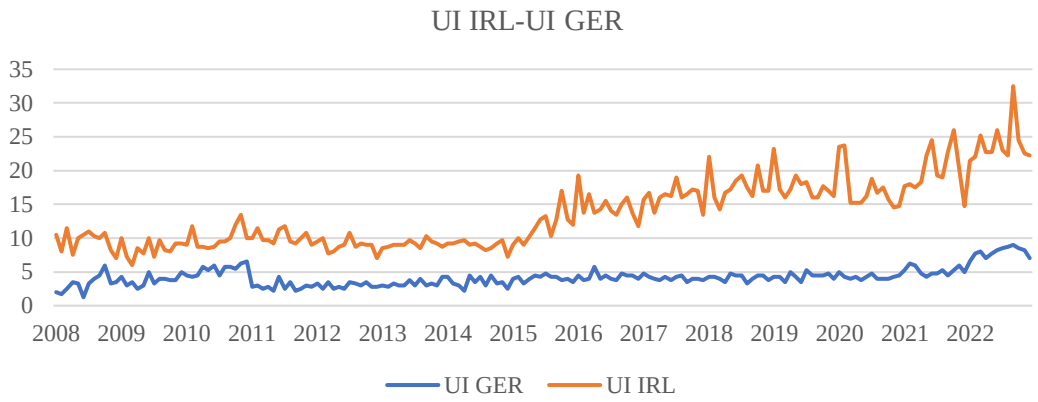

Figure 14.2. Ireland – Google Trends based Uncertainty Index of Ireland and Germany.

	UI GER	*UI IRL*
UI GER	1	
UI IRL	**0,65194655**	1

Table 14.3.1. Ireland – Correlation between Ireland's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI IRL/UI GER	11,47099328	3,68837E-23

Table 14.3.2. Ireland – T-statistic and p-value prices from correlations.

Figure 14.3.1. in the next page presents the first IRF graphs for Ireland. Again, the tests Augmented Dickey Fuller and Phillips Perron were harnessed for stationarity. It was found that three of the variables contained a unit-root, Unemploymentrate, UIIRL and LTGBY10Y. To convert them to stationary variables we took their first differences, creating dUnemplrate, dUIIRL and dLTGBY10Y. Regarding the optimal lags needed for conducting the VAR model for Ireland, the tables 14.4., 14.5. and 14.6. showed 7 lags. All the graphs depict quite volatile variables to a one-standard deviation of dUIIRL. They tend to move around 0, some with bigger spikes and some with smaller. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 14.7. in the appendix.

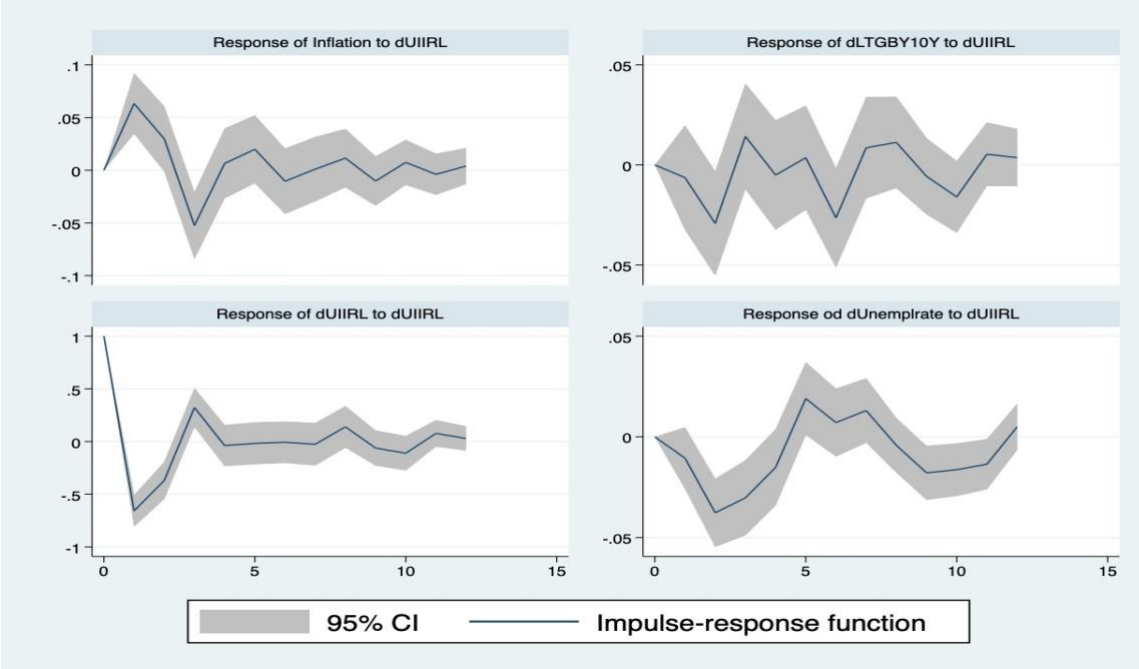

Figure 14.3.1. Ireland– Impulse Response Functions to a UIIRL shock. Sample: 2008M1 – 2022M12. VAR (7) estimated with an exogenous variable (UIGER). 95% confidence interval.

Concerning the second IRF graphs, it is a dynamic-multiplier function used to measures the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. All variables provided equal positive and negative values, except the dLTGBY10Y that the positive values prevailed, with its higher levels being in the first, third and seventh period. The Table 14.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

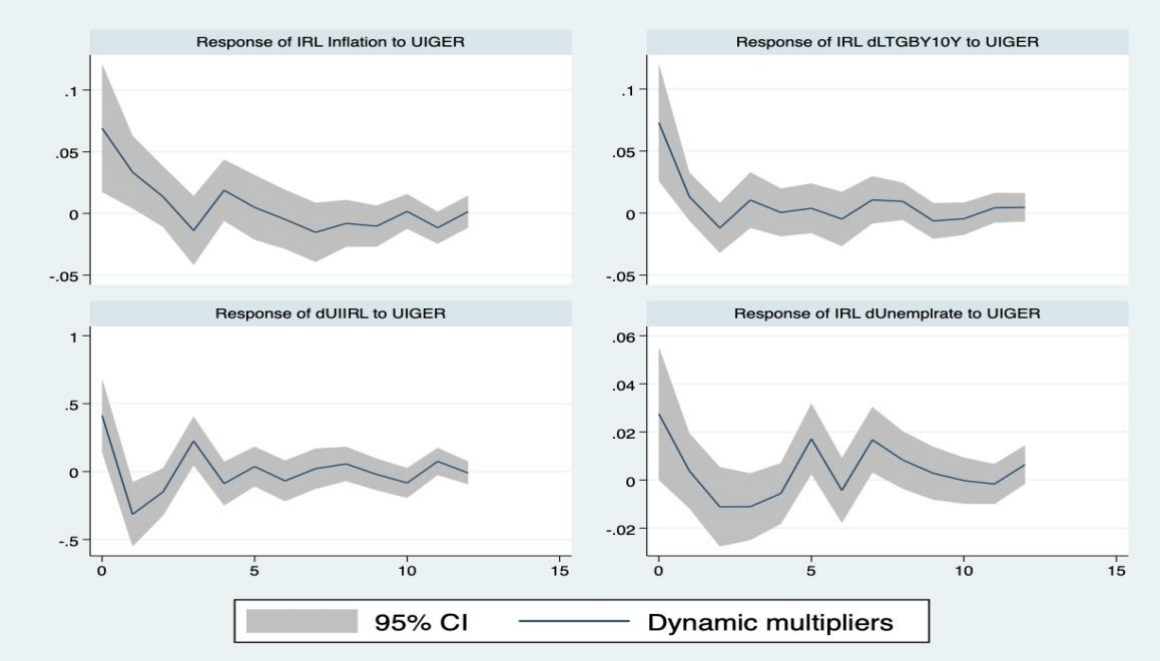

Figure 14.3.2. Ireland – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (7) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **ITALY**

Italy is one of the few countries that recorded an Uncertainty Index level less than that of their unemployment rate. Italy's unemployment rate reached 13% by 2014 and returned to its 2008 levels for a short period in 2020 and again in 2022. The Uncertainty Index did not record extreme spikes, like other European countries, but it rather fluctuated around 0 and 9 price level. The correlations of the economic indicators and the Uncertainty Index are presented in Table 15.1.

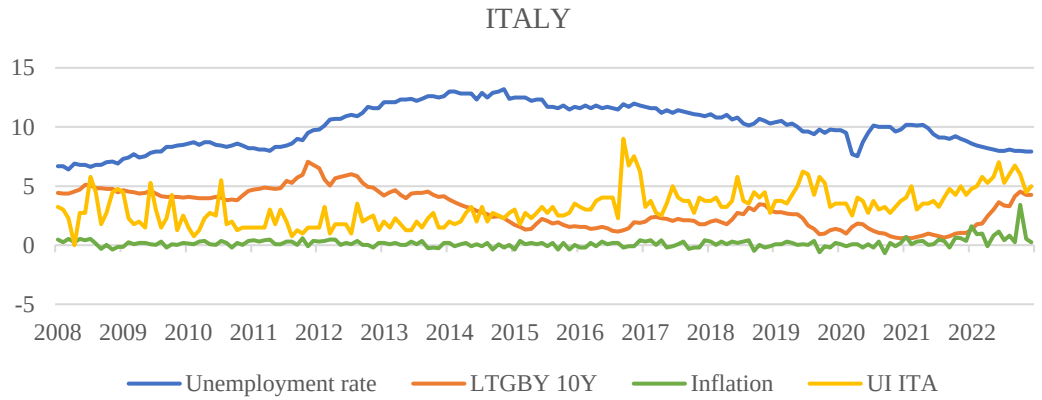

Figure 15.1. Italy – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Italy*
Unemployment rate	1			
LTGBY 10Y	-0,302728159	1		
Inflation	-0,279655512	0,11117023	1	
UI Italy	-0,10675958	-0,440526252	0,155465839	1

Table 15.1. Italy – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

Italy's data for existing uncertainty indices were available for EPU and CCI. The results in Table 15.2.2. show a statistically significant correlation between CCI ITA and UI ITA, while a statistically insignificant correlation between EPU ITA and UI ITA.

	UI ITA	*CCI ITA*	*EPU ITA*
UI ITA	1		
CCI ITA	**0,30312711**	1	
EPU ITA	**-0,0917678**	-0,3688628	1

Table 15.2.1. Italy – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI ITA), the Consumer Confidence Index (CCI ITA) and the Economic Policy Uncertainty index (EPU ITA).

	t-statistic	*p-value*
CCI/UI	4,243894768	3,52972E-05
EPU/UI	-1,229522926	0,220498535
CCI/EPU	-5,294598958	3,48443E-07

Table 15.2.2. Italy – T-statistic and p-value prices from correlations.

Italy is again one of the few countries which their Uncertainty Index managed to almost perfectly mimic the Germany's Uncertainty Index. A small spike in 2017 for UI ITA might have been due to the series of earthquakes that occurred in the country that year. The correlation of the variables, 0,517, is assumed to be strong and statistically significant at 1% confidence level.

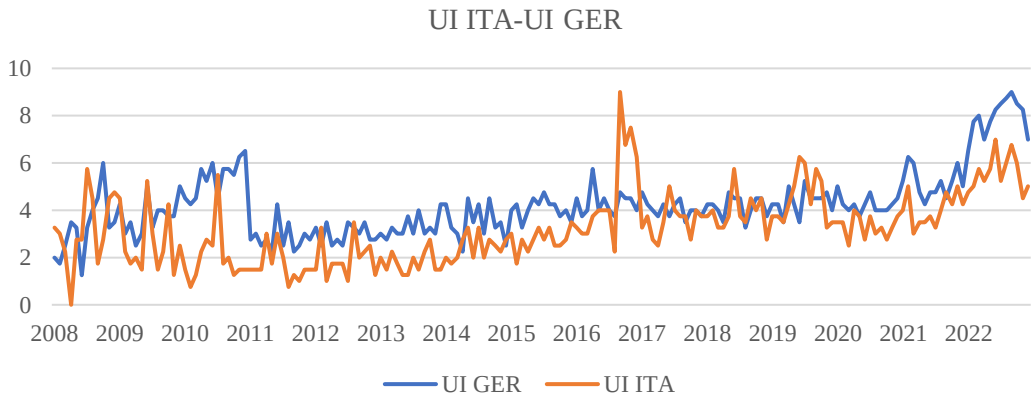

Figure 15.2. Italy – Google Trends based Uncertainty Index of Italy and Germany.

	UI GER	*UI ITA*
UI GER	1	
UI ITA	**0,51783404**	1

Table 15.3.1. Italy – Correlation between Italy's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI ITA/UI GER	8,075886092	9,75054E-14

Table 15.3.2. Italy – T-statistic and p-value prices from correlations.

The IRF graphs in the next page refer to the responses of the economic indicators and the Uncertainty Index to an UIITA impulse. The Augmented Dickey Fuller and Phillips Perron tests were harnessed to test for stationarity. The variables Unemploymentrate and LGTBY10Y were found to contain a unit-root. We took the first differences and created the dUnemplrate and dLTGBY10Y stationary variables. Based on the tables 15.4., 15.5. and 15.6. in the appendix, the optimal lags were 2. Then, we conducted the VAR model for Italy. The IRF graphs show how the variables react to one UIITA standard deviation. It is clear that for

Inflation, dLTGBY10Y and dUnemplrate the negative values prevail in the twelve months. Unlike UIITA which seemed to hold its price high for the first five months. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 15.7. in the appendix.

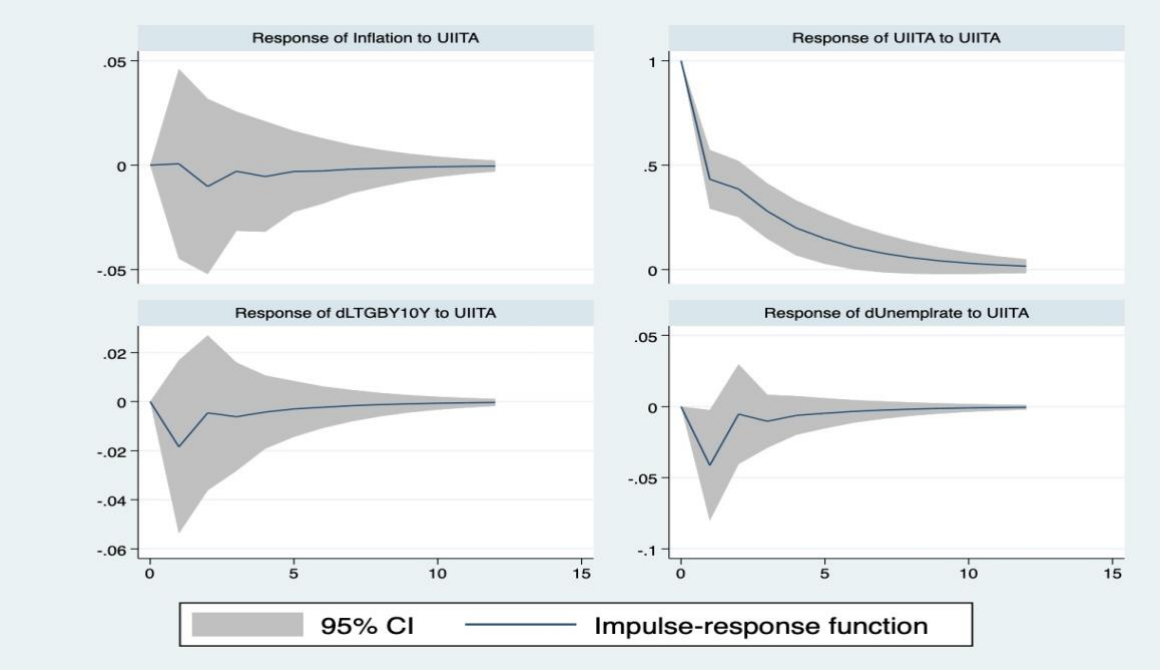

Figure 15.3.1. Italy– Impulse Response Functions to a UIITA shock. Sample: 2008M1 – 2022M12. VAR (7) estimated with an exogenous variable (UIGER). 95% confidence interval.

Regarding the second set of IRF graphs presented in the next page, it is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. All variables, except ITA dUnemplrate, begin positive and seem to create a smooth downward slope as a reaction to UIGER shocks, converging to zero by the fifth period. UIITA managed to remain below zero over the periods examined, with its lowest being at -0,002% in the fourth period. The Table 15.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

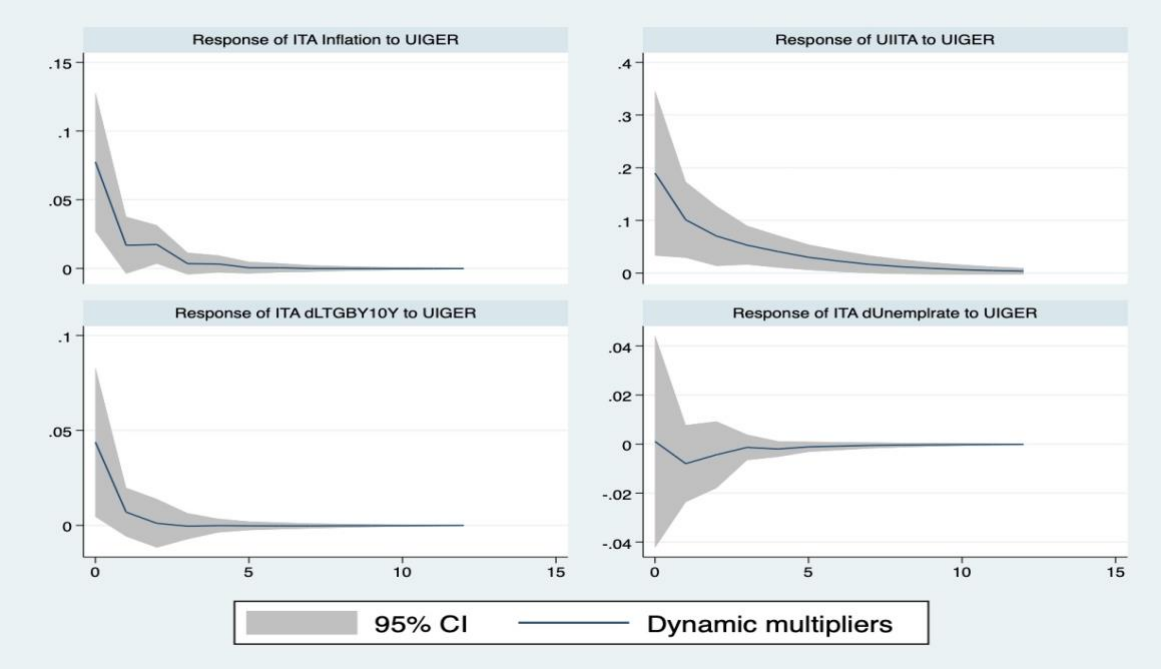

Figure 15.3.2. Italy – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (7) estimated with an exogenous variable (UIGER). 95% confidence interval.

▪ LATVIA

Concerning Latvia, the inflation, the unemployment rate, the long-term government bond yield 10 years and the constructed Uncertainty Index are presented in Figure 16.1 and correlated in Table 16.1. Latvia's Uncertainty Index constitutes one of the most extremely fluctuated Uncertainty Indices amongst the European countries. The country's unemployment rate reached as high as 19% in 2010 and fall back to 8% in 2019. The signs of the correlations for the economic indicators comply with the theory, unlike the sign of UI Latvia.

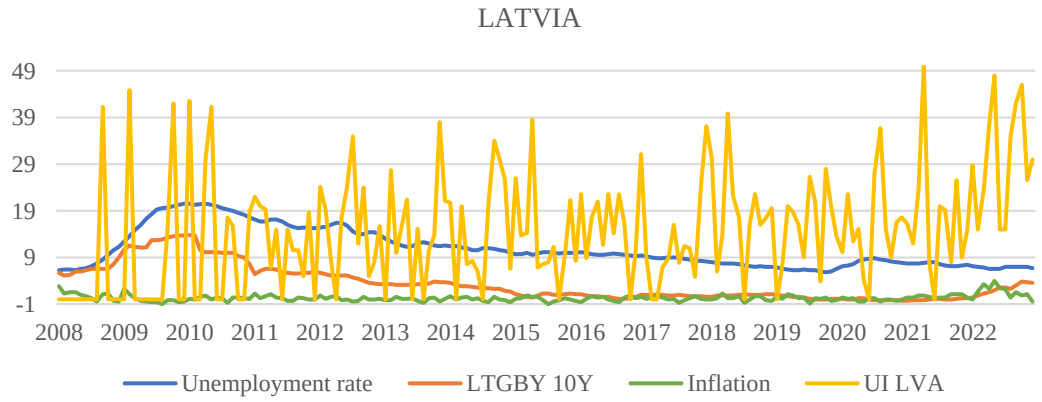

Figure 16.1. Latvia – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Latvia*
Unemployment rate	1			
LTGBY 10Y	0,817369385	1		
Inflation	-0,274359957	-0,079016786	1	
UI Latvia	-0,10603962	-0,057153854	0,156342787	1

Table 16.1. Latvia – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

For Latvia only the Consumer Confidence Index was found online. On the one hand the negative correlation between the two variables, CCI LVA and UI LVA, is a covetable outcome. On the other hand, the t-statistic is less than 1,96 in absolute value and the p-value greater than 0,05, posing the correlation statistically insignificant.

	UI LVA	*CCI LVA*
UI LVA	1	
CCI LVA	**-0,0341075**	1

Table 16.2.1. Latvia – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI LVA) and the Consumer Confidence Index (CCI LVA).

	t-statistic	*p-value*
CCI/UI	-0,455315401	0,649437242

Table 16.2.2. Latvia – T-statistic and p-value prices from correlations.

The Figure 16.2. below depicts the Uncertainty Indices for both Latvia and Germany. It is clear from the graph that UI LVA behaves more aggressively and extreme than UI GER. It seems that UI LVA does not absorb the big spikes quickly, caused by worldwide crises, rather keeps the high level of uncertainty for a few months before it reverts back to its normal levels. The correlation between UI LVA and UI GER is at 0,206 and it is statistically significant at 1% confidence level.

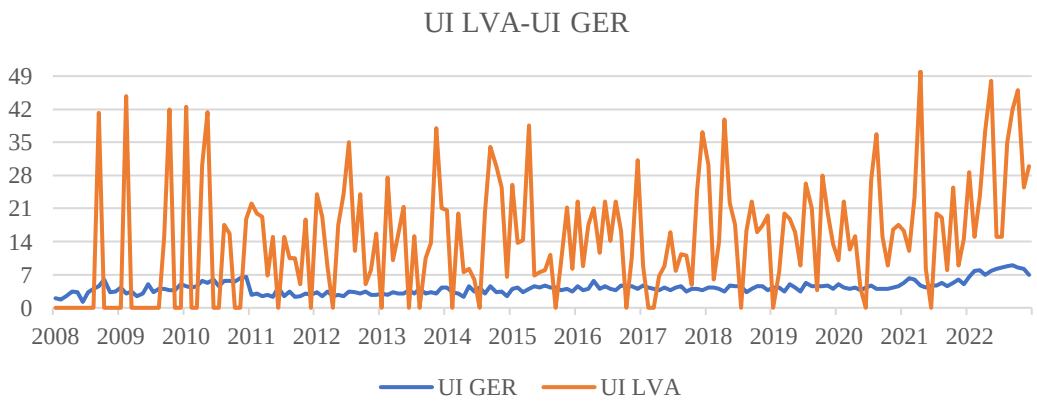

Figure 16.2. Latvia – Google Trends based Uncertainty Index of Latvia and Germany.

	UI GER	*UI LVA*
UI GER	1	
UI LVA	**0,20612586**	1

Table 16.3.1. Latvia – Correlation between Latvia's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI LVA/UI GER	2,810414243	0,005501907

Table 16.3.2. Latvia – T-statistic and p-value prices from correlations.

The Phillips Perron and Augmented Dickey Fuller stationarity tests were run on the four variables. A unit-root was found for the Unemploymentrate and the LTGBY10Y. By taking the first differences, two new stationary variables were created: dUnemplrate and dLTGBY10Y. The Varsoc, Varstable, and Varlmar were run, and the optimal number of lags was found to be 2 (see tables 16.4, 16.5, and 16.6 in the appendix). We then applied the VAR model to Romania. The IRF graphs show how the variables respond to a one-standard deviation of UILVA. All graphs present a minor impact of the UI of Latvia on the economic indicators and its Uncertainty Index. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 16.7. in the appendix.

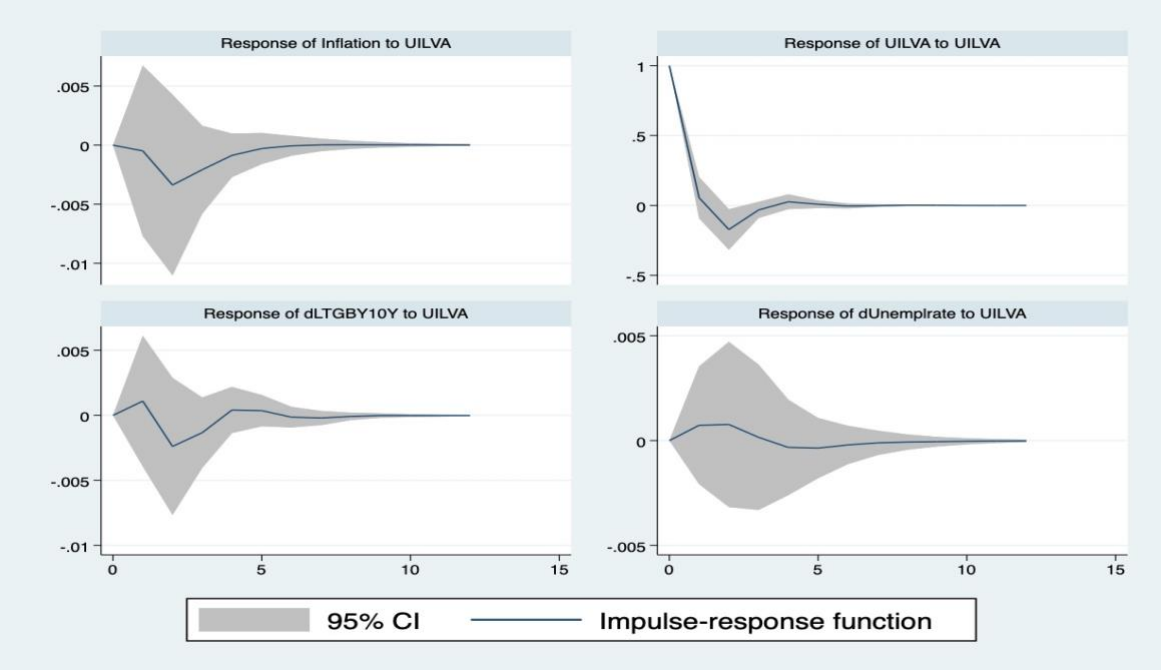

Figure 16.3.1. Latvia– Impulse Response Functions to a UILVA shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

The following figure is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. It is obvious that the UIGER has a greater impact on the country's economy than has the country's UI. A great positive response is given of LVA's

Inflation, which manages to stay positive throughout the whole period in concern. Positive values were also obtained from UILVA. The variable recorded a high of 0,45% in the first period, just before a sharp drop to its lowest value of -0,26%. LVA dLTGBY10Y and LVA dUnemplrate started positive and negative respectively in the first periods and then converged to zero. The Table 16.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

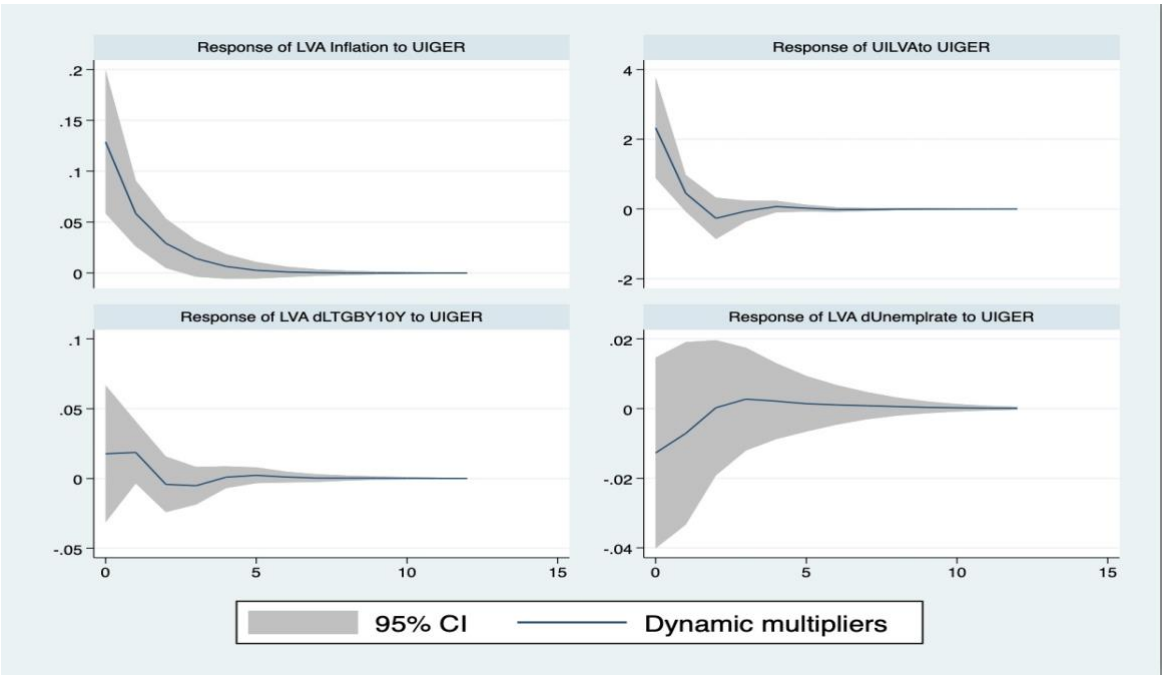

Figure 16.3.2. Latvia – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **LITHUANIA**

The economic indicators as well as the constructed Uncertainty Index of Lithuania are presented in Figure 17.1. Lithuania's unemployment rate marked its high level in 2010 at almost 20%. The long-term government bond yield 10 years marked its high just a year before in 2009, at 14%, and gradually decreasing onwards. The Uncertainty Index appears to have jump again in 2015 and never reverted to its 2014 lower levels. It is important to note that Lithuania joined the Eurozone on January 2015, giving up on litas, Lithuania's former currency since 1993. However, the former currency is not included in the variables for examination and we count Lithuania as a Eurozone country. The Table 17.1. reports all the correlations between the variables.

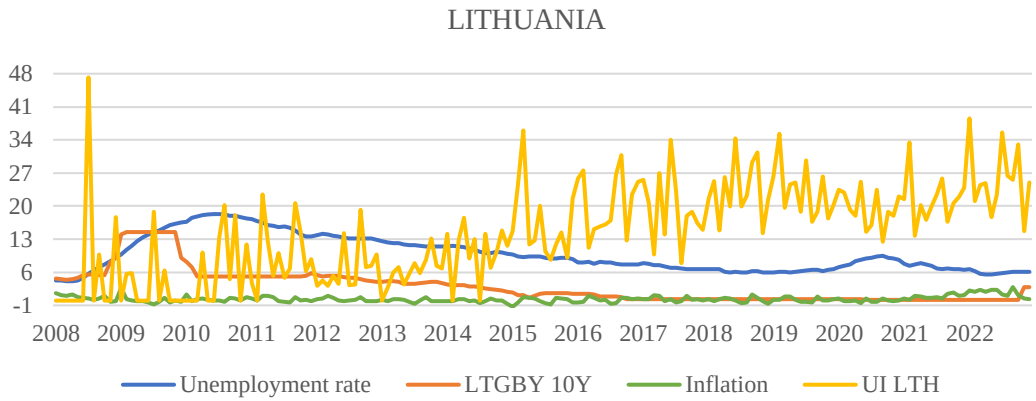

Figure 17.1. Lithuania – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Lithuania*
Unemployment rate	1			
LTGBY 10Y	0,610084752	1		
Inflation	-0,267700319	-0,137165123	1	
UI Lithuania	-0,524098762	-0,576620382	0,147174752	1

Table 17.1. Lithuania – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

For Lithuania, data only existed regarding the Consumers Confidence Index. It appears that the strong correlation of 0,473 is statistically significant, based on Table 17.2.2. This fact renders Lithuania one of the few countries in which individuals prefer to consume rather than save, in periods of uncertainty, as the security of the insurance sector is weak

	UI LTU	*CCI LTU*
UI LTU	1	
CCI LTU	**0,47319923**	1

Table 17.2.1. Lithuania – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI LTH) and the Consumer Confidence Index (CCI LTH).

	t-statistic	*p-value*
CCI/UI	7,166384308	1,97188E-11

Table 17.2.2. Lithuania – T-statistic and p-value prices from correlations.

In the Uncertainty Index of Lithuania, a jump in 2015 is recorded, causing the index to fluctuate in higher level prices and never reverting to its former levels. This is due to Lithuania entering the Eurozone and adopting the euro, giving up on litas. Such event, just like in any country, motivated the individual to look up terms like “minimum wage” or “energy price”, escalating our constructed Uncertainty Index based on the Google Trends. The correlation between UI LTH and UI GER is at 0,351 and it is statistically significant at 1% confidence level.

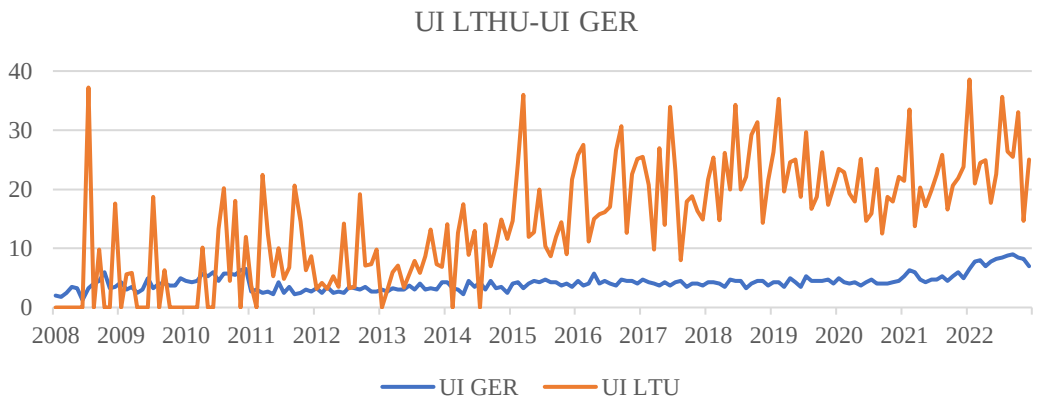

Figure 17.2. Lithuania – Google Trends based Uncertainty Index of Lithuania and Germany.

	UI GER	*UI LTU*
UI GER	1	
UI LTH	**0,35166587**	1

Table 17.3.1. Lithuania – Correlation between Lithuania’s and Germany’s Uncertainty Indices.

	t-statistic	*p-value*
UI LTH/UI GER	5,01194282	1,29353E-06

Table 17.3.2. Lithuania – T-statistic and p-value prices from correlations.

The stationarity tests Phillips Perron and Augmented Dickey Fuller were run on the four variables for Lithuania. It was determined that two variables, Unemploymentrate and LTGBY10Y, contained a unit-root. We took the first differences of both to make them stationary, creating two new variables dUnemplrate and dLTGBY10Y. Then the VAR model was conducted with the optimal lag number of 3. The variables appear to fluctuate around zero except of the UILTH. The UILTH remains positive during the twelve periods. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 17.7. in the appendix.

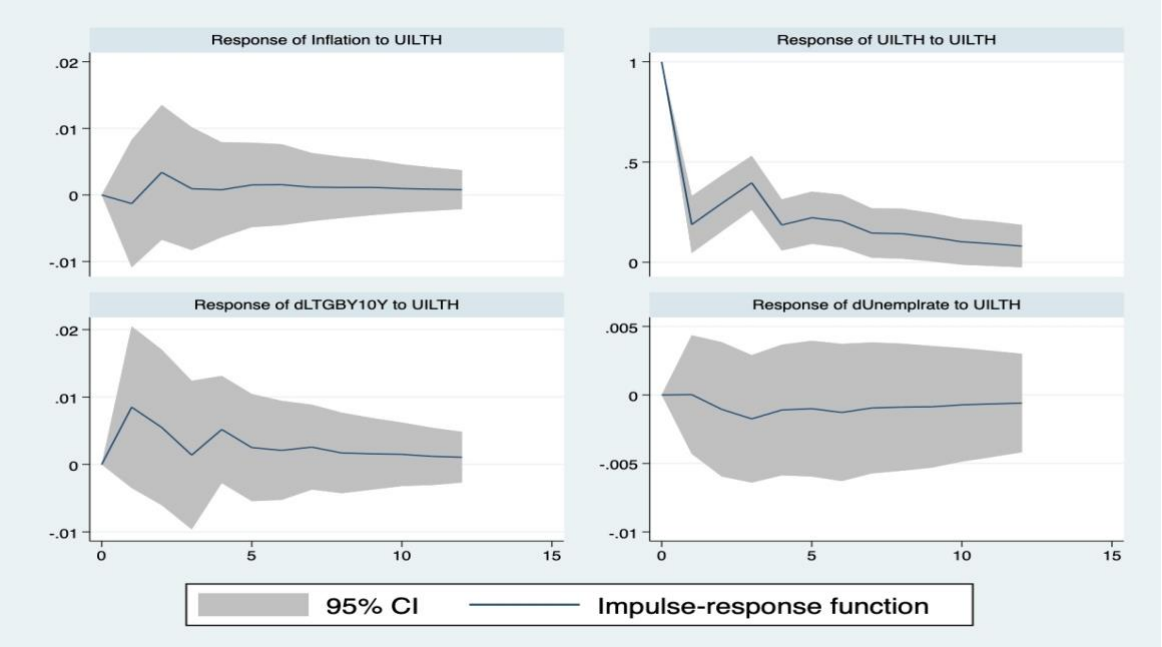

Figure 17.3.1. Lithuania– Impulse Response Functions to a UILTH shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

The Figure 17.3.2. is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. The impact of a unit increase in UIGER is significantly weak, especially in the UILTH's and LTH dUnemplrate's response. The other two variables, LTH Inflation and LTH dLTGBY10Y, begin with a positive and negative response respectively, but end up converging to zero in the first two periods. The Table 17.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

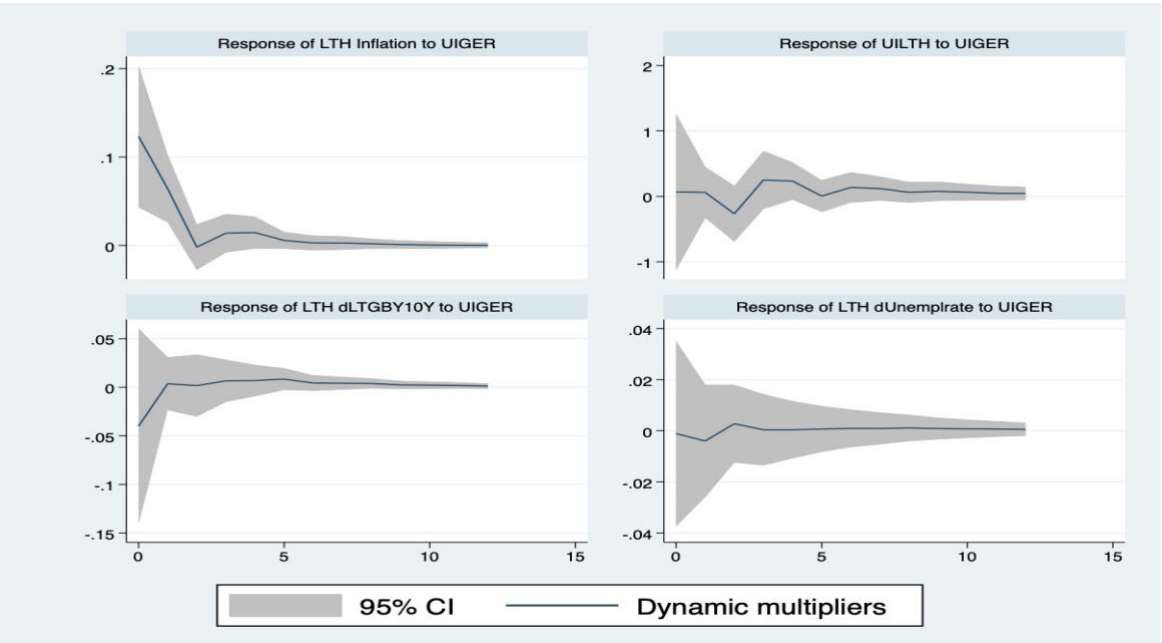

Figure 17.3.2. Lithuania – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **LUXEMBOURG**

For Luxembourg, the inflation, the unemployment rate, the long-term government bond yield 10 years and the Uncertainty Index are depicted in Figure 18.1. Lithuania was the first European country that recorded a positive correlation between unemployment rate and the Uncertainty Index at 0,048.

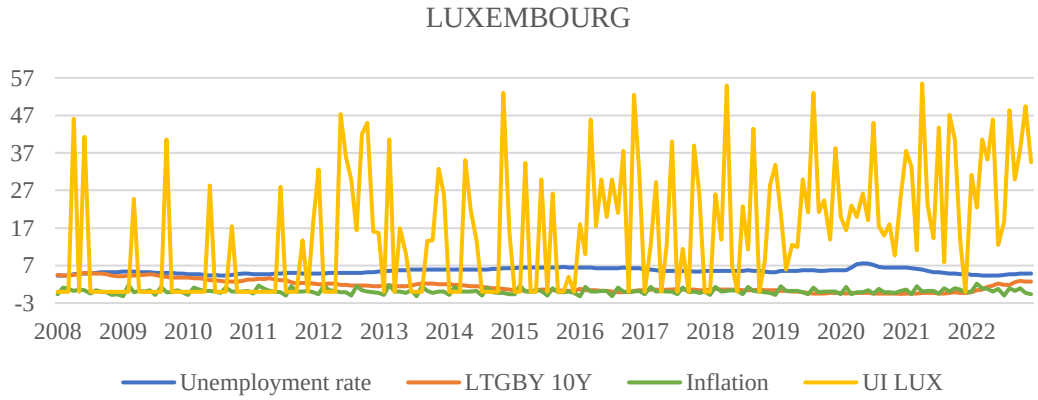

Figure 18.1. Luxembourg – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Luxembourg*
Unemployment rate	1			
LTGBY 10Y	-0,603397165	1		
Inflation	-0,129985254	0,003647903	1	
UI Luxembourg	0,048737805	-0,30868969	-0,001107036	1

Table 18.1. Luxembourg – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

Data for the Economic Policy Uncertainty index for Luxembourg were not available online. The correlation between the Consumers Confidence Index for Luxembourg and the Uncertainty Index we built based on Google Trends was found negative at -0,022. However, the results of the t-statistic and the p-value pose the correlation statistically insignificant.

	UI LUX	*CCI LUX*
UI LUX	1	
CCI LUX	**-0,0228705**	1

Table 18.2.1. Luxembourg – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI LUX) and the Consumer Confidence Index (CCI LUX).

	t-statistic	*p-value*
CCI/UI	-0,305210459	0,760562469

Table 18.2.2. Luxembourg – T-statistic and p-value prices from correlations.

Luxembourg's and Germany's Uncertainty Indices are shown below in the graph. It is obvious that UI LUX reacts in a very aggressive manner in contrast to UI GER. UI LUX is characterized with consecutive, extreme spikes throughout the research time horizon. The correlation between the variables is weak and statistically significant, at 0,238.

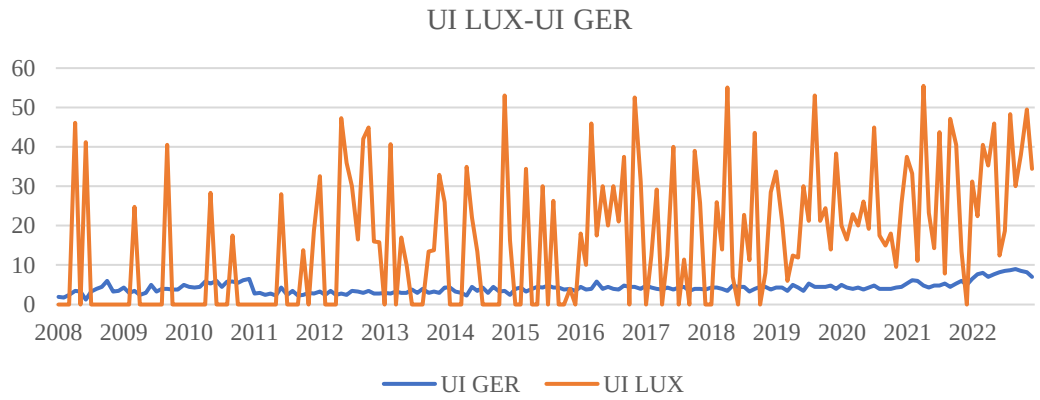

Figure 18.2. Luxembourg – Google Trends based Uncertainty Index of Luxembourg and Germany.

	UI GER	*UI LUX*
UI GER	1	
UI LUX	**0,23839347**	1

Table 18.3.1. Luxembourg – Correlation between Luxembourg's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI LUX/UI GER	3,274987841	0,001269911

Table 18.3.2. Luxembourg – T-statistic and p-value prices from correlations.

Tests for stationarity using Phillips Perron and Augmented Dickey Fuller were run on the four variables. It was determined that the Unemploymentrate and LTGBY10Y share unit-roots. The first differences were used to create the new stationary variables dUnemplrate and dLTGBY10Y. Following the Varsoc, Varstable, and Varlmar (tables 18.4, 18.5, and 18.6 in the appendix), 2 lags were shown to be optimal. For Romania, we then ran the VAR model. The response of the variables to UILUX one-standard deviation is shown by the following IRF graphs. The Uncertainty Index (UI) of Luxembourg seems to have a negligible impact on all economic indicators, just like Latvia and Lithuania. The variables converge to zero shortly after their first small response in the first period. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 18.7 in the appendix.

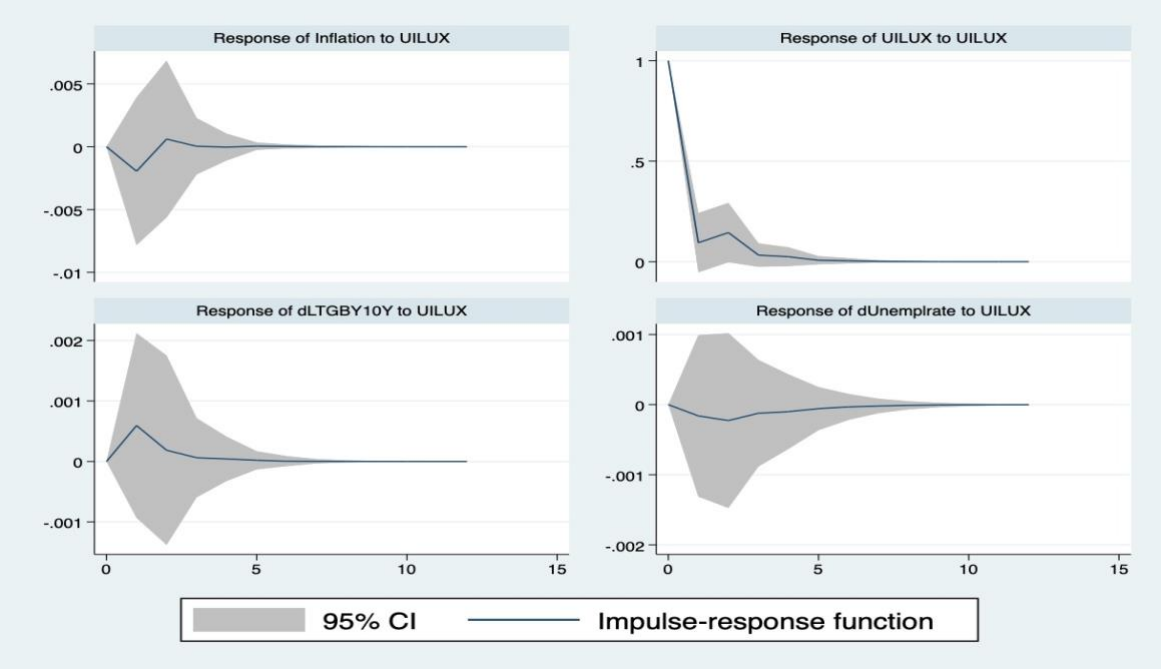

Figure 18.3.1. Luxembourg– Impulse Response Functions to a UILUX shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

In the next set of IRF graphs a dynamic-multiplier function is used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. As seen in Latvia and Lithuania, UIGER has a stronger impact on Luxembourg's economy than UILUX has. Most response values were recorded positive, except of the LUX dUnemplrate ones. The Table 18.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

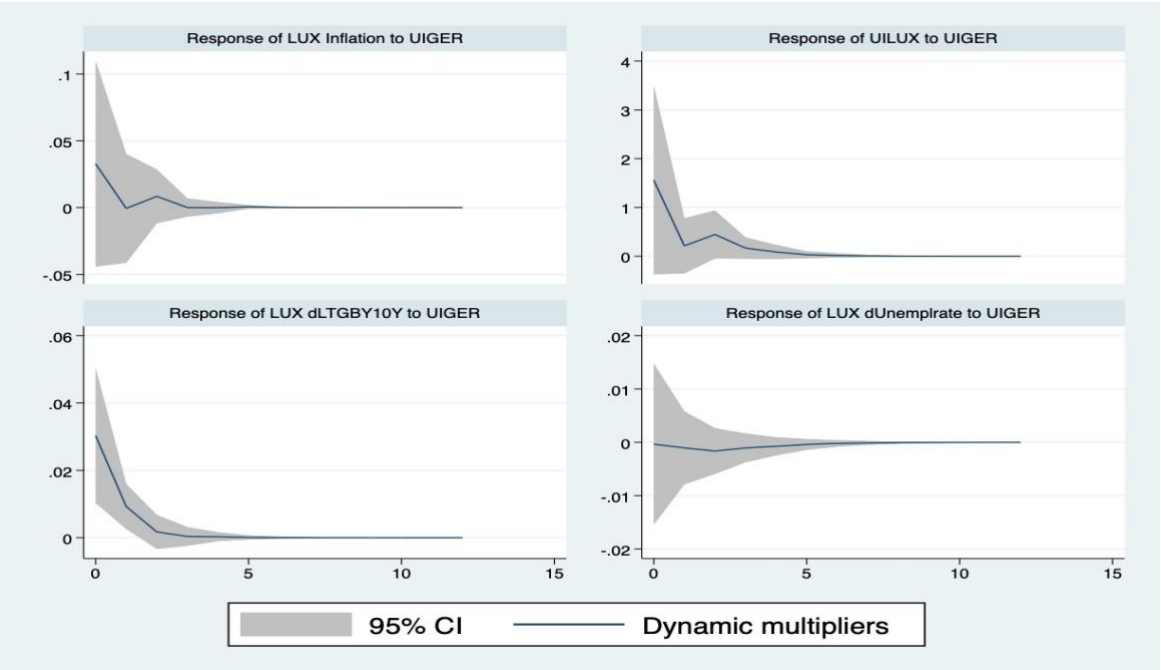

Figure 18.3.2. Luxembourg – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **MALTA**

Figure 19.1 presents Malta's economic indicators as well as the constructed Uncertainty Index. The Table 19.1 on the other hand, records the correlation of the variables. Malta's Uncertainty Index was found to record one of the upmost uncertainty levels amongst the European countries. Such an outcome is expected as Malta represents the small economies of Europe, where higher uncertainty levels are awaited.

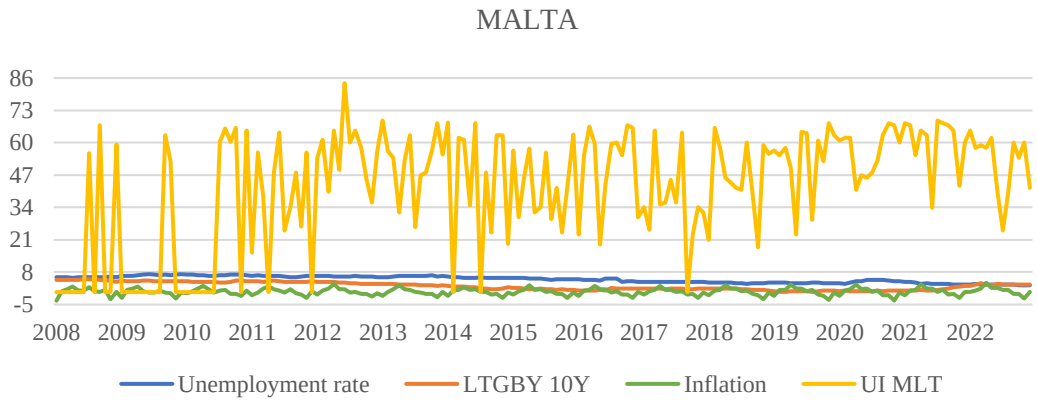

Figure 19.1. Malta – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Malta*
Unemployment rate	1			
LTGBY 10Y	0,732875084	1		
Inflation	-0,018910604	0,030554867	1	
UI Malta	-0,44355606	-0,491611314	-0,005758438	1

Table 19.1. Malta – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

Malta is the last country that data for the existing uncertainty indices, CCI and EPU, were not available online. The following graph pictures the Uncertainty Index of Malta and Germany. On January 2012 Malta's credit rating was downgraded by Standard and Poor's rating agency. The IMF warned that the Maltese economy is at risk of contagion from the global financial crisis, fact that launched uncertainty in the country. Also, it is explicit that the COVID19 epidemic crisis kept the Uncertainty Index high for at least 2 years, until 2021. The correlation between the two indices is at 0,227 and it is statistically significant as seen in Table 19.3.2.

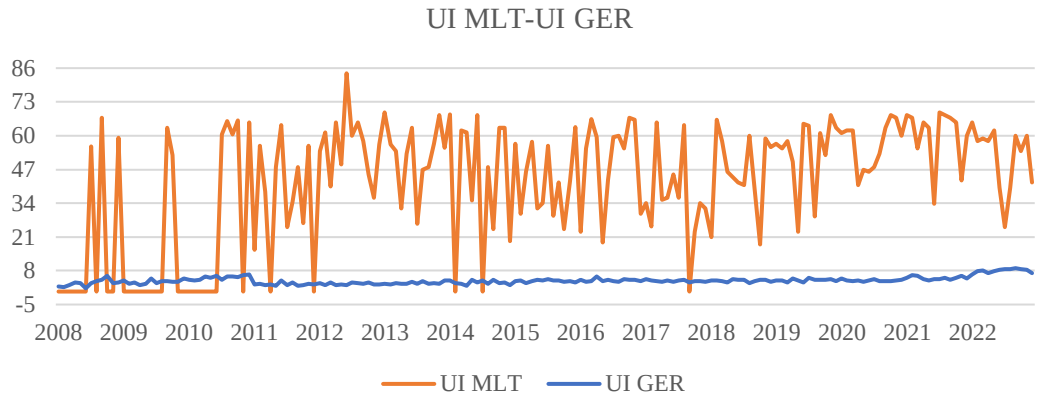

Figure 19.2. Malta – Google Trends based Uncertainty Index of Malta and Germany.

	UI GER	*UI MLT*
UI GER	1	
UI MLT	**0,22743649**	1

Table 19.3.1. Malta – Correlation between Malta's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI MLT/UI GER	3,11604372	0,00213726

Table 19.3.2. Malta – T-statistic and p-value prices from correlations.

The four variables were subjected to tests for stationarity using the Phillips Perron and Augmented Dickey Fuller. It was discovered that the LTGBY10Y and the Unemploymentrate share unit-roots. The newly created stationary variables, dUnemplrate and dLTGBY10Y, were made using the initial differences. Two lags were found to be the ideal number to follow the Varsoc, Varstable, and Varlmar (tables 19.4, 19.5, and 19.6 in the appendix). The VAR model was then conducted for Malta. For Inflation, extreme spikes were recorded above and below zero. However, the magnitude of UIMLT's impact on Inflation was negligible. Weak responses were also obtained from dLTGBY10Y and dUnemplrate, although recording consecutive fluctuations around zero. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 19.6. in the appendix.

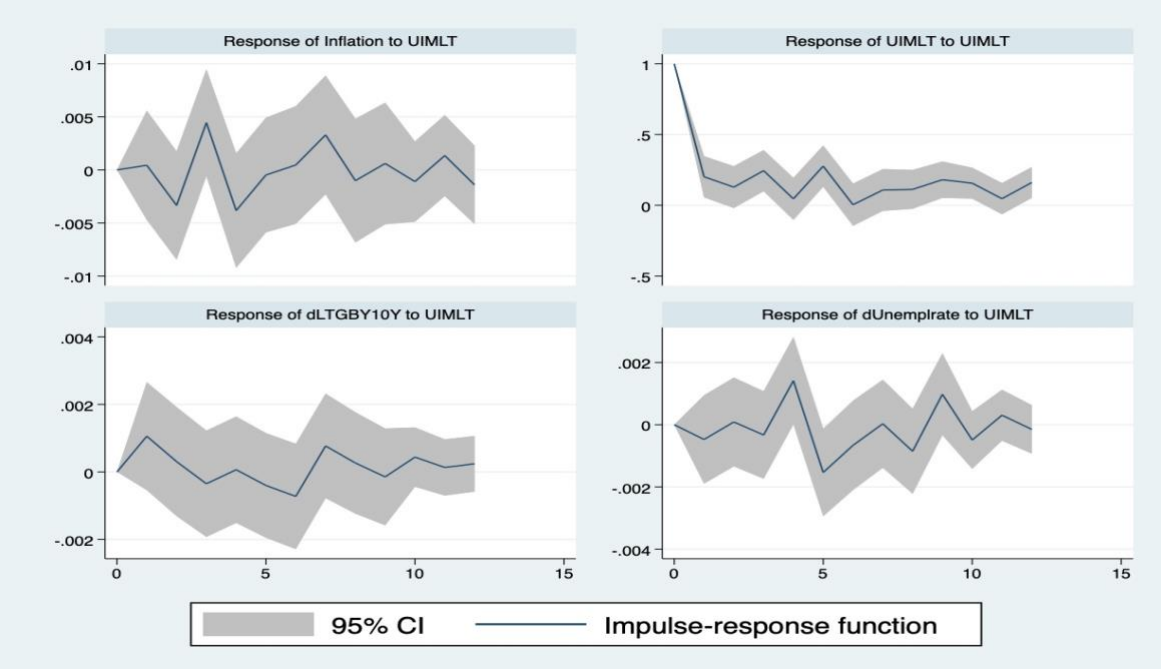

Figure 19.3.1. Malta– Impulse Response Functions to a UIMLT shock. Sample: 2008M1 – 2022M12. VAR (9) estimated with an exogenous variable (UIGER). 95% confidence interval.

The following figure presents a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. The weaker response came from MLT dUnemplrate and MLT dLTGBY10Y, the former recording a low of -0,005% in the fifth period and the latter a low of -0,004% in the ninth period. The Table 19.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

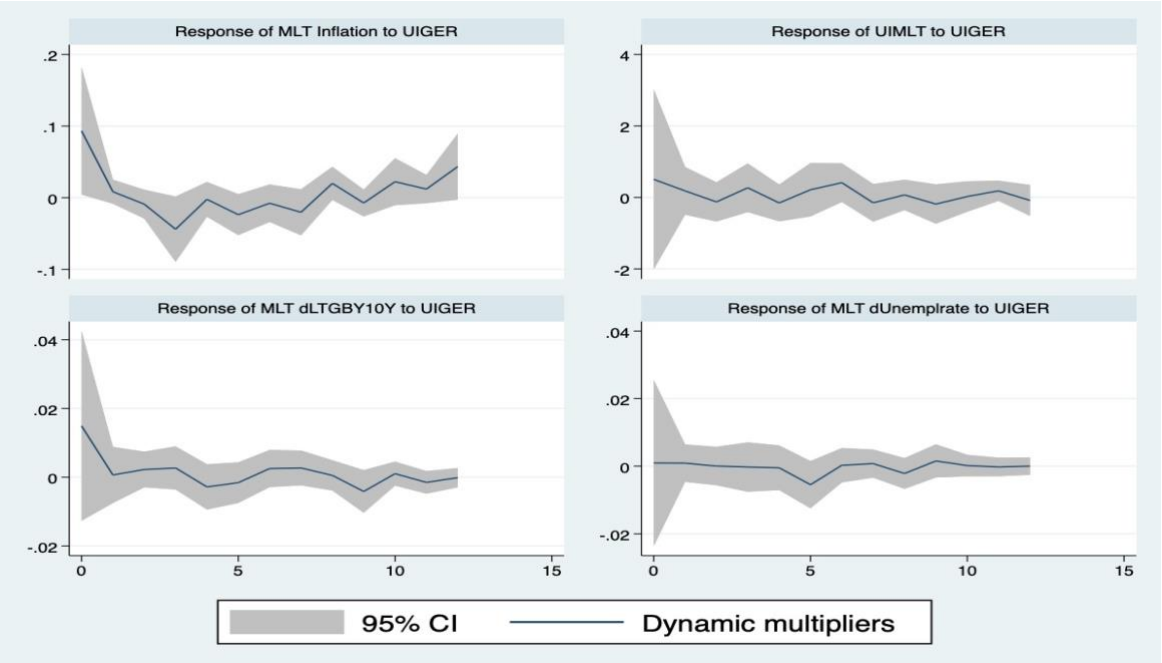

Figure 19.3.2. Malta – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (9) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **NETHERLANDS**

Regarding Netherlands, Figure 20.1. depicts the Uncertainty Index and the economic indicators of the country. Netherlands' unemployment rate reached its maximum level in 2014, at 9%. The signs of correlations seem to comply with theory, except the Uncertainty Index's one. The Uncertainty Index slightly rebounded in 2014, tripling its last year's price level. From that point onwards, the index never returned to its 2013 levels, gradually increasing over the years, reaching at the end of 2022 the all-time high 2008 level.

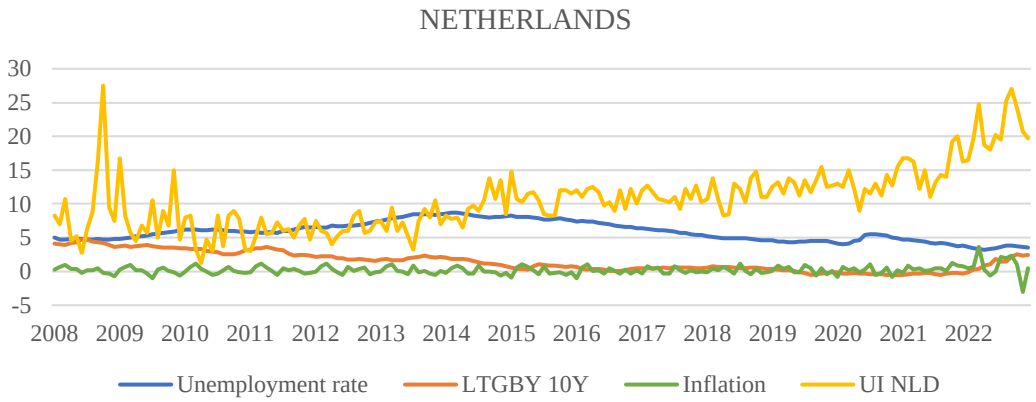

Figure 20.1. Netherlands – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2020.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Netherlands*
Unemployment rate	1			
LTGBY 10Y	0,099627988	1		
Inflation	-0,181130983	-0,037533865	1	
UI Netherlands	-0,499545797	-0,442901685	0,204133209	1

Table 20.1. Netherlands – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

Concerning the data for the existing uncertainty indices, Netherlands had both CCI and EPU indices available online. However, data were only available until December 2020. Due to this, the following correlation analysis between the indices are addressed to the 2008-2020 horizon. The results of the correlations were not covetable, as one would expect the opposite signs for each variable. However, they were found to be statistically significant as seen in Table 20.2.2.

	UI NLD	*CCI NLD*	*EPU NLD*
UI NLD	1		
CCI NLD	**0,29780402**	1	
EPU NLD	**-0,180406**	-0,6367986	1

Table 20.2.1. Netherlands – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI NLD), the Consumer Confidence Index (CCI NLD) and the Economic Policy Uncertainty index (EPU NLD).

	t-statistic	*p-value*
CCI/UI	4,162045502	4,90444E-05
EPU/UI	-2,447067666	0,015373568
CCI/EPU	-11,01896298	7,36809E-22

Table 20.2.2. Netherlands – T-statistic and p-value prices from correlations.

As forementioned, the Netherlands' Uncertainty Index spikes in 2008 due to the worldwide financial crisis and reverts back in 2010, while slightly rebounds in 2014 and remains at this level for the rest six years until December 2020. The correlation between the two countries' Uncertainty Indices is 0,338 and it is statistically significant.

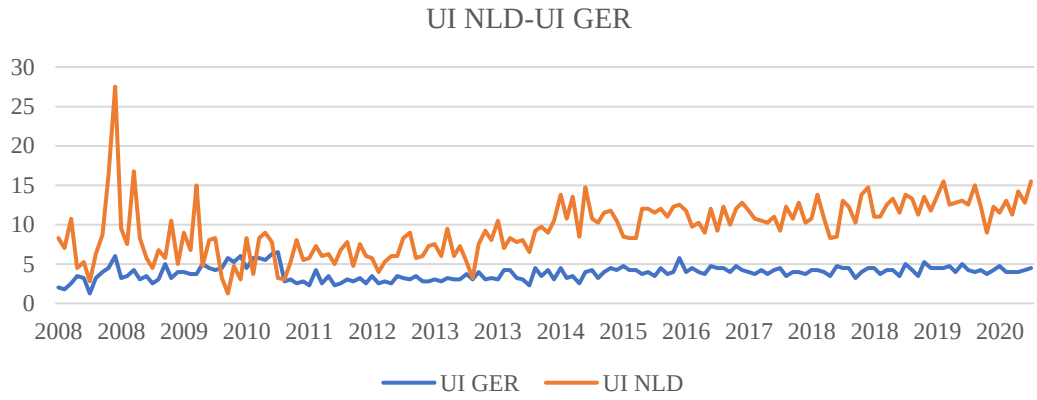

Figure 20.2. Netherlands – Google Trends based Uncertainty Index of Netherlands and Germany.

	UI GER	*UI NLD*
UI GER	1	
UI NLD	**0,33847303**	1

Table 20.3.1. Netherlands – Correlation between Netherlands's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI NDL/UI GER	4,799052234	3,36197E-06

Table 20.3.2. Netherlands – T-statistic and p-value prices from correlations.

The stationarity tests Phillips Perron and Augmented Dickey Fuller were run on the four variables for Lithuania. It was determined that two variables, Unemploymentrate and LTGBY10Y, contained a unit-root. We took the first differences of both to make them stationary, creating two new variables dUnemplrate and dLTGBY10Y. Then the VAR model was conducted for Netherlands with the optimal lag number of 3, based on the Varsoc, Varstable and Varlmar (see tables 20.4., 20.5. and 20.6. in the appendix). The following IRF graphs depict the impact of UINLD one-standard deviation on the economic indicators and the Uncertainty Index of the country. Inflation quickly responds with a jump in the first period, reaching a value close to 0,02% before it converges to zero. UINLD smoothly decreases over the periods, holding on to its positive values. On the other hand, both dLTGBY10Y and dUnemplrate drop sharply in the first period and then move closer to zero, with the former firstly turning positive for two periods. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 20.7. in the appendix.

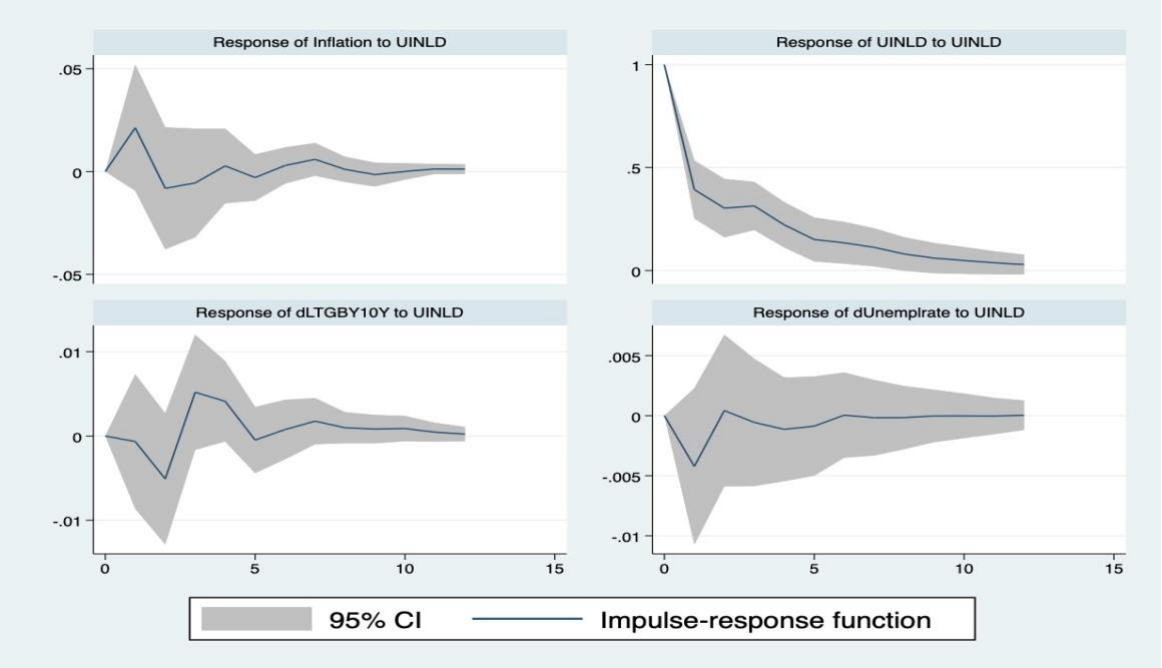

Figure 20.3.1. Netherlands– Impulse Response Functions to a UINLD shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval

Figure 20.3.2. is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable.

The Table 20.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

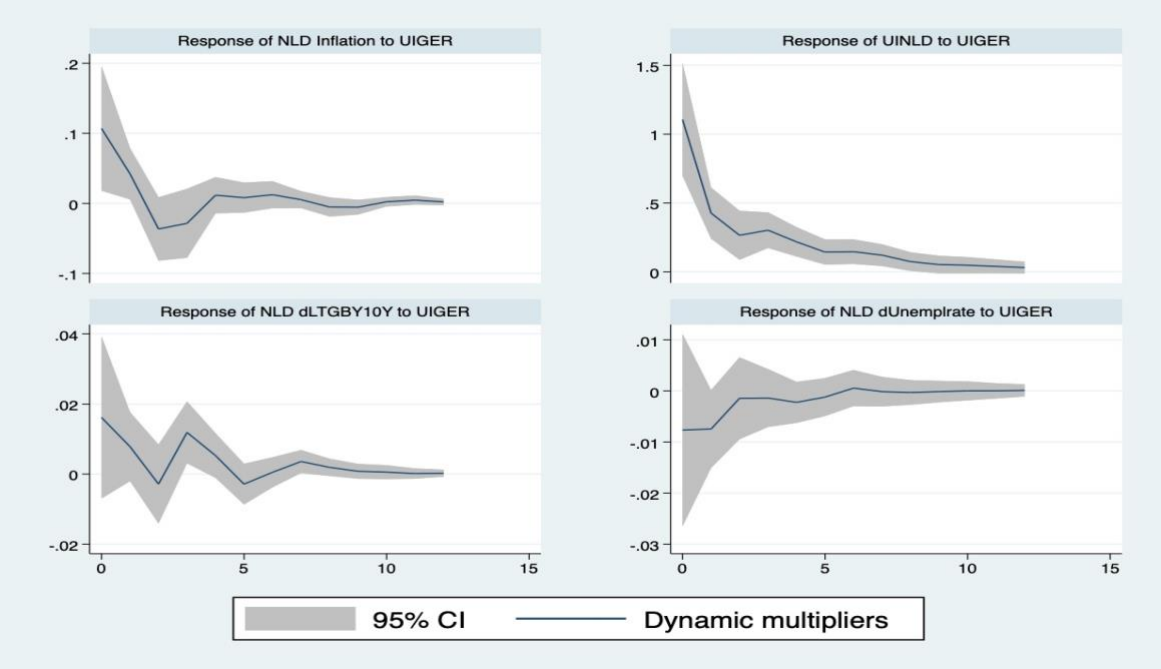

Figure 20.3.2. Netherlands – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **POLAND***

Poland's economic indicators and Uncertainty Index are presented In Figure 21.1. The official currency of Poland is also included in the pool of variables for analysis. The country's currency is zloty, firstly introduced in 1919, and it is equal to 0,22 euros. In Table 21.1. the correlations of the variables are recorded. unemployment rate well surpasses in price level Poland's Uncertainty Index. The unemployment rate recorded it all-time high level in the end of 2013 at 11%, while it interfered above 10% from 2010. It reached the level of 3% in 2020, a percentage lower than the 2008 level. The long-term government bond yield 10 years also fluctuated enough during the fifteen years, starting from 6% and dropping to almost 1% in 2021.

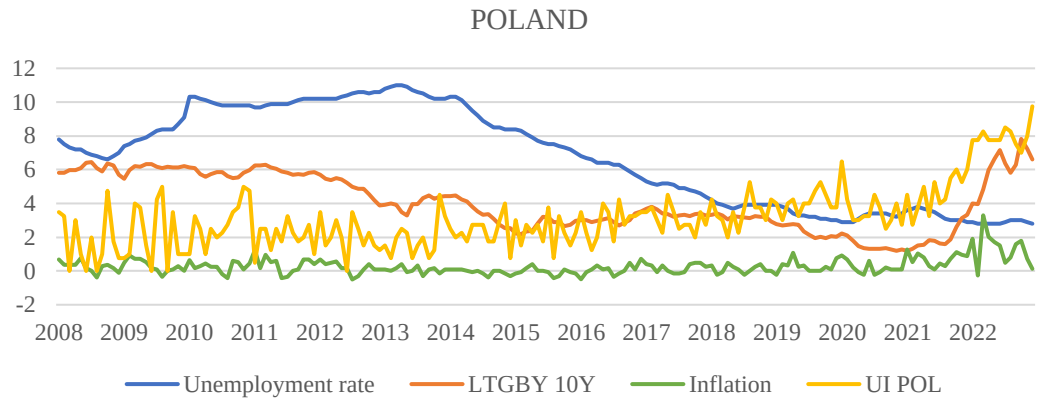

Figure 21.1. Poland – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Poland*	*PLN/EUR*
Unemployment rate	1				
LTGBY 10Y	0,484790705	1			
Inflation	-0,298914463	0,229032728	1		
UI Poland	-0,60910221	-0,05520706	0,453020647	1	
PLN/EUR	0,425710962	0,373111675	-0,246426862	-0,470918543	1

Table 21.1. Poland – Correlation between the Uncertainty Index (UI), unemployment rate, inflation, long-term government bond 10-year yield and the currency of the country over euro (PLN/EUR).

Data for existing uncertainty indices regarding Poland were only found for Consumers Confidence Index. The negative correlation is a covetable outcome, however, it is found to be statistically insignificant in Table 21.2.2.

	UI POL	*CCI POL*
UI POL	1	
CCI POL	**-0,0669258**	1

Table 21.2.1. Poland – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI POL) and the Consumer Confidence Index (CCI POL).

	t-statistic	*p-value*
CCI/UI	-0,894908345	0,372044598

Table 21.2.2. Poland – T-statistic and p-value prices from correlations.

Poland's Uncertainty Index appear to mimic Germany's Uncertainty Index throughout the whole fifteen years of analysis. The correlation is quite strong at 0,707 and found statistically significant at the 1% confidence level.

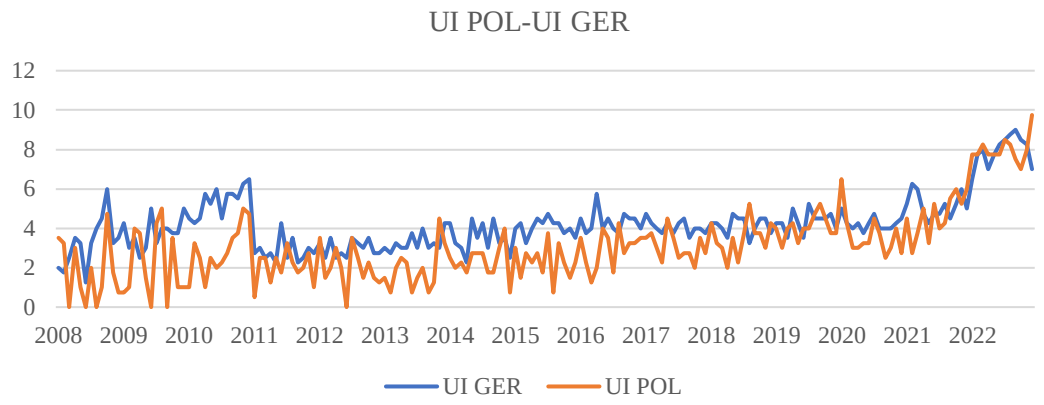

Figure 21.2. Poland – Google Trends based Uncertainty Index of Poland and Germany.

	UI GER	*UI POL*
UI GER	1	
UI POL	**0,70788963**	1

Table 21.3.1. Poland – Correlation between Poland's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI POL/UI GER	13,37125471	1,11272E-28

Table 21.3.2. Poland – T-statistic and p-value prices from correlations.

The Augmented Dickey Fuller and Phillips Perron were harnessed for the stationarity test on the five variables. It was determined that the variables Unemploymentrate, LTGBY10Y and PLN/EUR currency. We took their first differences and created the new stationary variables, dUnemplrate, dLTGBY10Y and dPLN/EUR. According to the tables 21.4., 21.5. and 21.6. seen in the appendix, we concluded that the optimal number of lags was 3. We then conducted the VAR model for Portugal. The IRF graphs in the next page show the impact of UIPOL one-standard deviation to the economic indicators and UIPOL. It is of note the weak impact UIPOL has on the dPLN/EUR currency. The Inflations' response to UIPOL records positive values with its highest being in the third period at around 0,06%. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 21.7. in the appendix.

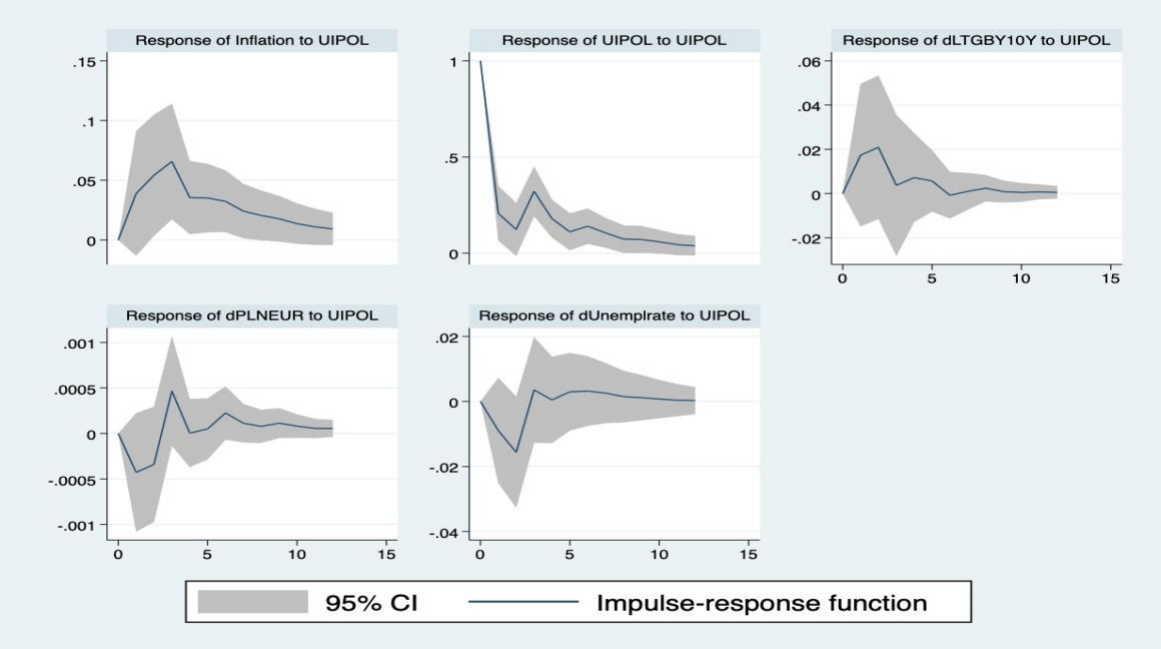

Figure 21.3.1. Poland– Impulse Response Functions to a UIPOL shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

The second set of IRF graphs is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. UIGER appears to have a great impact on UIPOL, POL Inflation and POL dLTGBY10Y, while for the first time UIGER has similar impact on the currency of the country as the country's UI has. The Table 21.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

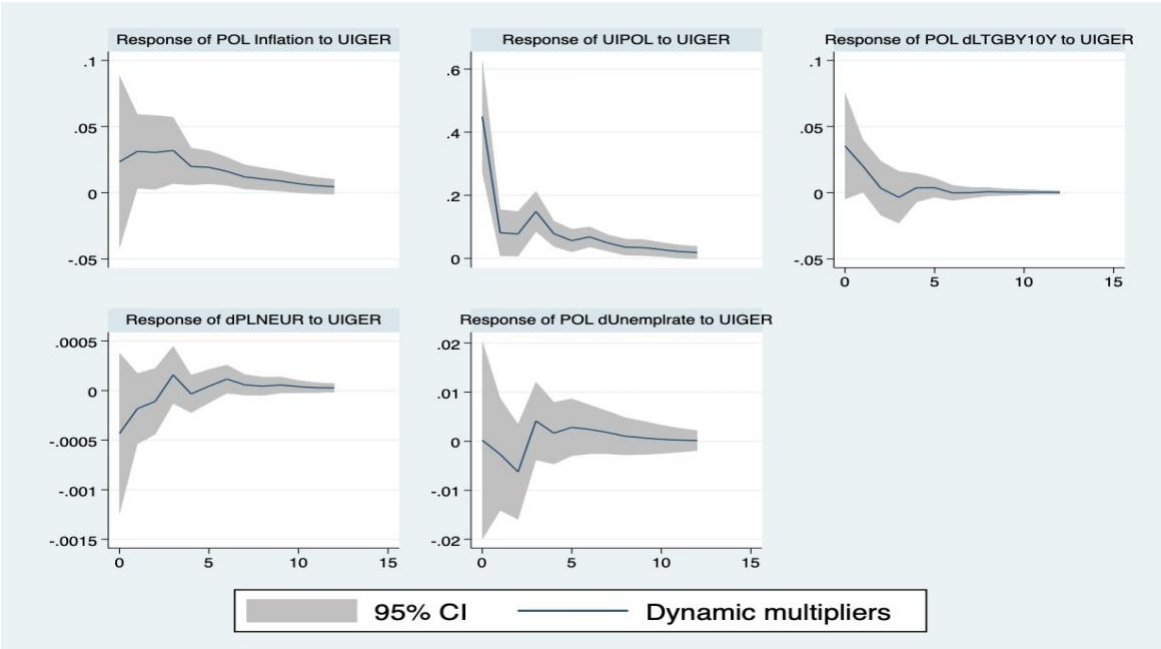

Figure 21.3.2. Poland – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **PORTUGAL**

Regarding Portugal, the country's economic indices and the Uncertainty Index are shown below. Portugal's unemployment rate hit the maximum level of 19% in 2013, gradually decreasing and reaching the 2008 level percentage just after 2017. Paradoxically, our Uncertainty Index record zero values in the period of the 2008 financial crisis. The Table 22.1. reports the correlations between all variables.

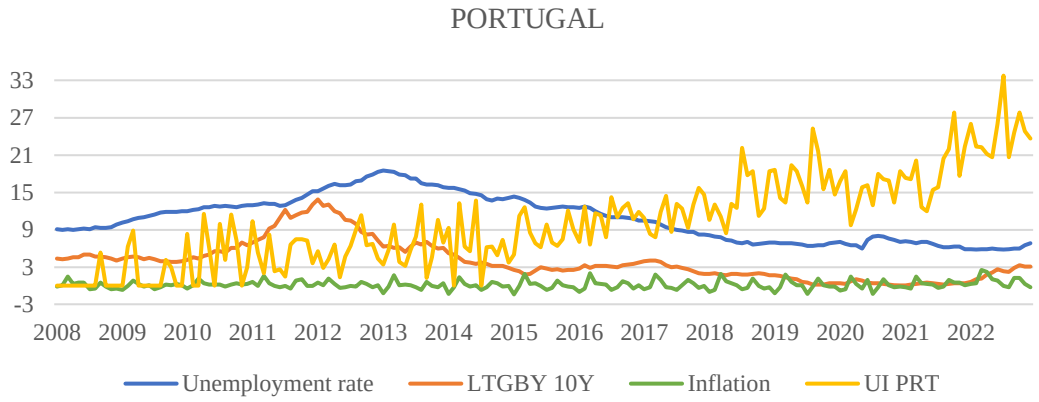

Figure 22.1. Portugal – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Portugal*
Unemployment rate	1			
LTGBY 10Y	0,730216599	1		
Inflation	-0,085348002	0,011189386	1	
UI Portugal	-0,630545575	-0,557599162	0,132669325	1

Table 22.1. Portugal – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

We only came across data for the Consumers Confidence Index and not for the Economic Policy Uncertainty index. The correlation that was provided was equal to 0,295 and was statistically significant at the 1% confidence level.

	UI PRT	*CCI PRT*
UI PRT	1	
CCI PRT	**0,29595466**	1

Table 22.2.1. Portugal – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI PRT) and the Consumer Confidence Index (CCI PRT).

	t-statistic	*p-value*
CCI/UI	4,133709677	5,48996E-05

Table 22.2.2. Portugal – T-statistic and p-value prices from correlations.

In the figure shown below, it is clear that Germany's Uncertainty Index interferes almost steady during the years despite the couple of worldwide crises that took place. While the Portugal's Uncertainty Index began to gradually increase just after 2017. A part of the uncertainty could be accused on the series of four initial deadly wildfires erupted across central Portugal in June 2017, that lead to many deaths and injured people. Accompanied by the COVID19 epidemic crisis and the Russian invasion to Ukraine, the UI PRT never returned to its 2015-2016 levels. The correlation between UI PRT and UI GER is considered strong at 0,604 and statistically significant.

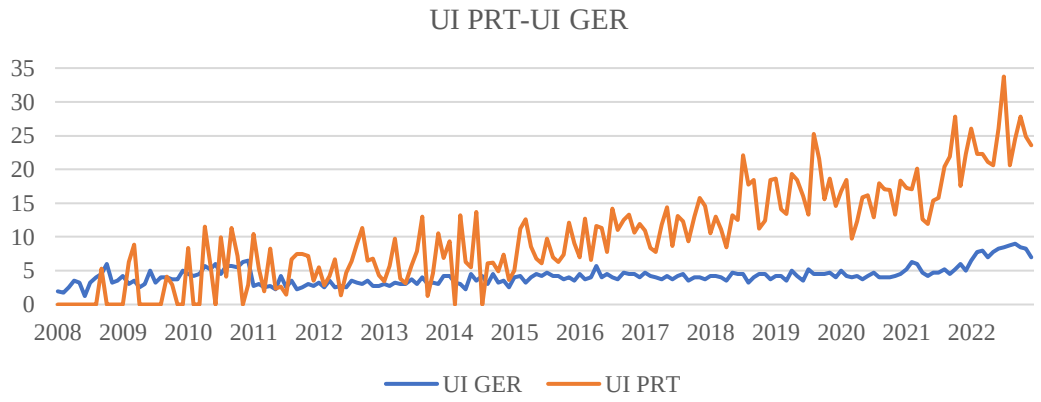

Figure 22.2. Portugal – Google Trends based Uncertainty Index of Portugal and Germany.

	UI GER	*UI PRT*
UI GER	1	
UI PRT	**0,6047231**	1

Table 22.3.1. Portugal – Correlation between Portugal's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI PRT/UI GER	10,13014793	2,48491E-19

Table 22.3.2. Portugal – T-statistic and p-value prices from correlations.

The Augmented Dickey Fuller and Phillips Perron stationarity tests were run on the four variables. We found unit-roots for the Unemploymentrate and LTGBY10Y. By taking the first differences, new stationary variables dUnemplrate and dLTGBY10Y were created. After running the Varsoc, Varstable, and Varlmar (see tables 22.4, 22.5, and 22.6 in the appendix), it was found that 2 lags were optimal. The VAR model for Portugal was then run. The IRF graphs show how the variables react to one UIPRT standard deviation. We notice that while Inflation

delays on its first spike, around 0,01% the fourth period, dUnemplrate jumps close to the same percentage in the first period. Also, dLTGBY10Y manages to hold on to positive values until the fifth period, while UIPRT never fell below zero. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 22.6. in the appendix.

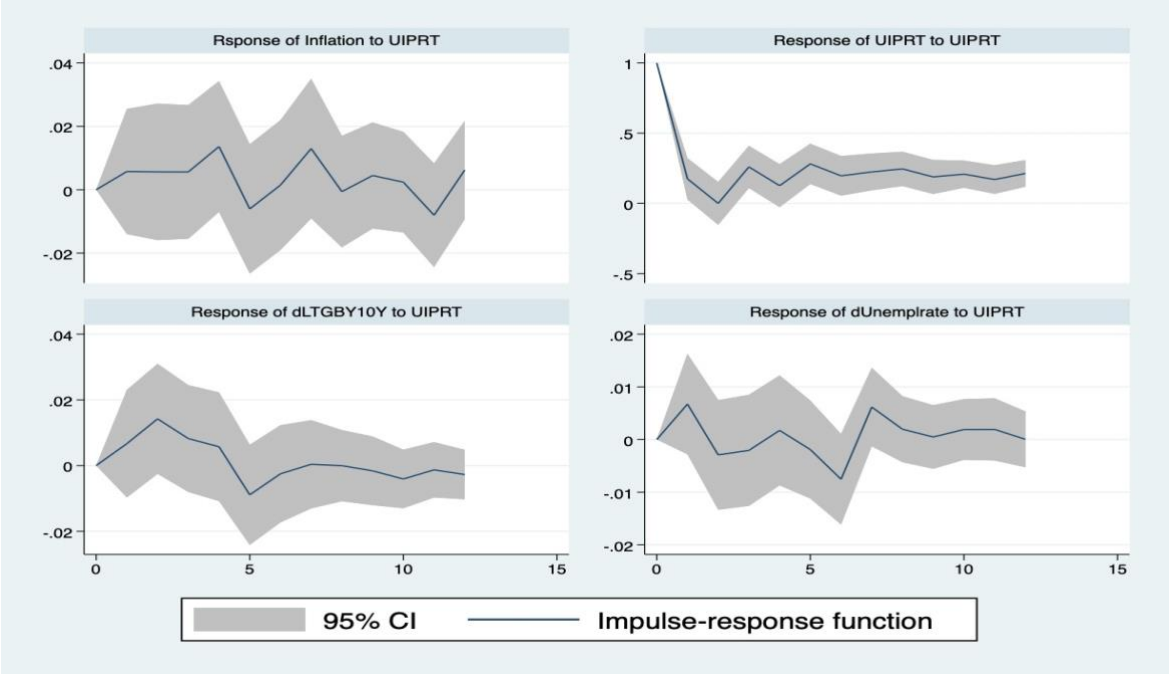

Figure 22.3.1. Portugal– Impulse Response Functions to a UIPRT shock. Sample: 2008M1 – 2022M12. VAR (7) estimated with an exogenous variable (UIGER). 95% confidence interval

The Figure 22.3.2. of Portugal in the next page is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. The variables are once again observed to be moving very close and around to zero for the whole twelve periods, meaning that the impact of UIGER is not remarkable in the Portuguese economy. The Table 22.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

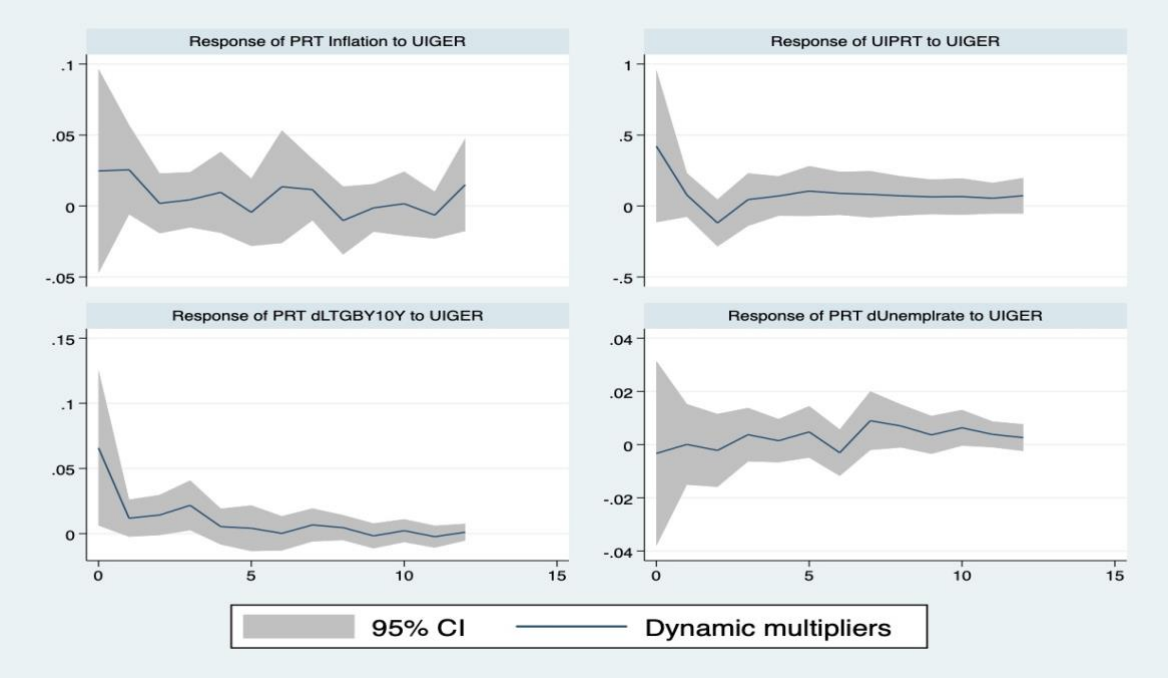

Figure 22.3.2. Portugal – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (7) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **ROMANIA***

In the following figure the economic indicators of Romania and the Uncertainty Index of the country are presented. As Romania is not included in Eurozone, its currency over euro is analyzed as well. The official currency of Romania, established in 2005, is the fourth Romania Leu (RON), which is equal in today's data to 0,20 euros. The Table 23.1. reports the correlations between the variables and the Romanian currency over euro. It appears that the correlation between RON/EUR and unemployment rate is positive at 0,325, fact that does not align with the economic theory. In theory, as mentioned before, it is known that a low level of unemployment rates means a strong economy, which increases the demand for the currency. In case a low unemployment rate is reported, then investors may seek investment opportunities in that country, causing a rise in the value of that currency. So, a positive correlation, as in the case of Romania, is not considered a desirable outcome.

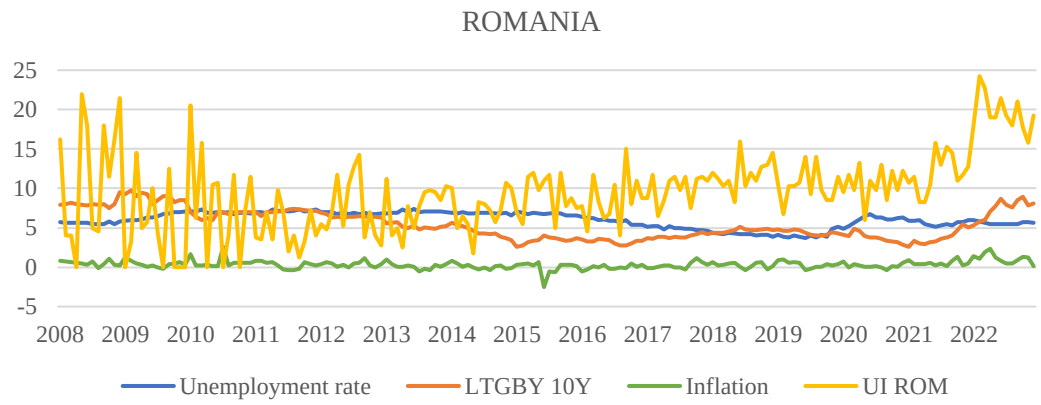

Figure 23.1. Romania – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Romania*	*RON/EUR*
Unemployment rate	1				
LTGBY 10Y	0,237578674	1			
Inflation	-0,099088452	0,305913713	1		
UI Romania	-0,379043765	-0,042269355	0,192283081	1	
RON/EUR	0,325756565	0,514864716	-0,041166464	-0,296208564	1

Table 23.1. Romania – Correlation between the Uncertainty Index (UI), unemployment rate, inflation, long-term government bond 10-year yield and the currency of the country over euro (RON/EUR).

Romania is the last of the three countries – Cyprus, Malta and Romania – that data exists neither for the Consumers Confidence Index nor for the Economic Policy Uncertainty index. Due to this fact, we move straight to the annotation of the comparison between the Romania's and Germany's Uncertainty Indices. The following graph depicts the UI ROM and UI GER. The table shows the moderate correlation of 0,493 between the two variables, a statistically significant value at the 1% confidence level.

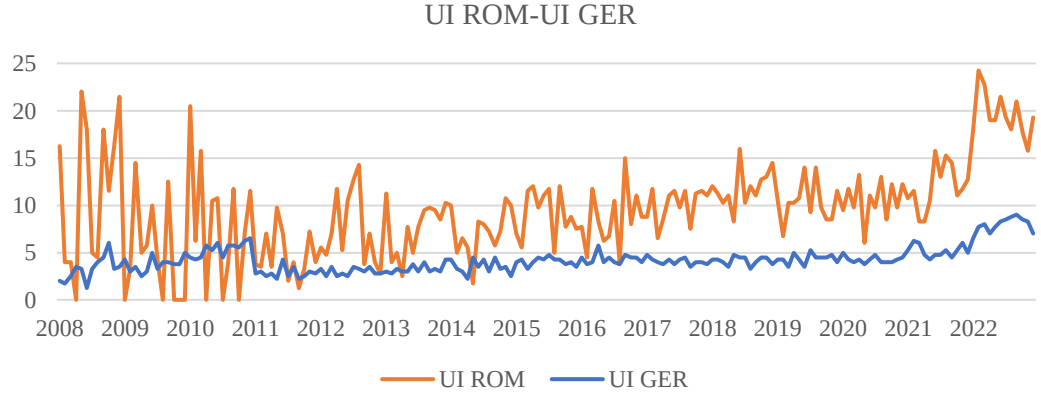

Figure 23.2. Romania – Google Trends based Uncertainty Index of Romania and Germany.

	UI GER	*UI ROM*
UI GER	1	
UI ROM	**0,49380344**	1

Table 23.2.1. Romania – Correlation between Romania's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI ROM/UI GER	7,57631097	1,8703E-12

Table 23.2.2. Romania – T-statistic and p-value prices from correlations.

The five variables were subjected to the Augmented Dickey Fuller and Phillips Perron stationarity tests. The Unemploymentrate, RON/EUR and LTGBY10Y were discovered to have a unit-root. New stationary variables, dUnemplrate, dRON/EUR and dLTGBY10Y, were produced by taking the first differences. Two lags were determined to be the ideal number after performing the Varsoc, Varstable, and Varlmar (tables 23.4, 23.5, and 23.6 in the appendix). Next, we ran the VAR model for Romania. The IRF graphs depict the response of the variables to one-standard deviation of UIRON. Inflation and dLTGBY10Y appear to spike in the first periods close to 0,02%. On the other hand, dRON/EUR moves negatively along the periods with extreme spikes, however its lowest record is -0,0002% a value quite weak to be remarkable. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 23.6. in the appendix.

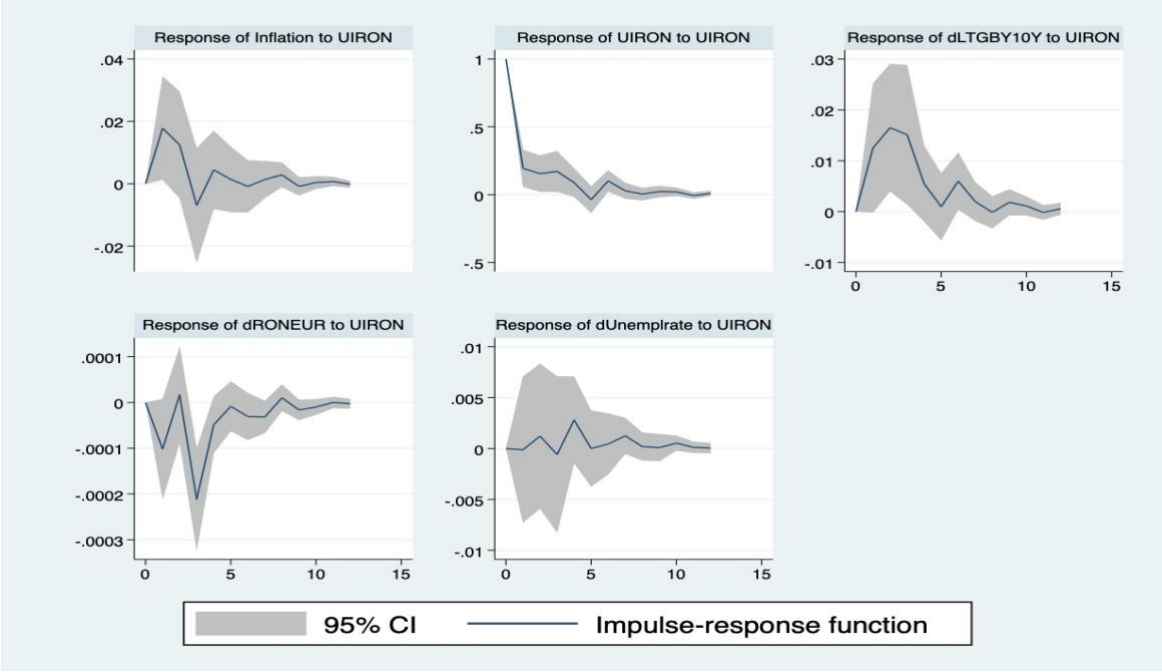

Figure 23.3.1. Romania– Impulse Response Functions to a UIRON shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

The following figure is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. The results obtained showed a weak negative impact on dRON/EUR currency in every unit increase of UIGER. RON dUnemplrate also appeared negative but only for the first two periods. Regarding RON Inflation, UIRON and RON dLTGBY10Y, most of the values appeared positive, with UIRON reaching as high as 0,41% in the second period. The Table 23.7.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

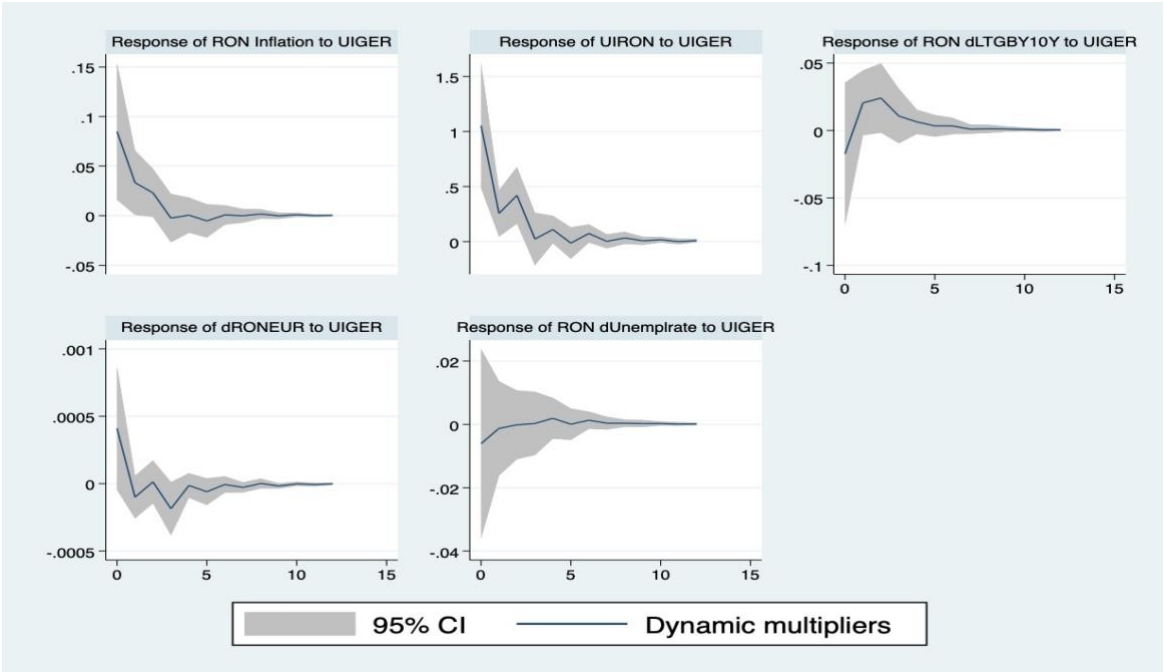

Figure 23.3.2. Romania – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **SLOVAKIA**

Concerning Slovakia, all economic indicators along with the Uncertainty Index of the country are shown in Figure 24.1. The country's unemployment rate recorded its all-time high in 2010 at 15% and interfered in that percentage for at least four years. As for the Uncertainty Index, it spiked slightly in the 2008 financial crisis, and much more in 2011 and 2022. The signs of the correlations in the following table comply with the economic expectations, except from the negative correlation between unemployment rate and the UI of Slovakia.

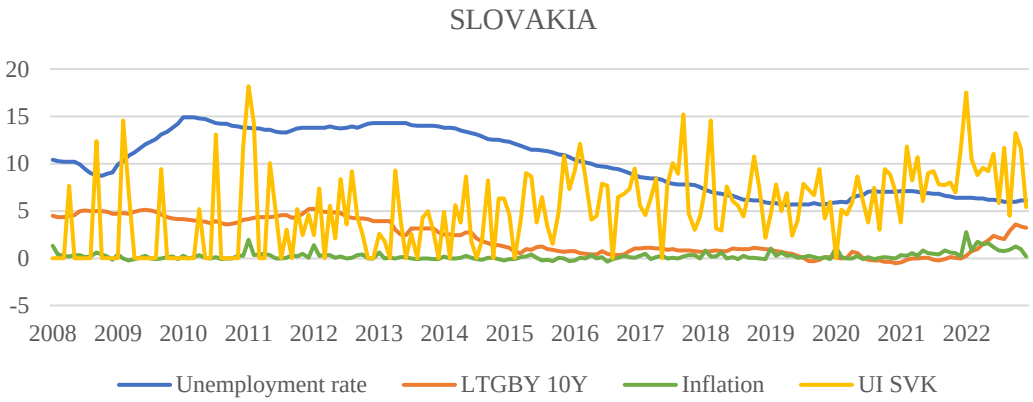

Figure 24.1. Slovakia – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Slovakia*
Unemployment rate	1			
LTGBY 10Y	0,690103595	1		
Inflation	-0,284065675	0,008202654	1	
UI Slovakia	-0,393579197	-0,381320969	0,308450546	1

Table 24.1. Slovakia – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

For Slovakia we came across data for the Consumers Confidence Index (CCI). The correlation between the existing uncertainty index and our constructed Uncertainty Index based on Google Trends showed a weak value of 0,05. However, in Table 24.2.2. it is clear that due to the t-statistic and p-value the correlation is considered statistically insignificant.

	UI SVK	*CCI SVK*
UI SVK	1	
CCI SVK	**0,05409434**	1

Table 24.2.1. Slovakia – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI SVK) and the Consumer Confidence Index (CCI SVK).

	t-statistic	*p-value*
CCI/UI	0,722766735	0,470771786

Table 24.2.2. Slovakia – T-statistic and p-value prices from correlations.

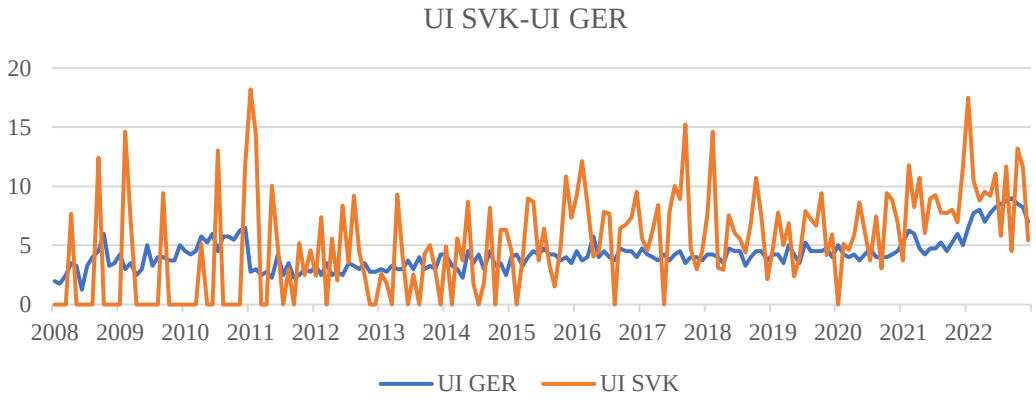

Figure 24.2. Slovakia – Google Trends based Uncertainty Index of Slovakia and Germany.

	UI GER	*UI SVK*
UI GER	1	
UI SVK	**0,31210281**	1

Table 24.3.1. Slovakia – Correlation between Slovakia's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI SVK/UI GER	4,382904226	1,99761E-05

Table 24.3.2. Slovakia – T-statistic and p-value prices from correlations.

The four variables were subjected to the Augmented Dickey Fuller and Phillips Perron stationarity tests. The Unemploymentrate and LTGBY10Y were discovered to contain a unit-root., Two new stationary variables, dUnemplrate and dLTGBY10Y, were produced by taking the first differences. The tables 24.4, 24.5, and 24.6 in the appendix revealed that the optimal number of lags was 2. The VAR model was then run. The IRF graphs shown in the next page depict the impact of UISVK one-standard deviation on the economic indicators of the country and the Uncertainty Index. The values obtained regarding all the variables indicated little to zero response of the economic indicators to UISVK impulse. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 24.7. in the appendix.

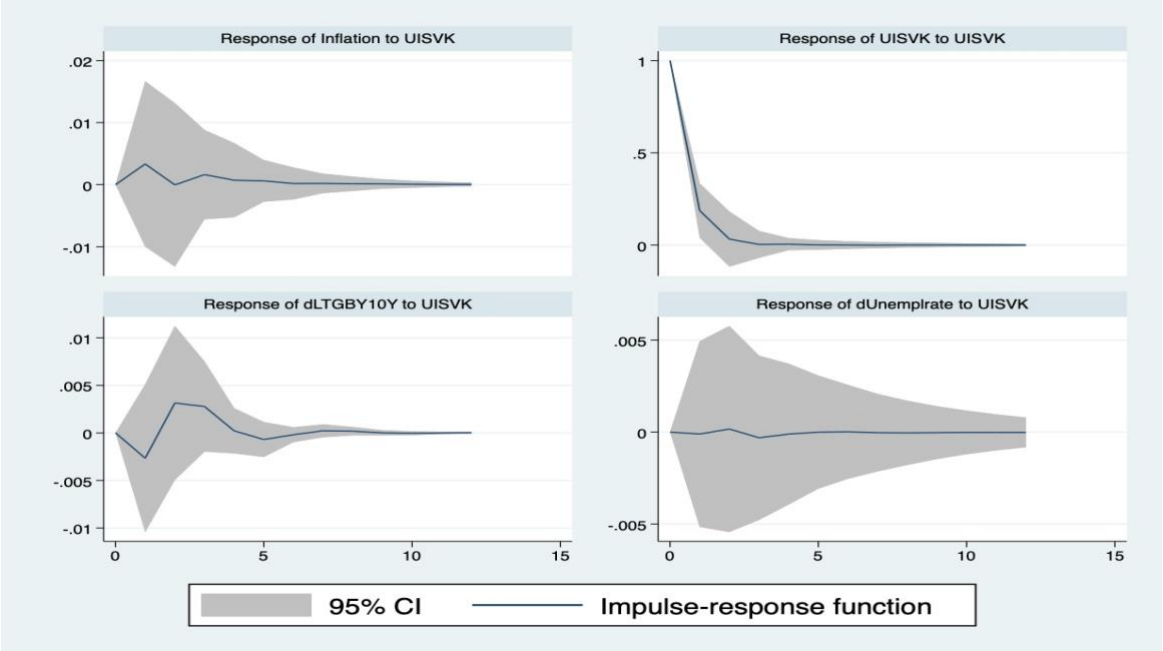

Figure 24.3.1. Slovakia– Impulse Response Functions to a UISVK shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

The next set of IRF graphs referred to a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. All four variable managed to remain above zero during the periods examined before the converge to zero and die out. We should note that the impact of an UIGER impulse is much more perceptible to the Slovenian economy than is its own Uncertainty Index. The Table 24.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

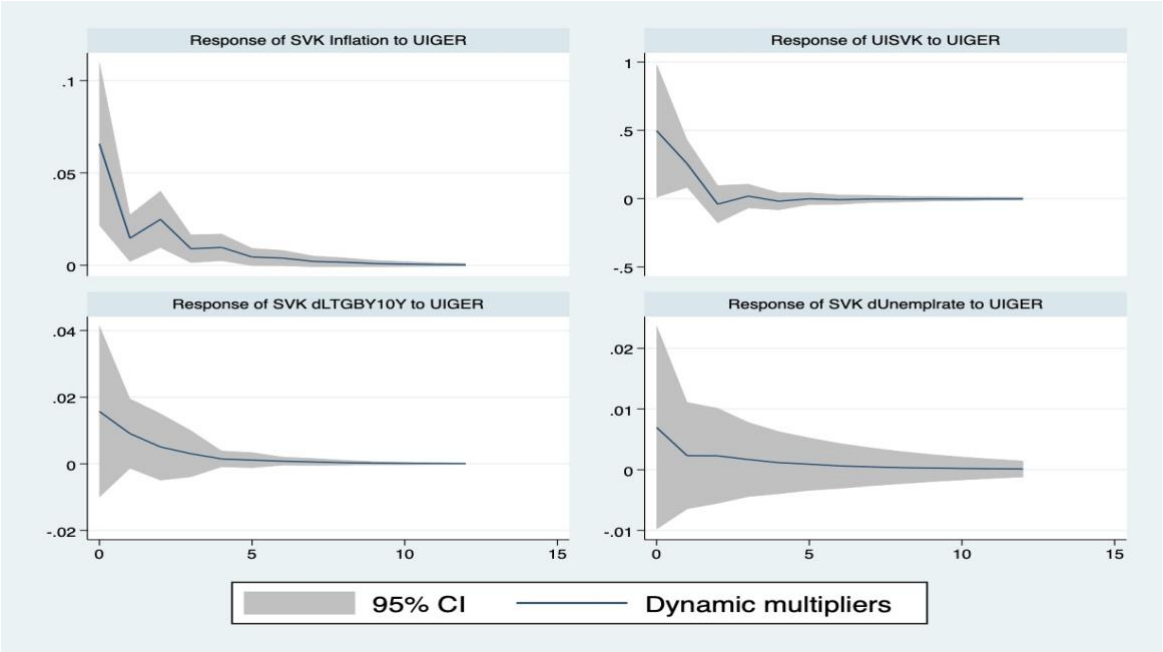

Figure 24.3.2. Slovakia – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **SLOVENIA**

In Figure 25.1. and Table 25.1. the economic indicators and our Uncertainty Index for Slovenia are depicted and reported respectively. It seems that the Uncertainty Index fluctuates around a mean throughout the fifteen years, with all-time high recorded in 2008. Unemployment rate reached its high level in 2013 at 10% and did not drop until after 2016.

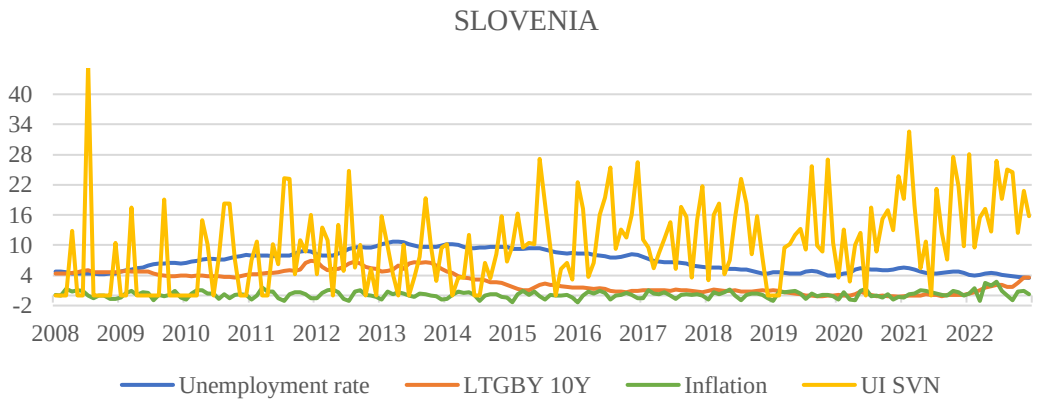

Figure 25.1. Slovenia – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Slovenia*
Unemployment rate	1			
LTGBY 10Y	0,508751996	1		
Inflation	-0,134905213	-0,009691676	1	
UI Slovenia	-0,164737758	-0,314687568	-0,02018059	1

Table 25.1. Slovenia – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

For Slovenia we only came across data for the Consumers Confidence Index. The positive correlation of 0,120 is not a desirable outcome, as a negative sign would be expected in this case between CCI and UI. However, with a t-statistic less than 1,96 in absolute value and a p-vale greater than 0,05, the correlation is considered statistically insignificant

	UI SVN	*CCI SVN*
UI SVN	1	
CCI SVN	**0,12030774**	1

Table 25.2.1. Slovenia – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI SVN) and the Consumer Confidence Index (CCI SVN).

	t-statistic	*p-value*
CCI/UI	1,616849199	0,10768168

Table 25.2.2. Slovenia – T-statistic and p-value prices from correlations.

The following graph compared the Uncertainty Indices of Slovenia and Germany. UI SVN appears to fluctuate around a mean with extreme spikes in contrast to UI GER. The correlation between the two variables is moderate at 0,335 and is found to be statistically significant in Table 25.3.2.

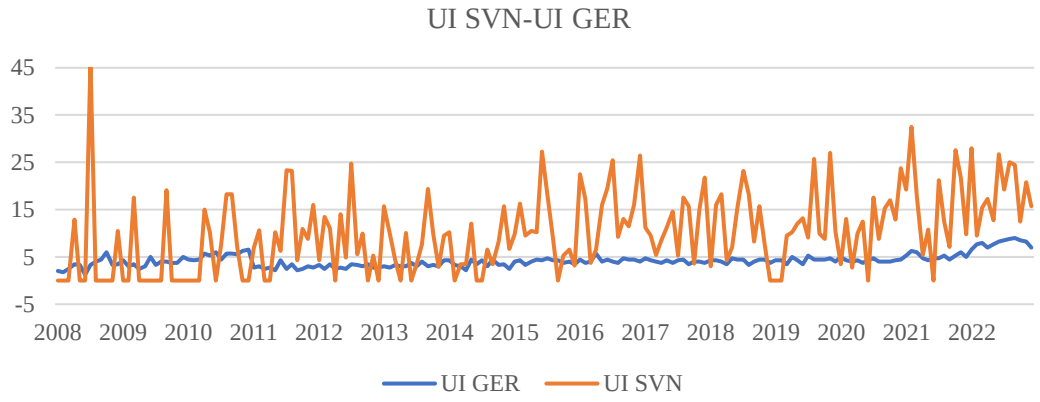

Figure 25.2. Slovenia – Google Trends based Uncertainty Index of Slovenia and Germany.

	UI GER	*UI SVN*
UI GER	1	
UI SVN	**0,3350541**	1

Table 25.3.1. Slovenia – Correlation between Slovenia's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI SVN/UI GER	4,744411473	4,27596E-06

Table 25.3.2. Slovenia – T-statistic and p-value prices from correlations.

On the four variables, the Augmented Dickey Fuller and Phillips Perron stationarity tests were conducted. The Unemploymentrate and LTGBY10Y were discovered to contain a unit-root. The dUnemplrate and dLTGBY10Y stationary variables, were produced by taking the first differences. The Varsoc, Varstable, and Varlmar tests (tables 25.4, 25.5, and 25.6 in the appendix) revealed that 2 lags were the optimal number. The VAR model was then run. All four variable move quite close to zero, so the impact of the UISVN on the economic indicators is of minor significance. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 25.7. in the appendix.

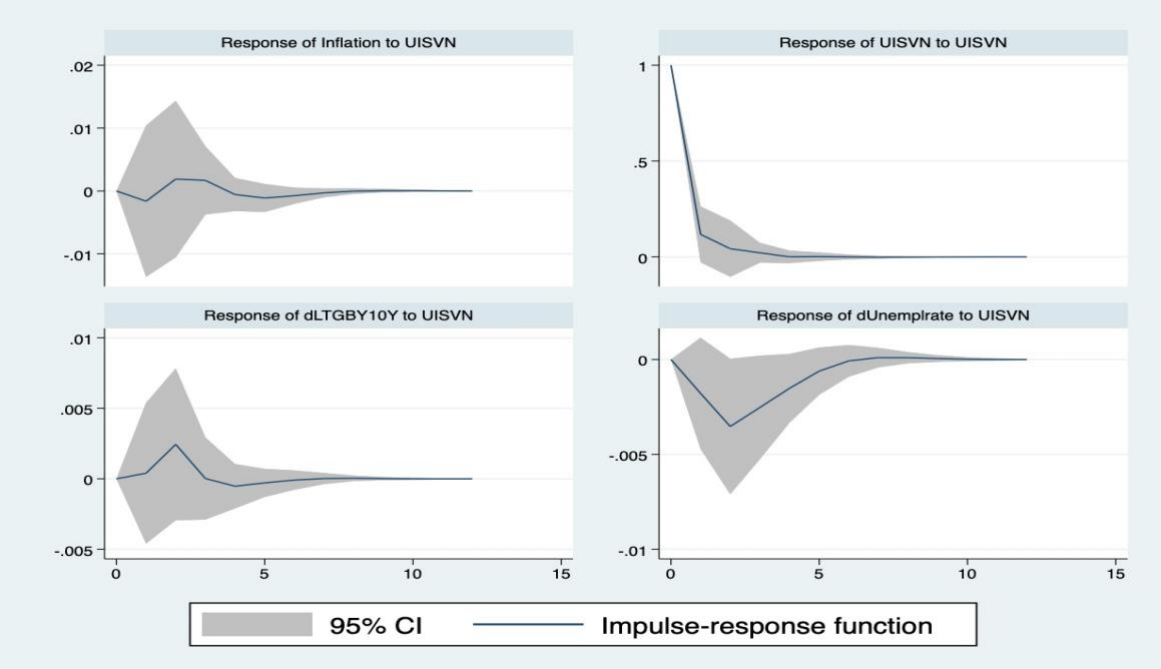

Figure 25.3.1. Slovenia– Impulse Response Functions to a UISVN shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

The Figure 25.3.2. for Slovenia is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. SVN Inflation turned negative in the fourth period, with its lowest price recorded equal to -0,002%. The UISVN managed to remain positive only for the first three periods. Both SVN dLTGBY10Y and SVN dUnemplrate had almost equal positive and negative values, with the former recording its lowest value in the third period with -0,007% and the latter in the fourth period with -0,002%. The Table 25.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

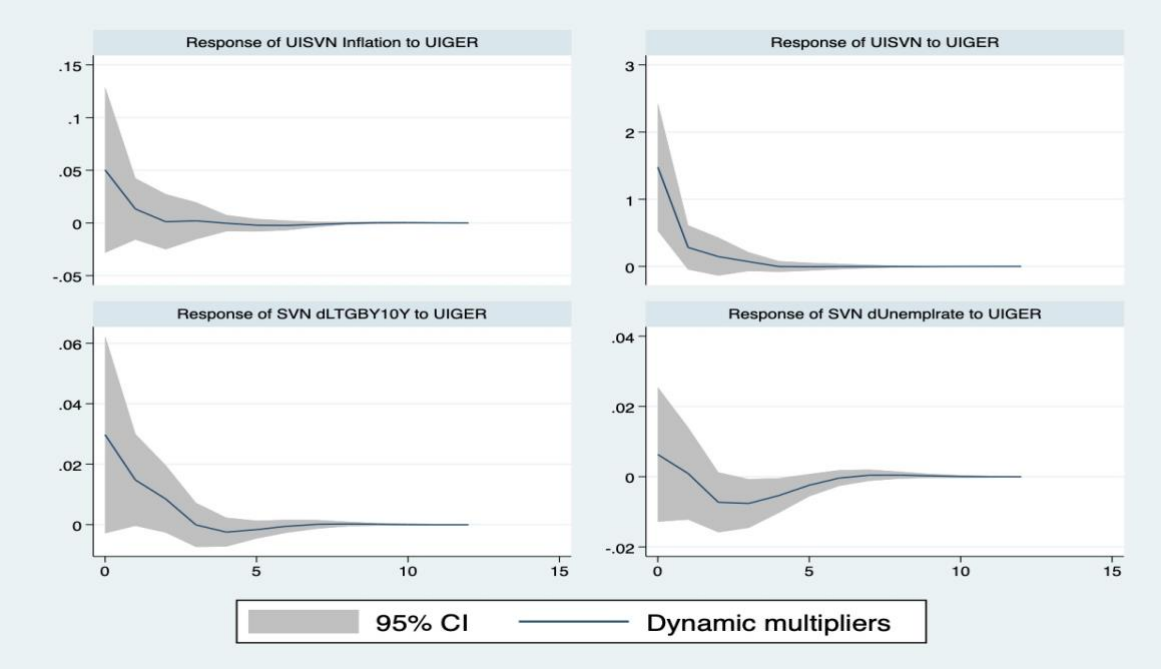

Figure 25.3.2. Slovenia – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **SPAIN**

Spain's economic indicators and Uncertainty Index are presented in the figure below. It is of note that the unemployment rate of Spain reached 26% in 2013, a level only Greece reached about the same time, making it the second country recording an over 20% unemployment rate in the fifteen years of analysis. On the other hand, while unemployment rate was high, the Uncertainty Index remained considerably low during the first decade and after the COVID19 epidemic crisis jumped slightly and interfered at that level until the end of 2022. The Table 26.1 reports the correlations between the variables.

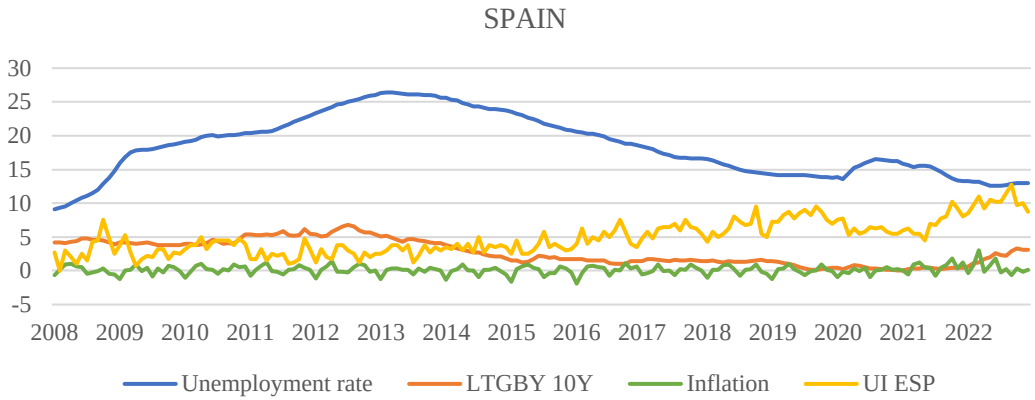

Figure 26.1. Spain – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Spain*
Unemployment rate	1			
LTGBY 10Y	0,480545888	1		
Inflation	-0,097831779	-0,027478227	1	
UI Spain	-0,579663791	-0,636917648	0,11691803	1

Table 26.1. Spain – Correlation between the Uncertainty Index (UI), unemployment rate, inflation and long-term government bond 10-year yield.

For Spain we were able to find data for both uncertainty indices, CCI and EPU. Both correlations between the existing uncertainty indices and our constructed Uncertainty Index were found statistically significant at the 1% confidence level, fact that renders the correlations true to their values. However, we face again the undesirable outcome of the positive sign between CCI and UI. This again, might be due to the negligible security that exists in the insurance sector, leading individuals to consume rather than save.

	UI ESP	*CCI ESP*	*EPU ESP*
UI ESP	1		
CCI ESP	**0,299168**	1	
EPU ESP	**0,28150059**	0,01256303	1

Table 26.2.1. Spain – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI ESP), the Consumer Confidence Index (CCI ESP) and the Economic Policy Uncertainty index (EPU ESP).

	t-statistic	*p-value*
CCI/UI	4,182977347	4,51078E-05
EPU/UI	3,913962762	0,000129126
CCI/EPU	0,167624993	0,867068599

Table 26.2.2. Spain – T-statistic and p-value prices from correlations.

The Uncertainty Index of Spain appears to follow the same route Germany's Uncertainty Index follows. With a statistically significant correlation as high as 0,720, Spain constitutes the country with the strongest correlation between its Uncertainty Index and the Germany's one.

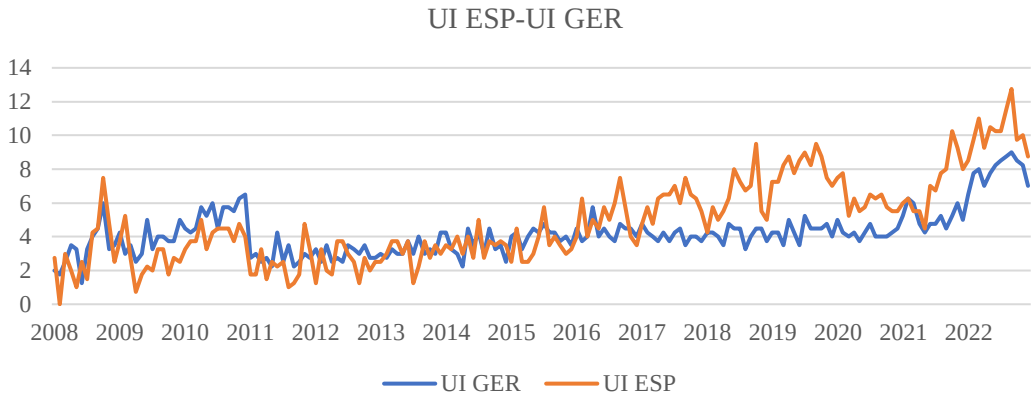

Figure 26.2. Spain – Google Trends based Uncertainty Index of Spain and Germany.

	UI GER	*UI ESP*
UI GER	1	
UI ESP	**0,72010589**	1

Table 26.3.1. Spain – Correlation between Spain's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI ESP/UI GER	13,84624115	4,60646E-30

Table 26.3.2. Spain – T-statistic and p-value prices from correlations.

Tests for stationarity, Augmented Dickey Fuller and Phillips Perron, were harnessed on the variables Inflation, UIESP, LTGBY10Y and Unemployment rate. Two of the variables, Unemploymentrate and LTGBY10Y, contained a unit-root, meaning they were not stationary. To make them stationary we took their first differences and created the dUnemplrate and dLTGBY10Y variables. According to the tables 26.4., 26.5. and 26.6., the optimal lags for the conduction of the VAR model for Spain were 3. It is observed that Inflation fluctuated around zero for all the periods, while the response of UIESP on UIESP's impulse remained positive. Both dLTGBY10Y and dUnemplrate fell below zero and spiked over it in the third and second period respectively. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 26.7. in the appendix.

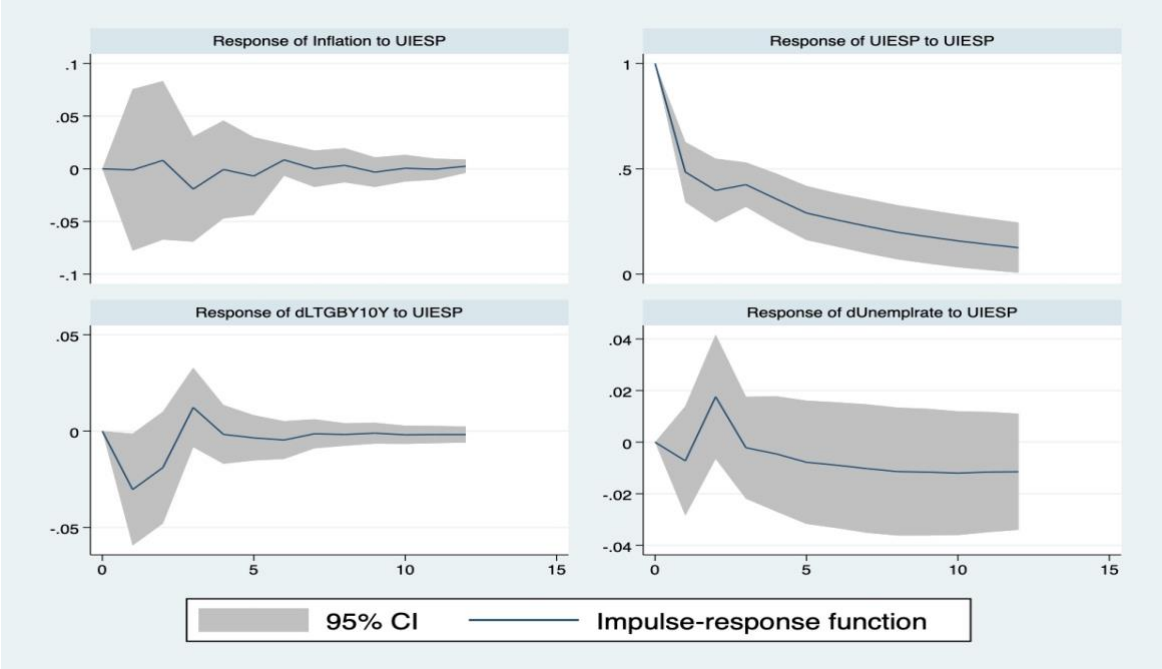

Figure 26.3.1. Spain– Impulse Response Functions to a UISVN shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

The Figure 26.3.2. is a dynamic-multiplier function used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. It looks like all variables follow the same route. Two of them manage to stay positive over the periods, UIESP and ESP dUnemplrate, while the other two dropped slightly below zero for only a period. The Table 26.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

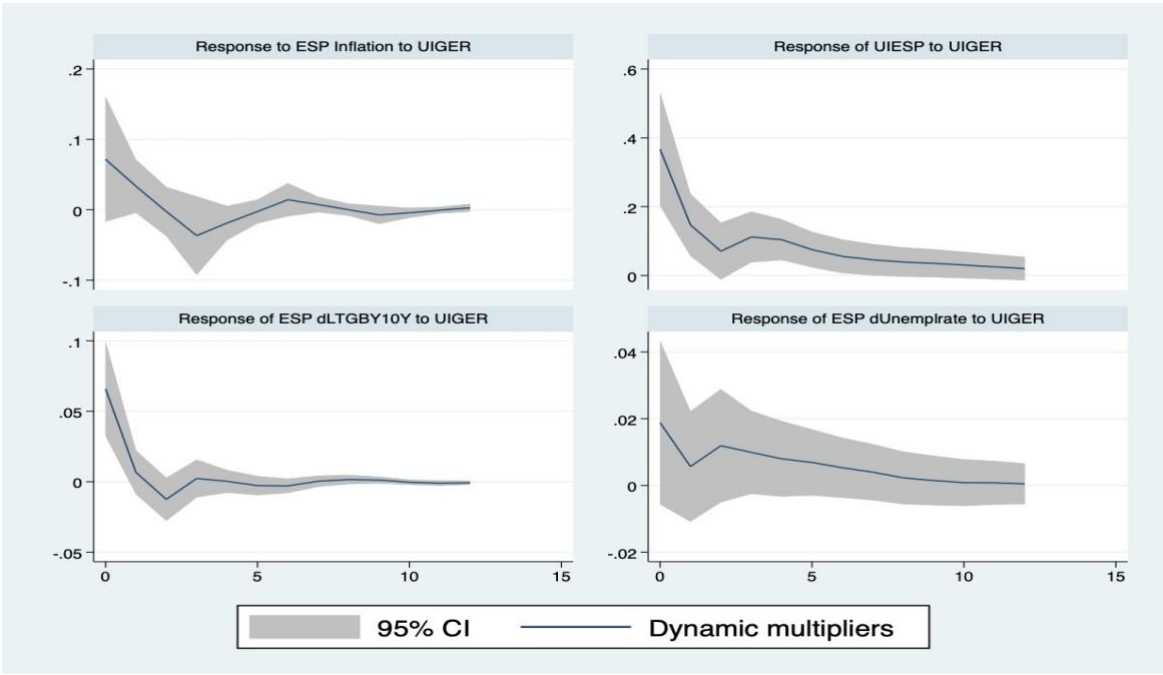

Figure 26.3.2. Spain – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (3) estimated with an exogenous variable (UIGER). 95% confidence interval.

- **SWEDEN***

The last country for analysis is Sweden. Sweden in not part of Eurozone and holds its own currency. The official currency of the country is the Swedish krona, first established in 1873. In today's data 1 Swedish krona equals 0,084 euros. Again, the positive correlation between unemployment rate and SEK/EUR currency is not covetable. Regarding the long-term government bond yield 10 years, its started at 4% in 2008 and gradually after six to seven years it converged to zero. The constructed Uncertainty Index seems to constantly fluctuate reaching its maximum level in 2022. The signs of the economic indicators' weak correlations comply with the economic theory.

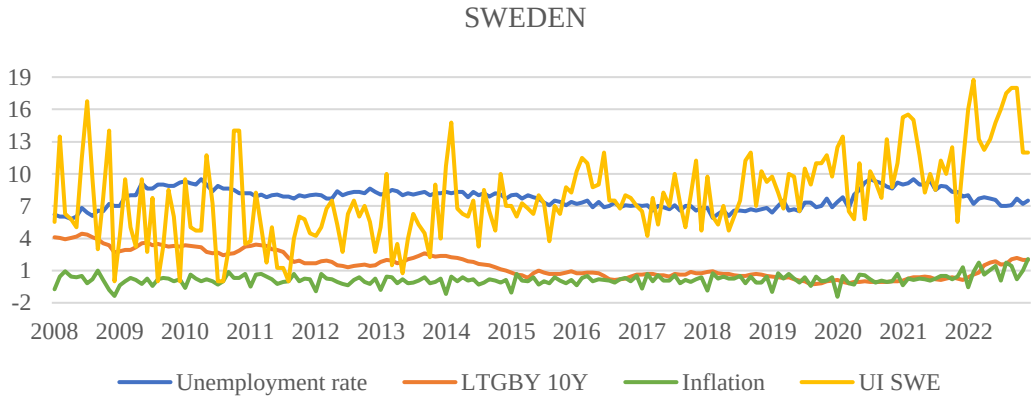

Figure 27.1. Sweden – Depiction of the Uncertainty Index (UI) and other economic indices from January 2008 till December 2022.

	Unemployment rate	*LTGBY 10Y*	*Inflation*	*UI Sweden*	*SEK/EUR*
Unemployment rate	1				
LTGBY 10Y	0,077668121	1			
Inflation	-0,061745212	0,005030739	1		
UI Sweden	-0,106957706	-0,273282112	0,206042173	1	
SEK/EUR	0,139032592	0,283662698	-0,165819035	-0,408637353	1

Table 27.1. Sweden – Correlation between the Uncertainty Index (UI), unemployment rate, inflation, long-term government bond 10-year yield and the currency of the country over euro (SEK/EUR).

Regarding Sweden's existing uncertainty indices, only Consumers Confidence Index data was available. We correlated the CCI of Sweden with our Uncertainty Index (UI SWE) and found a negative moderate value of -0,393. The correlation is considered statistically significant at the 1% confidence level, with a p-value less than 0,01 and t-statistic greater than 1,96 in absolute value.

	UI SWE	*CCI SWE*
UI SWE	1	
CCI SWE	**-0,3930513**	1

Table 27.2.1. Sweden – Measures of uncertainty: Correlation between our constructed Uncertainty Index (UI SWE) and the Consumer Confidence Index (CCI SWE).

	t-statistic	*p-value*
CCI/UI	-5,702952504	4,81874E-08

Table 27.2.2. Sweden – T-statistic and p-value prices from correlations.

It is noticeable that the Swedish Uncertainty Index is much more extreme and persistent in its jumps. Unlike UI SWE, UI GER remains mainly steady throughout the years with two exceptions, one in 2010-2011 and one at the end of 2022. The correlation between UI SWE and UI GER is positive at 0,503 and statistically significant as seen in Table 27.3.2.

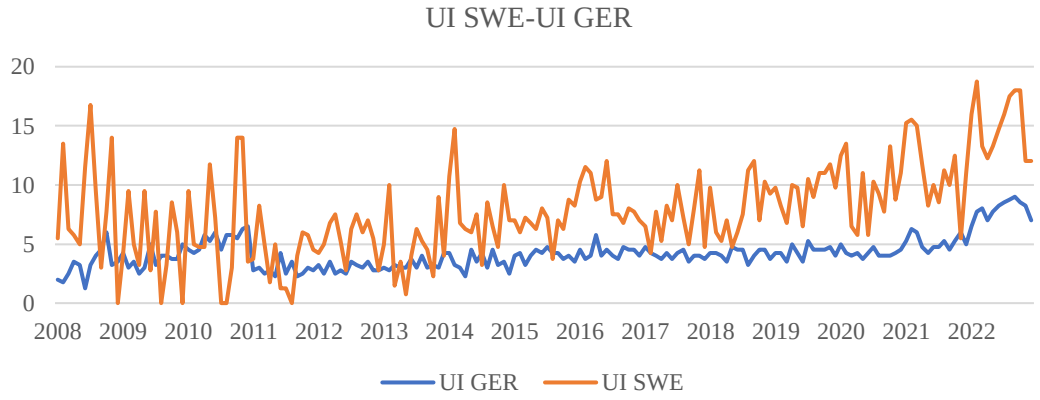

Figure 27.2. Sweden – Google Trends based Uncertainty Index of Sweden and Germany.

	UI GER	*UI SWE*
UI GER	1	
UI SWE	**0,50347345**	1

Table 27.3.1. Sweden – Correlation between Sweden's and Germany's Uncertainty Indices.

	t-statistic	*p-value*
UI SWE/UI GER	7,774410223	5,85744E-13

Table 27.3.2. Sweden – T-statistic and p-value prices from correlations.

The stationarity tests Augmented Dickey Fuller and Phillips Perron were run on the five variables. It was found that the Unemploymentrate and LTGBY10Y were containing a unit-root. Taking the first differences created new stationary variables, dUnemplrate and dLTGBY10Y. After running the Varsoc, Varstable and Varlmar (tables 27.4., 27.5. and 27.6.), the optimal number of lags was found to be 2. Then we conducted the VAR model. As seen in

the first graph, Inflation jumps close to 0,02% in the first periods and then drops close to zero. It is clear that the response of the two variables dLTGBY10Y and dSEK/EUR are of no great significance. Lastly, the dUnemplrate firstly drops below zero and then spikes close to 0,02% before it converges to zero as well and die out. The Forecast Error Variance Decomposition (FEVD) table, is presented in the Table 27.7. in the appendix.

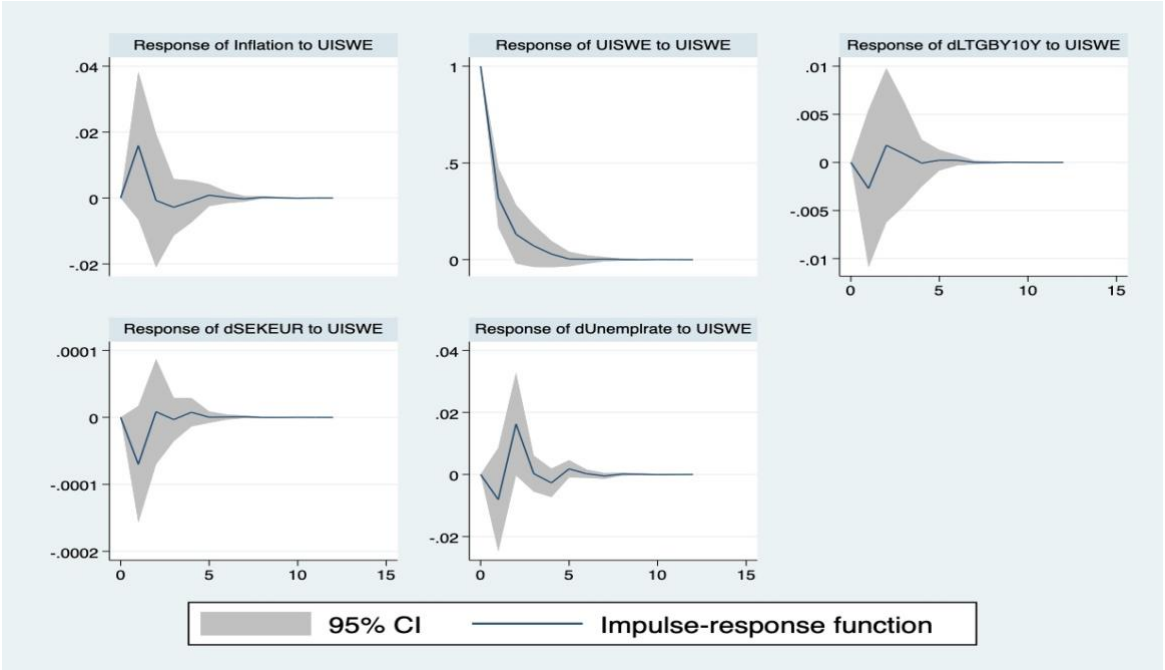

Figure 27.3.1. Sweden– Impulse Response Functions to a UISVN shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval

In the second set of IRF graphs is a dynamic-multiplier function, used to measure the impact of a unit increase in an exogenous variable on the endogenous variables over time. The Uncertainty Index of Germany is the exogenous variable. It is of note the tiny effect UIGER has on the currency dSEK/EUR. The response of UISWE to UIGER remains positive until the seventh period and turns negative only for the eight. Regarding the SWE dUnemplrate, while starting at -0,05, its jumps to 0,02 in the first period and then converges to zero, slowly dying out. SWE dLTGBY10Y only moved below zero in the third period. The Table 27.8.in appendix, reports the Dynamic-Multiplier Function table that divides the changes or the variation on the endogenous variables into the exogenous variable shocks of the Panel VAR model.

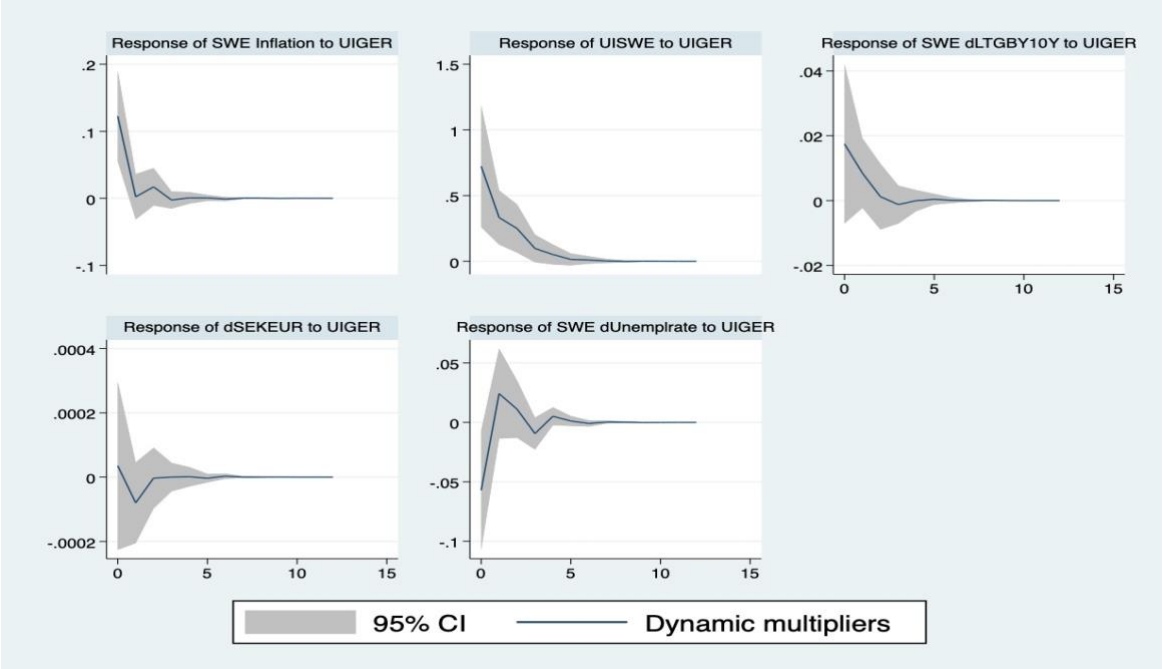

Figure 27.3.2. Sweden – Dynamic-Multiplier Functions of a UIGER shock. Sample: 2008M1 – 2022M12. VAR (2) estimated with an exogenous variable (UIGER). 95% confidence interval.

▪ EUROPEAN UNION & THE EUROZONE

In this subsection we focus on the Uncertainty Index for both the European Union and the Euro Area. For the European Union index and the Euro Area, all 27 and 19 countries' uncertainty index, respectively, was aggregated it having formerly being multiplied by their Real Gross Domestic Product. It is important to note that we hypothesized a stable RGDP throughout the year for all countries. The following figure depicts the historical data of the indices from January 2008 till December 2022. For the comparison of the two indices with the UI of Germany to be accurate, we transformed all the monthly data to annual data for all three variables. It is clear that the Uncertainty Index for the European Union is considerably more volatile than the Uncertainty Index of the Eurozone. Based on this fact, it would be safe to assume that the extreme spikes originate from the nine countries that are not members of the Eurozone. Also, it is of note that UI GER follows precisely the path of UI EU and UI EA throughout the fifteen years horizon, except for a small spike in 2010. Such a result is expected as Germany is the strongest economy in Europe.

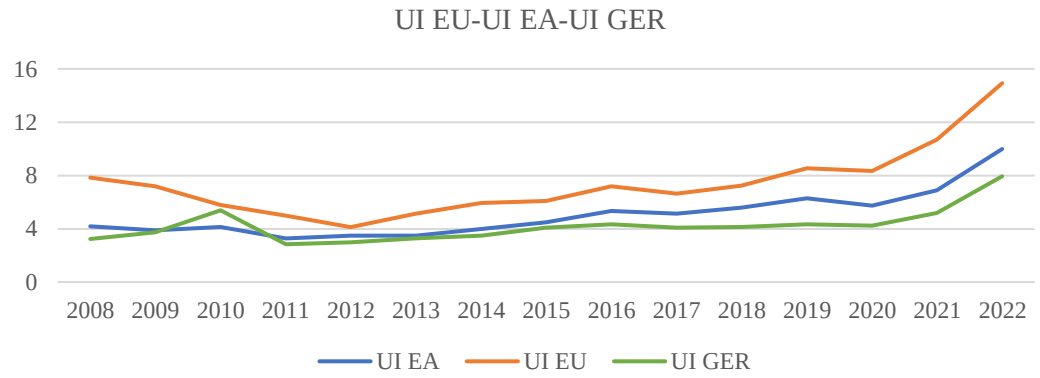

Figure 28.1. Google Trends based Uncertainty Index for the European Union, the Euro-Area and Germany

The following table presents the correlation of the three variables, UI EU, UI EA and UI GER. All variables have strong positive correlations, above 0,80, and as reported in Table 28.1.2. all are statistically significant with p-value well below 0,05 and t-statistic greater than 1,96 in absolute values.

	UI EA	*UI EU*	*UI GER*
UI EA	1		
UI EU	**0,95047526**	1	
UI GER	**0,89012295**	**0,8540705**	1

Table 28.1.1. European Union – Measures of uncertainty: Correlation between our constructed Aggregate Uncertainty Index for the European Union (UI EU) and the Economic Policy Uncertainty Index (EPU EU).

	t-statistic	*p-value*
UI EU/UI EA	40,8008778	2,88135E-92
UI GER/UI EA	26,0592245	1,18679E-62
UI GER/UI EU	21,9063016	2,06874E-52

Table 28.1.2. European Union – T-statistic and p-value prices from correlations.

Conclusions

The construction of a macroeconomic uncertainty index based on Google Trends yielded amalgamated findings. For most of the European countries, our Uncertainty Index based on Google Trends appeared to follow along with the economic theory and also provided likeable results when correlated with existing uncertainty indices, like the Consumer Confidence Index (CCI) and the Economic Policy Uncertainty index (EPY) by Baker, Bloom & Davis (2016). Nevertheless, the rest of the countries located undesirable findings when our Uncertainty Index was correlated with the CCI and EPU. The signs of the correlation were counter to theory.

One possible reason was discussed within the article. This was the weak or untrustworthy security of the country's insurance sector. Such a case could possibly impel the dwellers of the country to carry on consuming even in periods of high uncertainty, instead of saving up. The fact that only four terms were employed for the structure of the index, all investigated in the English language and not translated in each country's language, constitutes another reason for the non-covetable and indicative results. In literature regarding the concrete topic, authors investigate a single country's uncertainty index, or no more than two countries', with the use of forty or more keywords for the construction of the index.

Regarding the Impulse-Response and Dynamic-Multiplier Functions, likeable results prevailed. Firstly, the impact of the country's Uncertainty Index on the economic indicators of the country was examined. Then, all the countries' variables responses were tested to a unit increase in the Uncertainty Index of Germany, the greatest economy in Europe. The majority of the European countries responses of their variables seemed more intense, explicit and notable when a shock occurred to the Uncertainty Index of German rather than when occurred to their own country's Uncertainty Index. Whether there was a plethora of words used in the analysis for the construction of the macroeconomic uncertainty index, as pursued in other papers concerning Google Trends, the results would be more accurate, reliable and appropriate for drawing deservedly conclusions. For this reason, further research regarding the topic is suggested.

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Appendix A

	AUT	*BEL*	*CYP*	*EST*	*FIN*	*FRA*	*GER*	*GRC*	*IRL*	*ITA*	*LTV*	*LTH*	*LUX*	*MLT*	*NTH*	*POL*	*SVK*	*SVN*	*ESP*
AUT	1																		
BEL	0,3733	1																	
CYP	0,0797	0,201	1																
EST	-0,0018	0,143	0,303	1															
FIN	0,3679	0,451	0,159	0,146	1														
FRA	0,3040	0,577	0,204	0,210	0,399	1													
GER	0,3132	0,622	0,217	0,154	0,475	0,538	1												
GRC	-0,0536	0,256	0,342	0,117	0,145	0,286	0,258	1											
IRL	0,3039	0,607	0,165	0,251	0,470	0,675	0,651	0,143	1										
ITA	0,1822	0,456	0,030	0,204	0,383	0,548	0,517	0,210	0,634	1									
LTV	0,3857	0,255	0,184	0,052	0,315	0,165	0,206	0,036	0,129	0,044	1								
LTH	0,1113	0,401	0,205	0,182	0,313	0,463	0,351	0,128	0,609	0,568	0,108	1							
LUX	0,0637	0,305	0,218	0,233	0,249	0,364	0,238	0,203	0,350	0,271	0,176	0,259	1						
MLT	0,1188	0,302	0,294	0,235	0,209	0,216	0,227	0,038	0,389	0,274	0,222	0,464	0,269	1					
NTH	0,3442	0,724	0,089	0,144	0,498	0,668	0,686	0,215	0,735	0,589	0,251	0,486	0,293	0,307	1				
POL	0,3329	0,627	0,151	0,204	0,476	0,622	0,707	0,260	0,721	0,466	0,126	0,430	0,327	0,298	0,665	1			
SVK	0,1608	0,389	0,123	0,182	0,212	0,293	0,312	0,094	0,415	0,337	0,296	0,376	0,252	0,310	0,375	0,296	1		
SVN	-0,0118	0,368	0,306	0,252	0,215	0,312	0,335	0,215	0,376	0,368	0,079	0,497	0,245	0,343	0,319	0,319	0,329	1	
ESP	0,3366	0,650	0,189	0,172	0,482	0,720	0,720	0,191	0,855	0,662	0,176	0,557	0,321	0,309	0,770	0,719	0,425	0,370	1

Table 1. Uncertainty Index correlation between all Eurozone countries

	AUT	BEL	BUL	CRO	CYP	CZR	DNK	EST	FIN	FRA	GER	GRC	HUN	IRL	ITA	LTV	LTH	LUX	MLT	NTH	POL	PRT	ROM	SVK	SVN	ESP	SWE
AUT	1																										
BEL	0,3733206	1																									
BUL	0,1988053	0,4536	1																								
CRO	0,0801689	0,3324	0,456	1																							
CYP	0,0797992	0,2018	0,155	0,177	1																						
CZR	0,0628722	0,2270	0,364	0,251	0,207	1																					
DNK	0,2595668	0,5270	0,455	0,380	0,078	0,306	1																				
EST	-0,001876	0,1433	0,298	0,236	0,303	0,320	0,176	1																			
FIN	0,3679221	0,4516	0,374	0,189	0,159	0,138	0,482	0,146	1																		
FRA	0,3040116	0,5778	0,594	0,321	0,204	0,290	0,428	0,210	0,399	1																	
GER	0,3132517	0,6229	0,438	0,385	0,217	0,107	0,554	0,154	0,475	0,538	1																
GRC	-0,053616	0,2568	0,162	0,119	0,342	0,244	0,112	0,117	0,145	0,286	0,258	1															
HUN	0,1873963	0,4111	0,388	0,213	0,262	0,081	0,228	0,169	0,285	0,469	0,480	0,312	1														
IRL	0,3039261	0,6076	0,608	0,439	0,165	0,218	0,566	0,251	0,470	0,675	0,651	0,143	0,436	1													
ITA	0,1822935	0,4563	0,390	0,384	0,030	0,232	0,527	0,204	0,383	0,548	0,517	0,210	0,281	0,634	1												
LTV	0,3857427	0,2550	0,185	0,161	0,184	0,219	0,229	0,052	0,315	0,165	0,206	0,036	0,127	0,129	0,044	1											
LTH	0,1113652	0,4011	0,483	0,467	0,205	0,334	0,532	0,182	0,313	0,463	0,351	0,128	0,180	0,609	0,568	0,108	1										
LUX	0,0637784	0,3059	0,284	0,265	0,218	0,207	0,301	0,233	0,249	0,364	0,238	0,203	0,303	0,350	0,271	0,176	0,259	1									
MLT	0,1188692	0,3021	0,342	0,298	0,294	0,268	0,307	0,235	0,209	0,216	0,227	0,038	0,096	0,389	0,274	0,222	0,464	0,269	1								
NTH	0,3442938	0,7248	0,514	0,388	0,089	0,166	0,533	0,144	0,498	0,668	0,686	0,215	0,426	0,735	0,589	0,251	0,486	0,293	0,307	1							
POL	0,3329464	0,6275	0,542	0,434	0,151	0,150	0,507	0,204	0,476	0,622	0,707	0,260	0,389	0,721	0,466	0,126	0,430	0,327	0,298	0,665	1						
PRT	0,2802202	0,6177	0,657	0,540	0,186	0,280	0,583	0,264	0,462	0,641	0,604	0,158	0,416	0,798	0,553	0,203	0,617	0,398	0,471	0,670	0,693	1					
ROM	0,2583440	0,4669	0,462	0,167	0,118	0,227	0,467	0,262	0,400	0,475	0,493	0,178	0,375	0,535	0,468	0,244	0,295	0,295	0,272	0,509	0,494	0,498	1				
SVK	0,1608705	0,3893	0,324	0,364	0,123	0,268	0,386	0,182	0,212	0,293	0,312	0,094	0,218	0,415	0,337	0,296	0,376	0,252	0,310	0,375	0,296	0,483	0,255	1			
SVN	-0,01172	0,3684	0,389	0,291	0,306	0,243	0,364	0,252	0,215	0,312	0,335	0,215	0,205	0,376	0,368	0,079	0,497	0,245	0,343	0,319	0,319	0,456	0,221	0,329	1		
ESP	0,3366945	0,6506	0,579	0,471	0,189	0,179	0,552	0,172	0,482	0,720	0,720	0,191	0,433	0,855	0,662	0,176	0,557	0,321	0,309	0,770	0,719	0,793	0,545	0,425	0,370	1	
SWE	0,1393565	0,5427	0,413	0,375	0,060	0,238	0,557	0,156	0,386	0,542	0,503	0,197	0,364	0,600	0,446	0,120	0,433	0,328	0,151	0,577	0,571	0,563	0,418	0,258	0,292	0,548	1

Table 2. Uncertainty Index correlation between all European Union countries

- **AUSTRIA**

Sample: **2008m8** thru **2022m12** Number of obs = **173**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-663.067				.027502	7.758	7.81715	7.90381
1	-565.919	194.3	16	0.000	.010764	6.81987	6.99734*	7.25732*
2	-545.73	40.378	16	0.001	.01026	6.77144	7.06723	7.50053
3	-531.146	29.167	16	0.023	.010438	6.78782	7.20192	7.80854
4	-511.057	40.179	16	0.001	.009972	6.74054	7.27295	8.05289
5	-486.488	49.138	16	0.000	.009054	6.64147	7.2922	8.24546
6	-458.912	55.151*	16	0.000	.007949*	6.50765*	7.27669	8.40327

* optimal lag
Endogenous: **Unemploymentrate dLTGBY10Y Inflation UIAUT**
Exogenous: **UIGER _cons**

Table 1.4. Austria – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
-.4676055 + .7914339*i*	.919251
-.4676055 - .7914339*i*	.919251
.4629196 + .7832576*i*	.909828
.4629196 - .7832576*i*	.909828
.8738819 + .0360407*i*	.874625
.8738819 - .0360407*i*	.874625
-.09487648 + .8395095*i*	.844854
-.09487648 - .8395095*i*	.844854
-.313162 + .7517101*i*	.814333
-.313162 - .7517101*i*	.814333
.6902929 + .4123545*i*	.804077
.6902929 - .4123545*i*	.804077
-.7878991	.787899
-.7304775 + .253908*i*	.773348
-.7304775 - .253908*i*	.773348
.74421	.74421
.5238298 + .5281052*i*	.743836
.5238298 - .5281052*i*	.743836
.280052 + .6395593*i*	.698187
.280052 - .6395593*i*	.698187
-.6980468	.698047
-.3167053 + .5323623*i*	.619445
-.3167053 - .5323623*i*	.619445
-.1180394	.118039

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 1.5. Austria – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**13.1043**	**16**	**0.66512**
2	**18.4378**	**16**	**0.29889**

H0: no autocorrelation at lag order

Table 1.6. Austria – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.977605	.934004	1.02121
2	.001721	-.00864	.012083	.000095	-.002718	.002907	.006301	-.015773	.028375	.955216	.895679	1.01475
3	.002685	-.012755	.018126	.006557	-.015449	.028563	.007373	-.014404	.02915	.947134	.884734	1.00953
4	.008042	-.021661	.037744	.01254	-.014397	.039477	.012277	-.020523	.045077	.922815	.851186	.994444
5	.008119	-.024774	.041012	.013339	-.012543	.039221	.028243	-.022014	.0785	.917311	.844505	.990117
6	.011213	-.032768	.055194	.023551	-.016004	.063106	.036203	-.02066	.093067	.891463	.810441	.972485
7	.013685	-.037828	.065198	.027554	-.016226	.071335	.031747	-.018814	.082308	.877174	.794399	.959949
8	.016935	-.042893	.076763	.027442	-.014848	.069731	.035832	-.017734	.089399	.873511	.789651	.957372
9	.017379	-.045542	.080301	.0272	-.014706	.069105	.035086	-.016851	.087022	.868785	.782595	.954974
10	.018194	-.048413	.084802	.028261	-.012287	.068809	.037229	-.018632	.093089	.860535	.770225	.950845
11	.018195	-.049552	.085943	.028358	-.012276	.068991	.043664	-.018841	.106169	.859715	.768977	.950454
12	.018577	-.051362	.088515	.028052	-.011576	.067681	.046163	-.018799	.111126	.858372	.766825	.949919

95% lower and upper bounds reported.

(1) irfname = IRF212, impulse = UIAUT, and response = Unemploymentrate.

(2) irfname = IRF212, impulse = UIAUT, and response = dLTGBY10Y.

(3) irfname = IRF212, impulse = UIAUT, and response = Inflation.

(4) irfname = IRF212, impulse = UIAUT, and response = UIAUT.

Table 1.7. Austria – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.043172	-.106614	.020271	.039593	.015832	.063353	.031878	-.02062	.084375	.424231	-.055009	.90347
1	-.02982	-.071	.01136	.009507	.001662	.017352	.037752	.014163	.061341	-.065932	-.219947	.088083
2	-.024447	-.06154	.012645	-.001678	-.009596	.00624	-.007329	-.032042	.017383	.038488	-.109038	.186014
3	-.016203	-.052959	.020553	.000914	-.006564	.008391	.006449	-.011472	.024369	.115642	-.045002	.276286
4	-.033607	-.065298	-.001917	.005894	-.001492	.013281	.008688	-.011114	.02849	.002766	-.134726	.140259
5	-.002196	-.027253	.022861	-.003338	-.013128	.006453	.013585	-.005542	.032712	.145059	-.013161	.303279
6	-.002416	-.026969	.022137	-.007919	-.018747	.00291	.005368	-.024055	.034791	.120626	-.022316	.263569
7	-.00497	-.027106	.017165	.003898	-.002657	.010453	.007721	-.007101	.022544	.028607	-.062339	.119553
8	-.008332	-.026616	.009952	.00133	-.004176	.006836	-.005478	-.025006	.014049	-.008368	-.088174	.071438
9	.001042	-.016848	.018931	-.00258	-.008207	.003047	-.002038	-.014133	.010056	.04885	-.029709	.12741
10	-.008294	-.025847	.00926	-.001758	-.006793	.003277	.005602	-.007897	.019101	.027406	-.036244	.091056
11	-.009789	-.025565	.005987	.003205	-.002463	.008873	.002161	-.009568	.013891	-.0262	-.091974	.039575
12	-.007225	-.021522	.007072	.001405	-.002724	.005535	.006182	-.010338	.022702	.010709	-.041236	.062654

95% lower and upper bounds reported.

(1) irfname = IRF212, impulse = UIGER, and response = Unemploymentrate.

(2) irfname = IRF212, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF212, impulse = UIGER, and response = Inflation.

(4) irfname = IRF212, impulse = UIGER, and response = UIAUT.

Table 1.8. Austria – Table Dynamic Multiplier

- **BELGIUM**

Sample: **2008m6** thru **2022m12** Number of obs = **175**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-462.57				.002545	5.37795	5.43663	5.52262
1	-407.364	110.41	16	0.000	.001626	4.92987	5.10592	5.3639*
2	-369.786	75.155	16	0.000	.001271	4.68327	4.97669	5.40665
3	-342.186	55.201*	16	0.000	.001114*	4.55069*	4.96149*	5.56343
4	-331.242	21.887	16	0.147	.001183	4.60848	5.13664	5.91057

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIBEL**

Exogenous: **UIGER _cons**

Table 2.4. Belgium – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.4764886 + .699036*i*	.845986
.4764886 - .699036*i*	.845986
.7647861	.764786
-.7430688	.743069
-.3716029 + .5233908*i*	.641893
-.3716029 - .5233908*i*	.641893
.6310745 + .02894741*i*	.631738
.6310745 - .02894741*i*	.631738
-.0975546 + .6191707*i*	.626809
-.0975546 - .6191707*i*	.626809
.3871237 + .3629371*i*	.530649
.3871237 - .3629371*i*	.530649
-.1973467 + .3953648*i*	.441881
-.1973467 - .3953648*i*	.441881
-.4298656	.429866
-.00522316	.005223

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 2.5. Belgium – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	22.0746	16	0.14080
2	13.6366	16	0.62576

H0: no autocorrelation at lag order

Table 2.6. Belgium – Varlmar

Step	(1) irf	(1) Lower	(1) Upper	(2) irf	(2) Lower	(2) Upper	(3) irf	(3) Lower	(3) Upper	(4) irf	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	1	1	1
1	-.004845	-.010599	.000909	-.007091	-.014267	.000085	-.002032	-.015558	.011494	.237442	.092899	.381985
2	.003677	-.00314	.010494	-.00094	-.008262	.006382	-.009115	-.022524	.004293	.263734	.119683	.407784
3	.01041	.003497	.017322	-.001023	-.008181	.006134	.006232	-.006769	.019233	.23821	.092771	.38365
4	.006498	-.000273	.013269	.000945	-.005796	.007686	-.00155	-.014309	.011208	.137323	-.004315	.278962
5	.002194	-.004063	.008452	-.000779	-.004906	.003349	-.005246	-.013835	.003343	.102895	-.010014	.215804
6	-.003187	-.008405	.002031	-.000874	-.003894	.002145	-.001442	-.009822	.006939	.121759	.009892	.233626
7	-.002729	-.005995	.000538	-.000375	-.003247	.002497	-.002619	-.010707	.005468	.072396	-.028814	.173606
8	-.000831	-.003717	.002056	-.00013	-.002471	.00221	-.00141	-.007461	.004642	.056086	-.0289	.141072
9	.002028	-.00076	.004816	-9.8e-06	-.001612	.001592	.000627	-.004223	.005476	.028822	-.047721	.105364
10	.002301	.000012	.004589	.000103	-.001244	.00145	.000018	-.004238	.004274	.017032	-.051901	.085965
11	.001207	-.001098	.003512	-.000086	-.00122	.001048	-.000162	-.003403	.003079	.016039	-.041837	.073914
12	-.000662	-.002855	.00153	-.00016	-.001027	.000707	-.000456	-.002912	.002	.019997	-.030347	.070341

95% lower and upper bounds reported.

(1) irfname = IRF313, impulse = UIBEL, and response = dUnemploymentrate.

(2) irfname = IRF313, impulse = UIBEL, and response = dLTGBY10Y.

(3) irfname = IRF313, impulse = UIBEL, and response = Inflation.

(4) irfname = IRF313, impulse = UIBEL, and response = UIBEL.

Table 2.7. Belgium – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.014877	-.036444	.00669	.040292	.013396	.067187	.066173	.015474	.116872	.874831	.333055	1.41661
1	-.018062	-.033056	-.003068	.005758	-.005659	.017174	.016004	-.004219	.036226	.215146	.011701	.418591
2	-.00978	-.020188	.000628	-.006188	-.018189	.005813	-.006614	-.025176	.011949	.177851	-.045306	.401009
3	.009584	-.004336	.023504	.003923	-.006161	.014008	.028723	.008838	.048607	.286795	.067156	.506434
4	.01277	-.002096	.027636	.007593	-.002034	.017221	.021845	.000158	.043533	.263995	.062997	.464992
5	.008314	-.003141	.01977	.000185	-.006576	.006947	.001785	-.010504	.014074	.141086	.015068	.267104
6	-.0014	-.008878	.006077	-.000729	-.006228	.00477	.002283	-.009028	.013594	.193881	.070724	.317038
7	-.003872	-.01066	.002915	.001059	-.003788	.005906	.003302	-.008485	.015088	.186613	.05446	.318767
8	-.003076	-.008482	.00233	.000743	-.003896	.005383	.000255	-.009353	.009863	.145762	.03475	.256774
9	.001592	-.003578	.006762	.000061	-.002754	.002876	.00105	-.005953	.008053	.090253	-.002712	.183217
10	.003973	-.001687	.009633	.000505	-.001805	.002814	.002082	-.004279	.008443	.068784	-.023656	.161223
11	.003735	-.001263	.008734	.000418	-.001731	.002568	.001424	-.004024	.006872	.053842	-.026853	.134537
12	.000738	-.002919	.004395	-.000045	-.001837	.001747	-6.7e-06	-.004356	.004343	.052889	-.015707	.121486

95% lower and upper bounds reported.

(1) irfname = IRF313, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF313, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF313, impulse = UIGER, and response = Inflation.

(4) irfname = IRF313, impulse = UIGER, and response = UIBEL.

Table 2.8. Belgium – Table Dynamic Multiplier

- **BULGARIA**

Sample: **2008m5** thru **2022m12** Number of obs = **176**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	504.703				2.5e-09	-5.62163	-5.54856	-5.44149*
1	560.202	111	25	0.000	1.8e-09*	-5.96821*	-5.71248*	-5.33771
2	579.786	39.168	25	0.035	1.9e-09	-5.90666	-5.46828	-4.82582
3	601.672	43.771*	25	0.012	1.9e-09	-5.87127	-5.25022	-4.34007

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIBUL BGNEUR**

Exogenous: **UIGER _cons**

Table 3.4. Bulgaria - Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.8428964	.842896
.7239596	.72396
-.3716467 + .4877296*i*	.61319
-.3716467 - .4877296*i*	.61319
-.1794867 + .5396703*i*	.568735
-.1794867 - .5396703*i*	.568735
.07521116 + .5383582*i*	.543586
.07521116 - .5383582*i*	.543586
.5363245	.536325
.4734027 + .1862588*i*	.508726
.4734027 - .1862588*i*	.508726
-.2440434 + .3119567*i*	.396073
-.2440434 - .3119567*i*	.396073
-.3376419 + .05693582*i*	.342409
-.3376419 - .05693582*i*	.342409

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 3.5. Bulgaria – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	25.9748	25	0.40894
2	24.1254	25	0.51214

H0: no autocorrelation at lag order

Table 3.6. Bulgaria – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.976908	.933045	1.02077
2	.003321	-.011838	.018481	.000855	-.007621	.009331	.024638	-.018518	.067794	.932991	.859389	1.00659
3	.003205	-.011765	.018174	.005167	-.01424	.024573	.027918	-.020872	.076709	.900692	.809803	.991582
4	.003242	-.011974	.018457	.010071	-.01725	.037393	.036214	-.014513	.086941	.86952	.764752	.974288
5	.003266	-.013003	.019534	.013895	-.01712	.04491	.036118	-.014774	.08701	.850825	.732899	.968752
6	.003224	-.013131	.019578	.01421	-.016797	.045217	.03642	-.014072	.086912	.83553	.706063	.964997
7	.003214	-.013473	.019901	.014547	-.016864	.045957	.037073	-.013937	.088083	.821234	.680925	.961544
8	.003195	-.013492	.019883	.014542	-.016868	.045952	.03711	-.013875	.088095	.811593	.663	.960186
9	.003192	-.013217	.019602	.014713	-.01677	.046196	.037311	-.013799	.088421	.804311	.648913	.95971
10	.003188	-.013057	.019434	.014795	-.016787	.046378	.037417	-.013801	.088635	.798837	.637873	.959801
11	.00319	-.012888	.019269	.014812	-.016752	.046377	.037449	-.013793	.088691	.795021	.629769	.960273
12	.0032	-.012702	.019102	.014871	-.016737	.046479	.037495	-.013789	.088778	.792206	.623504	.960908

Step	(5) fevd	(5) Lower	(5) Upper
0	0	0	0
1	.001796	-.01056	.014152
2	.03365	-.018427	.085728
3	.033206	-.018216	.084629
4	.033153	-.01716	.083467
5	.0351	-.017284	.087484
6	.035063	-.017291	.087416
7	.035076	-.01729	.087443
8	.035002	-.017306	.08731
9	.034977	-.017299	.087253
10	.034997	-.017311	.087305
11	.034984	-.017318	.087285
12	.034981	-.017322	.087285

95% lower and upper bounds reported.

(1) irfname = IRF414, impulse = UIBUL, and response = dUnemploymentrate.

(2) irfname = IRF414, impulse = UIBUL, and response = dLTGBY10Y.

(3) irfname = IRF414, impulse = UIBUL, and response = Inflation.

(4) irfname = IRF414, impulse = UIBUL, and response = UIBUL.

(5) irfname = IRF414, impulse = UIBUL, and response = BGNEUR.

Table 3.7. Bulgaria – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.013074	-.018668	.044816	.03599	-.00784	.079819	.097475	.029111	.165839	.05192	-.631577	.735417
1	.002975	-.01214	.01809	-.002843	-.014876	.00919	.024067	-.000847	.048981	.186118	-.027857	.400093
2	-.001153	-.010179	.007873	.014654	.00164	.027667	.013317	-.005116	.03175	.105339	-.128205	.338883
3	-.000039	-.00868	.008601	.007939	-.006105	.021983	.011573	-.006956	.030103	.170237	-.05142	.391895
4	-.000513	-.006232	.005207	.003606	-.003013	.010224	.008399	-.002007	.018804	.122151	-.004797	.249099
5	-.001674	-.006419	.003071	.004072	-.001262	.009406	.003856	-.004397	.012109	.126953	.001804	.252103
6	-.001283	-.005579	.003013	.002939	-.000832	.006711	.002185	-.005435	.009805	.11114	-.000105	.222385
7	-.001015	-.004531	.0025	.001548	-.001449	.004545	.001726	-.004165	.007617	.093595	.004744	.182447
8	-.001141	-.004275	.001992	.001591	-.000791	.003972	.001452	-.003286	.006189	.083578	.002739	.164418
9	-.001012	-.003796	.001772	.001096	-.000831	.003023	.000755	-.003242	.004753	.070048	-.000696	.140792
10	-.000816	-.00324	.001608	.000791	-.000829	.002411	.000655	-.002702	.004011	.059108	-.002325	.120541
11	-.000726	-.002921	.001469	.000736	-.000679	.002152	.00061	-.002276	.003495	.051023	-.004706	.106753
12	-.000636	-.002597	.001325	.000568	-.000623	.001759	.000399	-.002065	.002863	.042478	-.007114	.09207

Step	(5) dm	(5) Lower	(5) Upper
0	-3.5e-06	-.000047	.00004
1	-7.9e-06	-.000022	6.3e-06
2	-2.6e-06	-.000015	9.8e-06
3	-7.7e-07	-.000013	.000012
4	-1.7e-06	-7.6e-06	4.2e-06
5	1.1e-06	-3.2e-06	5.5e-06
6	1.7e-06	-2.4e-06	5.8e-06
7	8.9e-07	-2.1e-06	3.9e-06
8	1.0e-06	-1.2e-06	3.2e-06
9	1.2e-06	-8.3e-07	3.1e-06
10	8.4e-07	-7.8e-07	2.5e-06
11	7.2e-07	-6.5e-07	2.1e-06
12	6.6e-07	-5.5e-07	1.9e-06

95% lower and upper bounds reported.

(1) irfname = IRF414, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF414, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF414, impulse = UIGER, and response = Inflation.

(4) irfname = IRF414, impulse = UIGER, and response = UIBUL.

(5) irfname = IRF414, impulse = UIGER, and response = BGNEUR.

Table 3.8. Bulgaria – Table Dynamics Multiplier

- **CROATIA**

Sample: **2008m7** thru **2022m11** Number of obs = **173**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	286.624				2.8e-08	-3.19797	-3.12402	-3.01569
1	376.883	180.52	25	0.000	1.3e-08*	-3.9524*	-3.69359*	-3.31445*
2	401.331	48.897	25	0.003	1.3e-08	-3.94603	-3.50235	-2.8524
3	415.619	28.575	25	0.282	1.5e-08	-3.82218	-3.19364	-2.27288
4	438.565	45.893	25	0.007	1.6e-08	-3.79844	-2.98503	-1.79346
5	464.577	52.025*	25	0.001	1.5e-08	-3.81014	-2.81187	-1.34948

* optimal lag

Endogenous: **dUenmployentrate dLTGBY10Y Inflation UICRO dHRKEUR**

Exogenous: **UIGER _cons**

Table 4.4. Croatia – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
-.2191601 + .818716*i*	.847542
-.2191601 - .818716*i*	.847542
.5894623 + .5795706*i*	.826661
.5894623 - .5795706*i*	.826661
.7016914 + .4121432*i*	.813777
.7016914 - .4121432*i*	.813777
-.6341936 + .498415*i*	.80661
-.6341936 - .498415*i*	.80661
.7800322 + .02001125*i*	.780289
.7800322 - .02001125*i*	.780289
.330629 + .6909745*i*	.766003
.330629 - .6909745*i*	.766003
.2337796 + .7046595*i*	.742427
.2337796 - .7046595*i*	.742427
-.7366534	.736653
-.524488 + .3727937*i*	.643477
-.524488 - .3727937*i*	.643477
-.3233537 + .5518397*i*	.639597
-.3233537 - .5518397*i*	.639597
-.5418487 + .2217489*i*	.585468
-.5418487 - .2217489*i*	.585468
.440516 + .2287796*i*	.496381
.440516 - .2287796*i*	.496381
.1823768 + .2002079*i*	.270822
.1823768 - .2002079*i*	.270822

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 4.5. Croatia – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**40.4847**	**25**	**0.02599**
2	**16.0154**	**25**	**0.91437**

H0: no autocorrelation at lag order

Table 4.6. Croatia – Varlmar

Step	(1) irf	(1) Lower	(1) Upper	(2) irf	(2) Lower	(2) Upper	(3) irf	(3) Lower	(3) Upper	(4) irf	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	1	1	1
1	-.001905	-.00828	.00447	-.000551	-.009339	.008237	.003743	-.009933	.017418	.139103	-.005566	.283773
2	-.006851	-.015382	.00168	.004066	-.004541	.012672	-.001079	-.016551	.014394	.017439	-.129049	.163927
3	-.004761	-.013727	.004204	.001788	-.00656	.010136	-.005361	-.020374	.009652	.122816	-.021123	.266755
4	-.006472	-.015072	.002129	-.000376	-.008717	.007964	.00314	-.011596	.017876	-.01542	-.15948	.128639
5	-.008196	-.016587	.000196	.002649	-.005557	.010855	-.000329	-.014662	.014003	.313927	.174343	.45351
6	-.006176	-.013761	.001409	.001005	-.003243	.005253	-.001547	-.011726	.008631	.067422	-.042753	.177597
7	-.004781	-.010801	.001239	.000547	-.003454	.004548	-.000952	-.008271	.006368	.027052	-.078346	.132449
8	-.002177	-.007105	.002752	.001862	-.001708	.005432	-.002005	-.008371	.004361	.069842	-.028613	.168297
9	-.000804	-.005549	.003941	-.000253	-.003294	.002788	.000726	-.004505	.005957	-.010203	-.107301	.086894
10	-.001384	-.005877	.003109	.000271	-.002277	.002819	-.00103	-.005599	.003538	.092865	-.000281	.186011
11	-.001787	-.005779	.002205	.000383	-.001666	.002431	-.000871	-.004433	.00269	.023319	-.045715	.092353
12	-.002433	-.005936	.001069	.000481	-.00127	.002232	-.000578	-.003615	.002459	.008192	-.055403	.071788

Step	(5) irf	(5) Lower	(5) Upper
0	0	0	0
1	-.000029	-.000056	-2.5e-06
2	.000014	-.000013	.000041
3	-4.1e-06	-.00003	.000022
4	-8.3e-06	-.000034	.000017
5	-5.8e-06	-.000032	.00002
6	-5.6e-06	-.000021	9.6e-06
7	3.8e-06	-.000011	.000018
8	2.4e-06	-.000011	.000016
9	1.6e-06	-.000012	.000015
10	-1.7e-06	-.000013	9.7e-06
11	-2.2e-06	-8.9e-06	4.5e-06
12	7.1e-07	-5.2e-06	6.6e-06

95% lower and upper bounds reported.

(1) irfname = IRF51, impulse = UICRO, and response = dUenmploymentrate.

(2) irfname = IRF51, impulse = UICRO, and response = dLTGBY10Y.

(3) irfname = IRF51, impulse = UICRO, and response = Inflation.

(4) irfname = IRF51, impulse = UICRO, and response = UICRO.

(5) irfname = IRF51, impulse = UICRO, and response = dHRKEUR.

Table 4.7. Croatia – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.002586	-.032124	.026952	.050858	.010142	.091574	.070491	.00713	.133852	.708173	.037904	1.37844
1	.002626	-.022091	.027342	-.004258	-.018252	.009737	.052588	.018487	.08669	.348952	.097055	.600848
2	.000698	-.016551	.017947	.000114	-.013716	.013944	.01558	-.007387	.038546	-.1879	-.46102	.08522
3	-.002927	-.015268	.009413	.013725	-.000487	.027937	.007962	-.015204	.031128	.126186	-.118034	.370406
4	-.005628	-.021588	.010332	.012424	-.001544	.026393	.004279	-.020151	.028709	-.072514	-.296735	.151708
5	-.000802	-.017687	.016082	-.01628	-.035136	.002577	-.013719	-.039673	.012236	.301465	.059056	.543874
6	.000854	-.012443	.01415	-.001264	-.011369	.008842	-.017716	-.041412	.005981	.097055	-.055688	.249798
7	.000978	-.008781	.010737	.003575	-.005342	.012491	-.00493	-.021404	.011544	.005207	-.137475	.147889
8	.002848	-.006245	.011942	-.003664	-.013262	.005934	-.007879	-.023543	.007785	.084388	-.032666	.201441
9	.002769	-.005451	.01099	-.007761	-.016953	.001432	-.003528	-.016085	.009028	.007186	-.092592	.106963
10	-.002148	-.009128	.004831	.005173	-.003205	.013551	.002621	-.007963	.013206	.07082	-.023763	.165403
11	-.003889	-.009967	.002189	.002108	-.00383	.008046	.004506	-.005683	.014695	.055744	-.015269	.126757
12	-.003627	-.008632	.001379	-.002367	-.008027	.003294	.001729	-.006322	.00978	.006142	-.052736	.06502

Step	(5) dm	(5) Lower	(5) Upper
0	.00007	-.000053	.000194
1	-.000035	-.00009	.00002
2	.000015	-.000031	.00006
3	-3.5e-07	-.000041	.00004
4	7.8e-06	-.00004	.000056
5	-.000034	-.000081	.000013
6	-.000014	-.000044	.000016
7	4.6e-06	-.000018	.000027
8	-3.6e-06	-.000026	.000019
9	-.00001	-.000032	.000011
10	5.9e-06	-.000013	.000024
11	-8.1e-07	-.000013	.000011
12	-3.1e-06	-.000013	7.3e-06

95% lower and upper bounds reported.

(1) irfname = IRF51, impulse = UIGER, and response = dUenmploymentrate.

(2) irfname = IRF51, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF51, impulse = UIGER, and response = Inflation.

(4) irfname = IRF51, impulse = UIGER, and response = UICRO.

(5) irfname = IRF51, impulse = UIGER, and response = dHRKEUR.

Table 4.8. Croatia – Table Dynamic Multiplier

- **CYPRUS**

Sample: **2008m5** thru **2022m12** Number of obs = **176**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-1032.08				26.6492	11.7964	11.8402	11.9045
1	-986.485	91.194	9	0.000	17.5829	11.3805	11.4901*	11.6507*
2	-979.482	14.007	9	0.122	17.9889	11.4032	11.5786	11.8355
3	-959.335	40.294*	9	0.000	15.8535*	11.2765*	11.5176	11.871

* optimal lag

Endogenous: **dUnemploymentrate Inflation UICYP**

Exogenous: **UIGER _cons**

Table 5.3. Cyprus – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.822165	.822165
.4676842 + .4868092*i*	.675064
.4676842 - .4868092*i*	.675064
-.296827 + .554627*i*	.629061
-.296827 - .554627*i*	.629061
-.6143307	.614331
.4045038 + .2198883*i*	.460407
.4045038 - .2198883*i*	.460407
-.3694156	.369416

All the eigenvalues lie inside the unit circle
VAR satisfies stability condition.

Table 4.5. Cyprus -Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	9.8987	9	0.35875
2	9.7051	9	0.37489

H0: no autocorrelation at lag order

Table 5.5. Cyprus -Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper
0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	.967547	.916045	1.01905
2	.008503	-.015233	.032238	.000212	-.003731	.004154	.9566	.89393	1.01927
3	.035342	-.018452	.089136	.000798	-.005824	.00742	.954887	.888467	1.02131
4	.036665	-.014893	.088222	.00521	-.010819	.02124	.923989	.834555	1.01342
5	.0366	-.014881	.08808	.005661	-.012451	.023772	.913157	.810778	1.01554
6	.036953	-.015727	.089633	.005995	-.014032	.026023	.906219	.795075	1.01736
7	.037324	-.015156	.089803	.006252	-.014728	.027231	.899448	.780547	1.01835
8	.037362	-.014998	.089723	.006369	-.014978	.027716	.895791	.772335	1.01925
9	.037365	-.015037	.089766	.006384	-.015002	.027769	.893787	.767642	1.01993
10	.037406	-.014941	.089753	.006461	-.015105	.028026	.892091	.763748	1.02043
11	.037419	-.014892	.089729	.006502	-.015178	.028183	.891067	.761296	1.02084
12	.037419	-.014884	.089722	.006536	-.015257	.028328	.890411	.759697	1.02112

95% lower and upper bounds reported.

(1) irfname = IRF6, impulse = UICYP, and response = dUnemploymentrate.

(2) irfname = IRF6, impulse = UICYP, and response = Inflation.

(3) irfname = IRF6, impulse = UICYP, and response = UICYP.

Table 5.6. Cyprus – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper
0	-.017781	-.053045	.017484	.092955	-.003442	.189352	.374382	-1.36012	2.10888
1	-.007812	-.023468	.007844	.02752	-.00269	.05773	.244867	-.261664	.751398
2	-.004664	-.015428	.006099	.019338	-.004784	.04346	.117031	-.305317	.539378
3	-.003681	-.010475	.003112	-.021959	-.052158	.00824	.382228	-.297559	1.06202
4	-.001875	-.006743	.002994	-.014678	-.034769	.005412	.213992	-.132198	.560183
5	.000462	-.003489	.004414	-.013431	-.031161	.0043	.181589	-.095114	.458292
6	9.4e-06	-.002387	.002406	-.001596	-.009402	.006209	.175033	-.128193	.478259
7	.000309	-.001654	.002273	.001077	-.006475	.008629	.132816	-.073486	.339118
8	.00019	-.001472	.001851	.003433	-.004414	.01128	.095301	-.067091	.257693
9	-.000093	-.00132	.001134	.000968	-.002585	.004521	.092983	-.065009	.250975
10	-.000191	-.001092	.000711	-.000084	-.002639	.002471	.071036	-.050467	.19254
11	-.000103	-.000754	.000549	-.001213	-.003935	.001509	.058006	-.042206	.158219
12	-.000105	-.000651	.000441	-.001029	-.00301	.000952	.049737	-.040465	.139939

95% lower and upper bounds reported.

(1) irfname = IRF6, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF6, impulse = UIGER, and response = Inflation.

(3) irfname = IRF6, impulse = UIGER, and response = UICYP.

Table 5.7. Cyprus – Table Dynamic Multiplier

- **CZECH REPUBLIC**

Sample: **2008m6** thru **2022m12** Number of obs = **175**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	410.161				7.1e-09	-4.57327	-4.49991*	-4.39242*
1	433.07	45.818	25	0.007	7.3e-09	-4.54937	-4.29262	-3.91641
2	464.543	62.947	25	0.000	6.8e-09	-4.62335	-4.18322	-3.53828
3	491.427	53.767	25	0.001	6.6e-09	-4.64487	-4.02135	-3.10769
4	521.187	59.52*	25	0.000	6.3e-09*	-4.69927*	-3.89236	-2.70998

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UICZ dCZKEUR**

Exogenous: **UIGER _cons**

Table 6.4. Czech Republic – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
-.3216367 + .723768*i*	.792017
-.3216367 - .723768*i*	.792017
.1547003 + .7553181*i*	.770998
.1547003 - .7553181*i*	.770998
-.4978942 + .5358598*i*	.731467
-.4978942 - .5358598*i*	.731467
.5312928 + .4745397*i*	.712362
.5312928 - .4745397*i*	.712362
-.3927539 + .5852649*i*	.704834
-.3927539 - .5852649*i*	.704834
.6873798	.68738
-.5712569 + .1910333*i*	.602352
-.5712569 - .1910333*i*	.602352
.1945812 + .55824*i*	.59118
.1945812 - .55824*i*	.59118
.551154 + .2129884*i*	.590876
.551154 - .2129884*i*	.590876
.5634704	.56347
-.08923145 + .09657925*i*	.131491
-.08923145 - .09657925*i*	.131491

All the eigenvalues lie inside the unit circle.

VAR satisfies stability condition.

Table 6.5. Czech Republic – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**47.1609**	**25**	**0.00469**
2	**26.3332**	**25**	**0.38999**

H0: no autocorrelation at lag order

Table 6.6. Czech Republic – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.927119	.852954	1.00128
2	.014539	-.016547	.045626	.011756	-.015665	.039176	.00355	-.012203	.019303	.885083	.792325	.97784
3	.013823	-.015627	.043273	.01777	-.02022	.055761	.004098	-.011872	.020069	.860341	.762433	.958249
4	.012972	-.014185	.040128	.018473	-.019325	.056271	.004772	-.012315	.02186	.851193	.750066	.952319
5	.013573	-.010649	.037796	.020206	-.021266	.061679	.015277	-.019071	.049625	.82223	.71866	.925799
6	.015159	-.010762	.041079	.019778	-.020847	.060404	.015278	-.019026	.049582	.819929	.714383	.925476
7	.015865	-.010896	.042626	.020009	-.020066	.060084	.01701	-.019236	.053256	.818227	.711756	.924698
8	.015986	-.010043	.042015	.019874	-.019659	.059407	.018066	-.019198	.055329	.815298	.707327	.923269
9	.015897	-.009959	.041754	.020006	-.019625	.059638	.019831	-.020235	.059898	.813936	.705696	.922177
10	.015879	-.010141	.041899	.020013	-.019651	.059677	.019842	-.020257	.059942	.813762	.70533	.922193
11	.015881	-.010044	.041806	.020146	-.01961	.059902	.019854	-.020249	.059956	.812986	.704265	.921707
12	.015915	-.009972	.041803	.02017	-.019677	.060017	.020121	-.020355	.060597	.812794	.704046	.921542

Step	(5) fevd	(5) Lower	(5) Upper
0	0	0	0
1	.012501	-.019732	.044735
2	.013692	-.019304	.046688
3	.018732	-.020504	.057969
4	.018812	-.020621	.058246
5	.025147	-.016853	.067148
6	.025346	-.016644	.067335
7	.027253	-.016681	.071187
8	.027264	-.016714	.071242
9	.027314	-.016843	.071472
10	.02741	-.016891	.071712
11	.027523	-.016829	.071874
12	.027521	-.016827	.071869

95% lower and upper bounds reported.

(1) irfname = IRF7, impulse = UICZ, and response = dUnemploymentrate.

(2) irfname = IRF7, impulse = UICZ, and response = dLTGBY10Y.

(3) irfname = IRF7, impulse = UICZ, and response = Inflation.

(4) irfname = IRF7, impulse = UICZ, and response = UICZ.

(5) irfname = IRF7, impulse = UICZ, and response = dCZKEUR.

Table 6.7. Czech Republic – Table FEVD

95% lower and upper bounds reported.

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.009717	-.03895	.019516	.030435	.002382	.058488	.111249	.043221	.179277	-.242753	-.784669	.299163
1	.007598	-.004755	.019952	.012053	-.000369	.024476	.012499	-.008638	.033635	.088294	-.104104	.280692
2	-.001828	-.013096	.00944	.001752	-.010876	.01438	.021507	-.000121	.043135	.212405	.01036	.414451
3	-.004746	-.019773	.01028	-.002608	-.01422	.009005	.023462	-.002929	.049852	.056431	-.112279	.225142
4	-.004918	-.015286	.005451	-.001106	-.010796	.008583	-.011809	-.035246	.011628	.199589	-.051348	.450527
5	-.00099	-.008522	.006541	.003864	-.003001	.010729	.002843	-.010518	.016204	.029525	-.099879	.158928
6	-.000383	-.008541	.007775	.00033	-.004325	.004985	.000015	-.012732	.012761	-.023872	-.131149	.083406
7	-.00132	-.007353	.004712	-.001321	-.006686	.004045	-.000509	-.012082	.011063	.024749	-.085366	.134865
8	.001239	-.00385	.006328	-.000268	-.003659	.003123	.008411	-.00074	.017562	-.052316	-.142883	.038252
9	.000278	-.00346	.004015	.001333	-.00158	.004247	.000216	-.005021	.005452	-.013413	-.071552	.044726
10	-.00059	-.003652	.002471	.001716	-.00046	.003891	.000325	-.004167	.004818	.016771	-.033317	.06686
11	.000798	-.001849	.003445	-.000184	-.001935	.001567	.001623	-.002655	.005902	-.008085	-.053572	.037402
12	-.00014	-.00166	.001381	-.000721	-.00233	.000888	-.001312	-.004895	.002272	.010773	-.022645	.044191

Step	(5) dm	(5) Lower	(5) Upper
0	.000043	-.000039	.000124
1	-5.5e-06	-.00003	.000019
2	.000021	-8.9e-06	.000051
3	4.6e-06	-.000025	.000034
4	-6.2e-06	-.000032	.00002
5	-2.2e-06	-.000015	.000011
6	-7.0e-06	-.000019	4.8e-06
7	-3.1e-06	-.000013	6.3e-06
8	-1.9e-07	-8.0e-06	7.6e-06
9	7.6e-07	-4.0e-06	5.5e-06
10	1.7e-06	-2.1e-06	5.6e-06
11	1.1e-08	-2.9e-06	2.9e-06
12	-4.9e-08	-2.6e-06	2.5e-06

(1) irfname = IRF7, impulse = UIGER, and response = dUnemploymentrate.
(2) irfname = IRF7, impulse = UIGER, and response = dLTGBY10Y.
(3) irfname = IRF7, impulse = UIGER, and response = Inflation.
(4) irfname = IRF7, impulse = UIGER, and response = UICZ.
(5) irfname = IRF7, impulse = UIGER, and response = dCZKEUR.

Table 6.8. Czech Republic – Table Dynamic Multiplier

- **DENMARK**

Sample: **2008m6** thru **2022m12** Number of obs = **175**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-678.987				.030191	7.85128	7.90997	7.99596*
1	-644.536	68.903*	16	0.000	.024453*	7.64041*	7.81646*	8.07444
2	-631.787	25.498	16	0.062	.025389	7.67756	7.97099	8.40094
3	-622.223	19.128	16	0.262	.027351	7.75112	8.16191	8.76385
4	-614.688	15.069	16	0.520	.030176	7.84787	8.37603	9.14995

* optimal lag
Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIDNK**
Exogenous: **UIGER _cons**

Table 7.4. Denmark – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.7296908	.729691
-.4492594 + .5394689*i*	.70204
-.4492594 - .5394689*i*	.70204
-.183558 + .6233747*i*	.649838
-.183558 - .6233747*i*	.649838
-.2851031 + .5165105*i*	.589972
-.2851031 - .5165105*i*	.589972
.2083516 + .5311751*i*	.570576
.2083516 - .5311751*i*	.570576
.4147524 + .3894863*i*	.568963
.4147524 - .3894863*i*	.568963
-.4862777 + .1690032*i*	.514809
-.4862777 - .1690032*i*	.514809
.3429207 + .1339579*i*	.368157
.3429207 - .1339579*i*	.368157
.1292067	.129207

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 7.5. Denmark – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	6.4486	16	0.98249
2	24.3704	16	0.08172

H0: no autocorrelation at lag order

Table 7.6. Denmark – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.97919	.937334	1.02105
2	.005031	-.013254	.023316	.002643	-.012121	.017406	.01405	-.0203	.0484	.975454	.928522	1.02239
3	.005002	-.013839	.023843	.013965	-.015391	.04332	.013859	-.020226	.047944	.96683	.910549	1.02311
4	.004997	-.013997	.02399	.013995	-.015904	.043893	.018491	-.022021	.059003	.946749	.875292	1.01821
5	.008437	-.016257	.03313	.028912	-.018254	.076078	.017988	-.021057	.057032	.94521	.876001	1.01442
6	.00847	-.015541	.032481	.030799	-.01826	.079858	.018899	-.020351	.05815	.944013	.873812	1.01421
7	.00857	-.015369	.032509	.030789	-.018261	.079838	.018836	-.020312	.057984	.943021	.871341	1.0147
8	.008632	-.015553	.032817	.031048	-.018461	.080557	.018967	-.020272	.058207	.942528	.87022	1.01484
9	.009166	-.01488	.033212	.031488	-.018609	.081584	.01954	-.019727	.058807	.942256	.86965	1.01486
10	.009182	-.014845	.033208	.031549	-.018629	.081727	.019612	-.019761	.058985	.942195	.869479	1.01491
11	.009183	-.014847	.033214	.03158	-.018669	.081829	.019616	-.019754	.058986	.942145	.869361	1.01493
12	.009234	-.014817	.033285	.031637	-.018689	.081962	.019668	-.019714	.05905	.942118	.869304	1.01493

95% lower and upper bounds reported.

(1) irfname = IRF8, impulse = UIDNK, and response = dUnemploymentrate.

(2) irfname = IRF8, impulse = UIDNK, and response = dLTGBY10Y.

(3) irfname = IRF8, impulse = UIDNK, and response = Inflation.

(4) irfname = IRF8, impulse = UIDNK, and response = UIDNK.

Table 7.7. Denmark – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.04357	-.029289	.11643	.022757	-.00644	.051954	.072821	.007728	.137914	1.29309	.577268	2.00892
1	-.037202	-.094439	.020035	.008651	-.001956	.019258	.003171	-.020708	.02705	.242343	.010307	.474378
2	.004918	-.023597	.033433	-.008226	-.020701	.004248	-.010656	-.036761	.015449	.114575	-.109071	.338222
3	.000376	-.028116	.028868	.001919	-.007667	.011504	.016426	-.004756	.037609	.152806	-.079992	.385604
4	-.012026	-.044351	.020298	.006382	-.004125	.01689	.001201	-.026396	.028798	.153641	-.066856	.374137
5	.00026	-.017663	.018183	.00203	-.003802	.007862	-.001006	-.015503	.013491	.076227	-.032431	.184884
6	.001106	-.010324	.012536	.000311	-.003202	.003823	.001628	-.008434	.011689	.064479	-.020963	.14992
7	-.000921	-.010237	.008396	.000576	-.002395	.003547	-.001353	-.009352	.006646	.046701	-.042191	.135593
8	-.003254	-.010253	.003746	.000989	-.001672	.003649	.001795	-.005004	.008594	.02758	-.040329	.095488
9	.000109	-.003928	.004145	.000556	-.00091	.002023	.001965	-.002066	.005996	.02233	-.023937	.068597
10	.000064	-.00286	.002988	.000289	-.000615	.001193	-.000218	-.003276	.00284	.018914	-.020366	.058194
11	-.000925	-.003208	.001359	.000341	-.000433	.001114	.000451	-.001673	.002575	.015954	-.013962	.045871
12	-.000082	-.001901	.001737	.000238	-.000425	.000901	.000452	-.001075	.00198	.007885	-.017498	.033268

95% lower and upper bounds reported.

(1) irfname = IRF8, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF8, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF8, impulse = UIGER, and response = Inflation.

(4) irfname = IRF8, impulse = UIGER, and response = UIDNK.

Table 7.8. Denmark – Table Dynamic Multiplier

- **ESTONIA**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	**-1027.03**				**23.5487**	**11.6727**	**11.7164**	**11.7804**
1	**-980.613**	**92.841***	**9**	**0.000**	**15.4295***	**11.2499***	**11.359***	**11.519***
2	**-974.149**	**12.929**	**9**	**0.166**	**15.8802**	**11.2785**	**11.4532**	**11.7092**

* optimal lag

Endogenous: **dUnemploymentrate Inflation UIEST**

Exogenous: **UIGER _cons**

Table 8.4. Estonia – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.6815258	.681526
.4579898	.45799
-.3062687	.306269
.1789238 + .1003724*i*	.205154
.1789238 - .1003724*i*	.205154
-.2013112	.201311

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 8.5. Estonia – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	10.1119	9	0.34150
2	5.7206	9	0.76752

H0: no autocorrelation at lag order

Table 8.6. Estonia – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper
0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	.996734	.97995	1.01352
2	.000433	-.004925	.005791	.002286	-.010739	.015312	.991152	.962212	1.02009
3	.003004	-.013701	.01971	.003946	-.015115	.023006	.941288	.875548	1.00703
4	.004315	-.018402	.027033	.004785	-.018344	.027914	.924792	.842739	1.00684
5	.004959	-.020367	.030285	.005221	-.020093	.030536	.913866	.820956	1.00678
6	.00523	-.021108	.031568	.005428	-.020926	.031783	.909228	.810922	1.00754
7	.00535	-.021417	.032116	.005528	-.021346	.032403	.906861	.80547	1.00825
8	.005402	-.021552	.032356	.005576	-.021552	.032703	.905765	.802753	1.00878
9	.005426	-.021614	.032465	.005598	-.021654	.03285	.90524	.801364	1.00912
10	.005436	-.021643	.032516	.005608	-.021704	.032921	.904994	.800672	1.00932
11	.005441	-.021656	.032539	.005613	-.021729	.032955	.904879	.800327	1.00943
12	.005444	-.021663	.03255	.005615	-.021741	.032972	.904825	.800157	1.00949

95% lower and upper bounds reported.

(1) irfname = IRF9, impulse = UIEST, and response = dUnemploymentrate.

(2) irfname = IRF9, impulse = UIEST, and response = Inflation.

(3) irfname = IRF9, impulse = UIEST, and response = UIEST.

Table 8.7. Estonia – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper
0	-.007135	-.060596	.046326	.068555	-.008709	.14582	.06807	-1.6623	1.79844
1	-.005663	-.031772	.020446	.023344	-.002809	.049497	.082423	-.249295	.414142
2	-.006103	-.018528	.006322	.018913	-.000461	.038288	.322425	-.141909	.786759
3	-.004684	-.012424	.003057	.010908	-.000355	.022171	.18742	-.068981	.44382
4	-.003761	-.009522	.002	.007443	-.000676	.015562	.166825	-.038093	.371742
5	-.002743	-.006978	.001492	.00483	-.000937	.010596	.111676	-.023461	.246813
6	-.001984	-.005156	.001187	.003251	-.001146	.007647	.08161	-.018708	.181929
7	-.001395	-.003735	.000945	.002176	-.001142	.005494	.056063	-.016072	.128197
8	-.000974	-.002704	.000757	.001471	-.001065	.004007	.039069	-.014872	.093009
9	-.000673	-.001947	.000601	.000995	-.000924	.002915	.026816	-.013395	.067028
10	-.000463	-.001402	.000475	.000676	-.000773	.002124	.018427	-.011874	.048727
11	-.000318	-.001008	.000373	.000459	-.000625	.001543	.012608	-.01017	.035385
12	-.000218	-.000725	.00029	.000312	-.000495	.001119	.008621	-.008494	.025736

95% lower and upper bounds reported.

(1) irfname = IRF9, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF9, impulse = UIGER, and response = Inflation.

(3) irfname = IRF9, impulse = UIGER, and response = UIEST.

Table 8.8. Estonia – Table Dynamic Multiplier

- **FINLAND**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	**-731.668**				**.050103**	**8.35783**	**8.41605**	**8.50138**
1	**-591.015**	**281.3**	**16**	**0.000**	**.012252**	**6.94933**	**7.12399***	**7.37999***
2	**-567.93**	**46.17***	**16**	**0.000**	**.011314***	**6.86927***	**7.16037**	**7.58704**

* optimal lag

Endogenous: **Unemploymentrate dLTGBY10Y Inflation UIFIN**

Exogenous: **UIGER _cons**

Table 9.4. Finland – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.9214362	**.921436**
.3939191 + .1814128*i*	**.433685**
.3939191 - .1814128*i*	**.433685**
-.388103	**.388103**
-.334288	**.334288**
.3215173	**.321517**
-.2055106 + .2427068*i*	**.318027**
-.2055106 - .2427068*i*	**.318027**

All the eigenvalues lie inside the unit circle.

VAR satisfies stability condition.

Table 9.5. Finland – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**37.5608**	**16**	**0.00175**
2	**21.5721**	**16**	**0.15755**

H0: no autocorrelation at lag order

Table 9.6. Finland – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.99184	.965367	1.01831
2	.000297	-.004214	.004808	.011266	-.017132	.039664	.000148	-.003317	.003613	.983948	.948049	1.01985
3	.001659	-.010588	.013906	.037435	-.02062	.09549	.000479	-.005497	.006456	.983737	.947995	1.01948
4	.003017	-.013979	.020013	.035639	-.019536	.090813	.002036	-.010824	.014897	.957875	.907081	1.00867
5	.006046	-.019402	.031495	.03618	-.018597	.090957	.002112	-.010872	.015097	.953409	.898617	1.0082
6	.00789	-.024023	.039803	.036265	-.018593	.091123	.002743	-.012387	.017872	.949554	.892915	1.00619
7	.00905	-.027059	.045158	.036618	-.018389	.091626	.002749	-.012279	.017777	.945964	.888053	1.00387
8	.009949	-.029188	.049086	.036625	-.018403	.091652	.002857	-.012397	.018111	.943614	.88464	1.00259
9	.010753	-.031072	.052577	.036635	-.018382	.091652	.002856	-.012388	.018099	.941769	.882065	1.00147
10	.011291	-.032495	.055078	.03663	-.018383	.091643	.002871	-.012415	.018157	.940046	.879478	1.00061
11	.011787	-.033705	.057278	.036631	-.018378	.091641	.002871	-.012408	.018151	.938742	.877524	.999961
12	.012207	-.03476	.059173	.03663	-.018378	.091638	.00288	-.012414	.018173	.937517	.875586	.999447

95% lower and upper bounds reported.

(1) irfname = IRF101, impulse = UIFIN, and response = Unemploymentrate.

(2) irfname = IRF101, impulse = UIFIN, and response = dLTGBY10Y.

(3) irfname = IRF101, impulse = UIFIN, and response = Inflation.

(4) irfname = IRF101, impulse = UIFIN, and response = UIFIN.

Table 9.7. Finland – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.013462	-.071439	.044515	.034733	.012842	.056624	.056737	.013777	.099698	1.30961	.681067	1.93814
1	-.028518	-.057455	.00042	.011194	.000921	.021466	.015596	-.00258	.033772	-.025966	-.27788	.225947
2	-.014358	-.03841	.009694	-.009144	-.019275	.000987	.017857	.00091	.034804	.137927	-.093692	.369546
3	-.020593	-.050464	.009278	.005774	-.004746	.016295	.002523	-.015684	.02073	.190942	-.069044	.450928
4	-.026794	-.049169	-.00442	.001754	-.004176	.007683	.000625	-.0073	.00855	.086989	-.028773	.202752
5	-.022881	-.042231	-.00353	.001439	-.002211	.005088	.001736	-.004686	.008158	.028627	-.06682	.124075
6	-.020269	-.040162	-.000376	.000731	-.002103	.003564	.002427	-.000583	.005438	.042521	-.019104	.104146
7	-.020831	-.03881	-.002853	.000305	-.001273	.001884	.001574	-.000983	.004131	.032986	-.007911	.073882
8	-.019524	-.036049	-.002999	-9.4e-07	-.001117	.001115	.000944	-.001034	.002922	.032532	-.000786	.065849
9	-.018313	-.034677	-.001949	.000238	-.000591	.001067	.000766	-.00089	.002422	.028361	-.001954	.058676
10	-.01781	-.033344	-.002275	.000247	-.000488	.000982	.000663	-.000789	.002114	.025859	-.001109	.052827
11	-.016828	-.031519	-.002137	.000156	-.000531	.000843	.000734	-.000638	.002107	.022185	-.003343	.047713
12	-.015847	-.030074	-.00162	.000144	-.000508	.000795	.000693	-.000595	.001981	.021536	-.00294	.046011

95% lower and upper bounds reported.

(1) irfname = IRF101, impulse = UIGER, and response = Unemploymentrate.

(2) irfname = IRF101, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF101, impulse = UIGER, and response = Inflation.

(4) irfname = IRF101, impulse = UIGER, and response = UIFIN.

Table 9.8. Finland – Table Dynamic Multiplier

- **FRANCE**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-159.555				.000078	1.89328	1.9515	2.03683
1	-105.21	108.69	16	0.000	.000051	1.46	1.63466	1.89066*
2	-70.3652	69.689*	16	0.000	.000041*	1.24706*	1.53817*	1.96484

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIFRA**

Exogenous: **UIGER _cons**

Table 10.4. France – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.7799354	.779935
.2585018 + .452247*i*	.520913
.2585018 - .452247*i*	.520913
-.484185	.484185
.01770491 + .4410349*i*	.44139
.01770491 - .4410349*i*	.44139
.3455633	.345563
-.26946	.26946

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 10.5. France – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	19.3586	16	0.25051
2	13.5208	16	0.63437

H0: no autocorrelation at lag order

Table 10.6. France – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.967989	.916961	1.01902
2	.005191	-.012137	.022518	.002268	-.009636	.014173	.005208	-.01347	.023886	.948968	.88001	1.01793
3	.006839	-.009766	.023444	.002898	-.009383	.015179	.010534	-.018416	.039484	.931039	.852746	1.00933
4	.008171	-.010518	.026859	.003131	-.009606	.015868	.010583	-.018914	.040081	.917286	.823193	1.01138
5	.009183	-.01237	.030735	.003543	-.01013	.017216	.011594	-.020106	.043293	.911255	.807943	1.01457
6	.00935	-.01287	.031569	.003725	-.01038	.017831	.011603	-.020089	.043294	.908153	.799937	1.01637
7	.009428	-.01316	.032015	.003874	-.010695	.018442	.011799	-.020367	.043965	.906241	.79489	1.01759
8	.009473	-.013332	.032279	.003938	-.010863	.018738	.011848	-.020394	.044089	.904982	.791723	1.01824
9	.009519	-.013486	.032525	.003979	-.010972	.018929	.011912	-.020464	.044287	.904238	.789821	1.01865
10	.00955	-.013587	.032686	.004003	-.011036	.019042	.011935	-.020485	.044355	.903794	.788701	1.01889
11	.009569	-.013649	.032786	.00402	-.011077	.019117	.011953	-.020505	.044412	.903527	.788031	1.01902
12	.009579	-.013684	.032841	.00403	-.011101	.019161	.011963	-.020514	.044439	.903365	.787628	1.0191

95% lower and upper bounds reported.

(1) irfname = IRF100, impulse = UIFRA, and response = dUnemploymentrate.

(2) irfname = IRF100, impulse = UIFRA, and response = dLTGBY10Y.

(3) irfname = IRF100, impulse = UIFRA, and response = Inflation.

(4) irfname = IRF100, impulse = UIFRA, and response = UIFRA.

Table 10.7. France – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.00431	-.024529	.015908	.032521	.010213	.054828	.031189	-.016825	.079203	.095628	-.003433	.194689
1	-.001049	-.010836	.008738	.014283	.00506	.023506	.013204	-.005842	.03225	.026783	-.008489	.062055
2	-.003758	-.009723	.002207	-.003041	-.010498	.004415	.010702	-.003873	.025277	.069621	.023764	.115478
3	-.001748	-.007779	.004283	-.002378	-.007363	.002607	.002208	-.004186	.008601	.044873	.017022	.072724
4	-.000531	-.004031	.002968	-.000179	-.002795	.002437	-.002769	-.008792	.003253	.039963	.016472	.063453
5	-.000095	-.00223	.00204	-.00003	-.002098	.002037	-.000506	-.004229	.003217	.027378	.010525	.04423
6	-.000345	-.001815	.001125	-.000456	-.001995	.001083	-.000875	-.003854	.002104	.023426	.008567	.038285
7	-.000373	-.001339	.000593	-.000367	-.001469	.000735	-.000591	-.002771	.00159	.01766	.005222	.030098
8	-.000299	-.001074	.000476	-.000247	-.001091	.000596	-.000649	-.002443	.001144	.014111	.002931	.025292
9	-.000197	-.000839	.000445	-.000191	-.000855	.000474	-.000388	-.001703	.000926	.010811	.001004	.020618
10	-.000144	-.000658	.000371	-.000163	-.000681	.000354	-.000333	-.001365	.000699	.008533	-.000203	.017269
11	-.000111	-.000511	.000289	-.000124	-.000517	.000268	-.000256	-.00104	.000528	.006613	-.001022	.014248
12	-.000091	-.000404	.000223	-.000094	-.000397	.000209	-.000212	-.000823	.000399	.005175	-.001496	.011845

95% lower and upper bounds reported.

(1) irfname = IRF100, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF100, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF100, impulse = UIGER, and response = Inflation.

(4) irfname = IRF100, impulse = UIGER, and response = UIFRA.

Table 10.8. France – Table Dynamic Multiplier

- **GERMANY**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	**-93.6529**				**.000035**	**1.10342**	**1.13253**	**1.1752**
1	**21.4832**	**230.27**	**16**	**0.000**	**.000012**	**-.016759**	**.128791**	**.342128***
2	**50.5501**	**58.134***	**16**	**0.000**	**1.0e-05***	**-.164408***	**.097583***	**.481588**

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIGER**

Exogenous: **_cons**

Table 11.4. Germany – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.9106246	**.910625**
.6872796	**.68728**
-.5162777	**.516278**
-.4683867	**.468387**
.1677058 + .3307286*i*	**.370819**
.1677058 - .3307286*i*	**.370819**
-.3126956	**.312696**
.2681526	**.268153**

All the eigenvalues lie inside the unit circle.

VAR satisfies stability condition.

Table 11.5. Germany – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**28.8394**	**16**	**0.02504**
2	**22.3068**	**16**	**0.13356**

H0: no autocorrelation at lag order

Table 11.6. Germany – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**.985793**	**.951174**	**1.02041**
2	**.004125**	**-.013054**	**.021303**	**.001835**	**-.009212**	**.012882**	**.002151**	**-.010334**	**.014637**	**.950449**	**.881196**	**1.0197**
3	**.004452**	**-.010991**	**.019894**	**.014412**	**-.009836**	**.03866**	**.016907**	**-.006203**	**.040016**	**.941248**	**.860956**	**1.02154**
4	**.006015**	**-.015897**	**.027927**	**.027153**	**-.010569**	**.064875**	**.02445**	**-.006808**	**.055709**	**.935547**	**.843613**	**1.02748**
5	**.006323**	**-.017292**	**.029937**	**.035934**	**-.011255**	**.083123**	**.033121**	**-.008314**	**.074556**	**.930258**	**.828953**	**1.03156**
6	**.006712**	**-.019628**	**.033052**	**.042713**	**-.011805**	**.097231**	**.038781**	**-.00965**	**.087212**	**.926207**	**.816974**	**1.03544**
7	**.006882**	**-.021055**	**.034819**	**.047992**	**-.012779**	**.108763**	**.043984**	**-.011317**	**.099286**	**.922346**	**.805962**	**1.03873**
8	**.007034**	**-.022452**	**.036521**	**.052369**	**-.013797**	**.118535**	**.048027**	**-.012903**	**.108956**	**.9193**	**.796991**	**1.04161**
9	**.007128**	**-.023486**	**.037743**	**.055923**	**-.014873**	**.126719**	**.051466**	**-.014537**	**.117469**	**.916678**	**.789235**	**1.04412**
10	**.007202**	**-.024365**	**.038769**	**.058839**	**-.015932**	**.133611**	**.054252**	**-.016098**	**.124603**	**.914554**	**.782847**	**1.04626**
11	**.007255**	**-.025054**	**.039563**	**.061222**	**-.016975**	**.139418**	**.056569**	**-.017606**	**.130744**	**.912781**	**.777472**	**1.04809**
12	**.007295**	**-.025621**	**.040212**	**.063179**	**-.01798**	**.144338**	**.058472**	**-.019024**	**.135969**	**.911331**	**.77303**	**1.04963**

95% lower and upper bounds reported.

(1) irfname = IRF122, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF122, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF122, impulse = UIGER, and response = Inflation.

(4) irfname = IRF122, impulse = UIGER, and response = UIGER.

Table 11.7. Germany – Table FEVD

- **GREECE**

Sample: **2008m11** thru **2022m12** Number of obs = **170**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-1201.3				17.736	14.2271	14.287	14.3747*
1	-1190.66	21.278	16	0.168	18.8928	14.2902	14.4698	14.7329
2	-1173.75	33.825	16	0.006	18.6991	14.2794	14.5788	15.0173
3	-1161.33	24.846	16	0.073	19.5214	14.3215	14.7407	15.3545
4	-1129.01	64.636	16	0.000	16.1387	14.1295	14.6685	15.4576
5	-1104.39	49.235	16	0.000	14.6215	14.0282	14.6869	15.6514
6	-1001.18	206.43	16	0.000	5.26071*	13.0021*	13.7806*	14.9205
7	-989.627	23.103	16	0.111	5.57259	13.0544	13.9526	15.2679
8	-970.417	38.42*	16	0.001	5.40336	13.0167	14.0346	15.5253
9	-963.979	12.875	16	0.682	6.1005	13.1292	14.2669	15.9329

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIGRE**

Exogenous: **UIGER _cons**

Table 12.4. Greece – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
-.5003767 + .8577625*i*	.993042
-.5003767 - .8577625*i*	.993042
.4922934 + .8618385*i*	.992531
.4922934 - .8618385*i*	.992531
-.9510555	.951055
-.1253157 + .9029069*i*	.911562
-.1253157 - .9029069*i*	.911562
.8958481	.895848
.8837424 + .1443695*i*	.895457
.8837424 - .1443695*i*	.895457
.7502402 + .4425977*i*	.871064
.7502402 - .4425977*i*	.871064
.3407648 + .7673652*i*	.839625
.3407648 - .7673652*i*	.839625
-.4440626 + .7040668*i*	.832407
-.4440626 - .7040668*i*	.832407
-.7032996 + .3961031*i*	.807173
-.7032996 - .3961031*i*	.807173
.1824138 + .7845356*i*	.805463
.1824138 - .7845356*i*	.805463
.7405289 + .2887832*i*	.794845
.7405289 - .2887832*i*	.794845
-.735775 + .2553412*i*	.778822
-.735775 - .2553412*i*	.778822
-.5774036 + .5208903*i*	.777638
-.5774036 - .5208903*i*	.777638
-.2313333 + .7308902*i*	.766626
-.2313333 - .7308902*i*	.766626
.5257182 + .3850971*i*	.651674
.5257182 - .3850971*i*	.651674
-.543758 + .09811508*i*	.552539
-.543758 - .09811508*i*	.552539
-.06576354 + .3939216*i*	.399373
-.06576354 - .3939216*i*	.399373
.175682 + .2865689*i*	.336134
.175682 - .2865689*i*	.336134

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 12.5. Greece – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	27.1228	16	0.04014
2	19.0650	16	0.26531

H0: no autocorrelation at lag order

Table 12.6. Greece – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.983384	.945274	1.02149
2	.000567	-.006242	.007375	.007541	-.01708	.032163	.001302	-.009007	.011611	.974925	.928771	1.02108
3	.00593	-.015786	.027645	.008049	-.017508	.033605	.005898	-.015842	.027638	.96169	.90551	1.01787
4	.013803	-.019004	.04661	.00899	-.018518	.036499	.009418	-.015384	.034219	.949381	.882091	1.01667
5	.013424	-.0184	.045247	.010763	-.017798	.039324	.021983	-.017049	.061015	.926815	.844078	1.00955
6	.016396	-.015439	.048231	.010821	-.018474	.040117	.023347	-.016512	.063206	.909644	.8118	1.00749
7	.01589	-.014988	.046767	.01168	-.016954	.040315	.015996	-.011498	.04349	.879183	.775749	.982618
8	.015802	-.014685	.04629	.011818	-.016134	.03977	.016272	-.010706	.043251	.870644	.766856	.974432
9	.016627	-.015786	.049041	.011621	-.015704	.038946	.017565	-.00813	.043259	.869273	.765993	.972553
10	.016401	-.015583	.048385	.012579	-.014778	.039936	.030487	-.012368	.073343	.861256	.753648	.968863
11	.016268	-.015594	.048131	.012612	-.015001	.040225	.030073	-.012185	.072331	.859872	.751274	.96847
12	.016053	-.015499	.047605	.012614	-.015009	.040237	.038913	-.011854	.08968	.862261	.755269	.969254

95% lower and upper bounds reported.

(1) irfname = IRF13, impulse = UIGRE, and response = dUnemploymentrate.

(2) irfname = IRF13, impulse = UIGRE, and response = dLTGBY10Y.

(3) irfname = IRF13, impulse = UIGRE, and response = Inflation.

(4) irfname = IRF13, impulse = UIFGRE, and response = UIGRE.

Table 12.7. Greece – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.181817	-.274915	-.088719	-.127025	-.362789	.10874	.096866	-.00686	.200592	.591841	-.094754	1.27844
1	.014521	-.019643	.048685	.019099	-.063795	.101994	-.002372	-.037858	.033114	.154793	-.088278	.397864
2	.010196	-.026128	.04652	-.017365	-.120393	.085663	-.011338	-.046681	.024006	.209424	-.027599	.446447
3	-.006582	-.038989	.025825	-.00927	-.088706	.070167	.011382	-.022822	.045586	.397653	.078296	.71701
4	.033613	-.003396	.070622	.021711	-.062403	.105826	-.048937	-.093987	-.003888	.283708	.03085	.536567
5	-.029075	-.06735	.0092	.020018	-.05548	.095517	-.007099	-.047273	.033076	.04195	-.269705	.353604
6	-.018191	-.050389	.014006	-.025998	-.111107	.05911	.046904	-.026461	.120269	-.333916	-.684667	.016835
7	.007825	-.026058	.041708	.044008	-.033622	.121638	-.006074	-.051108	.03896	.078486	-.178054	.335027
8	.021932	-.011544	.055409	.071293	-.010068	.152655	-.032384	-.081511	.016743	-.061401	-.31656	.193759
9	-.002186	-.032162	.02779	-.021322	-.097323	.05468	.040044	-.009069	.089158	-.253473	-.56455	.057604
10	-.001396	-.024769	.021977	.002413	-.047151	.051977	-.026866	-.072911	.019179	-.000122	-.185358	.185115
11	-.007806	-.030744	.015133	.000452	-.049575	.050479	.001609	-.039785	.043002	.117609	-.094213	.329432
12	-.005847	-.028205	.016512	-.000114	-.051379	.051151	.068172	-.00856	.144905	.001519	-.174104	.177143

95% lower and upper bounds reported.

(1) irfname = IRF13, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF13, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF13, impulse = UIGER, and response = Inflation.

(4) irfname = IRF13, impulse = UIGER, and response = UIGRE.

- **HUNGARY**

Sample: **2008m5** thru **2022m12** Number of obs = **176**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	753.624				1.5e-10	-8.45027	-8.37721	-8.27013*
1	804.402	101.56	25	0.000	1.1e-10	-8.74321	-8.48748	-8.11271
2	847.617	86.43	25	0.000	8.9e-11*	-8.9502*	-8.51181*	-7.86935
3	869.644	44.053*	25	0.011	9.3e-11	-8.91641	-8.29536	-7.38521

* optimal lag
Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIHUN dHUFEUR**
Exogenous: **UIGER _cons**

Table 13.4. Hungary – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.7296079	.729608
.6652535 + .2521035*i*	.71142
.6652535 - .2521035*i*	.71142
-.6584305	.658431
-.06344701 + .6279682*i*	.631165
-.06344701 - .6279682*i*	.631165
-.2310923 + .5501277*i*	.596694
-.2310923 - .5501277*i*	.596694
-.4473162 + .391481*i*	.594432
-.4473162 - .391481*i*	.594432
.5863252	.586325
.327266 + .3676092*i*	.492178
.327266 - .3676092*i*	.492178
-.2672463 + .2397366*i*	.359018
-.2672463 - .2397366*i*	.359018

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 13.5. Hungary – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**69.1151**	**25**	**0.00001**
2	**36.3987**	**25**	**0.06576**

H0: no autocorrelation at lag order

Table 13.6. Hungary – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.989958	.960645	1.01927
2	.012077	-.018803	.042956	.000679	-.006526	.007884	.010054	-.017581	.037689	.977955	.936074	1.01983
3	.012719	-.016494	.041933	.011867	-.017777	.041511	.018681	-.020472	.057833	.959985	.9043	1.01567
4	.012573	-.015139	.040286	.011996	-.017189	.04118	.019479	-.015734	.054692	.944546	.885361	1.00373
5	.012406	-.014838	.03965	.014343	-.017423	.04611	.018746	-.015634	.053125	.936946	.871948	1.00194
6	.012453	-.014742	.039647	.014446	-.016734	.045627	.019291	-.016358	.05494	.933661	.865453	1.00187
7	.012406	-.014664	.039477	.014776	-.01662	.046173	.019072	-.016253	.054397	.932183	.86246	1.00191
8	.012387	-.01464	.039413	.014786	-.016725	.046297	.018998	-.016203	.0542	.931403	.860844	1.00196
9	.012392	-.014636	.03942	.015022	-.016681	.046725	.018957	-.016175	.054088	.930898	.859693	1.0021
10	.012389	-.014628	.039406	.01503	-.016657	.046717	.01893	-.016153	.054014	.930719	.859289	1.00215
11	.012387	-.014625	.039399	.015034	-.016628	.046696	.018918	-.016142	.053979	.930595	.858997	1.00219
12	.012388	-.014624	.039399	.015045	-.016633	.046723	.018914	-.01614	.053968	.930582	.858956	1.00221

Step	(5) fevd	(5) Lower	(5) Upper
0	0	0	0
1	.017992	-.018455	.054439
2	.024195	-.015998	.064388
3	.025361	-.016375	.067096
4	.025454	-.015012	.06592
5	.025628	-.014526	.065782
6	.026388	-.01427	.067047
7	.026357	-.014237	.06695
8	.026349	-.014208	.066906
9	.02635	-.014218	.066919
10	.026345	-.01421	.0669
11	.026343	-.01421	.066897
12	.026343	-.014209	.066896

95% lower and upper bounds reported.

(1) irfname = IRF14, impulse = UIHUN, and response = dUnemploymentrate.

(2) irfname = IRF14, impulse = UIHUN, and response = dLTGBY10Y.

(3) irfname = IRF14, impulse = UIHUN, and response = Inflation.

(4) irfname = IRF14, impulse = UIHUN, and response = UIHUN.

(5) irfname = IRF14, impulse = UIHUN, and response = dHUFEUR

Table 13.7. Hungary – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.01182	-.011451	.03509	.062766	.010622	.11491	.11918	.05259	.18577	1.3262	.708378	1.94403
1	-.006142	-.016468	.004185	.061625	.02933	.09392	.051096	.020816	.081376	.081172	-.185495	.347838
2	.008698	-.001565	.01896	-.004783	-.038836	.02927	.064219	.033152	.095286	.090198	-.175482	.355879
3	.002922	-.005539	.011383	-.00825	-.035678	.019178	.025298	-.002028	.052625	.157467	-.082192	.397125
4	.002315	-.003753	.008383	-.008292	-.026602	.010019	.038013	.017107	.058919	.166917	-.001997	.335831
5	.000861	-.004143	.005864	-.007321	-.02111	.006469	.014453	-.003911	.032818	.023346	-.10361	.150302
6	.001108	-.002777	.004993	-.010659	-.022515	.001196	.011749	-.003975	.027473	.072444	-.024977	.169866
7	.000155	-.003682	.003992	-.006676	-.014624	.001272	.002566	-.012401	.017533	.031051	-.054431	.116533
8	.00043	-.002499	.003359	-.00416	-.01025	.00193	.002621	-.008483	.013725	.031607	-.032206	.095421
9	.000155	-.002508	.002818	-.001745	-.006547	.003058	-.002116	-.012547	.008314	.006379	-.044441	.0572
10	.000302	-.001634	.002238	-.001555	-.005038	.001927	-.001272	-.008878	.006334	.008265	-.025928	.042459
11	.000161	-.001417	.00174	-.000443	-.003004	.002119	-.001991	-.008395	.004414	-.000477	-.026285	.02533
12	.000196	-.000862	.001254	.000216	-.001926	.002358	-.000976	-.005476	.003524	.001976	-.013809	.017762

Step	(5) dm	(5) Lower	(5) Upper
0	-9.9e-06	-.000021	1.2e-06
1	-8.1e-07	-6.6e-06	5.0e-06
2	-6.5e-07	-5.6e-06	4.4e-06
3	5.1e-06	2.3e-08	.00001
4	1.7e-06	-1.5e-06	4.9e-06
5	2.3e-06	-1.8e-07	4.9e-06
6	5.0e-07	-1.2e-06	2.2e-06
7	8.2e-07	-6.5e-07	2.3e-06
8	3.9e-08	-9.9e-07	1.1e-06
9	1.1e-07	-7.3e-07	9.4e-07
10	-1.4e-07	-7.3e-07	4.6e-07
11	-4.8e-08	-4.6e-07	3.7e-07
12	-1.4e-07	-4.5e-07	1.8e-07

95% lower and upper bounds reported.

(1) irfname = IRF14, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF14, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF14, impulse = UIGER, and response = Inflation.

(4) irfname = IRF14, impulse = UIGER, and response = UIHUN.

(5) irfname = IRF14, impulse = UIGER, and response = dHUFEUR.

Table 13.8. Hungary – Table Dynamic Multiplier

- **IRELAND**

Sample: **2008m9** thru **2022m12** Number of obs = **172**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-623.928				.018252	7.348	7.4074	7.4944
1	-551.533	144.79	16	0.000	.009475	6.69225	6.87044	7.13143*
2	-521.342	60.384	16	0.000	.008037	6.52723	6.82421*	7.2592
3	-497.8	47.082	16	0.000	.007369	6.43954	6.85531	7.46431
4	-478.108	39.384	16	0.001	.007071	6.39661	6.93118	7.71417
5	-465.317	25.582	16	0.060	.007358	6.43392	7.08728	8.04427
6	-446.548	37.539	16	0.002	.007151	6.40172	7.17387	8.30485
7	-425.531	42.033*	16	0.000	.00678*	6.34339*	7.23433	8.53931

* optimal lag
Endogenous: **dUnemploymentrate dLTGBY10Y Inflation dUIIRL**
Exogenous: **UIGER _cons**

Table 14.4. Ireland – Varsoc

Eigenvalue	Modulus
.9191936	.919194
.4197886 + .7775577*i*	.883639
.4197886 - .7775577*i*	.883639
.5709296 + .6725593*i*	.882211
.5709296 - .6725593*i*	.882211
-.3991112 + .7605856*i*	.858941
-.3991112 - .7605856*i*	.858941
-.5517593 + .6448397*i*	.848679
-.5517593 - .6448397*i*	.848679
-.8441384 + .02783586*i*	.844597
-.8441384 - .02783586*i*	.844597
.02738111 + .8376731*i*	.83812
.02738111 - .8376731*i*	.83812
-.1042661 + .801219*i*	.807975
-.1042661 - .801219*i*	.807975
.7326161 + .3319276*i*	.804302
.7326161 - .3319276*i*	.804302
-.6264451 + .5016224*i*	.802533
-.6264451 - .5016224*i*	.802533
-.7478015 + .2330129*i*	.783264
-.7478015 - .2330129*i*	.783264
.5104453 + .5289146*i*	.735054
.5104453 - .5289146*i*	.735054
.7344748	.734475
.1628374 + .7033447*i*	.721949
.1628374 - .7033447*i*	.721949
.6178042	.617804
-.2416572	.241657

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 14.5. Ireland – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**23.4146**	**16**	**0.10309**
2	**16.3526**	**16**	**0.42864**

H0: no autocorrelation at lag order

Table 14.6. Ireland – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.945131	.878959	1.0113
2	.00782	-.014797	.030437	.001193	-.008635	.011022	.084755	.010338	.159172	.957012	.900643	1.01338
3	.08815	.007613	.168687	.025588	-.020037	.071213	.096169	.013583	.178755	.935906	.864585	1.00723
4	.132842	.02045	.245234	.030274	-.014532	.075079	.139452	.053274	.225629	.91028	.829447	.991112
5	.142057	.020058	.264057	.030555	-.013837	.074947	.134441	.051737	.217145	.8805	.784895	.976105
6	.154945	.041484	.268406	.02954	-.013743	.072823	.13486	.052599	.217122	.874731	.778258	.971204
7	.152353	.040206	.264499	.044773	-.008895	.098442	.132896	.051068	.214723	.861645	.762826	.960464
8	.152361	.04177	.262952	.046137	-.007583	.099857	.131021	.050277	.211766	.858611	.757402	.959819
9	.146543	.038727	.25436	.048992	-.008395	.10638	.131764	.050518	.21301	.859287	.758367	.960207
10	.154543	.042012	.267074	.049348	-.007356	.106053	.132253	.05095	.213556	.858528	.757939	.959118
11	.162677	.044068	.281285	.055054	-.006187	.116295	.132857	.051813	.213902	.8537	.750775	.956625
12	.168511	.046878	.290143	.055509	-.00553	.116548	.132174	.05149	.212859	.848582	.742746	.954417

95% lower and upper bounds reported.

(1) irfname = IRF15, impulse = dUIIRL, and response = dUnemploymentrate.

(2) irfname = IRF15, impulse = dUIIRL, and response = dLTGBY10Y.

(3) irfname = IRF15, impulse = dUIIRL, and response = Inflation.

(4) irfname = IRF15, impulse = dUIIRL, and response = dUIIRL.

Table 14.7. Ireland – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.0276	.00009	.055111	.072883	.025925	.119841	.069054	.017348	.12076	.412303	.14341	.681196
1	.003859	-.011704	.019421	.013248	-.006031	.032526	.033435	.004097	.062773	-.314627	-.550707	-.078547
2	-.011083	-.02752	.005354	-.011978	-.031999	.008042	.013501	-.010954	.037955	-.148946	-.322	.024109
3	-.011006	-.024831	.00282	.010463	-.011864	.032789	-.013856	-.041708	.013996	.225652	.046953	.404351
4	-.005529	-.018108	.007049	.00054	-.018671	.019751	.018785	-.005956	.043525	-.088705	-.249022	.071612
5	.01716	.002538	.031782	.003876	-.016104	.023856	.004894	-.021253	.031041	.037295	-.10837	.182961
6	-.004271	-.017681	.009139	-.004772	-.026572	.017029	-.004855	-.028769	.019058	-.068787	-.218018	.080444
7	.016774	.003211	.030337	.010693	-.008311	.029697	-.015357	-.039281	.008567	.02175	-.126408	.169908
8	.008334	-.003557	.020225	.009427	-.005563	.024417	-.008053	-.027005	.010899	.056052	-.069673	.181777
9	.002839	-.008128	.013806	-.006345	-.0207	.008011	-.01033	-.026944	.006283	-.020854	-.137175	.095468
10	-.00018	-.009728	.009367	-.004552	-.017501	.008397	.001614	-.012379	.015606	-.083484	-.192903	.025935
11	-.001625	-.009926	.006675	.004214	-.00772	.016148	-.011581	-.024501	.001338	.074838	-.024521	.174198
12	.006422	-.001552	.014396	.004635	-.006741	.016011	.001458	-.011462	.014379	-.009719	-.093274	.073835

95% lower and upper bounds reported.

(1) irfname = IRF15, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF15, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF15, impulse = UIGER, and response = Inflation.

(4) irfname = IRF15, impulse = UIGER, and response = dUIIRL.

Table 14.8. Ireland – Table Dynamic Multiplier

- **ITALY**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-412.377				.001358	4.75002	4.80824	4.89358
1	-366.564	91.626*	16	0.000	.00097*	4.41315*	4.58781*	4.84381*
2	-353.825	25.478	16	0.062	.001007	4.45	4.7411	5.16777

* optimal lag
Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIITA**
Exogenous: **UIGER _cons**

Table 15.4. Italy – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.7291949	.729195
.4990882	.499088
-.4277698	.42777
.08441045 + .3301046*i*	.340726
.08441045 - .3301046*i*	.340726
-.2095292 + .171185*i*	.270568
-.2095292 - .171185*i*	.270568
.1408908	.140891

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 15.5. Italy – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	35.1066	16	0.00384
2	18.8341	16	0.27736

H0: no autocorrelation at lag order

Table 15.6. Italy – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.987843	.955751	1.01993
2	.021314	-.018415	.061043	.005012	-.014129	.024154	3.1e-06	-.000474	.00048	.963826	.907697	1.01995
3	.021538	-.0178	.060876	.005288	-.014803	.025378	.000875	-.00633	.00808	.950023	.888854	1.01119
4	.022824	-.018225	.063874	.00583	-.015839	.027499	.000945	-.007109	.008999	.950102	.887673	1.01253
5	.023292	-.018651	.065235	.006094	-.016666	.028854	.001192	-.009164	.011548	.948958	.884535	1.01338
6	.023558	-.018891	.066007	.006222	-.017129	.029574	.001268	-.009964	.012499	.948537	.88299	1.01408
7	.023697	-.019057	.066452	.006299	-.017412	.030011	.001333	-.010595	.013261	.948296	.882175	1.01442
8	.023771	-.019149	.066691	.006339	-.017565	.030243	.001364	-.010911	.013639	.948179	.881744	1.01462
9	.02381	-.019201	.066822	.006361	-.017649	.030371	.001383	-.011102	.013868	.948115	.881515	1.01471
10	.023831	-.019231	.066893	.006373	-.017694	.03044	.001392	-.011203	.013988	.948081	.881393	1.01477
11	.023842	-.019248	.066932	.006379	-.017719	.030477	.001398	-.011259	.014055	.948063	.881328	1.0148
12	.023848	-.019257	.066953	.006382	-.017732	.030496	.001401	-.011289	.014091	.948053	.881293	1.01481

95% lower and upper bounds reported.

(1) irfname = IRF151, impulse = UIITA, and response = dUnemploymentrate.

(2) irfname = IRF151, impulse = UIITA, and response = dLTGBY10Y.

(3) irfname = IRF151, impulse = UIITA, and response = Inflation.

(4) irfname = IRF151, impulse = UIITA, and response = UIITA.

Table 15.7. Italy – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.001036	-.042227	.0443	.043845	.004539	.083152	.077527	.026912	.128141	.189575	.033006	.346144
1	-.007983	-.023667	.007701	.006968	-.005841	.019777	.016905	-.00384	.037651	.101069	.029051	.173086
2	-.004355	-.017953	.009243	.001076	-.011708	.013861	.017474	.00349	.031458	.070272	.013485	.127059
3	-.001354	-.006546	.003838	-.000436	-.007282	.00641	.003555	-.004363	.011473	.05288	.01603	.089729
4	-.002039	-.005236	.001158	-.000133	-.003732	.003466	.003293	-.002923	.009508	.040844	.010344	.071345
5	-.001129	-.003188	.000931	-.000245	-.002513	.002022	.000556	-.003735	.004847	.029907	.005751	.054063
6	-.000858	-.002475	.000759	-.000271	-.002027	.001486	.000461	-.002815	.003738	.022605	.002311	.042899
7	-.000554	-.001764	.000656	-.000281	-.001599	.001036	-.000075	-.002471	.002322	.016427	-.000234	.033088
8	-.000411	-.001337	.000514	-.000216	-.0012	.000768	-.000076	-.00189	.001737	.012144	-.001659	.025947
9	-.000289	-.00099	.000411	-.000171	-.000897	.000555	-.000143	-.001487	.001201	.008866	-.00241	.020142
10	-.000211	-.000747	.000324	-.000128	-.000669	.000413	-.000115	-.001119	.000889	.006501	-.002684	.015686
11	-.000151	-.00056	.000257	-.000097	-.0005	.000305	-.000103	-.000847	.000641	.004745	-.002669	.012159
12	-.00011	-.000422	.000202	-.000072	-.000372	.000228	-.000079	-.000631	.000473	.003468	-.002482	.009418

95% lower and upper bounds reported.

(1) irfname = IRF151, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF151, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF151, impulse = UIGER, and response = Inflation.

(4) irfname = IRF151, impulse = UIGER, and response = UIITA.

Table 15.8. Italy – Table Dynamic Multiplier

- **LATVIA**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	**-1029.31**				**1.447**	**11.721**	**11.7792**	**11.8646**
1	**-897.59**	**263.44**	**16**	**0.000**	**.391427***	**10.4134***	**10.5881***	**10.8441***
2	**-882.213**	**30.755***	**16**	**0.014**	**.394339**	**10.4205**	**10.7116**	**11.1383**

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UILVA**

Exogenous: **UIGER _cons**

Table 16.4. Latvia – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.5664554 + .03085298*i*	**.567295**
.5664554 - .03085298*i*	**.567295**
.07411473 + .4590437*i*	**.464988**
.07411473 - .4590437*i*	**.464988**
.1628566 + .2832831*i*	**.326759**
.1628566 - .2832831*i*	**.326759**
.2313979	**.231398**
-.0749869	**.074987**

All the eigenvalues lie inside the unit circle.

VAR satisfies stability condition.

Table 16.5. Latvia – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**28.1125**	**16**	**0.03066**
2	**19.9488**	**16**	**0.22254**

H0: no autocorrelation at lag order

Table 16.6. Latvia – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.969959	.920425	1.01949
2	.000706	-.004732	.006143	.000875	-.007144	.008894	.000082	-.002342	.002505	.956781	.897473	1.01609
3	.001138	-.008393	.010668	.004754	-.011834	.021342	.003783	-.013958	.021523	.94798	.888861	1.0071
4	.001042	-.008307	.010392	.005791	-.014317	.0259	.005079	-.016489	.026646	.936795	.873132	1.00046
5	.001092	-.006985	.00917	.00582	-.014172	.025811	.005271	-.016459	.027	.931207	.863563	.998851
6	.001186	-.006277	.00865	.005862	-.014098	.025822	.005276	-.016405	.026957	.929142	.859675	.998609
7	.001217	-.006037	.008471	.005859	-.014116	.025833	.005268	-.016383	.026919	.928228	.857841	.998615
8	.001224	-.005962	.00841	.005882	-.014178	.025941	.005264	-.016373	.026902	.927839	.857009	.998669
9	.001228	-.005933	.008388	.005884	-.014183	.02595	.005263	-.016369	.026895	.927698	.856686	.998709
10	.00123	-.00592	.008379	.005883	-.014181	.025948	.005262	-.016368	.026893	.927648	.856565	.998731
11	.00123	-.005915	.008376	.005883	-.014181	.025947	.005262	-.016368	.026893	.927629	.856516	.998742
12	.001231	-.005913	.008374	.005883	-.014182	.025948	.005262	-.016368	.026892	.927621	.856495	.998747

95% lower and upper bounds reported.

(1) irfname = IRF16, impulse = UILVA, and response = dUnemploymentrate.

(2) irfname = IRF16, impulse = UILVA, and response = dLTGBY10Y.

(3) irfname = IRF16, impulse = UILVA, and response = Inflation.

(4) irfname = IRF16, impulse = UILVA, and response = UILVA.

Table 16.7. Latvia – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.01771	-.031295	.066714	-.012726	-.040109	.014656	.128749	.058357	.19914	2.32839	.88575	3.77103
1	.018685	-.003509	.040879	-.007113	-.033314	.019087	.058359	.025951	.090768	.450112	-.071995	.972219
2	-.0042	-.024133	.015734	.000248	-.019163	.01966	.029042	.004782	.053303	-.267169	-.861919	.327581
3	-.005177	-.018676	.008323	.002722	-.012016	.01746	.014135	-.003757	.032028	-.060321	-.3589	.238259
4	.000935	-.006886	.008757	.002136	-.008761	.013032	.00637	-.005757	.018496	.069845	-.095373	.235064
5	.002304	-.003347	.007955	.001393	-.006582	.009369	.002568	-.005564	.0107	.02334	-.075759	.122438
6	.00102	-.002858	.004899	.001073	-.004622	.006768	.000959	-.00423	.006147	-.017618	-.086476	.051239
7	.000314	-.002499	.003126	.000835	-.003082	.004753	.000299	-.003004	.003601	-.014385	-.06125	.03248
8	.000297	-.001584	.002178	.000574	-.002033	.003181	8.6e-06	-.002156	.002173	-.00414	-.034582	.026303
9	.0003	-.000929	.00153	.000363	-.001333	.002058	-.0001	-.001558	.001358	-.001979	-.022738	.01878
10	.000196	-.000592	.000985	.000229	-.000859	.001317	-.000114	-.001101	.000873	-.002602	-.016096	.010892
11	.000104	-.000401	.000609	.000147	-.000544	.000838	-.000094	-.000758	.000571	-.002144	-.010851	.006563
12	.000062	-.00026	.000384	.000093	-.000344	.00053	-.000069	-.000513	.000374	-.001199	-.006712	.004313

95% lower and upper bounds reported.

(1) irfname = IRF16, impulse = UIGER, and response = dLTGBY10Y.

(2) irfname = IRF16, impulse = UIGER, and response = dUnemploymentrate.

(3) irfname = IRF16, impulse = UIGER, and response = Inflation.

(4) irfname = IRF16, impulse = UIGER, and response = UILVA.

Table 16.8. Latvia – Table Dynamic Multiplier

- **LITHUANIA**

Sample: **2008m5** thru **2022m12** Number of obs = **176**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-1020.25				1.39532	11.6846	11.7431	11.8287
1	-919.856	200.78	16	0.000	.534852	10.7256	10.901*	11.158*
2	-894.63	50.453	16	0.000	.4818	10.6208	10.913	11.3414
3	-876.19	36.879*	16	0.002	.469028*	10.5931*	11.0022	11.6019

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UILTH**

Exogenous: **UIGER _cons**

Table 17.4. Lithuania – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.8724436	.872444
.7501316 + .04584076*i*	.751531
.7501316 - .04584076*i*	.751531
-.321932 + .5072898*i*	.600819
-.321932 - .5072898*i*	.600819
-.03343273 + .5177559*i*	.518834
-.03343273 - .5177559*i*	.518834
-.329227 + .3182158*i*	.457877
-.329227 - .3182158*i*	.457877
.3658775 + .1942669*i*	.414254
.3658775 - .1942669*i*	.414254
-.313562	.313562

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 17.5. Lithuania – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	21.0516	16	0.17654
2	20.4502	16	0.20062

H0: no autocorrelation at lag order

Table 17.6. Lithuania – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.99806	.98507	1.01105
2	4.0e-07	-.000152	.000153	.009791	-.017726	.037308	.000298	-.004109	.004704	.96136	.907799	1.01492
3	.000752	-.006168	.007672	.012912	-.018918	.044743	.002283	-.008636	.013201	.945612	.883073	1.00815
4	.002522	-.011741	.016786	.012911	-.019404	.045226	.00238	-.009368	.014128	.937317	.874625	1.00001
5	.003057	-.016072	.022186	.016034	-.024483	.056551	.002446	-.01001	.014903	.923666	.848673	.998659
6	.003485	-.020178	.027148	.016687	-.02659	.059964	.002809	-.012321	.017939	.923937	.846108	1.00177
7	.004258	-.02523	.033746	.017164	-.028419	.062746	.003187	-.014182	.020557	.917831	.830607	1.00506
8	.004643	-.02884	.038127	.017921	-.03063	.066472	.003405	-.015501	.022311	.911676	.814659	1.00869
9	.004994	-.032154	.042142	.018251	-.03202	.068523	.003606	-.016718	.02393	.90869	.804754	1.01263
10	.005331	-.035213	.045876	.018538	-.033197	.070273	.003808	-.017743	.02536	.904497	.792661	1.01633
11	.005564	-.037624	.048753	.018802	-.034218	.071822	.003957	-.018517	.026431	.900807	.781902	1.01971
12	.005761	-.039692	.051215	.018968	-.034952	.072888	.004078	-.019133	.027288	.897977	.773215	1.02274

95% lower and upper bounds reported.

(1) irfname = IRF17, impulse = UILTH, and response = dUnemploymentrate.

(2) irfname = IRF17, impulse = UILTH, and response = dLTGBY10Y.

(3) irfname = IRF17, impulse = UILTH, and response = Inflation.

(4) irfname = IRF17, impulse = UILTH, and response = UILTH.

Table 17.7. Lithuania – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.001071	-.037292	.03515	-.040074	-.140444	.060297	.123377	.043203	.203551	.067945	-1.12272	1.25861
1	-.00396	-.025966	.018046	.003652	-.023552	.030856	.064283	.026041	.102525	.061245	-.329099	.451589
2	.00279	-.012425	.018006	.001661	-.030249	.03357	-.001852	-.027603	.023899	-.264956	-.691669	.161757
3	.000415	-.013524	.014354	.006606	-.015135	.028346	.013899	-.007822	.03562	.250346	-.192757	.693449
4	.00043	-.010754	.011613	.00689	-.009208	.022988	.014565	-.003542	.032671	.234331	-.050451	.519113
5	.000726	-.008234	.009686	.008381	-.002787	.019548	.005757	-.003758	.015272	.005089	-.236823	.247002
6	.00095	-.00641	.00831	.004318	-.003627	.012263	.002901	-.005438	.011239	.136568	-.095154	.36829
7	.000952	-.005285	.007189	.004146	-.002407	.010699	.002783	-.004802	.010367	.120091	-.063489	.303671
8	.001121	-.004033	.006275	.003922	-.001241	.009086	.001959	-.003667	.007585	.062	-.09603	.220031
9	.000908	-.003343	.005159	.002386	-.0018	.006573	.00104	-.003637	.005717	.077441	-.069492	.224374
10	.00079	-.002813	.004394	.002108	-.001548	.005765	.000572	-.003618	.004762	.063313	-.063006	.189632
11	.000742	-.002308	.003793	.001779	-.001374	.004931	.000336	-.003205	.003878	.047168	-.064672	.159008
12	.000583	-.002003	.003168	.001258	-.001498	.004014	.000195	-.002808	.003198	.044704	-.056727	.146136

95% lower and upper bounds reported.

(1) irfname = IRF17, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF17, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF17, impulse = UIGER, and response = Inflation.

(4) irfname = IRF17, impulse = UIGER, and response = UILTH.

Table 17.8. Lithuania – Table Dynamic Multiplier

- **LUXEMBOURG**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-763.888				.072107	8.7219	8.78012	8.86546
1	-718.515	90.746*	16	0.000	.051746*	8.39001*	8.56467*	8.82067*
2	-712.314	12.404	16	0.716	.057826	8.50072	8.79182	9.21849

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UILUX**

Exogenous: **UIGER _cons**

Table 18.4. Luxembourg – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.477851 + .02186065*i*	.478351
.477851 - .02186065*i*	.478351
-.1710051 + .3419483*i*	.382324
-.1710051 - .3419483*i*	.382324
-.3223537	.322354
.1595323	.159532
-.113218	.113218
.07643549	.076435

All the eigenvalues lie inside the unit circle.

VAR satisfies stability condition.

Table 18.5. Luxembourg – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	20.2266	16	0.21019
2	17.4160	16	0.35918

H0: no autocorrelation at lag order

Table 18.6. Luxembourg- Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.99549	.975791	1.01519
2	.000348	-.004641	.005337	.003018	-.012456	.018491	.002058	-.010327	.014443	.968754	.917144	1.02036
3	.000994	-.009196	.011185	.003282	-.013955	.020518	.002248	-.012027	.016524	.962381	.908047	1.01671
4	.001173	-.011144	.013489	.003312	-.014349	.020973	.002243	-.011931	.016417	.960266	.903252	1.01728
5	.001295	-.0122	.01479	.003327	-.014467	.021121	.002243	-.01192	.016405	.959836	.902163	1.01751
6	.001335	-.012555	.015225	.00333	-.014493	.021153	.002244	-.011921	.016408	.959772	.902005	1.01754
7	.001348	-.012673	.015369	.00333	-.014497	.021157	.002244	-.011919	.016407	.959751	.901955	1.01755
8	.001352	-.012709	.015414	.00333	-.014498	.021159	.002244	-.011919	.016407	.959747	.901945	1.01755
9	.001354	-.01272	.015427	.00333	-.014498	.021159	.002244	-.011919	.016407	.959746	.901943	1.01755
10	.001354	-.012723	.015431	.00333	-.014498	.021159	.002244	-.011919	.016407	.959746	.901942	1.01755
11	.001354	-.012724	.015432	.00333	-.014498	.021159	.002244	-.011919	.016407	.959746	.901942	1.01755
12	.001354	-.012724	.015432	.00333	-.014498	.021159	.002244	-.011919	.016407	.959745	.901942	1.01755

95% lower and upper bounds reported.

(1) irfname = IRF18, impulse = UILUX, and response = dUnemploymentrate.

(2) irfname = IRF18, impulse = UILUX, and response = dLTGBY10Y.

(3) irfname = IRF18, impulse = UILUX, and response = Inflation.

(4) irfname = IRF18, impulse = UILUX, and response = UILUX.

Table 18.7. Luxembourg – Table FEVD

95% lower and upper bounds reported.

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.000354	-.015436	.014728	.030286	.010294	.050279	.032728	-.044227	.109683	1.55836	-.371651	3.48838
1	-.001046	-.007882	.005791	.009255	.002585	.015925	-.000611	-.041279	.040058	.212698	-.353171	.778568
2	-.001646	-.005933	.002641	.001713	-.003334	.006759	.008388	-.011778	.028555	.445492	-.046897	.937882
3	-.001049	-.003749	.00165	.000362	-.002411	.003135	.000017	-.006826	.006861	.166676	-.052922	.386274
4	-.000759	-.002466	.000948	.000285	-.001042	.001613	-.000089	-.004298	.00412	.086858	-.056598	.230315
5	-.0004	-.00141	.000609	.000072	-.000541	.000685	.000528	-.00084	.001897	.029799	-.042427	.102025
6	-.000217	-.000832	.000398	.000018	-.000332	.000367	.000115	-.000544	.000775	.015972	-.029503	.061447
7	-.000122	-.00048	.000237	.000018	-.000152	.000187	.000037	-.000359	.000432	.005128	-.017949	.028205
8	-.000064	-.000271	.000143	5.3e-06	-.000082	.000093	.000056	-.000141	.000253	.002118	-.011359	.015595
9	-.000033	-.000151	.000085	1.3e-06	-.000044	.000047	.000021	-.000082	.000125	.00075	-.006317	.007817
10	-.000017	-.000084	.000049	1.0e-06	-.000022	.000024	9.1e-06	-.000049	.000067	.000228	-.003627	.004083
11	-8.9e-06	-.000046	.000028	3.0e-07	-.000012	.000012	6.7e-06	-.000024	.000037	.000033	-.002003	.002069
12	-4.5e-06	-.000025	.000016	3.6e-08	-6.2e-06	6.3e-06	3.1e-06	-.000014	.00002	-6.1e-06	-.001096	.001084

(1) irfname = IRF18, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF18, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF18, impulse = UIGER, and response = Inflation.

(4) irfname = IRF18, impulse = UIGER, and response = UILUX.

Table 18.8. Luxembourg – Table Dynamic Multiplier

- **MALTA**

Sample: **2008m11** thru **2022m12** Number of obs = **170**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-991.865				1.50925	11.7631	11.823	11.9107*
1	-957.279	69.173	16	0.000	1.21296	11.5445	11.7241	11.9872
2	-941.627	31.302	16	0.012	1.21847	11.5486	11.848	12.2864
3	-895.634	91.987	16	0.000	.856997	11.1957	11.6149*	12.2287
4	-888.262	14.743	16	0.544	.950167	11.2972	11.8361	12.6253
5	-844.052	88.421	16	0.000	.683618	10.9653	11.624	12.5886
6	-824.213	39.677	16	0.001	.655947	10.9202	11.6986	12.8385
7	-802.448	43.531	16	0.000	.61616*	10.8523*	11.7505	13.0658
8	-798.783	7.3297	16	0.966	.717341	10.9974	12.0154	13.5061
9	-775.737	46.092*	16	0.000	.666145	10.9146	12.0523	13.7183

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIMLT**

Exogenous: **UIGER _cons**

Table 19.3. Malta – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.8625021 + .4948821*i*	.994393
.8625021 - .4948821*i*	.994393
-.9856419	.985642
.9354768	.935477
-.7396816 + .5073237*i*	.896943
-.7396816 - .5073237*i*	.896943
-.04453382 + .8780927*i*	.879221
-.04453382 - .8780927*i*	.879221
-.7836493 + .3826372*i*	.872077
-.7836493 - .3826372*i*	.872077
.4346795 + .7542339*i*	.870526
.4346795 - .7542339*i*	.870526
-.8563532	.856353
.07059865 + .8241941*i*	.827212
.07059865 - .8241941*i*	.827212
.6499667 + .5032289*i*	.822007
.6499667 - .5032289*i*	.822007
-.5599546 + .5995618*i*	.82038
-.5599546 - .5995618*i*	.82038
-.198421 + .7934534*i*	.817887
-.198421 - .7934534*i*	.817887
.3590489 + .6744372*i*	.764056
.3590489 - .6744372*i*	.764056
-.5726736 + .4935185*i*	.755987
-.5726736 - .4935185*i*	.755987
.1048129 + .7421142*i*	.749479
.1048129 - .7421142*i*	.749479
.6923289 + .2826914*i*	.747819
.6923289 - .2826914*i*	.747819
-.3560778 + .6520449*i*	.742936
-.3560778 - .6520449*i*	.742936
.7075905	.70759
-.6440076	.644008
.4244209 + .4829823*i*	.642966
.4244209 - .4829823*i*	.642966
.4864534	.486453

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 19.4. Malta – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	18.0367	16	0.32175
2	20.5181	16	0.19779

H0: no autocorrelation at lag order

Table 19.5. Malta – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.995825	.97648	1.01517
2	.002284	-.011396	.015963	.008797	-.01767	.035264	.000151	-.00341	.003712	.984863	.948604	1.02112
3	.0023	-.010774	.015373	.009477	-.017401	.036355	.008836	-.017519	.035192	.976281	.929816	1.02275
4	.003239	-.012047	.018525	.010126	-.017688	.037939	.020117	-.014461	.054694	.972346	.922554	1.02214
5	.021405	-.01771	.060521	.009886	-.017487	.037259	.02867	-.010329	.067669	.957832	.899883	1.01578
6	.040987	-.005797	.087772	.010915	-.016788	.038617	.027302	-.009702	.064307	.958466	.903307	1.01363
7	.044351	-.006196	.094899	.014521	-.018889	.047931	.026358	-.008936	.061651	.942224	.876732	1.00772
8	.044309	-.006125	.094742	.018602	-.019657	.056862	.030431	-.010699	.071562	.932633	.868084	.997182
9	.04999	-.001466	.101446	.019073	-.019761	.057908	.030111	-.009929	.07015	.932334	.86733	.997338
10	.057243	.000207	.114278	.018899	-.020057	.057856	.029981	-.009927	.069889	.92756	.861386	.993734
11	.059103	.000682	.117524	.020164	-.019262	.05959	.028767	-.009386	.06692	.9272	.860597	.993802
12	.059804	.00045	.119157	.020234	-.019314	.059782	.029193	-.010326	.068712	.925253	.856563	.993942

95% lower and upper bounds reported.

(1) irfname = IRF19, impulse = UIMLT, and response = dUnemploymentrate.

(2) irfname = IRF19, impulse = UIMLT, and response = dLTGBY10Y.

(3) irfname = IRF19, impulse = UIMLT, and response = Inflation.

(4) irfname = IRF19, impulse = UIMLT, and response = UIMLT.

Table 19.6. Malta – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.00094	-.023602	.025483	.014932	-.012679	.042542	.093205	.004325	.182085	.504967	-2.01095	3.02089
1	.000897	-.004635	.006429	.000661	-.007502	.008824	.008286	-.008514	.025087	.18266	-.484328	.849648
2	.000049	-.005642	.00574	.002249	-.002951	.007448	-.009053	-.029254	.011148	-.126128	-.674908	.422652
3	-.000251	-.007564	.007062	.002706	-.003562	.008974	-.044035	-.089621	.00155	.269542	-.411674	.950758
4	-.000457	-.00706	.006146	-.002823	-.009417	.003771	-.002348	-.026644	.021949	-.154832	-.669882	.360218
5	-.005473	-.01246	.001514	-.00158	-.00749	.004329	-.023768	-.052364	.004829	.214028	-.532807	.960863
6	.00029	-.004806	.005386	.00253	-.002874	.007935	-.007763	-.033929	.018403	.412639	-.128851	.954129
7	.000766	-.003394	.004925	.002702	-.002367	.007771	-.020413	-.052558	.011733	-.151644	-.679206	.375918
8	-.002153	-.006717	.00241	.000537	-.003869	.004943	.019955	-.003222	.043132	.069693	-.355063	.494448
9	.001563	-.003347	.006473	-.004139	-.010352	.002073	-.007453	-.026215	.011309	-.186781	-.737086	.363525
10	.000186	-.003003	.003374	.001044	-.002447	.004536	.022263	-.010567	.055093	.024714	-.401211	.45064
11	-.000228	-.00298	.002524	-.001498	-.004784	.001789	.012002	-.007725	.031729	.184129	-.098597	.466855
12	.000024	-.002569	.002616	-.000123	-.002938	.002691	.043345	-.002829	.08952	-.08421	-.517409	.348988

95% lower and upper bounds reported.

(1) irfname = IRF19, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF19, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF19, impulse = UIGER, and response = Inflation.

(4) irfname = IRF19, impulse = UIGER, and response = UIMLT.

Table 19.7. Malta – Table Dynamic Multiplier

- **NETHERLANDS**

Sample: **2008m5** thru **2022m12** Number of obs = **176**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-463.263				.002488	5.35526	5.41371	5.49938
1	-407.92	110.69	16	0.000	.001591	4.90819	5.08354*	5.34053*
2	-384.479	46.884	16	0.000	.001463	4.82362	5.11588	5.54418
3	-362.4	44.158*	16	0.000	.001366*	4.75454*	5.1637	5.76333

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UINLD**

Exogenous: **UIGER _cons**

Table 20.4. Netherlands – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.3283264 + .6994938*i*	.772716
.3283264 - .6994938*i*	.772716
.7677714	.767771
.6929047	.692905
-.1696867 + .6188437*i*	.641686
-.1696867 - .6188437*i*	.641686
.6033983	.603398
-.5314448 + .09486402*i*	.539845
-.5314448 - .09486402*i*	.539845
-.1839812 + .2699878*i*	.326715
-.1839812 - .2699878*i*	.326715
-.03660851	.036609

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 20.5. Netherlands – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	25.4717	16	0.06193
2	16.7767	16	0.40019

H0: no autocorrelation at lag order

Table 20.6. Netherlands – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.980431	.939907	1.02096
2	.007657	-.015879	.031192	.000123	-.002867	.003112	.008961	-.016765	.034686	.974564	.927874	1.02125
3	.007005	-.014076	.028087	.007074	-.014618	.028765	.009782	-.015717	.03528	.957953	.899318	1.01659
4	.006965	-.01434	.02827	.013732	-.01477	.042234	.009424	-.015652	.0345	.952483	.891794	1.01317
5	.007342	-.014893	.029576	.0179	-.01522	.05102	.009462	-.014804	.033728	.949635	.883039	1.01623
6	.007572	-.01561	.030754	.017853	-.015013	.05072	.00946	-.014249	.033169	.94814	.876626	1.01965
7	.00755	-.015514	.030615	.017982	-.015326	.05129	.009473	-.014163	.033108	.946573	.871025	1.02212
8	.007549	-.015637	.030735	.018707	-.015912	.053327	.010046	-.01391	.034003	.945855	.867594	1.02412
9	.007555	-.015756	.030866	.018918	-.015953	.05379	.010024	-.013791	.033839	.945076	.864399	1.02575
10	.007553	-.015763	.030869	.019081	-.016104	.054266	.010043	-.013854	.033939	.944437	.86198	1.02689
11	.007552	-.015769	.030873	.019267	-.016349	.054882	.01004	-.01385	.033929	.944156	.860663	1.02765
12	.007552	-.01578	.030884	.019312	-.01642	.055044	.010055	-.013842	.033952	.944006	.859921	1.02809

95% lower and upper bounds reported.

(1) irfname = IRF20, impulse = UINLD, and response = dUnemploymentrate.

(2) irfname = IRF20, impulse = UINLD, and response = dLTGBY10Y.

(3) irfname = IRF20, impulse = UINLD, and response = Inflation.

(4) irfname = IRF20, impulse = UINLD, and response = UINLD.

Table 20.7. Netherlands – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.007651	-.026475	.011174	.016159	-.006962	.039281	.106939	.018043	.195834	1.10611	.697184	1.51504
1	-.007447	-.015073	.000179	.007838	-.00201	.017687	.042272	.005659	.078885	.426444	.240371	.612518
2	-.001423	-.009445	.006598	-.00283	-.014095	.008435	-.036462	-.081723	.008799	.265151	.087302	.442999
3	-.001378	-.007046	.00429	.011904	.003078	.020731	-.028406	-.07762	.020809	.302228	.172786	.431671
4	-.002223	-.006237	.001792	.005282	-.001095	.011659	.011688	-.014114	.037491	.217384	.110519	.324249
5	-.00119	-.004905	.002525	-.002855	-.008672	.002962	.008276	-.01319	.029742	.143295	.051856	.234734
6	.000573	-.002959	.004105	.00052	-.003762	.004801	.012417	-.006874	.031707	.145897	.056567	.235227
7	-.000128	-.003021	.002766	.003594	.000304	.006885	.005371	-.006708	.01745	.120763	.041409	.200118
8	-.000284	-.002702	.002134	.001934	-.000532	.0044	-.005105	-.018794	.008583	.074051	.006281	.141821
9	-.000116	-.002218	.001986	.000805	-.001319	.002928	-.005351	-.015855	.005153	.052221	-.011974	.116416
10	.000022	-.001838	.001882	.000564	-.001417	.002545	.002311	-.004391	.009014	.047714	-.011201	.106629
11	.000028	-.001465	.001521	.000167	-.001295	.001629	.004749	-.001781	.011279	.039566	-.010834	.089966
12	.000115	-.001086	.001316	.000252	-.000759	.001264	.002093	-.002489	.006675	.030559	-.01241	.073529

95% lower and upper bounds reported.

(1) irfname = IRF20, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF20, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF20, impulse = UIGER, and response = Inflation.

(4) irfname = IRF20, impulse = UIGER, and response = UINLD.

Table 20.8. Netherlands – Table Dynamics Multiplier

- **POLAND**

Sample: **2008m5** thru **2022m12** Number of obs = **176**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	361.937				1.3e-08	-3.99929	-3.92622	-3.81915
1	441.852	159.83	25	0.000	6.8e-09	-4.62331	-4.36759*	-3.99282*
2	470.571	57.439*	25	0.000	6.5e-09*	-4.66558*	-4.2272	-3.58473
3	488.317	35.491	25	0.080	7.1e-09	-4.58315	-3.9621	-3.05195

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIPOL dPLNEUR**

Exogenous: **UIGER _cons**

Table 21.4. Poland – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.8222779	.822278
-.2413971 + .5644116*i*	.613867
-.2413971 - .5644116*i*	.613867
.5941437 + .1467133*i*	.61199
.5941437 - .1467133*i*	.61199
.1603675 + .5698107*i*	.591948
.1603675 - .5698107*i*	.591948
.4169694 + .3347039*i*	.534687
.4169694 - .3347039*i*	.534687
-.4730982	.473098
-.3662971 + .109624*i*	.382349
-.3662971 - .109624*i*	.382349
-.1827268 + .2781543*i*	.332805
-.1827268 - .2781543*i*	.332805
.1978118	.197812

All the eigenvalues lie inside the unit circle.

VAR satisfies stability condition.

Table 21.5. Poland – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	31.8877	25	0.16129
2	36.5538	25	0.06361

H0: no autocorrelation at lag order

Table 21.6. Poland – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	,965153	,911918	1,01839
2	,00637	-,013149	,025888	,003944	-,012145	,020033	,007078	-,015447	,029604	,951384	,889464	1,0133
3	,020445	-,018826	,059717	,009512	-,017955	,036979	,020068	-,018564	,0587	,926293	,849927	1,00266
4	,019494	-,017963	,05695	,009297	-,017176	,035771	,04365	-,012784	,100084	,924999	,845721	1,00428
5	,019269	-,018748	,057285	,010073	-,015827	,035973	,049307	-,015193	,113807	,922982	,840403	1,00556
6	,019062	-,018048	,056172	,010688	-,016138	,037515	,055059	-,016278	,126396	,92103	,835782	1,00628
7	,019142	-,017238	,055522	,010686	-,016062	,037435	,059968	-,017451	,137388	,919917	,83237	1,00746
8	,019261	-,016711	,055233	,010697	-,016114	,037507	,062631	-,018847	,144108	,919353	,830516	1,00819
9	,019309	-,01648	,055097	,010786	-,016209	,03778	,064602	-,019959	,149163	,918818	,829032	1,0086
10	,019347	-,016348	,055042	,0108	-,016249	,037849	,066134	-,02085	,153118	,918531	,828098	1,00896
11	,019366	-,016286	,055018	,010805	-,016268	,037878	,06705	-,021581	,155682	,91836	,827496	1,00922
12	,019372	-,016259	,055003	,010814	-,016295	,037923	,067652	-,022152	,157456	,918205	,827005	1,00941

Step	(5) fevd	(5) Lower	(5) Upper
0	0	0	0
1	,019872	-,020429	,060173
2	,021813	-,015399	,059025
3	,023887	-,013677	,06145
4	,03437	-,011302	,080043
5	,034277	-,011296	,079851
6	,034304	-,011128	,079735
7	,036204	-,011271	,08368
8	,036638	-,011329	,084606
9	,036818	-,011251	,084887
10	,037269	-,01128	,085819
11	,037507	-,011309	,086323
12	,037614	-,011296	,086524

95% lower and upper bounds reported.

(1) irfname = IRF21, impulse = UIPOL, and response = dUnemploymentrate.

(2) irfname = IRF21, impulse = UIPOL, and response = dLTGBY10Y.

(3) irfname = IRF21, impulse = UIPOL, and response = Inflation.

(4) irfname = IRF21, impulse = UIPOL, and response = UIPOL.

(5) irfname = IRF21, impulse = UIPOL, and response = dPLNEUR.

Table 21.7. Poland – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	,000213	-,020005	,02043	,035268	-,004872	,075408	,023336	-,041714	,088385	,44993	,272441	,627419
1	-,002673	-,014094	,008749	,020153	,000277	,040029	,031265	,003252	,059278	,081325	,007926	,154724
2	-,006245	-,015951	,003462	,003386	-,01716	,023932	,03045	,002472	,058428	,07769	,006559	,148822
3	,004114	-,003836	,012065	-,003457	-,023104	,016191	,032022	,006844	,0572	,148629	,084713	,212545
4	,001647	-,004665	,007959	,003782	-,007008	,014571	,019801	,005804	,033799	,078142	,037651	,118632
5	,002821	-,002997	,008638	,003827	-,003524	,011178	,019218	,006703	,031732	,056446	,020195	,092696
6	,002399	-,002593	,007391	-,000128	-,0059	,005644	,016156	,005446	,026865	,068124	,036001	,100247
7	,001779	-,002595	,006153	4,6e-06	-,004214	,004223	,011919	,002739	,0211	,049212	,022763	,075662
8	,001002	-,002816	,004821	,000706	-,002495	,003907	,01039	,001959	,018821	,035674	,009487	,061861
9	,000676	-,002726	,004078	,000407	-,002117	,00293	,008867	,001088	,016646	,034379	,008683	,060075
10	,000383	-,002531	,003297	,000373	-,0017	,002446	,006761	-,000186	,013709	,028004	,005276	,050732
11	,000207	-,00225	,002665	,000358	-,00125	,001966	,005397	-,000875	,011668	,02153	,000358	,042702
12	,000132	-,001945	,002209	,000195	-,001164	,001554	,004466	-,001182	,010114	,018661	-,001419	,038741

Step	(5) dm	(5) Lower	(5) Upper
0	-,000433	-,001243	,000378
1	-,000183	-,000539	,000173
2	-,000109	-,000441	,000224
3	,000159	-,000131	,000448
4	-,000034	-,000224	,000156
5	,000044	-,000125	,000213
6	,000116	-,000028	,000259
7	,000057	-,000048	,000163
8	,000044	-,00005	,000137
9	,000056	-,000026	,000139
10	,00004	-,000023	,000103
11	,000029	-,000023	,000081
12	,000028	-,000017	,000072

95% lower and upper bounds reported.

(1) irfname = IRF21, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF21, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF21, impulse = UIGER, and response = Inflation.

(4) irfname = IRF21, impulse = UIGER, and response = UIPOL.

(5) irfname = IRF21, impulse = UIGER, and response = dPLNEUR.

Table 21.8. Poland – Table Dynamic Multiplier

- **PORTUGAL**

Sample: **2008m9** thru **2022m12** Number of obs = **172**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-829.036				.198191	9.73298	9.79238	9.87938
1	-752.648	152.78	16	0.000	.098215	9.03079	9.20898	9.46998*
2	-724.04	57.216	16	0.000	.084856	8.88419	9.18117	9.61616
3	-695.299	57.483	16	0.000	.073239	8.73603	9.15181	9.7608
4	-668.161	54.275	16	0.000	.064447	8.60653	9.14109*	9.92408
5	-649.186	37.951	16	0.002	.062415	8.57193	9.22528	10.1823
6	-622.974	52.423	16	0.000	.055633	8.45319	9.22534	10.3563
7	-592.915	60.119*	16	0.000	.047483*	8.28971*	9.18065	10.4856

* optimal lag
Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIPRT**
Exogenous: **UIGER _cons**

Table 22.4. Portugal – Varsoc

Eigenvalue	Modulus
.9878806	.987881
-.4819805 + .8382349*i*	.966925
-.4819805 - .8382349*i*	.966925
.4759206 + .8250644*i*	.952487
.4759206 - .8250644*i*	.952487
.8843778 + .05518146*i*	.886098
.8843778 - .05518146*i*	.886098
-.8835004	.8835
-.6931876 + .4466199*i*	.824608
-.6931876 - .4466199*i*	.824608
.5813329 + .5775473*i*	.819456
.5813329 - .5775473*i*	.819456
-.731108 + .3386682*i*	.805739
-.731108 - .3386682*i*	.805739
-.06347797 + .8017136*i*	.804223
-.06347797 - .8017136*i*	.804223
-.6365653 + .4807251*i*	.797692
-.6365653 - .4807251*i*	.797692
.7348333 + .288535*i*	.789451
.7348333 - .288535*i*	.789451
-.2837146 + .7232403*i*	.776898
-.2837146 - .7232403*i*	.776898
.460939 + .5984462*i*	.755382
.460939 - .5984462*i*	.755382
-.06762485 + .6781577*i*	.681521
-.06762485 - .6781577*i*	.681521
.2611344 + .5625155*i*	.620173
.2611344 - .5625155*i*	.620173

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 22.5. Portugal – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	28.5034	16	0.02751
2	25.3546	16	0.06381

H0: no autocorrelation at lag order

Table 22.6. Portugal – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.98576	.950602	1.02092
2	.009171	-.016726	.035067	.00348	-.013593	.020552	.001561	-.009168	.01229	.969978	.920631	1.01932
3	.009731	-.012459	.031921	.018702	-.022529	.059932	.002997	-.014366	.02036	.924251	.847831	1.00067
4	.01013	-.012177	.032436	.022106	-.022939	.06715	.004389	-.016378	.025157	.906059	.821173	.990946
5	.010642	-.01173	.033014	.024202	-.024877	.073282	.01196	-.017985	.041905	.895429	.805004	.985853
6	.011078	-.012051	.034208	.028282	-.018522	.075087	.013028	-.018489	.044545	.889798	.792594	.987001
7	.020603	-.011959	.053166	.028486	-.017648	.07462	.010984	-.014705	.036673	.882689	.778	.987378
8	.025732	-.009629	.061093	.028156	-.017557	.073869	.016378	-.013899	.046655	.873659	.764018	.9833
9	.02574	-.009919	.061399	.027942	-.017393	.073278	.015799	-.013232	.04483	.874609	.762253	.986965
10	.025259	-.00959	.060107	.028083	-.016592	.072758	.016289	-.013801	.04638	.871069	.752245	.989893
11	.025382	-.009512	.060275	.028963	-.015494	.073421	.015906	-.013758	.045569	.865424	.738105	.992744
12	.025801	-.008822	.060424	.028905	-.015131	.07294	.017689	-.016674	.052052	.860657	.725117	.996196

95% lower and upper bounds reported.

(1) irfname = IRF22, impulse = UIPRT, and response = dUnemploymentrate.

(2) irfname = IRF22, impulse = UIPRT, and response = dLTGBY10Y.

(3) irfname = IRF22, impulse = UIPRT, and response = Inflation.

(4) irfname = IRF22, impulse = UIPRT, and response = UIPRT.

Table 22.7. Portugal – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.003287	-.037961	.031387	.065791	.006237	.125346	.024653	-.047151	.096456	.421644	-.114366	.957654
1	.000083	-.015057	.015224	.011865	-.00237	.0261	.025538	-.005867	.056942	.077599	-.075897	.231094
2	-.002178	-.01588	.011524	.014278	-.001098	.029655	.001856	-.019215	.022928	-.119374	-.284465	.045717
3	.003743	-.006304	.013791	.021725	.002628	.040822	.004371	-.015094	.023835	.045134	-.140113	.230382
4	.001474	-.006646	.009594	.005397	-.008349	.019144	.009621	-.018891	.038133	.070582	-.068398	.209562
5	.004786	-.004885	.014458	.004124	-.013389	.021636	-.00445	-.028151	.01925	.105617	-.069933	.281167
6	-.003042	-.011757	.005674	.000223	-.012945	.013391	.01358	-.026063	.053223	.088845	-.062843	.240533
7	.008981	-.002023	.019986	.006665	-.005984	.019315	.011536	-.010086	.033158	.082569	-.080676	.245814
8	.007025	-.001066	.015117	.004609	-.004978	.014196	-.010229	-.034168	.01371	.071156	-.067027	.20934
9	.003655	-.003468	.010779	-.001741	-.011294	.007813	-.001318	-.018089	.015453	.064424	-.057719	.186567
10	.006323	-.000394	.013039	.002246	-.006519	.011011	.001628	-.020928	.024184	.066335	-.061636	.194306
11	.003848	-.001004	.0087	-.002322	-.01075	.006105	-.006425	-.02296	.01011	.054709	-.053516	.162934
12	.002634	-.00239	.007658	.001108	-.005336	.007552	.015012	-.01763	.047654	.072013	-.053153	.197178

95% lower and upper bounds reported.

(1) irfname = IRF22, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF22, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF22, impulse = UIGER, and response = Inflation.

(4) irfname = IRF22, impulse = UIGER, and response = UIPRT.

Table 22.8. Portugal – Table Dynamic Multiplier

- **ROMANIA**

Sample: **2008m5** thru **2022m12** Number of obs = **176**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	81.926				3.0e-07	-.817341	-.744277*	-.6372*
1	120.983	78.114	25	0.000	2.6e-07	-.97708	-.721355	-.346586
2	140.24	38.514	25	0.041	2.8e-07	-.911821	-.473435	.169025
3	171.671	62.861*	25	0.000	2.6e-07*	-.984896*	-.363849	.546304

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIROM dRONEUR**

Exogenous: **UIGER _cons**

Table 23.4. Romania – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
-.3037983 + .6669938*i*	.732922
-.3037983 - .6669938*i*	.732922
-.6807774	.680777
.6767982	.676798
.6555864	.655586
-.4453655 + .407143*i*	.60342
-.4453655 - .407143*i*	.60342
.4979474 + .3035443*i*	.583173
.4979474 - .3035443*i*	.583173
.3520968 + .3928122*i*	.527516
.3520968 - .3928122*i*	.527516
.00768436 + .5231897*i*	.523246
.00768436 - .5231897*i*	.523246
-.3313849 + .2785793*i*	.432923
-.3313849 - .2785793*i*	.432923

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 23.5. Romania – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	32.5984	25	0.14142
2	27.6030	25	0.32645

H0: no autocorrelation at lag order

Table 23.6. Romania – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.986736	.953158	1.02031
2	5.2e-06	-.000584	.000594	.017341	-.017012	.051693	.019191	-.015799	.05418	.963597	.910366	1.01683
3	.000425	-.00482	.005669	.042394	-.006014	.090802	.027169	-.019277	.073615	.870026	.776427	.963625
4	.000511	-.005829	.00685	.062781	.006313	.119249	.029355	-.014704	.073414	.831301	.738651	.923951
5	.00292	-.008422	.014262	.065321	.0075	.123142	.030339	-.014744	.075421	.831116	.737717	.924514
6	.002904	-.008379	.014187	.065273	.007366	.123179	.030314	-.014759	.075387	.829703	.735763	.923644
7	.00296	-.008394	.014314	.068332	.00877	.127894	.03033	-.014688	.075349	.82904	.734942	.923137
8	.00344	-.008471	.015352	.068647	.008728	.128567	.03042	-.014707	.075548	.827867	.73306	.922673
9	.003451	-.008549	.01545	.068619	.008752	.128485	.030844	-.014708	.076397	.826613	.730649	.922577
10	.003453	-.008545	.01545	.068907	.008731	.129083	.030878	-.014672	.076427	.826396	.730253	.922539
11	.003539	-.008608	.015686	.06901	.008732	.129288	.030884	-.014678	.076446	.826379	.730226	.922532
12	.003543	-.008619	.015705	.069008	.008746	.12927	.030912	-.01469	.076514	.826289	.730054	.922524

Step	(5) fevd	(5) Lower	(5) Upper
0	0	0	0
1	.000605	-.006343	.007552
2	.016449	-.018132	.05103
3	.016859	-.017665	.051383
4	.077797	.009124	.14647
5	.080263	.009173	.151352
6	.079533	.009424	.149643
7	.08062	.009845	.151395
8	.081852	.00999	.153714
9	.081967	.009902	.154033
10	.082299	.00981	.154787
11	.082409	.009811	.155007
12	.0824	.009823	.154977

95% lower and upper bounds reported.

(1) irfname = IRF23, impulse = UIROM, and response = dUnemploymentrate.

(2) irfname = IRF23, impulse = UIROM, and response = dLTGBY10Y.

(3) irfname = IRF23, impulse = UIROM, and response = Inflation.

(4) irfname = IRF23, impulse = UIROM, and response = UIROM.

(5) irfname = IRF23, impulse = UIROM, and response = dRONEUR

Table 23.7. Romania – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.006092	-.036003	.02382	-.017401	-.070295	.035492	.084906	.015904	.153909	1.05324	.485183	1.62129
1	-.00127	-.016172	.013632	.020456	-.003618	.044529	.033264	.00078	.065748	.255991	.044673	.467309
2	-.000137	-.010965	.01069	.024084	-.001602	.04977	.023033	-.001238	.047304	.419754	.16273	.676778
3	.000288	-.009702	.010277	.010682	-.009522	.030887	-.002469	-.026942	.022004	.023314	-.215039	.261666
4	.001925	-.004525	.008375	.006375	-.002668	.015418	.000556	-.0172	.018311	.10944	-.015787	.234666
5	.000056	-.004889	.005001	.003425	-.004635	.011485	-.005274	-.022047	.0115	-.01366	-.156786	.129466
6	.001319	-.001396	.004034	.003305	-.002743	.009353	.000739	-.009001	.010478	.073658	-.009232	.156548
7	.000386	-.001642	.002414	.00093	-.002422	.004281	-.000128	-.007085	.006829	.002207	-.061227	.06564
8	.000355	-.000785	.001496	.001179	-.001865	.004224	.001685	-.003109	.006478	.033043	-.022373	.088459
9	.000259	-.000849	.001366	.001033	-.00095	.003016	-.000176	-.003345	.002992	.007234	-.02975	.044219
10	.000259	-.000397	.000915	.000752	-.000617	.002122	.000858	-.00114	.002856	.016369	-.009176	.041914
11	.000118	-.000443	.000678	.000348	-.000941	.001637	.000075	-.001354	.001503	.000071	-.024675	.024818
12	.000135	-.000261	.000532	.000413	-.000416	.001243	.000239	-.000701	.00118	.008929	-.006207	.024065

Step	(5) dm	(5) Lower	(5) Upper
0	.00041	-.000046	.000867
1	-.000099	-.000258	.000059
2	.000013	-.000146	.000172
3	-.000185	-.000383	.000012
4	-.000013	-.000104	.000078
5	-.000059	-.000158	.00004
6	-5.7e-06	-.000066	.000055
7	-.000027	-.000066	.000011
8	1.4e-06	-.000035	.000038
9	-.000016	-.000036	2.9e-06
10	-1.7e-06	-.000017	.000014
11	-6.3e-06	-.00002	7.0e-06
12	-1.4e-06	-.00001	7.4e-06

95% lower and upper bounds reported.

(1) irfname = IRF23, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF23, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF23, impulse = UIGER, and response = Inflation.

(4) irfname = IRF23, impulse = UIGER, and response = UIROM.

(5) irfname = IRF23, impulse = UIGER, and response = dRONEUR.

Table 23.8. Romania – Table Dynamic Multiplier

- **SLOVAKIA**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-493.285				.003389	5.66423	5.72245	5.80779
1	-411.671	163.23	16	0.000	.001615	4.92283	5.09749	5.3535*
2	-380.601	62.14*	16	0.000	.001362*	4.75255*	5.04365*	5.47032

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UISVK**

Exogenous: **UIGER _cons**

Table 24.4. Slovakia – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.8267964	.826796
.6645892	.664589
.1597506 + .5491285*i*	.571894
.1597506 - .5491285*i*	.571894
-.4954356	.495436
-.2899669	.289967
.1887301	.18873
.01208011	.01208

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 24.5. Slovakia – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	**11.6056**	**16**	**0.77066**
2	**13.1188**	**16**	**0.66405**

H0: no autocorrelation at lag order

Table 24.6. Slovakia – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.938531	.869972	1.00709
2	7.2e-06	-.000666	.000681	.002057	-.009955	.014068	.001205	-.008433	.010844	.880244	.784392	.976095
3	.00002	-.000798	.000837	.004679	-.010064	.019422	.001062	-.007408	.009533	.859619	.762905	.956334
4	.000062	-.000844	.000967	.006619	-.014208	.027446	.001292	-.008652	.011236	.850182	.749569	.950794
5	.000063	-.001084	.001211	.006623	-.014217	.027464	.001316	-.008806	.011437	.843163	.739577	.946749
6	.000061	-.001048	.001169	.006727	-.0144	.027853	.001344	-.009013	.011701	.838966	.732839	.945093
7	.000059	-.000996	.001114	.00673	-.014394	.027854	.001343	-.009029	.011714	.835979	.727844	.944114
8	.000058	-.001026	.001143	.00674	-.014426	.027905	.001345	-.009054	.011744	.833965	.724275	.943655
9	.000058	-.001066	.001183	.006747	-.014444	.027937	.001346	-.009063	.011754	.832584	.721744	.943424
10	.000058	-.001089	.001205	.006746	-.014442	.027935	.001347	-.009069	.011762	.831654	.719973	.943334
11	.000058	-.001099	.001215	.006746	-.014441	.027934	.001347	-.00907	.011763	.831019	.718727	.943312
12	.000058	-.001107	.001223	.006746	-.014441	.027932	.001347	-.00907	.011764	.830586	.717849	.943323

95% lower and upper bounds reported.

(1) irfname = IRF24, impulse = UISVK, and response = dUnemploymentrate.

(2) irfname = IRF24, impulse = UISVK, and response = dLTGBY10Y.

(3) irfname = IRF24, impulse = UISVK, and response = Inflation.

(4) irfname = IRF24, impulse = UISVK, and response = UISVK.

Table 24.7. Slovakia – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.006964	-.009789	.023718	.015718	-.01001	.041446	.065792	.021605	.109979	.497228	.009533	.984923
1	.002324	-.006464	.011111	.009089	-.001363	.01954	.014675	.001985	.027365	.255381	.081419	.429343
2	.002297	-.00555	.010145	.005074	-.004942	.015089	.024854	.009496	.040213	-.040608	-.1781	.096884
3	.001687	-.004446	.00782	.003033	-.003923	.009989	.008959	.001383	.016535	.018547	-.069375	.10647
4	.00116	-.00398	.0063	.001484	-.000937	.003905	.009709	.002415	.017003	-.01941	-.083237	.044416
5	.000926	-.003414	.005265	.001108	-.001194	.00341	.004492	-.00025	.009233	-.000889	-.045022	.043244
6	.000626	-.003097	.004349	.000809	-.000453	.002071	.003916	-.000306	.008138	-.007852	-.04318	.027476
7	.000483	-.002668	.003635	.000576	-.000516	.001668	.002129	-.000846	.005104	-.002329	-.029604	.024946
8	.000352	-.002328	.003031	.000335	-.000444	.001113	.001641	-.000839	.00412	-.003394	-.025619	.018831
9	.000276	-.001984	.002537	.000206	-.000311	.000723	.000962	-.000835	.002759	-.001756	-.019872	.01636
10	.000209	-.001699	.002118	.000136	-.000265	.000538	.000687	-.00074	.002114	-.001802	-.016876	.013272
11	.000164	-.001439	.001766	.000097	-.000202	.000396	.000422	-.000628	.001471	-.001198	-.013751	.011355
12	.000127	-.001217	.001471	.000062	-.000171	.000296	.00029	-.000522	.001101	-.001037	-.011542	.009468

95% lower and upper bounds reported.

(1) irfname = IRF24, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF24, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF24, impulse = UIGER, and response = Inflation.

(4) irfname = IRF24, impulse = UIGER, and response = UISVK.

Table 24.8. Slovakia – Table Dynamic multiplier

- **SLOVENIA**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-805.457				.115336	9.1916	9.24982	9.33516
1	-736.511	137.89	16	0.000	.063415	8.59335	8.76801*	9.02401*
2	-717.966	37.091*	16	0.002	.06164*	8.56459*	8.85569	9.28236

* optimal lag
Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UISVN**
Exogenous: **UIGER _cons**

Table 25.4. Slovenia – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.3052983 + .4148034*i*	.515043
.3052983 - .4148034*i*	.515043
.4021861 + .2475295*i*	.472255
.4021861 - .2475295*i*	.472255
.2179378 + .3256507*i*	.391849
.2179378 - .3256507*i*	.391849
-.1759498 + .2432817*i*	.30024
-.1759498 - .2432817*i*	.30024

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 25.5. Slovenia – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	30.2599	16	0.01670
2	16.6968	16	0.40547

H0: no autocorrelation at lag order

Table 25.6. Slovenia – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.990497	.962047	1.01895
2	.005192	-.011815	.0222	.000113	-.002705	.002931	.000347	-.004796	.00549	.951741	.891556	1.01193
3	.022733	-.023937	.069403	.004201	-.014923	.023325	.000814	-.005851	.007479	.940991	.877138	1.00484
4	.030696	-.030351	.091742	.004177	-.014904	.023258	.001171	-.00747	.009811	.936356	.868323	1.00439
5	.033393	-.031427	.098212	.004347	-.014432	.023126	.001209	-.007369	.009787	.936211	.868102	1.00432
6	.033771	-.031255	.098798	.004399	-.014488	.023285	.001368	-.007422	.010158	.936114	.867905	1.00432
7	.033749	-.031193	.09869	.004403	-.014525	.023331	.00144	-.007436	.010317	.936064	.867805	1.00432
8	.03375	-.031208	.098709	.004403	-.014518	.023325	.001451	-.007427	.01033	.936055	.867788	1.00432
9	.033758	-.031214	.09873	.004404	-.014516	.023324	.001452	-.007426	.010329	.936053	.867784	1.00432
10	.03376	-.031214	.098734	.004404	-.014517	.023325	.001452	-.007425	.010329	.936052	.867781	1.00432
11	.03376	-.031213	.098734	.004404	-.014517	.023325	.001452	-.007425	.010329	.936052	.86778	1.00432
12	.03376	-.031213	.098734	.004404	-.014517	.023325	.001452	-.007424	.010329	.936052	.86778	1.00432

95% lower and upper bounds reported.

(1) irfname = IRF25, impulse = UISVN, and response = dUnemploymentrate.

(2) irfname = IRF25, impulse = UISVN, and response = dLTGBY10Y.

(3) irfname = IRF25, impulse = UISVN, and response = Inflation.

(4) irfname = IRF25, impulse = UISVN, and response = UISVN.

Table 25.7. Slovenia – Table Dynamic Multiplier

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.006314	-.012825	.025453	.02976	-.002831	.06235	.050287	-.028286	.12886	1.4791	.526423	2.43178
1	.000908	-.012213	.014029	.01479	-.0004	.029981	.013253	-.015862	.042368	.281789	-.047675	.611253
2	-.007308	-.015841	.001225	.008518	-.002617	.019652	.001125	-.025092	.027342	.145587	-.137583	.428756
3	-.007629	-.014575	-.000684	-.000064	-.007357	.007229	.002011	-.015579	.019601	.070173	-.069449	.209796
4	-.005356	-.010276	-.000435	-.002457	-.007232	.002317	-.000253	-.008004	.007498	-.002205	-.081939	.077529
5	-.002429	-.005607	.000749	-.001639	-.004598	.001321	-.002178	-.008165	.003809	-.005288	-.064385	.05381
6	-.00037	-.002607	.001866	-.000524	-.002664	.001615	-.002374	-.006961	.002214	-.002304	-.042602	.037995
7	.000418	-.001183	.002019	.000104	-.001341	.001549	-.001385	-.003862	.001093	-.002235	-.026413	.021943
8	.000435	-.000554	.001423	.000218	-.000555	.000991	-.000318	-.001535	.000898	-.002288	-.014242	.009666
9	.000218	-.000358	.000794	.000116	-.000292	.000525	.000201	-.000718	.00112	-.001839	-.007922	.004243
10	.000048	-.000315	.000411	.000019	-.000271	.000309	.000248	-.000375	.000872	-.000895	-.004405	.002615
11	-.000017	-.000244	.000209	-.000017	-.000209	.000174	.000124	-.000216	.000463	-.000112	-.002254	.002031
12	-.000022	-.000151	.000107	-.000015	-.000115	.000084	.00002	-.000179	.000219	.000202	-.001076	.001481

95% lower and upper bounds reported.

(1) irfname = IRF25, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF25, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF25, impulse = UIGER, and response = Inflation.

(4) irfname = IRF25, impulse = UIGER, and response = UISVN.

Table 25.8. Slovenia – Table Dynamic Multiplier

- **SPAIN**

Sample: **2008m5** thru **2022m12** Number of obs = **176**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-536.819				.00574	6.19112	6.24957	6.33523
1	-356.977	359.68	16	0.000	.000892	4.32929	4.50464	4.76163*
2	-336.767	40.421	16	0.001	.000851	4.28144	4.5737	5.002
3	-303.274	66.986*	16	0.000	.000698*	4.08266*	4.49182*	5.09145

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UIESP**

Exogenous: **UIGER _cons**

Table 26.4. Spain – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
.9248117	.924812
.7956589	.795659
.3898525 + .6655127*i*	.771293
.3898525 - .6655127*i*	.771293
-.7019566	.701957
-.6007216	.600722
.16068 + .4155854*i*	.445566
.16068 - .4155854*i*	.445566
-.1402392 + .4025028*i*	.426234
-.1402392 - .4025028*i*	.426234
.08384955 + .1184628*i*	.145135
.08384955 - .1184628*i*	.145135

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 26.5. Spain – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	16.0191	16	0.45163
2	13.4623	16	0.63871

H0: no autocorrelation at lag order

Table 26.6. Spain -Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.973753	.927139	1.02037
2	.00162	-.00785	.011089	.019824	-.017779	.057427	3.8e-06	-.000529	.000537	.969793	.921957	1.01763
3	.008327	-.008741	.025395	.026753	-.018494	.072001	.000207	-.003609	.004022	.951549	.89354	1.00956
4	.007258	-.00672	.021236	.029272	-.018931	.077475	.001183	-.005194	.007561	.932827	.859767	1.00589
5	.006813	-.004322	.017947	.029128	-.018466	.076721	.001171	-.005224	.007565	.921776	.835022	1.00853
6	.007292	-.003668	.018251	.029079	-.018223	.07638	.001299	-.006253	.00885	.91008	.808236	1.01192
7	.008108	-.006195	.022412	.029389	-.017772	.076549	.001447	-.006118	.009013	.898839	.781368	1.01631
8	.009307	-.010744	.029358	.02937	-.017626	.076366	.001443	-.0061	.008985	.887878	.7548	1.02096
9	.010844	-.015899	.037586	.029358	-.017526	.076243	.001471	-.006166	.009108	.877554	.729267	1.02584
10	.012422	-.021023	.045866	.029355	-.017518	.076228	.001489	-.006257	.009236	.867824	.705198	1.03045
11	.014111	-.025971	.054194	.029413	-.01748	.076306	.001489	-.006233	.009211	.858936	.682908	1.03496
12	.015646	-.030469	.061761	.029453	-.017423	.076329	.001489	-.006248	.009227	.851034	.66278	1.03929

95% lower and upper bounds reported.

(1) irfname = IRF26, impulse = UIESP, and response = dUnemploymentrate.

(2) irfname = IRF26, impulse = UIESP, and response = dLTGBY10Y.

(3) irfname = IRF26, impulse = UIESP, and response = Inflation.

(4) irfname = IRF26, impulse = UIESP, and response = UIESP

Table 26.7. Spain – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	.018798	-.005686	.043282	.066003	.032502	.099504	.071843	-.01673	.160416	.366876	.201885	.531867
1	.005662	-.01088	.022204	.006668	-.008891	.022226	.033476	-.004272	.071224	.147032	.056769	.237296
2	.011897	-.005036	.02883	-.012481	-.027751	.002789	-.002378	-.037226	.032471	.070618	-.011805	.153041
3	.009901	-.002538	.022341	.00234	-.011016	.015695	-.036595	-.092288	.019099	.111882	.038038	.185727
4	.007973	-.003346	.019292	.000281	-.007816	.008378	-.018686	-.042861	.005489	.103978	.04457	.163386
5	.006882	-.00302	.016785	-.002733	-.009483	.004017	-.002423	-.019416	.014571	.075106	.023561	.126651
6	.005293	-.0037	.014286	-.002922	-.008034	.00219	.014352	-.009108	.037811	.055525	.006791	.104259
7	.003967	-.004449	.012382	.000366	-.003567	.004299	.007558	-.00337	.018486	.04559	-.000081	.091261
8	.002264	-.005618	.010147	.001576	-.001699	.00485	.000187	-.008446	.00882	.038927	-.003651	.081505
9	.001457	-.005948	.008862	.001205	-.00114	.00355	-.007188	-.019952	.005577	.035486	-.005042	.076014
10	.000836	-.006157	.00783	-.000344	-.002216	.001528	-.004261	-.011336	.002813	.030283	-.008107	.068673
11	.000778	-.005757	.007313	-.000962	-.002843	.000918	-.000534	-.005127	.004058	.025051	-.010992	.061094
12	.000475	-.005622	.006572	-.000723	-.002111	.000666	.002872	-.002712	.008456	.019982	-.013909	.053873

95% lower and upper bounds reported.

(1) irfname = IRF26, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF26, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF26, impulse = UIGER, and response = Inflation.

(4) irfname = IRF26, impulse = UIGER, and response = UIESP.

Table 26.8. Spain – Table Dynamic Multiplier

- **SWEDEN**

Sample: **2008m4** thru **2022m12** Number of obs = **177**

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	**279.884**				**3.3e-08**	**-3.04954**	**-2.97676**	**-2.8701***
1	**322.276**	**84.784**	**25**	**0.000**	**2.7e-08***	**-3.24606***	**-2.99134***	**-2.618**
2	**342.529**	**40.505***	**25**	**0.026**	**2.8e-08**	**-3.19241**	**-2.75576**	**-2.11575**

* optimal lag

Endogenous: **dUnemploymentrate dLTGBY10Y Inflation UISWE dSEKEUR**

Exogenous: **UIGER _cons**

Table 27.4. Sweden – Varsoc

Eigenvalue stability condition

Eigenvalue	Modulus
-.1484403 + .4914486*i*	.513377
-.1484403 - .4914486*i*	.513377
.4385669	.438567
-.3134646 + .3046228*i*	.437098
-.3134646 - .3046228*i*	.437098
.3513644 + .2470612*i*	.42953
.3513644 - .2470612*i*	.42953
-.3548719	.354872
.06316376 + .2381084*i*	.246344
.06316376 - .2381084*i*	.246344

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

Table 27.5. Sweden – Varstable

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	46.6929	25	0.00533
2	16.9505	25	0.88358

H0: no autocorrelation at lag order

Table 27.6. Sweden – Varlmar

Step	(1) fevd	(1) Lower	(1) Upper	(2) fevd	(2) Lower	(2) Upper	(3) fevd	(3) Lower	(3) Upper	(4) fevd	(4) Lower	(4) Upper
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	.965793	.913163	1.01842
2	.004734	-.013966	.023434	.002827	-.012237	.01789	.01079	-.019944	.041523	.929972	.851629	1.00831
3	.022008	-.023312	.067327	.003516	-.010271	.017303	.010442	-.019378	.040262	.899052	.805791	.992313
4	.021731	-.022949	.06641	.00373	-.011386	.018846	.010714	-.018715	.040144	.897519	.80305	.991989
5	.022128	-.023104	.067359	.003731	-.011342	.018805	.010765	-.018556	.040087	.89647	.800961	.991979
6	.022323	-.023263	.067909	.003746	-.011372	.018865	.010796	-.018497	.040088	.89592	.799828	.992012
7	.022323	-.023261	.067908	.003761	-.011397	.01892	.010795	-.01849	.040081	.895784	.799563	.992006
8	.022336	-.023267	.067938	.003761	-.011397	.01892	.010798	-.018489	.040085	.895778	.799549	.992007
9	.022336	-.023267	.067939	.003761	-.011397	.01892	.0108	-.018489	.040088	.895773	.799539	.992007
10	.022336	-.023267	.06794	.003762	-.011397	.01892	.0108	-.018489	.040088	.895772	.799537	.992007
11	.022336	-.023267	.06794	.003762	-.011397	.01892	.0108	-.018489	.040088	.895772	.799537	.992007
12	.022336	-.023267	.06794	.003762	-.011397	.01892	.0108	-.018489	.040088	.895772	.799537	.992007

Step	(5) fevd	(5) Lower	(5) Upper
0	0	0	0
1	.005315	-.015588	.026218
2	.017927	-.019501	.055355
3	.01782	-.019289	.054928
4	.017819	-.019296	.054934
5	.017976	-.01911	.055062
6	.017975	-.019109	.055059
7	.017975	-.019109	.05506
8	.017977	-.019108	.055062
9	.017977	-.019108	.055062
10	.017977	-.019108	.055062
11	.017977	-.019108	.055062
12	.017977	-.019108	.055062

95% lower and upper bounds reported.

(1) irfname = IRF27, impulse = UISWE, and response = dUnemploymentrate.

(2) irfname = IRF27, impulse = UISWE, and response = dLTGBY10Y.

(3) irfname = IRF27, impulse = UISWE, and response = Inflation.

(4) irfname = IRF27, impulse = UISWE, and response = UISWED

(5) irfname = IRF27, impulse = UISWE, and response = dSEKEUR.

Table 27.7. Sweden – Table FEVD

Step	(1) dm	(1) Lower	(1) Upper	(2) dm	(2) Lower	(2) Upper	(3) dm	(3) Lower	(3) Upper	(4) dm	(4) Lower	(4) Upper
0	-.057119	-.107199	-.007038	.017494	-.007081	.042069	.122575	.055148	.190003	.723985	.260898	1.18707
1	.024187	-.013701	.062076	.008459	-.002269	.019186	.002322	-.03152	.036164	.333689	.127513	.539865
2	.011137	-.012971	.035245	.00122	-.008928	.011368	.017143	-.010767	.045054	.250413	.06692	.433906
3	-.009427	-.022853	.003998	-.00123	-.007078	.004619	-.002523	-.015314	.010269	.098294	-.006748	.203336
4	.005132	-.002392	.012657	-.000019	-.003272	.003235	.000685	-.007906	.009276	.052473	-.023355	.128301
5	.001195	-.00297	.005361	.000409	-.001254	.002073	.000634	-.003804	.005072	.014896	-.030532	.060323
6	-.000919	-.003573	.001734	.00009	-.000765	.000944	-.00114	-.004215	.001936	.010715	-.017807	.039238
7	.000266	-.000937	.001469	8.8e-06	-.000364	.000381	.000269	-.000735	.001274	.003118	-.011504	.01774
8	.000165	-.000597	.000927	.000061	-.000103	.000225	.000184	-.000575	.000943	-.000399	-.008596	.007798
9	-.000065	-.000477	.000347	.00002	-.000057	.000096	-.000103	-.000437	.000231	.000624	-.003248	.004496
10	-.000024	-.000227	.000179	-6.0e-06	-.000046	.000034	.000036	-.000111	.000182	.000326	-.001699	.00235
11	.000023	-.000091	.000137	2.2e-06	-.000016	.00002	.000026	-.000061	.000113	-.000061	-.001025	.000902
12	3.7e-06	-.000057	.000064	2.4e-06	-9.7e-06	.000014	-6.4e-06	-.00005	.000037	.000057	-.00038	.000494

Step	(5) dm	(5) Lower	(5) Upper
0	.000035	-.000226	.000297
1	-.00008	-.000206	.000046
2	-2.9e-06	-.000097	.000092
3	9.2e-08	-.000044	.000044
4	1.0e-06	-.000029	.000031
5	-3.2e-06	-.000017	.00001
6	2.9e-06	-5.1e-06	.000011
7	1.4e-07	-2.3e-06	2.6e-06
8	1.0e-07	-1.5e-06	1.7e-06
9	2.1e-07	-4.1e-07	8.2e-07
10	2.5e-08	-2.5e-07	3.0e-07
11	-1.5e-08	-1.8e-07	1.5e-07
12	7.5e-11	-7.9e-08	7.9e-08

95% lower and upper bounds reported.

(1) irfname = IRF27, impulse = UIGER, and response = dUnemploymentrate.

(2) irfname = IRF27, impulse = UIGER, and response = dLTGBY10Y.

(3) irfname = IRF27, impulse = UIGER, and response = Inflation.

(4) irfname = IRF27, impulse = UIGER, and response = UISWE.

(5) irfname = IRF27, impulse = UIGER, and response = dSEKEUR.

Table 27.8. Sweden – Table Dynamic Multiplier

Appendix B

- **AUSTRIA**

Vector autoregression

Sample: 2008m8 thru 2022m12			Number of obs	=	173
Log likelihood	=	-458.912	AIC	=	6.507653
FPE	=	.0079492	HQIC	=	7.276695
Det(Sigma_ml)	=	.0023669	SBIC	=	8.403274

Equation	Parms	RMSE	R-sq	chi2	P>chi2
Unemploymentrate	26	.415321	0.7255	457.2734	0.0000
dLTGBY10Y	26	.155548	0.3706	101.8459	0.0000
Inflation	26	.343669	0.5209	188.1277	0.0000
UIAUT	26	3.1373	0.2364	53.5579	0.0008

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
Unemploymentrate						
Unemploymentrate						
L1.	.614017	.0753739	8.15	0.000	.4662869	.761747
L2.	.1960194	.0861536	2.28	0.023	.0271614	.3648774
L3.	.089783	.0872513	1.03	0.303	-.0812264	.2607924
L4.	-.0602073	.0887563	-0.68	0.498	-.2341664	.1137518
L5.	-.2301615	.0876907	-2.62	0.009	-.402032	-.0582909
L6.	.2582134	.0759366	3.40	0.001	.1093804	.4070463
dLTGBY10Y						
L1.	-.0164233	.1944731	-0.08	0.933	-.3975836	.3647371
L2.	.1639699	.1995475	0.82	0.411	-.2271361	.5550758
L3.	.1148817	.2008915	0.57	0.567	-.2788584	.5086219
L4.	-.2909367	.204707	-1.42	0.155	-.6921551	.1102817
L5.	.4007599	.2065396	1.94	0.052	-.0040502	.80557
L6.	.2195677	.2108451	1.04	0.298	-.1936811	.6328165
Inflation						
L1.	-.1717679	.0864893	-1.99	0.047	-.3412839	-.002252
L2.	.0366115	.0846415	0.43	0.665	-.1292828	.2025057
L3.	-.1283888	.088072	-1.46	0.145	-.3010066	.0442291
L4.	-.012176	.0893023	-0.14	0.892	-.1872053	.1628533
L5.	-.1483774	.0870797	-1.70	0.088	-.3190505	.0222958
L6.	-.0152537	.0882894	-0.17	0.863	-.1882977	.1577904
UIAUT						
L1.	.0066326	.0101862	0.65	0.515	-.0133321	.0265972
L2.	.0041117	.0096966	0.42	0.672	-.0148932	.0231166
L3.	.0091038	.0096922	0.94	0.348	-.0098925	.0281001
L4.	-.0042078	.0096985	-0.43	0.664	-.0232165	.0148009
L5.	.0082499	.0096259	0.86	0.391	-.0106164	.0271163
L6.	.007521	.0095482	0.79	0.431	-.0111931	.0262352
UIGER	-.0431719	.0323692	-1.33	0.182	-.1066143	.0202706
_cons	.8539602	.3365193	2.54	0.011	.1943944	1.513526
dLTGBY10Y						
Unemploymentrate						
L1.	.0148553	.0282294	0.53	0.599	-.0404733	.0701838
L2.	.0294431	.0322667	0.91	0.362	-.0337984	.0926846
L3.	-.0768544	.0326778	-2.35	0.019	-.1409016	-.0128071
L4.	-.0044432	.0332414	-0.13	0.894	-.0695952	.0607088
L5.	.0275958	.0328423	0.84	0.401	-.0367739	.0919656
L6.	.0192534	.0284401	0.68	0.498	-.0364882	.0749951
dLTGBY10Y						
L1.	.2461235	.072835	3.38	0.001	.1033696	.3888775
L2.	-.1462585	.0747355	-1.96	0.050	-.2927373	.0002203
L3.	.0351907	.0752388	0.47	0.640	-.1122747	.1826561
L4.	.0389743	.0766678	0.51	0.611	-.1112919	.1892405
L5.	-.0787819	.0773542	-1.02	0.308	-.2303932	.0728295
L6.	-.1151564	.0789667	-1.46	0.145	-.2699282	.0396155
Inflation						
L1.	.0193505	.0323924	0.60	0.550	-.0441374	.0828384
L2.	.0316796	.0317003	1.00	0.318	-.0304519	.0938111
L3.	.0278851	.0329851	0.85	0.398	-.0367645	.0925348
L4.	-.0305068	.0334459	-0.91	0.362	-.0960595	.035046
L5.	-.0890515	.0326135	-2.73	0.006	-.1529728	-.0251302
L6.	.0700344	.0330666	2.12	0.034	.0052252	.1348437
UIAUT						
L1.	-.0005032	.003815	-0.13	0.895	-.0079805	.0069741
L2.	.0040391	.0036316	1.11	0.266	-.0030788	.0111569
L3.	-.0056814	.00363	-1.57	0.118	-.012796	.0014332
L4.	.0037205	.0036323	1.02	0.306	-.0033987	.0108398
L5.	.0050206	.0036051	1.39	0.164	-.0020453	.0120865
L6.	.0035906	.003576	1.00	0.315	-.0034184	.0105995
UIGER	.0395926	.0121231	3.27	0.001	.0158318	.0633533
_cons	-.295337	.1260348	-2.34	0.019	-.5423607	-.0483134
Inflation						
Unemploymentrate						
L1.	-.0121388	.0623703	-0.19	0.846	-.1343823	.1101047
L2.	.0408695	.0712903	0.57	0.566	-.0988569	.1805959
L3.	-.1530936	.0721986	-2.12	0.034	-.2946002	-.011587
L4.	.0625295	.0734439	0.85	0.395	-.0814179	.206477
L5.	.0619293	.0725622	0.85	0.393	-.08029	.2041485
L6.	.036346	.0628359	0.58	0.563	-.0868101	.1595021
dLTGBY10Y						
L1.	.7439926	.1609224	4.62	0.000	.4285905	1.059395
L2.	-.0995804	.1651213	-0.60	0.546	-.4232123	.2240514
L3.	.3527717	.1662335	2.12	0.034	.02696	.6785833
L4.	-.1840665	.1693907	-1.09	0.277	-.5160662	.1479332
L5.	.547928	.1709071	3.21	0.001	.2129562	.8828998
L6.	-.3072011	.1744698	-1.76	0.078	-.6491557	.0347535
Inflation						
L1.	.1186217	.0715681	1.66	0.097	-.0216491	.2588925
L2.	-.3335457	.070039	-4.76	0.000	-.4708197	-.1962717
L3.	.1618284	.0728777	2.22	0.026	.0189908	.3046661
L4.	-.2527746	.0738958	-3.42	0.001	-.3976076	-.1079416
L5.	.077795	.0720566	1.08	0.280	-.0634334	.2190234
L6.	.4153135	.0730576	5.68	0.000	.2721232	.5585037
UIAUT						
L1.	.0094047	.0084289	1.12	0.265	-.0071157	.025925
L2.	-.0053807	.0080237	-0.67	0.502	-.0211068	.0103455
L3.	-.008073	.0080201	-1.01	0.314	-.0237921	.007646
L4.	.018946	.0080253	2.36	0.018	.0032167	.0346753
L5.	.0059256	.0079652	0.74	0.457	-.0096859	.0215371
L6.	.0000749	.0079009	0.01	0.992	-.0154107	.0155605
UIGER	.0318775	.0267848	1.19	0.234	-.0206197	.0843748
_cons	-.2691202	.2784626	-0.97	0.334	-.8148969	.2766564
UIAUT						
Unemploymentrate						
L1.	.2798899	.5693688	0.49	0.623	-.8360524	1.395832
L2.	-.6481821	.6507984	-1.00	0.319	-1.923724	.6273593
L3.	.0056058	.65909	0.01	0.993	-1.286187	1.297399
L4.	.0069466	.6704586	0.01	0.992	-1.307128	1.321021
L5.	-.6876329	.6624091	-1.04	0.299	-1.985931	.6106651
L6.	.0927041	.5736196	0.16	0.872	-1.03157	1.216978
dLTGBY10Y						
L1.	-2.018194	1.469036	-1.37	0.169	-4.897452	.8610646
L2.	.3786152	1.507368	0.25	0.802	-2.575771	3.333002
L3.	2.054101	1.51752	1.35	0.176	-.9201847	5.028386
L4.	-2.491352	1.546342	-1.61	0.107	-5.522128	.5394233
L5.	3.773398	1.560185	2.42	0.016	.7154904	6.831305
L6.	-.2818638	1.592709	-0.18	0.860	-3.403516	2.839789
Inflation						
L1.	1.113355	.6533342	1.70	0.088	-.1671562	2.393867
L2.	.474833	.6393759	0.74	0.458	-.7783208	1.727987
L3.	.9909036	.6652894	1.49	0.136	-.3130396	2.294847
L4.	.5170375	.6745833	0.77	0.443	-.8051214	1.839196
L5.	.0238083	.6577942	0.04	0.971	-1.265445	1.313061
L6.	-.2318797	.6669319	-0.35	0.728	-1.539042	1.075283
UIAUT						
L1.	-.0222388	.0769461	-0.29	0.773	-.1730505	.1285729
L2.	-.0838849	.0732471	-1.15	0.252	-.2274466	.0596767
L3.	-.0729406	.0732139	-1.00	0.319	-.2164372	.070556
L4.	.039871	.0732619	0.54	0.586	-.1037197	.1834616
L5.	-.0156726	.0727131	-0.22	0.829	-.1581877	.1268425
L6.	.0882643	.0721266	1.22	0.221	-.0531012	.2296298
UIGER	.4242308	.2445145	1.73	0.083	-.0550087	.9034704
_cons	8.73359	2.542043	3.44	0.001	3.751277	13.7159

VAR 1. Austria – VAR model with 6 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **BELGIUM**

Vector autoregression

Sample: 2008m6 thru 2022m12			Number of obs	=	175
Log likelihood =	-331.2422		AIC	=	4.608483
FPE =	.0011825		HQIC	=	5.136645
Det(Sigma_ml) =	.0005178		SBIC	=	5.910566

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	18	.140441	0.5587	221.5164	0.0000
dLTGBY10Y	18	.17514	0.2518	58.9098	0.0000
Inflation	18	.330144	0.3244	84.03398	0.0000
UIBEL	18	3.52797	0.5671	229.269	0.0000

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.6784826	.0723027	9.38	0.000	.5367719	.8201934
L2.	-.0800368	.0797659	-1.00	0.316	-.236375	.0763015
L3.	-.4879286	.0795636	-6.13	0.000	-.6438704	-.3319868
L4.	.2000862	.072003	2.78	0.005	.058963	.3412095
dLTGBY10Y						
L1.	-.1045411	.0597723	-1.75	0.080	-.2216927	.0126105
L2.	.0007912	.0634947	0.01	0.990	-.123656	.1252385
L3.	.0517279	.0648107	0.80	0.425	-.0752986	.1787545
L4.	-.0327119	.0640477	-0.51	0.610	-.158243	.0928192
Inflation						
L1.	.0072952	.0326907	0.22	0.823	-.0567773	.0713677
L2.	-.0556704	.0317591	-1.75	0.080	-.1179172	.0065763
L3.	-.01595	.0339018	-0.47	0.638	-.0823964	.0504964
L4.	.0614958	.0350073	1.76	0.079	-.0071172	.1301088
UIBEL						
L1.	-.0048448	.0029357	-1.65	0.099	-.0105988	.0009091
L2.	.0073882	.0029731	2.49	0.013	.001561	.0132154
L3.	.0069112	.0029903	2.31	0.021	.0010502	.0127721
L4.	-.0053947	.0029309	-1.84	0.066	-.0111392	.0003498
UIGER	-.0148771	.0110037	-1.35	0.176	-.0364441	.0066898
_cons	.0209674	.0370852	0.57	0.572	-.0517183	.0936531
dLTGBY10Y						
dUnemploymentrate						
L1.	-.0320518	.0901668	-0.36	0.722	-.2087755	.1446719
L2.	-.0303419	.0994739	-0.31	0.760	-.2253072	.1646234
L3.	-.0481434	.0992216	-0.49	0.628	-.2426143	.1463274
L4.	-.0013267	.089793	-0.01	0.988	-.1773178	.1746643
dLTGBY10Y						
L1.	.2934493	.0745405	3.94	0.000	.1473527	.4395459
L2.	-.268589	.0791825	-3.39	0.001	-.4237839	-.1133942
L3.	.066923	.0808236	0.83	0.408	-.0914885	.2253344
L4.	.0131068	.0798721	0.16	0.870	-.1434398	.1696533
Inflation						
L1.	-.0051266	.0407677	-0.13	0.900	-.0850297	.0747766
L2.	.0180686	.039606	0.46	0.648	-.0595577	.0956949
L3.	.0702406	.0422781	1.66	0.097	-.0126229	.1531042
L4.	.0161954	.0436567	0.37	0.711	-.06937	.1017609
UIBEL						
L1.	-.0070909	.0036611	-1.94	0.053	-.0142665	.0000847
L2.	.0026587	.0037077	0.72	0.473	-.0046083	.0099256
L3.	-.0014524	.0037292	-0.39	0.697	-.0087614	.0058566
L4.	.0033514	.0036551	0.92	0.359	-.0038124	.0105153
UIGER	.0402919	.0137225	2.94	0.003	.0133963	.0671874
_cons	-.175521	.046248	-3.80	0.000	-.2661654	-.0848767
Inflation						
dUnemploymentrate						
L1.	-.0593311	.1699665	-0.35	0.727	-.3924594	.2737972
L2.	-.1358556	.1875107	-0.72	0.469	-.5033698	.2316586
L3.	-.1709815	.1870352	-0.91	0.361	-.5375637	.1956007
L4.	-.0627241	.169262	-0.37	0.711	-.3944714	.2690233
dLTGBY10Y						
L1.	.364197	.1405105	2.59	0.010	.0888014	.6395926
L2.	-.2021035	.1492609	-1.35	0.176	-.4946495	.0904425
L3.	.1472372	.1523545	0.97	0.334	-.1513721	.4458465
L4.	.2585426	.1505609	1.72	0.086	-.0365513	.5536366
Inflation						
L1.	.0336199	.076848	0.44	0.662	-.1169994	.1842392
L2.	.0260464	.0746582	0.35	0.727	-.120281	.1723738
L3.	.2409942	.0796952	3.02	0.002	.0847944	.3971939
L4.	-.0329111	.0822938	-0.40	0.689	-.1942041	.1283818
UIBEL						
L1.	-.002032	.0069012	-0.29	0.768	-.0155582	.0114942
L2.	-.0062693	.0069891	-0.90	0.370	-.0199677	.007429
L3.	.0070854	.0070296	1.01	0.313	-.0066923	.020863
L4.	.0009379	.0068899	0.14	0.892	-.0125662	.0144419
UIGER	.0661728	.0258672	2.56	0.011	.0154741	.1168716
_cons	-.1329557	.0871785	-1.53	0.127	-.3038224	.0379111
UIBEL						
dUnemploymentrate						
L1.	-.6603161	1.816293	-0.36	0.716	-4.220184	2.899552
L2.	-.2183274	2.003773	-0.11	0.913	-4.14565	3.708995
L3.	3.204834	1.998691	1.60	0.109	-.7125286	7.122196
L4.	-1.277132	1.808763	-0.71	0.480	-4.822243	2.267979
dLTGBY10Y						
L1.	.289098	1.501521	0.19	0.847	-2.653828	3.232024
L2.	-3.49645	1.595029	-2.19	0.028	-6.622649	-.3702513
L3.	.8552085	1.628087	0.53	0.599	-2.335784	4.046201
L4.	3.291246	1.608921	2.05	0.041	.1378194	6.444672
Inflation						
L1.	-.2122853	.8212115	-0.26	0.796	-1.82183	1.39726
L2.	1.121084	.7978108	1.41	0.160	-.4425968	2.684764
L3.	1.734477	.8516372	2.04	0.042	.0652991	3.403656
L4.	-.4879542	.8794065	-0.55	0.579	-2.211559	1.235651
UIBEL						
L1.	.2374421	.0737478	3.22	0.001	.092899	.3819851
L2.	.2057745	.0746866	2.76	0.006	.0593915	.3521575
L3.	.1039214	.0751191	1.38	0.167	-.0433094	.2511522
L4.	.0431599	.0736272	0.59	0.558	-.1011467	.1874665
UIGER	.8748311	.2764216	3.16	0.002	.3330548	1.416607
_cons	-.0969388	.9316053	-0.10	0.917	-1.922852	1.728974

VAR 2. Belgium – VAR model with 4 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **BULGARIA**

Vector autoregression

Sample: 2008m5 thru 2022m12			Number of obs	=	176
Log likelihood =	601.6718		AIC	=	-5.871271
FPE =	1.95e-09		HQIC	=	-5.250224
Det(Sigma_ml) =	7.38e-10		SBIC	=	-4.340071

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	17	.210264	0.3128	80.11836	0.0000
dLTGBY10Y	17	.290335	0.1986	43.62154	0.0002
Inflation	17	.452855	0.3215	83.40497	0.0000
UIBUL	17	4.5276	0.3890	112.0759	0.0000
BGNEUR	17	.000288	0.1112	22.01218	0.1428

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.4833689	.0743613	6.50	0.000	.3376235	.6291143
L2.	-.0205748	.0821419	-0.25	0.802	-.18157	.1404204
L3.	.1860891	.075434	2.47	0.014	.0382412	.3339369
dLTGBY10Y						
L1.	-.0270077	.0529787	-0.51	0.610	-.130844	.0768287
L2.	-.0690376	.0528534	-1.31	0.191	-.1726283	.0345531
L3.	-.0157173	.0622278	-0.25	0.801	-.1376815	.106247
Inflation						
L1.	-.0234418	.0347778	-0.67	0.500	-.0916051	.0447214
L2.	.0087139	.0360796	0.24	0.809	-.0620007	.0794286
L3.	-.0062783	.0341765	-0.18	0.854	-.0732629	.0607064
UIBUL						
L1.	.0028319	.0035021	0.81	0.419	-.0040322	.009696
L2.	-.0028482	.0034406	-0.83	0.408	-.0095915	.0038952
L3.	.0000196	.0034699	0.01	0.995	-.0067814	.0068205
BGNEUR						
L1.	66.65975	54.80312	1.22	0.224	-40.75239	174.0719
L2.	14.24793	54.97068	0.26	0.795	-93.49262	121.9885
L3.	-40.22567	55.14469	-0.73	0.466	-148.3073	67.85593
UIGER	.0130743	.0161951	0.81	0.419	-.0186676	.0448162
_cons	-20.86136	48.04751	-0.43	0.664	-115.0327	73.31003
dLTGBY10Y						
dUnemploymentrate						
L1.	.1081089	.1026789	1.05	0.292	-.0931381	.3093559
L2.	.0454764	.1134226	0.40	0.688	-.1768278	.2677806
L3.	-.2728378	.1041601	-2.62	0.009	-.4769879	-.0686877
dLTGBY10Y						
L1.	-.0149064	.0731537	-0.20	0.839	-.1582849	.1284721
L2.	.0960114	.0729806	1.32	0.188	-.0470279	.2390507
L3.	.0853253	.0859249	0.99	0.321	-.0830845	.253735
Inflation						
L1.	-.0392608	.0480216	-0.82	0.414	-.1333814	.0548598
L2.	.1145938	.0498191	2.30	0.021	.0169502	.2122374
L3.	.0711843	.0471913	1.51	0.131	-.021309	.1636775
UIBUL						
L1.	-.001758	.0048358	-0.36	0.716	-.011236	.00772
L2.	-.0044701	.0047508	-0.94	0.347	-.0137815	.0048412
L3.	.0077737	.0047913	1.62	0.105	-.0016172	.0171645
BGNEUR						
L1.	-56.43269	75.67281	-0.75	0.456	-204.7487	91.88329
L2.	-35.97682	75.90418	-0.47	0.636	-184.7463	112.7926
L3.	21.38255	76.14446	0.28	0.779	-127.8578	170.6229
UIGER	.0359895	.0223625	1.61	0.108	-.0078401	.0798191
_cons	36.13521	66.34459	0.54	0.586	-93.89779	166.1682
Inflation						
dUnemploymentrate						
L1.	.0825222	.1601553	0.52	0.606	-.2313763	.3964207
L2.	-.0472867	.17693129	-0.27	0.789	-.3940296	.2994562
L3.	.1457578	.1624656	0.90	0.370	-.1726689	.4641846
dLTGBY10Y						
L1.	-.1620101	.1141027	-1.42	0.156	-.3856473	.0616271
L2.	.2103486	.1138327	1.85	0.065	-.0127595	.4334566
L3.	-.0635249	.1340229	-0.47	0.636	-.3262049	.1991552
Inflation						
L1.	.3002089	.0749026	4.01	0.000	.1534026	.4470152
L2.	.0118638	.0777062	0.15	0.879	-.1404376	.1641651
L3.	.1340273	.0736075	1.82	0.069	-.0102407	.2782953
UIBUL						
L1.	-.0164468	.0075427	-2.18	0.029	-.0312302	-.0016633
L2.	.0003601	.0074101	0.05	0.961	-.0141635	.0148836
L3.	.0141606	.0074734	1.89	0.058	-.000487	.0288081
BGNEUR						
L1.	-116.4768	118.032	-0.99	0.324	-347.8153	114.8617
L2.	171.5952	118.3929	1.45	0.147	-60.45063	403.641
L3.	55.65868	118.7677	0.47	0.639	-177.1217	288.439
UIGER	.0974747	.0348802	2.79	0.005	.0291107	.1658387
_cons	-56.93767	103.4821	-0.55	0.582	-259.7589	145.8836
UIBUL						
dUnemploymentrate						
L1.	-1.336283	1.601219	-0.83	0.404	-4.474614	1.802048
L2.	-1.320039	1.76876	-0.75	0.455	-4.786745	2.146666
L3.	-.9182443	1.624317	-0.57	0.572	-4.101848	2.265359
dLTGBY10Y						
L1.	1.340429	1.140789	1.18	0.240	-.8954763	3.576335
L2.	.3440114	1.13809	0.30	0.762	-1.886604	2.574627
L3.	1.456973	1.339949	1.09	0.277	-1.16928	4.083225
Inflation						
L1.	1.580523	.7488693	2.11	0.035	.1127663	3.04828
L2.	.6526327	.7768999	0.84	0.401	-.8700631	2.175329
L3.	.2642398	.7359211	0.36	0.720	-1.178139	1.706619
UIBUL						
L1.	.0984676	.0754116	1.31	0.192	-.0493365	.2462717
L2.	.2354254	.0740856	3.18	0.001	.0902203	.3806305
L3.	.2066155	.074718	2.77	0.006	.0601709	.35306
BGNEUR						
L1.	1087.281	1180.074	0.92	0.357	-1225.622	3400.183
L2.	1585.898	1183.682	1.34	0.180	-734.0762	3905.872
L3.	-420.7244	1187.429	-0.35	0.723	-2748.042	1906.593
UIGER	.05192	.3487296	0.15	0.882	-.6315775	.7354175
_cons	-1149.206	1034.606	-1.11	0.267	-3176.995	878.584
BGNEUR						
dUnemploymentrate						
L1.	-.000118	.0001019	-1.16	0.247	-.0003177	.0000817
L2.	-.0000644	.0001126	-0.57	0.567	-.000285	.0001562
L3.	.0000154	.0001034	0.15	0.882	-.0001872	.000218
dLTGBY10Y						
L1.	.0000569	.0000726	0.78	0.433	-.0000854	.0001992
L2.	-.0000656	.0000724	-0.91	0.365	-.0002076	.0000763
L3.	.0001382	.0000853	1.62	0.105	-.0000289	.0003053
Inflation						
L1.	-.0000903	.0000477	-1.89	0.058	-.0001837	3.12e-06
L2.	.000015	.0000494	0.30	0.762	-.0000819	.0001119
L3.	-.0000755	.0000468	-1.61	0.107	-.0001673	.0000163
UIBUL						
L1.	.0000117	4.80e-06	2.43	0.015	2.25e-06	.0000211
L2.	-2.15e-06	4.72e-06	-0.46	0.649	-.0000114	7.09e-06
L3.	2.70e-07	4.76e-06	0.06	0.955	-9.05e-06	9.59e-06
BGNEUR						
L1.	.0676319	.0751045	0.90	0.368	-.0795703	.2148341
L2.	-.0927706	.0753342	-1.23	0.218	-.2404229	.0548816
L3.	.0316862	.0755726	0.42	0.675	-.1164335	.1798058
UIGER	-3.52e-06	.0000222	-0.16	0.874	-.000047	.00004
_cons	.5080639	.0658464	7.72	0.000	.3790074	.6371204

VAR 3. Bulgaria – VAR model with 3 lags for unemployment rate, inflation, long term government bond 10 years, the country's currency over euro (BGN/EUR) and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **CROATIA**

Vector autoregression

Sample: 2008m7 thru 2022m11			Number of obs	=	173
Log likelihood	=	464.5775	AIC	=	-3.810144
FPE	=	1.54e-08	HQIC	=	-2.811869
Det(Sigma_ml)	=	3.20e-09	SBIC	=	-1.349483

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUenmploymentr~e	27	.1997	0.6178	279.6458	0.0000
dLTGBY10Y	27	.27527	0.1911	40.88122	0.0319
Inflation	27	.428363	0.3988	114.7619	0.0000
UICRO	27	4.53151	0.3635	98.79753	0.0000
dHRKEUR	27	.000837	0.1763	37.03079	0.0743

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUenmploymentrate						
dUenmploymentrate						
L1.	.8809396	.0759831	11.59	0.000	.7320154	1.029864
L2.	-.189042	.1016051	-1.86	0.063	-.3881843	.0101004
L3.	-.2498566	.1022003	-2.44	0.014	-.4501655	-.0495477
L4.	.1042582	.1055055	0.99	0.323	-.1025289	.3110452
L5.	.0113455	.0778442	0.15	0.884	-.1412264	.1639174
dLTGBY10Y						
L1.	.0617012	.0542897	1.14	0.256	-.0447047	.1681072
L2.	.0018849	.0554823	0.03	0.973	-.1068583	.1106281
L3.	-.0459306	.0565632	-0.81	0.417	-.1567925	.0649313
L4.	.0652619	.0560478	1.16	0.244	-.0445897	.1751136
L5.	.0589599	.0565956	1.04	0.298	-.0519654	.1698853
Inflation						
L1.	.0324799	.0360997	0.90	0.368	-.0382743	.103234
L2.	.014617	.0392365	0.37	0.709	-.062285	.0915191
L3.	-.027566	.0389644	-0.71	0.479	-.1039349	.0488029
L4.	-.0031334	.0388238	-0.08	0.936	-.0792267	.0729599
L5.	.0742964	.0360503	2.06	0.039	.003639	.1449537
UICRO						
L1.	-.001905	.0032528	-0.59	0.558	-.0082804	.0044705
L2.	-.0046537	.003217	-1.45	0.148	-.010959	.0016515
L3.	.0010319	.0031005	0.33	0.739	-.005045	.0071089
L4.	-.0038144	.0030409	-1.25	0.210	-.0097744	.0021456
L5.	-.0049813	.0029876	-1.67	0.095	-.010837	.0008743
dHRKEUR						
L1.	11.7221	18.223	0.64	0.520	-23.99432	47.43852
L2.	-4.377873	18.19644	-0.24	0.810	-40.04223	31.28649
L3.	-6.73799	18.30036	-0.37	0.713	-42.60604	29.13006
L4.	-51.53206	18.28799	-2.82	0.005	-87.37586	-15.68826
L5.	-16.44347	18.57154	-0.89	0.376	-52.84301	19.95608
UIGER	-.0025861	.0150708	-0.17	0.864	-.0321243	.0269521
_cons	.0896717	.0564949	1.59	0.112	-.0210562	.2003997
dLTGBY10Y						
dUenmploymentrate						
L1.	-.0858451	.1047368	-0.82	0.412	-.2911254	.1194352
L2.	.1792679	.1400546	1.28	0.201	-.0952341	.45377
L3.	-.1681642	.1408751	-1.19	0.233	-.4442743	.107946
L4.	-.0084643	.1454311	-0.06	0.954	-.293504	.2765754
L5.	.0351297	.1073022	0.33	0.743	-.1751786	.2454381
dLTGBY10Y						
L1.	-.0391555	.0748342	-0.52	0.601	-.1858277	.1075168
L2.	.0396997	.0764779	0.52	0.604	-.1101943	.1895937
L3.	.0959935	.077968	1.23	0.218	-.056821	.2488079
L4.	.0739719	.0772575	0.96	0.338	-.07745	.2253938
L5.	-.1738032	.0780126	-2.23	0.026	-.3267051	-.0209013
Inflation						
L1.	.005349	.0497606	0.11	0.914	-.09218	.102878
L2.	-.0264012	.0540844	-0.49	0.625	-.1324047	.0796022
L3.	.0949268	.0537094	1.77	0.077	-.0103417	.2001954
L4.	.0549833	.0535156	1.03	0.304	-.0499054	.1598719
L5.	-.1403886	.0496925	-2.83	0.005	-.2377842	-.042993
UICRO						
L1.	-.0005506	.0044838	-0.12	0.902	-.0093387	.0082374
L2.	.0029111	.0044344	0.66	0.512	-.0057802	.0116023
L3.	.0007291	.0042738	0.17	0.865	-.0076475	.0091057
L4.	.000179	.0041916	0.04	0.966	-.0080364	.0083944
L5.	.0010383	.0041182	0.25	0.801	-.0070332	.0091099
dHRKEUR						
L1.	-35.15999	25.11897	-1.40	0.162	-84.39227	14.07229
L2.	-41.09966	25.08236	-1.64	0.101	-90.26018	8.06086
L3.	3.317833	25.22561	0.13	0.895	-46.12345	52.75912
L4.	29.62727	25.20856	1.18	0.240	-19.78059	79.03514
L5.	-14.72957	25.5994	-0.58	0.565	-64.90348	35.44434
UIGER	.0508584	.0207739	2.45	0.014	.0101423	.0915745
_cons	-.2586653	.0778738	-3.32	0.001	-.4112951	-.1060355
Inflation						
dUenmploymentrate						
L1.	-.1198051	.1629866	-0.74	0.462	-.4392531	.1996428
L2.	.4937031	.2179467	2.27	0.023	.0665354	.9208708
L3.	-.5947419	.2192235	-2.71	0.007	-1.024412	-.1650718
L4.	.4221846	.2263133	1.87	0.062	-.0213814	.8657505
L5.	-.1026627	.1669788	-0.61	0.539	-.4299351	.2246097
dLTGBY10Y						
L1.	.2710057	.1164535	2.33	0.020	.0427609	.4992504
L2.	-.1266127	.1190115	-1.06	0.287	-.359871	.1066456
L3.	.1084143	.1213303	0.89	0.372	-.1293886	.3462173
L4.	.0602145	.1202246	0.50	0.616	-.1754214	.2958504
L5.	-.1499507	.1213997	-1.24	0.217	-.3878898	.0879883
Inflation						
L1.	.5096038	.0774352	6.58	0.000	.3578335	.661374
L2.	-.0350518	.0841637	-0.42	0.677	-.2000097	.129906
L3.	.0480374	.0835802	0.57	0.565	-.1157768	.2118515
L4.	-.1298954	.0832786	-1.56	0.119	-.2931183	.0333276
L5.	-.0449151	.0773293	-0.58	0.561	-.1964778	.1066475
UICRO						
L1.	.0037428	.0069775	0.54	0.592	-.0099328	.0174183
L2.	-.0036175	.0069006	-0.52	0.600	-.0171425	.0099074
L3.	-.0045936	.0066508	-0.69	0.490	-.0176289	.0084416
L4.	.0055461	.0065228	0.85	0.395	-.0072383	.0183305
L5.	-.0037934	.0064086	-0.59	0.554	-.016354	.0087672
dHRKEUR						
L1.	-1.097373	39.08901	-0.03	0.978	-77.71043	75.51569
L2.	23.48208	39.03204	0.60	0.547	-53.01931	99.98347
L3.	-61.13821	39.25496	-1.56	0.119	-138.0765	15.8001
L4.	-41.09954	39.22842	-1.05	0.295	-117.9858	35.78676
L5.	-3.148236	39.83664	-0.08	0.937	-81.22662	74.93014
UIGER	.070491	.0323274	2.18	0.029	.0071304	.1338515
_cons	-.1696409	.1211837	-1.40	0.162	-.4071565	.0678748
UICRO						
dUenmploymentrate						
L1.	-.4985761	1.724179	-0.29	0.772	-3.877906	2.880753
L2.	2.578739	2.305583	1.12	0.263	-1.940121	7.097599
L3.	-5.51658	2.31909	-2.38	0.017	-10.06191	-.9712475
L4.	5.224132	2.394091	2.18	0.029	.5318005	9.916463
L5.	-1.780971	1.766411	-1.01	0.313	-5.243073	1.681131
dLTGBY10Y						
L1.	1.531632	1.231922	1.24	0.214	-.88289	3.946155
L2.	-2.749238	1.258982	-2.18	0.029	-5.216797	-.2816797
L3.	-.7712644	1.283511	-0.60	0.548	-3.2869	1.744371
L4.	-1.722198	1.271815	-1.35	0.176	-4.214909	.770513
L5.	1.033099	1.284246	0.80	0.421	-1.483976	3.550174
Inflation						
L1.	2.068982	.8191605	2.53	0.012	.4634566	3.674507
L2.	-1.507	.8903388	-1.69	0.091	-3.252032	.238032
L3.	1.688331	.8841658	1.91	0.056	-.0446021	3.421264
L4.	-1.199854	.8809752	-1.36	0.173	-2.926533	.5268261
L5.	1.449329	.81804	1.77	0.076	-.1540004	3.052658
UICRO						
L1.	.1391033	.0738122	1.88	0.059	-.005566	.2837726
L2.	.0007709	.0729991	0.01	0.992	-.1423047	.1438465
L3.	.0866864	.0703562	1.23	0.218	-.0512092	.224582
L4.	-.0191466	.0690023	-0.28	0.781	-.1543886	.1160954
L5.	.2963656	.0677943	4.37	0.000	.1634912	.42924
dHRKEUR						
L1.	360.9456	413.5092	0.87	0.383	-449.5175	1171.409
L2.	-1032.605	412.9065	-2.50	0.012	-1841.887	-223.3234
L3.	-224.6491	415.2646	-0.54	0.589	-1038.553	589.2546
L4.	-114.9046	414.984	-0.28	0.782	-928.2582	698.449
L5.	108.1328	421.4181	0.26	0.797	-717.8315	934.097
UIGER	.7081727	.3419804	2.07	0.038	.0379036	1.378442
_cons	.1184743	1.28196	0.09	0.926	-2.394122	2.63107
dHRKEUR						
dUenmploymentrate						
L1.	-.0000124	.0003184	-0.04	0.969	-.0006365	.0006116
L2.	-.0002352	.0004257	-0.55	0.581	-.0010697	.0005992
L3.	.0003374	.0004282	0.79	0.431	-.0005019	.0011768
L4.	-.000702	.0004421	-1.59	0.112	-.0015685	.0001645
L5.	-.0000456	.0003262	-0.14	0.889	-.000685	.0005937
dLTGBY10Y						
L1.	-3.91e-06	.0002275	-0.02	0.986	-.0004498	.000442
L2.	-.0000302	.0002325	-0.13	0.897	-.0004858	.0004255
L3.	-.0001082	.000237	-0.46	0.648	-.0005727	.0003563
L4.	.0001432	.0002349	0.61	0.542	-.0003171	.0006035
L5.	-.000582	.0002371	-2.45	0.014	-.0010468	-.0001172
Inflation						
L1.	-1.35e-06	.0001513	-0.01	0.993	-.0002978	.0002951
L2.	.0002472	.0001644	1.50	0.133	-.000075	.0005695
L3.	-.0000496	.0001633	-0.30	0.761	-.0003696	.0002704
L4.	.0002849	.0001627	1.75	0.080	-.0000339	.0006038
L5.	-.0001965	.0001511	-1.30	0.193	-.0004925	.0000996
UICRO						
L1.	-.0000292	.0000136	-2.14	0.032	-.0000559	-2.46e-06
L2.	.0000124	.0000135	0.92	0.357	-.000014	.0000388
L3.	-6.98e-06	.000013	-0.54	0.591	-.0000324	.0000185
L4.	-7.33e-06	.0000127	-0.58	0.565	-.0000323	.0000176
L5.	-.0000118	.0000125	-0.94	0.346	-.0000363	.0000127
dHRKEUR						
L1.	-.1962583	.0763584	-2.57	0.010	-.345918	-.0465986
L2.	-.1031142	.0762471	-1.35	0.176	-.2525558	.0463273
L3.	-.1215978	.0766826	-1.59	0.113	-.2718928	.0286973
L4.	-.1835138	.0766307	-2.39	0.017	-.3337073	-.0333203
L5.	-.0284151	.0778188	-0.37	0.715	-.1809373	.124107
UIGER	.0000704	.0000631	1.11	0.265	-.0000534	.0001942
_cons	-.0001231	.0002367	-0.52	0.603	-.0005871	.0003409

VAR 4. Croatia – VAR model with 5 lags for unemployment rate, inflation, long term government bond 10 years, the country's currency over euro (HRK/EUR) and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **CYPRUS**

Vector autoregression

Sample: **2008m5** thru **2022m12** — Number of obs = **176**
Log likelihood = **-959.3347** — AIC = **11.27653**
FPE = **15.85347** — HQIC = **11.51764**
Det(Sigma_ml) = **10.89059** — SBIC = **11.871**

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	11	.302946	0.2468	57.68498	0.0000
Inflation	11	.828117	0.1864	40.32574	0.0000
UICYP	11	14.9005	0.3301	86.70705	0.0000

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.4452671	.0766663	5.81	0.000	.2950039	.5955304
L2.	.0363797	.0832142	0.44	0.662	-.1267172	.1994766
L3.	-.0048241	.0756865	-0.06	0.949	-.153167	.1435187
Inflation						
L1.	-.0072599	.0267951	-0.27	0.786	-.0597773	.0452574
L2.	-.0188318	.0278036	-0.68	0.498	-.0733259	.0356622
L3.	-.0017157	.0271209	-0.06	0.950	-.0548717	.0514404
UICYP						
L1.	.0020831	.001489	1.40	0.162	-.0008352	.0050015
L2.	.0024071	.0015156	1.59	0.112	-.0005634	.0053777
L3.	-.0037961	.001485	-2.56	0.011	-.0067066	-.0008855
UIGER	-.0177807	.0179925	-0.99	0.323	-.0530453	.0174839
_cons	.0729782	.0806366	0.91	0.365	-.0850666	.2310229
Inflation						
dUnemploymentrate						
L1.	-.0076986	.2095708	-0.04	0.971	-.4184499	.4030527
L2.	.0427922	.2274698	0.19	0.851	-.4030404	.4886249
L3.	.1381383	.2068925	0.67	0.504	-.2673634	.5436401
Inflation						
L1.	.2980419	.0732455	4.07	0.000	.1544834	.4416003
L2.	.1217385	.0760024	1.60	0.109	-.0272234	.2707005
L3.	-.2894107	.0741363	-3.90	0.000	-.4347151	-.1441063
UICYP						
L1.	-.000858	.0040702	-0.21	0.833	-.0088354	.0071194
L2.	.0019507	.004143	0.47	0.638	-.0061694	.0100708
L3.	-.0047901	.0040593	-1.18	0.238	-.0127463	.003166
UIGER	.0929549	.0491832	1.89	0.059	-.0034424	.1893522
_cons	-.2100306	.2204236	-0.95	0.341	-.6420529	.2219917
UICYP						
dUnemploymentrate						
L1.	-.8418321	3.770853	-0.22	0.823	-8.232568	6.548903
L2.	-.6352881	4.092913	-0.16	0.877	-8.657249	7.386673
L3.	-6.555344	3.72266	-1.76	0.078	-13.85162	.7409359
Inflation						
L1.	1.483124	1.317921	1.13	0.260	-1.099954	4.066203
L2.	-.5979531	1.367527	-0.44	0.662	-3.278257	2.082351
L3.	.8432176	1.333949	0.63	0.527	-1.771275	3.45771
UICYP						
L1.	.2458317	.0732357	3.36	0.001	.1022924	.389371
L2.	.1435152	.0745459	1.93	0.054	-.0025921	.2896226
L3.	.2731491	.0730405	3.74	0.000	.1299922	.4163059
UIGER	.3743818	.8849642	0.42	0.672	-1.360116	2.10888
_cons	6.895924	3.966129	1.74	0.082	-.8775452	14.66939

VAR 5. Cyprus – VAR model with 3 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **CZECH REPUBLIC**

```
Vector autoregression

Sample: 2008m6 thru 2022m12                     Number of obs      =       175
Log likelihood =    521.1865                    AIC                =  -4.699275
FPE            =    6.30e-09                    HQIC               =  -4.592361
Det(Sigma_ml)  =    1.78e-09                    SBIC               =  -2.709981

Equation           Parms      RMSE     R-sq      chi2      P>chi2
------------------------------------------------------------------
dUnemploymentr~e      22   .222881   0.3207   82.63618   0.0000
dLTGBY10Y             22   .213885   0.3178   81.53147   0.0000
Inflation             22   .538671   0.2863   70.20696   0.0000
UICZ                  22   4.13175   0.2124   47.20669   0.0009
dCZKEUR               22   .000624   0.1020   19.87383   0.5293
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	-.1992071	.0754588	-2.64	0.008	-.3471036	-.0513106
L2.	-.1051274	.0695418	-1.51	0.131	-.2414267	.031172
L3.	.4278889	.0686967	6.23	0.000	.2932577	.5625202
L4.	.1232584	.073268	1.68	0.093	-.0203443	.2668611
dLTGBY10Y						
L1.	.0537821	.0789323	0.68	0.496	-.1009224	.2084866
L2.	.0664059	.0849113	0.78	0.434	-.1000172	.2328289
L3.	-.0169701	.0903636	-0.19	0.851	-.1940794	.1601392
L4.	-.0949605	.0864553	-1.10	0.272	-.2644098	.0744889
Inflation						
L1.	.0348141	.0325202	1.07	0.284	-.0289244	.0985526
L2.	-.003812	.0323327	-0.12	0.906	-.067183	.059559
L3.	.0094293	.0353893	0.27	0.790	-.0599324	.0787909
L4.	-.0113695	.0345618	-0.33	0.742	-.0791095	.0563704
UICZ						
L1.	-.0064322	.0038621	-1.67	0.096	-.0140019	.0011375
L2.	.0004724	.0039501	0.12	0.905	-.0072698	.0082145
L3.	.0011076	.0039318	0.28	0.778	-.0065986	.0088138
L4.	.005394	.0039104	1.38	0.168	-.0022702	.0130582
dCZKEUR						
L1.	-33.12863	27.25572	-1.22	0.224	-86.54886	20.2916
L2.	-82.71334	27.41575	-3.02	0.003	-136.4472	-28.97946
L3.	-10.44405	28.50978	-0.37	0.714	-66.32219	45.43409
L4.	-29.52427	27.61218	-1.07	0.285	-83.64315	24.5946
UIGER	-.009717	.014915	-0.65	0.515	-.0389498	.0195158
_cons	.0257245	.0664525	0.39	0.699	-.1045201	.1559691
dLTGBY10Y						
dUnemploymentrate						
L1.	-.0265075	.0724133	-0.37	0.714	-.1684348	.1154199
L2.	.0005405	.0667351	0.01	0.994	-.1302578	.1313388
L3.	-.0933366	.0659183	-1.42	0.157	-.2225341	.0358609
L4.	.1081229	.0703109	1.54	0.124	-.0296839	.2459298
dLTGBY10Y						
L1.	.3573507	.0757466	4.72	0.000	.2088901	.5058112
L2.	-.3248159	.0814842	-3.99	0.000	-.4845221	-.1651098
L3.	.0159327	.0867165	0.18	0.854	-.1540284	.1858939
L4.	.1459602	.082966	1.76	0.079	-.0166501	.3085706
Inflation						
L1.	.0142589	.0312077	0.46	0.648	-.0469071	.0754249
L2.	.067578	.0310278	2.18	0.029	.0067646	.1283913
L3.	.0134221	.0339609	0.40	0.693	-.0531401	.0799844
L4.	-.0160898	.0331669	-0.49	0.628	-.0810957	.0489162
UICZ						
L1.	-.0054159	.0037063	-1.46	0.144	-.01268	.0018483
L2.	-.0025029	.0037907	-0.66	0.509	-.0099326	.0049268
L3.	.000883	.0037731	0.23	0.815	-.0065122	.0082782
L4.	.0007215	.0037526	0.19	0.848	-.0066334	.0080763
dCZKEUR						
L1.	-46.59976	26.15567	-1.78	0.075	-97.86393	4.664423
L2.	-12.84653	26.30924	-0.49	0.625	-64.4117	38.71864
L3.	-21.27612	27.35912	-0.78	0.437	-74.899	32.34677
L4.	-34.51742	26.49774	-1.30	0.193	-86.45204	17.4172
UIGER	.0304352	.014313	2.13	0.033	.0023822	.0584882
_cons	-.1101564	.0637705	-1.73	0.084	-.2351443	.0148314
Inflation						
dUnemploymentrate						
L1.	-.1886879	.1756019	-1.07	0.283	-.5328612	.1554855
L2.	-.1555046	.1618323	-0.96	0.337	-.47269	.1616809
L3.	.0725123	.1598517	0.45	0.650	-.2407912	.3858158
L4.	.013393	.1705037	0.08	0.937	-.3207881	.3475741
dLTGBY10Y						
L1.	.1604171	.1836852	0.87	0.382	-.1995992	.5204334
L2.	.188195	.197599	0.95	0.341	-.1990919	.5754818
L3.	.5281328	.2102871	2.51	0.012	.1159776	.9402879
L4.	-.1673983	.2011922	-0.83	0.405	-.5617278	.2269312
Inflation						
L1.	.0802874	.0756786	1.06	0.289	-.06804	.2286148
L2.	.1240623	.0752423	1.65	0.099	-.0234098	.2715345
L3.	.0887841	.0823551	1.08	0.281	-.0726291	.2501972
L4.	-.1546737	.0804296	-1.92	0.054	-.3123129	.0029655
UICZ						
L1.	.0083246	.0089877	0.93	0.354	-.009291	.0259401
L2.	-.0042365	.0091925	-0.46	0.645	-.0222534	.0137804
L3.	.0078321	.0091498	0.86	0.392	-.0101012	.0257654
L4.	.0142347	.0090999	1.56	0.118	-.0036008	.0320702
dCZKEUR						
L1.	-26.53055	63.42742	-0.42	0.676	-150.846	97.7849
L2.	-69.3215	63.79982	-1.09	0.277	-194.3669	55.72386
L3.	-143.2098	66.34577	-2.16	0.031	-273.2451	-13.1745
L4.	22.26294	64.25693	0.35	0.729	-103.6783	148.2042
UIGER	.1112489	.034709	3.21	0.001	.0432206	.1792772
_cons	-.4208155	.1546432	-2.72	0.007	-.7239107	-.1177204
UICZ						
dUnemploymentrate						
L1.	2.336219	1.388851	1.67	0.095	-.4054784	5.077917
L2.	-.8177958	1.289162	-0.63	0.526	-3.344507	1.708915
L3.	-.7937986	1.273384	-0.62	0.533	-3.289586	1.701989
L4.	-2.987745	1.358239	-2.20	0.028	-5.649844	-.3256459
dLTGBY10Y						
L1.	1.991991	1.463243	1.36	0.173	-.8759121	4.859894
L2.	-.2804775	1.574081	-0.18	0.859	-3.285619	2.884664
L3.	-.2427275	1.675155	-0.14	0.885	-3.525971	3.040516
L4.	.7417267	1.602705	0.46	0.644	-2.399517	3.88297
Inflation						
L1.	.7358169	.6028587	1.22	0.222	-.4457645	1.917398
L2.	.8440529	.5993828	1.41	0.159	-.3307159	2.018822
L3.	.4294451	.6560442	0.65	0.513	-.8563778	1.715268
L4.	.0325129	.6407055	0.05	0.960	-1.223247	1.288273
UICZ						
L1.	.101073	.0715962	1.41	0.158	-.0392531	.2413991
L2.	-.111222	.0732277	-1.52	0.129	-.2547456	.0323015
L3.	.1543721	.0728877	2.12	0.034	.0115149	.2972293
L4.	-.28911136	.0724903	-3.99	0.000	-.431192	-.1470352
dCZKEUR						
L1.	-163.5636	505.2652	-0.32	0.746	-1153.865	826.7379
L2.	679.0723	508.2318	1.34	0.182	-317.0436	1675.188
L3.	574.3747	528.5128	1.09	0.277	-461.4915	1610.241
L4.	1206.89	511.8731	2.36	0.018	203.637	2210.143
UIGER	-.2427531	.2764929	-0.88	0.380	-.7846693	.299163
_cons	7.20646	1.231894	5.85	0.000	4.791993	9.620928
dCZKEUR						
dUnemploymentrate						
L1.	.0002125	.0002114	1.01	0.315	-.0002018	.0006268
L2.	-.0001377	.0001948	-0.71	0.480	-.0005195	.0002441
L3.	-.0000314	.0001924	-0.16	0.870	-.0004085	.0003458
L4.	8.11e-06	.0002052	0.04	0.968	-.0003942	.0004104
dLTGBY10Y						
L1.	.0000923	.0002211	0.42	0.676	-.0003411	.0005257
L2.	.0003111	.0002379	1.31	0.191	-.0001551	.0007773
L3.	.0001227	.0002531	0.48	0.628	-.0003735	.0006188
L4.	.0002396	.0002422	0.99	0.323	-.0002351	.0007143
Inflation						
L1.	-.0000814	.0000911	-0.89	0.372	-.0002599	.0000972
L2.	.0001126	.0000906	1.24	0.214	-.0000649	.0002902
L3.	.0000337	.0000991	0.34	0.734	-.0001606	.000228
L4.	-.0001454	.0000968	-1.50	0.133	-.0003351	.0000444
UICZ						
L1.	-6.28e-06	.0000108	-0.58	0.562	-.0000275	.0000149
L2.	-6.60e-06	.0000111	-0.60	0.551	-.0000283	.0000151
L3.	-3.81e-06	.0000011	-0.34	0.869	-.0000234	.0000198
L4.	-.0000137	.000011	-1.25	0.211	-.0000352	7.76e-06
dCZKEUR						
L1.	.0292569	.0763527	0.38	0.702	-.1203917	.1789055
L2.	-.1110931	.076801	-1.45	0.148	-.2616203	.0394341
L3.	-.1198025	.0798658	-1.50	0.134	-.2763365	.0367315
L4.	.0270101	.0773513	0.35	0.727	-.1245956	.1786158
UIGER	.0000425	.0000418	1.02	0.309	-.0000394	.0001244
_cons	.0000118	.0001862	0.06	0.950	-.0003531	.0003766

VAR 6. Czech Republic – VAR model with 4 lags for unemployment rate, inflation, long term government bond 10 years, the country's currency over euro (CZK/EUR) and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **DENMARK**

Vector autoregression

Sample: 2008m6 thru 2022m12		Number of obs	= 175
Log likelihood = -614.6883		AIC	= 7.847867
FPE = .0301756		HQIC	= 8.376029
Det(Sigma_ml) = .0132137		SBIC	= 9.14995

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	18	.453702	0.2925	72.35859	0.0000
dLTGBY10Y	18	.181812	0.1882	40.56444	0.0011
Inflation	18	.405338	0.1872	40.29875	0.0012
UIDNK	18	4.4575	0.3916	112.6519	0.0000

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	-.5917327	.0753841	-7.85	0.000	-.7394828	-.4439826
L2.	-.2371118	.0877017	-2.70	0.007	-.4090039	-.0652197
L3.	-.0261259	.0868079	-0.30	0.763	-.1962662	.1440145
L4.	-.0204295	.075614	-0.27	0.787	-.1686303	.1277713
dLTGBY10Y						
L1.	-.1019822	.1939323	-0.53	0.599	-.4820825	.278118
L2.	-.0690236	.199309	-0.35	0.729	-.4596621	.3216149
L3.	.1229336	.1989854	0.62	0.537	-.2670706	.5129378
L4.	-.3643111	.1991211	-1.83	0.067	-.7545814	.0259592
Inflation						
L1.	.0255585	.0872374	0.29	0.770	-.1454236	.1965405
L2.	.0140625	.0874985	0.16	0.872	-.1574315	.1855565
L3.	-.0546096	.088238	-0.62	0.536	-.2275529	.1183337
L4.	.1017014	.0879918	1.16	0.248	-.0707594	.2741622
UIDNK						
L1.	-.0084762	.0078697	-1.08	0.281	-.0239005	.006948
L2.	-.0026007	.0077151	-0.34	0.736	-.0177221	.0125207
L3.	-.0012608	.0077497	-0.16	0.871	-.01645	.0139284
L4.	-.0073225	.0075618	-0.97	0.333	-.0221434	.0074984
UIGER	.0435703	.0371739	1.17	0.241	-.0292892	.1164298
_cons	.0090098	.1213876	0.07	0.941	-.2289055	.2469252
dLTGBY10Y						
dUnemploymentrate						
L1.	-.0175368	.0302087	-0.58	0.562	-.0767449	.0416712
L2.	-.0182732	.0351448	-0.52	0.603	-.0871557	.0506093
L3.	.0021714	.0347866	0.06	0.950	-.0660091	.0703519
L4.	-.0140006	.0303009	-0.46	0.644	-.0733892	.0453881
dLTGBY10Y						
L1.	.283408	.0777147	3.65	0.000	.1310901	.435726
L2.	-.2103268	.0798693	-2.63	0.008	-.3668678	-.0537858
L3.	.1009162	.0797396	1.27	0.206	-.0553706	.257203
L4.	-.004358	.079794	-0.05	0.956	-.1607514	.1520355
Inflation						
L1.	.0014776	.0349587	0.04	0.966	-.0670402	.0699954
L2.	.016026	.0350634	0.46	0.648	-.052697	.0847489
L3.	.0194912	.0353597	0.55	0.581	-.0498125	.088795
L4.	-.0232337	.0352611	-0.66	0.510	-.0923441	.0458767
UIDNK						
L1.	.0022101	.0031536	0.70	0.483	-.0039709	.0083911
L2.	-.0057654	.0030917	-1.86	0.062	-.011825	.0002942
L3.	.0021454	.0031056	0.69	0.490	-.0039414	.0082322
L4.	.0044091	.0030303	1.46	0.146	-.0015301	.0103483
UIGER	.0227571	.0148967	1.53	0.127	-.00644	.0519541
_cons	-.1383698	.0486438	-2.84	0.004	-.2337098	-.0430297
Inflation						
dUnemploymentrate						
L1.	.02776	.0673483	0.41	0.680	-.1042403	.1597603
L2.	.0302954	.0783529	0.39	0.699	-.1232734	.1838643
L3.	.0377354	.0775544	0.49	0.627	-.1142684	.1897392
L4.	.0033574	.0675538	0.05	0.960	-.1290455	.1357604
dLTGBY10Y						
L1.	.3036333	.1732596	1.75	0.080	-.0359492	.6432158
L2.	-.2186963	.1780632	-1.23	0.219	-.5676937	.1303011
L3.	.0779798	.177774	0.44	0.661	-.2704509	.4264105
L4.	.2874273	.1778953	1.62	0.106	-.0612411	.6360958
Inflation						
L1.	.1309684	.0779381	1.68	0.093	-.0217874	.2837242
L2.	-.125979	.0781714	-1.61	0.107	-.2791921	.0272342
L3.	.1417574	.078832	1.80	0.072	-.0127505	.2962654
L4.	-.1873291	.0786121	-2.38	0.017	-.341406	-.0332522
UIDNK						
L1.	-.0112022	.0070308	-1.59	0.111	-.0249823	.0025779
L2.	.0022274	.0068927	0.32	0.747	-.0112821	.0157369
L3.	.0082003	.0069236	1.18	0.236	-.0053698	.0217703
L4.	.0014458	.0067558	0.21	0.831	-.0117953	.0146868
UIGER	.072821	.0332112	2.19	0.028	.0077282	.1379138
_cons	-.1577364	.108448	-1.45	0.146	-.3702906	.0548177
UIDNK						
dUnemploymentrate						
L1.	-.1394132	.7406294	-0.19	0.851	-1.59102	1.312194
L2.	-.845928	.8616465	-0.98	0.326	-2.534724	.842868
L3.	-1.567201	.8528654	-1.84	0.066	-3.238786	.1043849
L4.	-.0317149	.7428887	-0.04	0.966	-1.48775	1.42432
dLTGBY10Y						
L1.	.3394431	1.905335	0.18	0.859	-3.394945	4.073831
L2.	.0290768	1.95816	0.01	0.988	-3.808847	3.867
L3.	-1.691516	1.954981	-0.87	0.387	-5.523208	2.140175
L4.	.3260974	1.956314	0.17	0.868	-3.508208	4.160403
Inflation						
L1.	.4657731	.8570847	0.54	0.587	-1.214082	2.145628
L2.	.1407888	.8596506	0.16	0.870	-1.544095	1.825673
L3.	.3012168	.8669157	0.35	0.728	-1.397907	2.00034
L4.	-.4800147	.8644972	-0.56	0.579	-2.174398	1.214369
UIDNK						
L1.	.1599065	.0773175	2.07	0.039	.008367	.3114461
L2.	.0712759	.0757993	0.94	0.347	-.077288	.2198398
L3.	.1379074	.0761393	1.81	0.070	-.0113228	.2871377
L4.	.0537929	.074293	0.72	0.469	-.0918187	.1994045
UIGER	1.293093	.3652239	3.54	0.000	.5772678	2.008919
_cons	.490448	1.192602	0.41	0.681	-1.847009	2.827906

VAR 7. Denmark – VAR model with 4 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **ESTONIA**

```
Vector autoregression

Sample: 2008m4 thru 2022m12                     Number of obs     =       177
Log likelihood =  -974.1487                     AIC               =   11.27852
FPE            =   15.88016                     HQIC              =   11.45318
Det(Sigma_ml)  =   12.10598                     SBIC              =   11.70918

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e       8     .430734   0.2697   65.36671   0.0000
Inflation              8     .622517   0.2783   68.24171   0.0000
UIEST                  8     13.9415   0.1451   30.05053   0.0001
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.4979857	.0750763	6.63	0.000	.3508388	.6451326
L2.	-.0280474	.075392	-0.37	0.710	-.1758129	.1197181
Inflation						
L1.	-.0300607	.052498	-0.57	0.567	-.1329549	.0728336
L2.	-.0384446	.0532884	-0.72	0.471	-.142888	.0659987
UIEST						
L1.	-.0007205	.0022761	-0.32	0.752	-.0051816	.0037405
L2.	-.0012708	.0022698	-0.56	0.576	-.0057195	.0031779
UIGER	-.0071349	.0272765	-0.26	0.794	-.0605959	.046326
_cons	.0895686	.1144169	0.78	0.434	-.1346845	.3138217
Inflation						
dUnemploymentrate						
L1.	.0011259	.1085038	0.01	0.992	-.2115376	.2137895
L2.	-.0121231	.10896	-0.11	0.911	-.2256808	.2014345
Inflation						
L1.	.3383841	.0758726	4.46	0.000	.1896766	.4870917
L2.	.15581	.0770149	2.02	0.043	.0048636	.3067564
UIEST						
L1.	.002262	.0032895	0.69	0.492	-.0041853	.0087093
L2.	.0009689	.0032804	0.30	0.768	-.0054606	.0073983
UIGER	.0685552	.0394213	1.74	0.082	-.0087091	.1458196
_cons	-.1925414	.1653607	-1.16	0.244	-.5166424	.1315596
UIEST						
dUnemploymentrate						
L1.	-1.783878	2.429992	-0.73	0.463	-6.546574	2.978818
L2.	-2.935064	2.440208	-1.20	0.229	-7.717784	1.847656
Inflation						
L1.	.8643024	1.699201	0.51	0.611	-2.46607	4.194674
L2.	3.670053	1.724782	2.13	0.033	.2895414	7.050564
UIEST						
L1.	.1534135	.0736702	2.08	0.037	.0090227	.2978044
L2.	.1022347	.0734661	1.39	0.164	-.0417562	.2462257
UIGER	.0680696	.8828578	0.08	0.939	-1.6623	1.798439
_cons	11.54459	3.703327	3.12	0.002	4.286204	18.80298

VAR 8. Estonia – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **FINLAND**

```
Vector autoregression

Sample: 2008m4 thru 2022m12                     Number of obs     =        177
Log likelihood =  -567.9304                     AIC               =   6.869271
FPE            =   .0113135                     HQIC              =   7.160372
Det(Sigma_ml)  =   .0071961                     SBIC              =   7.587045

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
Unemploymentrate     10     .438065   0.8011   713.0979   0.0000
dLTGBY10Y            10     .158895   0.2612   62.58666   0.0000
Inflation            10     .304527   0.2220   50.50005   0.0000
UIFIN                10     4.51735   0.2709   65.76116   0.0000
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
Unemploymentrate						
Unemploymentrate						
L1.	.5453293	.0705372	7.73	0.000	.407079	.6835796
L2.	.3282743	.068321	4.80	0.000	.1943677	.4621809
dLTGBY10Y						
L1.	-.2867933	.2005006	-1.43	0.153	-.6797674	.1061807
L2.	.4053334	.2011138	2.02	0.044	.0111576	.7995093
Inflation						
L1.	-.2968235	.105553	-2.81	0.005	-.5037035	-.0899435
L2.	-.0017415	.1094605	-0.02	0.987	-.2162801	.2127971
UIFIN						
L1.	-.0027328	.0072435	-0.38	0.706	-.0169298	.0114642
L2.	-.0038872	.0071872	-0.54	0.589	-.0179737	.0101994
UIGER	-.0079541	.030151	-0.26	0.792	-.067049	.0511409
_cons	1.147724	.3399914	3.38	0.001	.4813535	1.814095
dLTGBY10Y						
Unemploymentrate						
L1.	.0344239	.0255854	1.35	0.178	-.0157225	.0845703
L2.	-.053406	.0247815	-2.16	0.031	-.1019769	-.0048352
dLTGBY10Y						
L1.	.2708699	.0727259	3.72	0.000	.1283298	.4134101
L2.	-.0781659	.0729483	-1.07	0.284	-.221142	.0648102
Inflation						
L1.	.1264573	.0382863	3.30	0.001	.0514174	.2014971
L2.	-.0512261	.0397037	-1.29	0.197	-.1290439	.0265917
UIFIN						
L1.	-.0039491	.0026274	-1.50	0.133	-.0090987	.0012005
L2.	-.0049998	.0026069	-1.92	0.055	-.0101093	.0001097
UIGER	.0403737	.0109364	3.69	0.000	.0189387	.0618087
_cons	.0290312	.1233222	0.24	0.814	-.2126759	.2707383
Inflation						
Unemploymentrate						
L1.	-.0028457	.049035	-0.06	0.954	-.0989525	.0932612
L2.	-.0213141	.0474944	-0.45	0.654	-.1144013	.0717731
dLTGBY10Y						
L1.	.3303574	.1393811	2.37	0.018	.0571755	.6035393
L2.	.1139287	.1398073	0.81	0.415	-.1600886	.3879461
Inflation						
L1.	.0279161	.0733768	0.38	0.704	-.1158997	.1717319
L2.	.1156494	.0760931	1.52	0.129	-.0334904	.2647892
UIFIN						
L1.	.0012916	.0050354	0.26	0.798	-.0085776	.0111609
L2.	.000403	.0049963	0.08	0.936	-.0093895	.0101955
UIGER	.0603622	.02096	2.88	0.004	.0192815	.101443
_cons	.0550822	.2363502	0.23	0.816	-.4081557	.5183201
UIFIN						
Unemploymentrate						
L1.	.085566	.7273843	0.12	0.906	-1.340081	1.511213
L2.	-.8907832	.7045306	-1.26	0.206	-2.271638	.4900714
dLTGBY10Y						
L1.	-2.41914	2.067577	-1.17	0.242	-6.471516	1.633236
L2.	1.72858	2.0739	0.83	0.405	-2.336189	5.79335
Inflation						
L1.	.2676895	1.08847	0.25	0.806	-1.865672	2.401051
L2.	.275812	1.128764	0.24	0.807	-1.936526	2.48815
UIFIN						
L1.	.0532643	.0746954	0.71	0.476	-.093136	.1996646
L2.	.1176281	.0741144	1.59	0.112	-.0276335	.2628897
UIGER	1.370506	.3109196	4.41	0.000	.7611151	1.979898
_cons	6.978434	3.506016	1.99	0.047	.1067696	13.8501

VAR 9. Finland – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **FRANCE**

```
Vector autoregression

Sample: 2008m4 thru 2022m12                     Number of obs     =        177
Log likelihood =  -70.36518                     AIC               =   1.247064
FPE            =   .0000409                     HQIC              =   1.538165
Det(Sigma_ml)  =    .000026                     SBIC              =   1.964838

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e      10     .146152   0.2262   51.74037   0.0000
dLTGBY10Y             10     .161254   0.2300   52.86484   0.0000
Inflation             10     .347078   0.1356   27.76705   0.0010
UIFRA                 10     .716081   0.5563   221.8773   0.0000
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.4889574	.0735836	6.64	0.000	.3447362	.6331787
L2.	-.2456504	.0733638	-3.35	0.001	-.3894409	-.10186
dLTGBY10Y						
L1.	-.0342238	.0655211	-0.52	0.601	-.1626429	.0941952
L2.	-.0644222	.0662339	-0.97	0.331	-.1942383	.0653938
Inflation						
L1.	.0186447	.0310588	0.60	0.548	-.0422295	.0795189
L2.	-.0076132	.0306737	-0.25	0.804	-.0677325	.0525062
UIFRA						
L1.	.0166293	.0141903	1.17	0.241	-.0111832	.0444417
L2.	-.0227341	.0140007	-1.62	0.104	-.0501749	.0047068
UIGER	-.0043104	.0103157	-0.42	0.676	-.0245288	.0159079
_cons	.0372551	.0459145	0.81	0.417	-.0527356	.1272458
dLTGBY10Y						
dUnemploymentrate						
L1.	-.08107	.081187	-1.00	0.318	-.2401936	.0780535
L2.	.1017926	.0809444	1.26	0.209	-.0568556	.2604408
dLTGBY10Y						
L1.	.2985442	.0722914	4.13	0.000	.1568557	.4402328
L2.	-.2496687	.0730778	-3.42	0.001	-.3928985	-.1064388
Inflation						
L1.	.0996505	.0342681	2.91	0.004	.0324862	.1668148
L2.	.0330189	.0338432	0.98	0.329	-.0333125	.0993504
UIFRA						
L1.	.0116773	.0156566	0.75	0.456	-.019009	.0423636
L2.	-.0155853	.0154474	-1.01	0.313	-.0458617	.014691
UIGER	.0325209	.0113816	2.86	0.004	.0102133	.0548284
_cons	-.1484746	.0506588	-2.93	0.003	-.247764	-.0491852
Inflation						
dUnemploymentrate						
L1.	.0587642	.1747442	0.34	0.737	-.2837282	.4012567
L2.	-.2997709	.1742223	-1.72	0.085	-.6412402	.0416985
dLTGBY10Y						
L1.	.4495636	.1555977	2.89	0.004	.1445977	.7545294
L2.	.2528141	.1572903	1.61	0.108	-.0554693	.5610975
Inflation						
L1.	-.1499291	.0737576	-2.03	0.042	-.2944913	-.0053668
L2.	.0193795	.072843	0.27	0.790	-.1233902	.1621492
UIFRA						
L1.	.0367366	.0336987	1.09	0.276	-.0293116	.1027848
L2.	-.0499872	.0332485	-1.50	0.133	-.115153	.0151786
UIGER	.0311893	.0244974	1.27	0.203	-.0168247	.0792033
_cons	.0519488	.1090364	0.48	0.634	-.1617585	.2656561
UIFRA						
dUnemploymentrate						
L1.	-.3345824	.3605275	-0.93	0.353	-1.041203	.3720384
L2.	.1124415	.3594505	0.31	0.754	-.5920686	.8169516
dLTGBY10Y						
L1.	-.2031685	.3210248	-0.63	0.527	-.8323656	.4260285
L2.	.7175281	.324517	2.21	0.027	.0814864	1.35357
Inflation						
L1.	.1453116	.1521746	0.95	0.340	-.1529452	.4435684
L2.	.0506023	.1502877	0.34	0.736	-.2439562	.3451609
UIFRA						
L1.	.2866945	.0695262	4.12	0.000	.1504256	.4229633
L2.	.398904	.0685973	5.82	0.000	.2644557	.5333523
UIGER	.095628	.0505423	1.89	0.058	-.0034331	.1946891
_cons	.6850707	.2249608	3.05	0.002	.2441556	1.125986

VAR 10. France – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **GERMANY**

```
Vector autoregression

Sample: 2008m4 thru 2022m12                     Number of obs     =        177
Log likelihood =   50.55013                     AIC               =  -.1644083
FPE            =   9.97e-06                     HQIC              =   .0975828
Det(Sigma_ml)  =   6.64e-06                     SBIC              =   .4815883

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e       9     .059037   0.2394   55.71135   0.0000
dLTGBY10Y              9     .157796   0.1938   42.53503   0.0000
Inflation              9     .399478   0.1411   29.06681   0.0003
UIGER                  9     .784024   0.6797     375.65   0.0000
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.2124205	.0713921	2.98	0.003	.0724945	.3523466
L2.	.3378044	.0708811	4.77	0.000	.1988801	.4767288
dLTGBY10Y						
L1.	-.0122745	.028112	-0.44	0.662	-.0673731	.042824
L2.	-.0319322	.0278352	-1.15	0.251	-.0864881	.0226238
Inflation						
L1.	-.012462	.0112143	-1.11	0.266	-.0344415	.0095176
L2.	-.002932	.0114364	-0.26	0.798	-.0253469	.019483
UIGER						
L1.	.005006	.005332	0.94	0.348	-.0054445	.0154565
L2.	-.0006147	.0053675	-0.11	0.909	-.0111348	.0099055
_cons	-.0286567	.017035	-1.68	0.093	-.0620447	.0047313
dLTGBY10Y						
dUnemploymentrate						
L1.	-.0315674	.1908211	-0.17	0.869	-.4055699	.3424351
L2.	.2452285	.1894551	1.29	0.196	-.1260966	.6165536
dLTGBY10Y						
L1.	.2545815	.0751395	3.39	0.001	.1073108	.4018521
L2.	-.1603179	.0743995	-2.15	0.031	-.3061383	-.0144975
Inflation						
L1.	.0904732	.0299741	3.02	0.003	.031725	.1492214
L2.	-.0039828	.0305679	-0.13	0.896	-.0638948	.0559293
UIGER						
L1.	.0092786	.0142516	0.65	0.515	-.018654	.0372112
L2.	.0155218	.0143466	1.08	0.279	-.0125971	.0436407
_cons	-.12036	.0455321	-2.64	0.008	-.2096014	-.0311187
Inflation						
dUnemploymentrate						
L1.	-.9297021	.4830834	-1.92	0.054	-1.876528	.017124
L2.	.2247163	.4796252	0.47	0.639	-.7153318	1.164764
dLTGBY10Y						
L1.	.3992782	.1902234	2.10	0.036	.0264472	.7721093
L2.	-.3073113	.1883501	-1.63	0.103	-.6764708	.0618481
Inflation						
L1.	-.0618885	.0758827	-0.82	0.415	-.2106158	.0868387
L2.	.1300164	.0773859	1.68	0.093	-.0216572	.2816899
UIGER						
L1.	.0243559	.0360794	0.68	0.500	-.0463584	.0950702
L2.	.0560556	.03632	1.54	0.123	-.0151303	.1272415
_cons	-.2166168	.1152694	-1.88	0.060	-.4425406	.009307
UIGER						
dUnemploymentrate						
L1.	.9239724	.9481107	0.97	0.330	-.9342903	2.782235
L2.	-1.503463	.9413234	-1.60	0.110	-3.348423	.3414975
dLTGBY10Y						
L1.	.2949808	.3733369	0.79	0.429	-.436746	1.026708
L2.	-.3383824	.3696603	-0.92	0.360	-1.062903	.3861385
Inflation						
L1.	.2654731	.148929	1.78	0.075	-.0264225	.5573686
L2.	.0684246	.1518793	0.45	0.652	-.2292534	.3661026
UIGER						
L1.	.4989949	.0708102	7.05	0.000	.3602094	.6377804
L2.	.3465368	.0712825	4.86	0.000	.2068257	.4862479
_cons	.6220815	.2262303	2.75	0.006	.1786783	1.065485

VAR 11. Germany – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **GREECE**

```
Vector autoregression

Sample: 2008m11 thru 2022m12                    Number of obs     =        170
Log likelihood =  -963.9795                     AIC               =   13.12917
FPE            =   6.100504                     HQIC              =   14.26691
Det(Sigma_ml)  =   .9894824                     SBIC              =   15.93294

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e      38       .53401   0.3079   75.64323   0.0002
dLTGBY10Y             38      1.35235   0.2032   43.34069   0.2191
Inflation             38      .594973   0.8200   774.4211   0.0000
UIGRE                 38      3.93832   0.4755   154.1317   0.0000
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	-.0877553	.0748506	-1.17	0.241	-.2344598	.0589491
L2.	-.0850276	.076491	-1.11	0.266	-.2349473	.064892
L3.	.077753	.0758018	1.03	0.305	-.0708159	.2263219
L4.	-.1440582	.073371	-1.96	0.050	-.2878627	-.0002537
L5.	.2280704	.0697619	3.27	0.001	.0913396	.3648012
L6.	.1527938	.0729445	2.09	0.036	.0098252	.2957624
L7.	.0869717	.0745483	1.17	0.243	-.0591403	.2330837
L8.	-.0979309	.076064	-1.29	0.198	-.2470137	.0511518
L9.	.0651386	.0755957	0.86	0.389	-.0830263	.2133035
dLTGBY10Y						
L1.	.0342786	.0304932	1.12	0.261	-.025487	.0940442
L2.	.0373458	.0304798	1.23	0.220	-.0223935	.0970851
L3.	.0030272	.0315086	0.10	0.923	-.0587285	.0647829
L4.	.01023	.0308943	0.33	0.741	-.0503217	.0707818
L5.	.0344706	.0312563	1.10	0.270	-.0267905	.0957318
L6.	-.0036194	.031152	-0.12	0.908	-.0646762	.0574374
L7.	.0088321	.03141	0.28	0.779	-.0527303	.0703945
L8.	.0199351	.0309614	0.64	0.520	-.0407482	.0806183
L9.	-.0018066	.0303611	-0.06	0.953	-.0613133	.0577001
Inflation						
L1.	.0101033	.0693145	0.15	0.884	-.1257506	.1459572
L2.	.066153	.0680054	0.97	0.331	-.0671351	.1994411
L3.	.041064	.0739406	0.56	0.579	-.1038569	.1859849
L4.	.0927737	.0444598	2.09	0.037	.0056342	.1799133
L5.	.1330433	.0472752	2.81	0.005	.0403857	.2257009
L6.	.1043434	.0439653	2.37	0.018	.018173	.1905138
L7.	.1363678	.0708155	1.93	0.054	-.002428	.2751636
L8.	.0396303	.0701473	0.56	0.572	-.0978559	.1771165
L9.	.0588962	.0785823	0.75	0.454	-.0951224	.2129147
UIGRE						
L1.	.0032803	.0100585	0.33	0.744	-.0164339	.0229945
L2.	-.0114755	.0098515	-1.16	0.244	-.0307842	.0078332
L3.	.012391	.0095738	1.29	0.196	-.0063734	.0311554
L4.	-.0004813	.009975	-0.05	0.962	-.020032	.0190693
L5.	.0144817	.0097595	1.48	0.138	-.0046465	.0336099
L6.	-.0062406	.0101647	-0.61	0.539	-.0261631	.0136818
L7.	-.0015076	.0077995	-0.19	0.847	-.0167944	.0137791
L8.	.0001732	.0076743	0.02	0.982	-.0148682	.0152147
L9.	.0042876	.008024	0.53	0.593	-.0114393	.0200144
UIGER	-.1818171	.0474997	-3.83	0.000	-.2749148	-.0887194
_cons	.5850963	.2271442	2.58	0.010	.1399017	1.030291
dLTGBY10Y						
dUnemploymentrate						
L1.	.0231044	.1895545	0.12	0.903	-.3484156	.3946245
L2.	.232239	.1937088	1.20	0.231	-.1474232	.6119012
L3.	.0428767	.1919635	0.22	0.823	-.3333649	.4191182
L4.	-.0390267	.1858075	-0.21	0.834	-.4032027	.3251493
L5.	-.1246614	.1766677	-0.71	0.480	-.4709237	.2216009
L6.	.0761971	.1847274	0.41	0.680	-.285862	.4382563
L7.	-.3168659	.188789	-1.68	0.093	-.6868854	.0531537
L8.	-.2853129	.1926275	-1.48	0.139	-.6628558	.09223
L9.	.0144287	.1914415	0.08	0.940	-.3607898	.3896472
dLTGBY10Y						
L1.	.1060018	.0772222	1.37	0.170	-.0453509	.2573546
L2.	-.1970911	.0771882	-2.55	0.011	-.3483772	-.045805
L3.	.065596	.0797935	0.82	0.411	-.0907965	.2219884
L4.	.167777	.0782379	2.14	0.032	.0144335	.3211204
L5.	.0927368	.0791546	1.17	0.241	-.0624033	.2478769
L6.	.0032508	.0788905	0.04	0.967	-.1513718	.1578735
L7.	.0048282	.0795438	0.06	0.952	-.1510748	.1607312
L8.	-.0629571	.0784078	-0.80	0.422	-.2166336	.0907194
L9.	.0480699	.0768877	0.63	0.532	-.1026272	.198767
Inflation						
L1.	.1932964	.1755346	1.10	0.271	-.1507452	.5373379
L2.	-.0897973	.1722194	-0.52	0.602	-.4273411	.2477465
L3.	.0983348	.18725	0.53	0.599	-.2686685	.465338
L4.	.1082424	.1125916	0.96	0.336	-.1124331	.3289179
L5.	.1114268	.1197214	0.93	0.352	-.1232228	.3460765
L6.	-.0957285	.1113394	-0.86	0.390	-.3139498	.1224928
L7.	.0112998	.1793359	0.06	0.950	-.340192	.3627917
L8.	.2084423	.1776437	1.17	0.241	-.1397329	.5566176
L9.	.1192426	.1990049	0.60	0.549	-.2707998	.5092851
UIGRE						
L1.	.0304824	.0254724	1.20	0.231	-.0194426	.0804075
L2.	.0032153	.0249484	0.13	0.897	-.0456828	.0521133
L3.	-.0094165	.0242451	-0.39	0.698	-.0569361	.0381031
L4.	.007754	.0252611	0.31	0.759	-.0417568	.0572648
L5.	-.007223	.0247153	-0.29	0.770	-.055664	.0412181
L6.	-.0081061	.0257415	-0.31	0.753	-.0585585	.0423462
L7.	.0122445	.0197518	0.62	0.535	-.0264683	.0509572
L8.	-.0075685	.0194348	-0.39	0.697	-.04566	.030523
L9.	-.0083211	.0203204	-0.41	0.682	-.0481483	.0315062
UIGER	-.1270246	.1202901	-1.06	0.291	-.3627888	.1087396
_cons	.353467	.5752288	0.61	0.539	-.7739607	1.480895

Inflation						
dUnemploymentrate						
L1.	.0695006	.0833957	0.83	0.405	-.0939519	.2329532
L2.	.0840794	.0852234	0.99	0.324	-.0829553	.2511142
L3.	-.0057782	.0844555	-0.07	0.945	-.171308	.1597517
L4.	.0751821	.0817472	0.92	0.358	-.0850394	.2354036
L5.	-.0016045	.0777261	-0.02	0.984	-.1539448	.1507358
L6.	.1009847	.081272	1.24	0.214	-.0583055	.2602749
L7.	-.0808031	.0830589	-0.97	0.331	-.2435955	.0819893
L8.	.1076406	.0847477	1.27	0.204	-.0584618	.2737429
L9.	-.1950644	.0842259	-2.32	0.021	-.3601441	-.0299847
dLTGBY10Y						
L1.	-.0319505	.0339744	-0.94	0.347	-.0985391	.034638
L2.	-.0151593	.0339594	-0.45	0.655	-.0817185	.0514
L3.	.0166566	.0351057	0.47	0.635	-.0521492	.0854624
L4.	.0579728	.0344213	1.68	0.092	-.0094916	.1254372
L5.	-.018509	.0348245	-0.53	0.595	-.0867639	.0497458
L6.	.0289802	.0347084	0.83	0.404	-.039047	.0970074
L7.	-.0085664	.0349958	-0.24	0.807	-.0771569	.0600241
L8.	.0000632	.034496	0.00	0.999	-.0675478	.0676741
L9.	-.0287381	.0338272	-0.85	0.396	-.0950383	.037562
Inflation						
L1.	.0979427	.0772276	1.27	0.205	-.0534206	.2493059
L2.	.0792451	.075769	1.05	0.296	-.0692594	.2277497
L3.	.0589294	.0823818	0.72	0.474	-.1025359	.2203948
L4.	-.1736126	.0495354	-3.50	0.000	-.2707001	-.076525
L5.	-.101832	.0526722	-1.93	0.053	-.2050676	.0014036
L6.	.7542651	.0489845	15.40	0.000	.6582572	.8502729
L7.	-.2393922	.0788999	-3.03	0.002	-.3940332	-.0847511
L8.	-.2663523	.0781554	-3.41	0.001	-.4195342	-.1131704
L9.	-.1612972	.0875534	-1.84	0.065	-.3328988	.0103044
UIGRE						
L1.	-.0055444	.0112068	-0.49	0.621	-.0275093	.0164204
L2.	-.0083818	.0109762	-0.76	0.445	-.0298948	.0131312
L3.	.014026	.0106668	1.31	0.189	-.0068806	.0349325
L4.	-.0178556	.0111138	-1.61	0.108	-.0396381	.003927
L5.	.0100068	.0108736	0.92	0.357	-.0113052	.0313187
L6.	-.0038931	.0113251	-0.34	0.731	-.02609	.0183037
L7.	.0078545	.0086899	0.90	0.366	-.0091774	.0248864
L8.	.0118464	.0085505	1.39	0.166	-.0049122	.028605
L9.	.0048846	.0089401	0.55	0.585	-.0126376	.0224069
UIGER	.0968663	.0529224	1.83	0.067	-.0068597	.2005922
_cons	-.4335741	.2530755	-1.71	0.087	-.9295929	.0624448
UIGRE						
dUnemploymentrate						
L1.	-.2888069	.5520228	-0.52	0.601	-1.370752	.793138
L2.	-.3040015	.5641209	-0.54	0.590	-1.409658	.8016551
L3.	-.658829	.5590383	-1.18	0.239	-1.754524	.4368659
L4.	-.2421233	.5411108	-0.45	0.655	-1.302681	.8184343
L5.	.0658563	.5144937	0.13	0.898	-.9425328	1.074245
L6.	1.535351	.5379654	2.85	0.004	.4809578	2.589743
L7.	-.0753442	.5497934	-0.14	0.891	-1.152919	1.002231
L8.	.1673944	.5609719	0.30	0.765	-.9320903	1.266879
L9.	.177107	.5575182	0.32	0.751	-.9156087	1.269823
dLTGBY10Y						
L1.	.1885162	.2248874	0.84	0.402	-.252255	.6292875
L2.	-.2755098	.2247884	-1.23	0.220	-.716087	.1650673
L3.	-.0591905	.2323756	-0.25	0.799	-.5146384	.3962573
L4.	.1112898	.2278453	0.49	0.625	-.3352789	.5578584
L5.	-.062746	.2305148	-0.27	0.785	-.5145468	.3890548
L6.	.3610789	.229746	1.57	0.116	-.0892149	.8113728
L7.	-.4725986	.2316484	-2.04	0.041	-.9266212	-.0185761
L8.	-.0134637	.2283402	-0.06	0.953	-.4610023	.4340748
L9.	-.1332769	.2239132	-0.60	0.552	-.5721387	.3055849
Inflation						
L1.	.3426888	.511194	0.67	0.503	-.659233	1.344611
L2.	.430226	.5015393	0.86	0.391	-.5527731	1.413225
L3.	.2704935	.5453116	0.50	0.620	-.7982976	1.339285
L4.	.7798333	.3278906	2.38	0.017	.1371796	1.422487
L5.	.5810609	.3486541	1.67	0.096	-.1022886	1.26441
L6.	.0595756	.324244	0.18	0.854	-.575931	.6950822
L7.	-.474383	.522264	-0.91	0.364	-1.498002	.5492355
L8.	-.4745828	.517336	-0.92	0.359	-1.488543	.5393771
L9.	.277382	.5795444	0.48	0.632	-.8585041	1.413268
UIGRE						
L1.	.1571945	.0741811	2.12	0.034	.0118023	.3025868
L2.	.0921769	.0726551	1.27	0.205	-.0502245	.2345784
L3.	.3679335	.070607	5.21	0.000	.2295463	.5063206
L4.	.0844737	.0735656	1.15	0.251	-.0597122	.2286596
L5.	-.2649098	.0719761	-3.68	0.000	-.4059803	-.1238393
L6.	-.2297802	.0749646	-3.07	0.002	-.3767081	-.0828522
L7.	.0654062	.0575213	1.14	0.256	-.0473334	.1781458
L8.	.2031072	.0565983	3.59	0.000	.0921766	.3140378
L9.	-.0110441	.0591773	-0.19	0.852	-.1270295	.1049413
UIGER	.591841	.3503101	1.69	0.091	-.0947542	1.278436
_cons	2.136836	1.675188	1.28	0.202	-1.146472	5.420144

VAR 12. Greece – VAR model with 9 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **HUNGARY**

```
Vector autoregression

Sample: 2008m5 thru 2022m12                     Number of obs     =       176
Log likelihood =    869.6439                    AIC               =  -8.916408
FPE            =   9.26e-11                     HQIC              =  -8.295361
Det(Sigma_ml)  =   3.51e-11                     SBIC              =  -7.385208

Equation              Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e         17   .159948   0.1729   36.78528   0.0022
dLTGBY10Y                17   .358403   0.4002   117.4137   0.0000
Inflation                17   .457694   0.5156   187.3278   0.0000
UIHUN                    17   4.24651   0.3409    91.0329   0.0000
dHUFEUR                  17   .000076   0.1448   29.81084   0.0190
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.1161374	.0761195	1.53	0.127	-.033054	.2653289
L2.	.2665104	.0736637	3.62	0.000	.1221323	.4108885
L3.	.106666	.0777259	1.37	0.170	-.045674	.259006
dLTGBY10Y						
L1.	.0061054	.0348079	0.18	0.861	-.0621169	.0743278
L2.	-.0074532	.0350833	-0.21	0.832	-.0762152	.0613087
L3.	.0004434	.0314165	0.01	0.989	-.0611318	.0620186
Inflation						
L1.	-.0252078	.0266764	-0.94	0.345	-.0774926	.027077
L2.	.0129276	.0263876	0.49	0.624	-.0387911	.0646463
L3.	.0081703	.0266433	0.31	0.759	-.0440495	.0603902
UIHUN						
L1.	-.0040946	.0028227	-1.45	0.147	-.0096271	.0014379
L2.	.0034127	.002755	1.24	0.215	-.001987	.0088123
L3.	.0012614	.0027469	0.46	0.646	-.0041224	.0066453
dHUFEUR						
L1.	-54.10148	167.0907	-0.32	0.746	-381.5932	273.3902
L2.	-187.7249	173.7906	-1.08	0.280	-528.3481	152.8984
L3.	-97.39092	177.9061	-0.55	0.584	-446.0806	251.2987
UIGER	.0118195	.0118731	1.00	0.320	-.0114514	.0350905
_cons	-.0667518	.0424099	-1.57	0.115	-.1498736	.01637
dLTGBY10Y						
dUnemploymentrate						
L1.	.122057	.1705644	0.72	0.474	-.212243	.456357
L2.	-.1797584	.1650615	-1.09	0.276	-.503273	.1437562
L3.	-.1636777	.174164	-0.94	0.347	-.5050328	.1776775
dLTGBY10Y						
L1.	.029717	.0779957	0.38	0.703	-.1231519	.1825858
L2.	-.2423222	.0786127	-3.08	0.002	-.3964003	-.0882442
L3.	.1295271	.0703963	1.84	0.066	-.0084472	.2675013
Inflation						
L1.	.2430087	.059775	4.07	0.000	.1258518	.3601656
L2.	-.0903894	.0591278	-1.53	0.126	-.2062778	.0254991
L3.	-.183904	.0597008	-3.08	0.002	-.3009154	-.0668926
UIHUN						
L1.	.007289	.006325	1.15	0.249	-.0051079	.0196858
L2.	.0043781	.0061732	0.71	0.478	-.0077211	.0164774
L3.	.0019139	.0061551	0.31	0.756	-.0101498	.0139777
dHUFEUR						
L1.	-1984.411	374.4076	-5.30	0.000	-2718.236	-1250.585
L2.	-184.0258	389.4204	-0.47	0.637	-947.2758	579.2242
L3.	-444.4945	398.6424	-1.12	0.265	-1225.819	336.8302
UIGER	.0627658	.0266047	2.36	0.018	.0106216	.11491
_cons	-.3896947	.0950297	-4.10	0.000	-.5759495	-.2034398
Inflation						
dUnemploymentrate						
L1.	.3785592	.2178172	1.74	0.082	-.0483547	.8054731
L2.	.4058158	.2107899	1.93	0.054	-.0073248	.8189563
L3.	.0980275	.2224141	0.44	0.659	-.3378961	.5339511
dLTGBY10Y						
L1.	.0307047	.0996035	0.31	0.758	-.1645147	.2259241
L2.	.0811603	.1003914	0.81	0.419	-.1156032	.2779239
L3.	.2362198	.0898988	2.63	0.009	.0600214	.4124182
Inflation						
L1.	.233953	.076335	3.06	0.002	.0843391	.3835669
L2.	.2133187	.0755085	2.83	0.005	.0653248	.3613127
L3.	-.0035729	.0762402	-0.05	0.963	-.1530009	.1458551
UIHUN						
L1.	.01163	.0080773	1.44	0.150	-.0042013	.0274613
L2.	.0093402	.0078834	1.18	0.236	-.006111	.0247914
L3.	-.0137633	.0078603	-1.75	0.080	-.0291692	.0016425
dHUFEUR						
L1.	-139.9582	478.1329	-0.29	0.770	-1077.081	797.1651
L2.	-397.0996	497.3048	-0.80	0.425	-1371.799	577.5998
L3.	585.087	509.0816	1.15	0.250	-412.6945	1582.869
UIGER	.1191797	.0339752	3.51	0.000	.0525896	.1857699
_cons	-.3477285	.1213566	-2.87	0.004	-.5855831	-.109874
UIHUN						
dUnemploymentrate						
L1.	-1.006588	2.020917	-0.50	0.618	-4.967512	2.954336
L2.	-.7974065	1.955716	-0.41	0.683	-4.63054	3.035727
L3.	2.173383	2.063567	1.05	0.292	-1.871133	6.217899
dLTGBY10Y						
L1.	-.6256848	.9241256	-0.68	0.498	-2.436938	1.185568
L2.	-1.278597	.9314355	-1.37	0.170	-3.104177	.5469832
L3.	1.610925	.8340845	1.93	0.053	-.023851	3.2457
Inflation						
L1.	-.8060369	.7082393	-1.14	0.255	-2.19416	.5820866
L2.	1.269871	.7005708	1.81	0.070	-.1032226	2.642965
L3.	-.3280829	.7073594	-0.46	0.643	-1.714482	1.058316
UIHUN						
L1.	.1673545	.0749418	2.23	0.026	.0204714	.3142377
L2.	.0370941	.0731426	0.51	0.612	-.1062628	.180451
L3.	.1138882	.072928	1.56	0.118	-.0290481	.2568246
dHUFEUR						
L1.	-650.8485	4436.135	-0.15	0.883	-9345.514	8043.817
L2.	-3909.593	4614.013	-0.85	0.397	-12952.89	5133.706
L3.	3670.598	4723.279	0.78	0.437	-5586.857	12928.05
UIGER	1.326204	.3152232	4.21	0.000	.7083783	1.94403
_cons	-.1955507	1.125951	-0.17	0.862	-2.402374	2.011273
dHUFEUR						
dUnemploymentrate						
L1.	.0000278	.0000364	0.76	0.445	-.0000435	.000099
L2.	-.0000799	.0000352	-2.27	0.023	-.0001489	-.0000109
L3.	.0000301	.0000371	0.81	0.417	-.0000427	.0001029
dLTGBY10Y						
L1.	.0000496	.0000166	2.98	0.003	.000017	.0000821
L2.	-9.16e-06	.0000168	-0.55	0.585	-.000042	.0000237
L3.	.0000254	.000015	1.69	0.091	-4.02e-06	.0000548
Inflation						
L1.	-9.60e-06	.0000127	-0.75	0.451	-.0000346	.0000154
L2.	-3.37e-06	.0000126	-0.27	0.789	-.0000281	.0000213
L3.	.0000324	.0000127	2.55	0.011	7.50e-06	.0000574
UIHUN						
L1.	-1.76e-06	1.35e-06	-1.31	0.192	-4.40e-06	8.82e-07
L2.	8.78e-07	1.32e-06	0.67	0.505	-1.70e-06	3.46e-06
L3.	1.18e-07	1.31e-06	0.09	0.928	-2.45e-06	2.69e-06
dHUFEUR						
L1.	.0771761	.0798213	0.97	0.334	-.0792708	.233623
L2.	.2093737	.0830219	2.52	0.012	.0466537	.3720937
L3.	-.0287789	.084988	-0.34	0.735	-.1953523	.1377945
UIGER	-9.92e-06	5.67e-06	-1.75	0.080	-.000021	1.20e-06
_cons	.000035	.0000203	1.73	0.084	-4.75e-06	.0000747

VAR 13. Hungary – VAR model with 3 lags for unemployment rate, inflation, long term government bond 10 years, the country's currency over euro (HUF/EUR) and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **IRELAND**

Vector autoregression

Sample: **2008m9** thru **2022m12** Number of obs = **172**
Log likelihood = **-425.5313** AIC = **6.343387**
FPE = **.0067805** HQIC = **7.234331**
Det(Sigma_ml) = **.0016558** SBIC = **8.539313**

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	30	.21056	0.5876	245.1184	0.0000
dLTGBY10Y	30	.35941	0.3039	75.10764	0.0000
Inflation	30	.39575	0.4761	156.3326	0.0000
dUIIRL	30	2.05807	0.4893	164.7763	0.0000

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.4993705	.0723174	6.91	0.000	.357631	.64111
L2.	.0498306	.0783762	0.64	0.525	-.1037839	.2034452
L3.	-.197855	.0777547	-2.54	0.011	-.3502514	-.0454587
L4.	.0994988	.0789152	1.26	0.207	-.0551722	.2541698
L5.	-.0084814	.0774134	-0.11	0.913	-.160209	.1432461
L6.	.0664439	.0761473	0.87	0.383	-.082802	.2156898
L7.	.1819087	.0676059	2.69	0.007	.0494036	.3144139
dLTGBY10Y						
L1.	-.0488496	.0439701	-1.11	0.267	-.1350293	.0373302
L2.	.0763546	.0437071	1.75	0.081	-.0093098	.1620191
L3.	-.0079601	.0431308	-0.18	0.854	-.092495	.0765748
L4.	-.0003879	.0439414	-0.01	0.993	-.0865115	.0857357
L5.	.131898	.0439377	3.00	0.003	.0457817	.2180142
L6.	-.1387054	.0457116	-3.03	0.002	-.2282984	-.0491124
L7.	.098994	.0442488	2.24	0.025	.0122679	.1857201
Inflation						
L1.	-.0290946	.0397405	-0.73	0.464	-.1069847	.0487954
L2.	-.0876481	.039812	-2.20	0.028	-.1656782	-.0096179
L3.	.039759	.0410694	0.97	0.333	-.0407355	.1202534
L4.	-.0193565	.0417329	-0.46	0.643	-.1011514	.0624384
L5.	.0298147	.0402595	0.74	0.459	-.0490925	.108722
L6.	-.0624987	.040339	-1.55	0.121	-.1415616	.0165642
L7.	.0705629	.0381473	1.85	0.064	-.0042044	.1453303
dUIIRL						
L1.	-.0105621	.0078138	-1.35	0.176	-.0258769	.0047527
L2.	-.0378392	.0094948	-3.99	0.000	-.0564486	-.0192299
L3.	-.0342457	.0118462	-2.89	0.004	-.0574637	-.0110276
L4.	-.0318801	.0121269	-2.63	0.009	-.0556484	-.0081117
L5.	-.0060512	.0121084	-0.50	0.617	-.0297832	.0176808
L6.	-.006837	.0105311	-0.65	0.516	-.0274776	.0138036
L7.	.0151317	.0087613	1.73	0.084	-.0020402	.0323036
UIGER	.0276005	.0140362	1.97	0.049	.0000901	.0551109
_cons	-.110179	.0591867	-1.86	0.063	-.2261829	.0058249
dLTGBY10Y						
dUnemploymentrate						
L1.	.1226477	.1234402	0.99	0.320	-.1192905	.364586
L2.	-.0871797	.1337821	-0.65	0.515	-.3493877	.1750283
L3.	-.0462544	.1327211	-0.35	0.727	-.306383	.2138743
L4.	-.0410279	.1347021	-0.30	0.761	-.3050392	.2229833
L5.	.0095218	.1321386	0.07	0.943	-.2494652	.2685088
L6.	.2475381	.1299774	1.90	0.057	-.0072131	.5022892
L7.	-.1446696	.115398	-1.25	0.210	-.3708454	.0815063
dLTGBY10Y						
L1.	.1996119	.0750535	2.66	0.008	.0525098	.346714
L2.	.053331	.0746047	0.71	0.475	-.0928914	.1995535
L3.	-.1340107	.073621	-1.82	0.069	-.2783052	.0102837
L4.	.1121194	.0750045	1.49	0.135	-.0348868	.2591256
L5.	.1763473	.0749982	2.35	0.019	.0293536	.323341
L6.	.0005975	.078026	0.01	0.994	-.1523307	.1535257
L7.	-.0126399	.0755293	-0.17	0.867	-.1606745	.1353948
Inflation						
L1.	-.0299804	.067834	-0.44	0.659	-.1629326	.1029717
L2.	-.0814864	.067956	-1.20	0.230	-.2146778	.051705
L3.	.2077029	.0701022	2.96	0.003	.0703052	.3451007
L4.	-.0398666	.0712347	-0.56	0.576	-.1794841	.0997509
L5.	-.1493615	.0687199	-2.17	0.030	-.28405	-.014673
L6.	-.0987481	.0688555	-1.43	0.152	-.2337024	.0362061
L7.	.1501558	.0651145	2.31	0.021	.0225339	.2777778
dUIIRL						
L1.	-.0063435	.0133376	-0.48	0.634	-.0324846	.0197977
L2.	-.0289671	.0162068	-1.79	0.074	-.0607318	.0027977
L3.	.008767	.0202205	0.43	0.665	-.0308644	.0483985
L4.	-.0224184	.0206997	-1.08	0.279	-.0629891	.0181523
L5.	-.0124386	.0206681	-0.60	0.547	-.0529472	.0280701
L6.	-.0249464	.0179758	-1.39	0.165	-.0601782	.0102855
L7.	.0129687	.0149549	0.87	0.386	-.0163423	.0422798
UIGER	.0728834	.0239586	3.04	0.002	.0259253	.1198415
_cons	-.3074029	.1010271	-3.04	0.002	-.5054124	-.1093933

Inflation						
dUnemploymentrate						
L1.	-.3428276	.135921	-2.52	0.012	-.6092279	-.0764274
L2.	-.0390411	.1473086	-0.27	0.791	-.3277606	.2496784
L3.	-.0095091	.1461404	-0.07	0.948	-.295939	.2769208
L4.	-.1338182	.1483216	-0.90	0.367	-.4245233	.1568868
L5.	.04235	.145499	0.29	0.771	-.2428228	.3275227
L6.	-.1874107	.1431193	-1.31	0.190	-.4679193	.0930979
L7.	.1740685	.1270657	1.37	0.171	-.0749757	.4231126
dLTGBY10Y						
L1.	-.0436609	.082642	-0.53	0.597	-.2056363	.1183145
L2.	.0106938	.0821478	0.13	0.896	-.150313	.1717006
L3.	.1868659	.0810647	2.31	0.021	.027982	.3457498
L4.	.1359874	.0825881	1.65	0.100	-.0258823	.2978572
L5.	-.0027344	.0825811	-0.03	0.974	-.1645905	.1591216
L6.	-.0842111	.0859151	-0.98	0.327	-.2526017	.0841794
L7.	-.0935057	.0831659	-1.12	0.261	-.2565079	.0694965
Inflation						
L1.	.2893558	.0746926	3.87	0.000	.142961	.4357505
L2.	.0820502	.074827	1.10	0.273	-.064608	.2287084
L3.	-.0422512	.0771901	-0.55	0.584	-.193541	.1090386
L4.	-.0182649	.0784372	-0.23	0.816	-.1719989	.1354691
L5.	-.1474642	.075668	-1.95	0.051	-.2957708	.0008425
L6.	.2531794	.0758173	3.34	0.001	.1045801	.4017787
L7.	-.1960422	.0716981	-2.73	0.006	-.3365678	-.0555165
dUIIRL						
L1.	.063299	.0146861	4.31	0.000	.0345147	.0920832
L2.	.049175	.0178455	2.76	0.006	.0141985	.0841514
L3.	-.0251244	.022265	-1.13	0.259	-.0687629	.0185141
L4.	-.0067458	.0227926	-0.30	0.767	-.0514186	.0379269
L5.	-.0046615	.0227578	-0.20	0.838	-.049266	.0399429
L6.	-.0009834	.0197933	-0.05	0.960	-.0397775	.0378107
L7.	-.0139379	.016467	-0.85	0.397	-.0462125	.0183368
UIGER	.0690541	.0263811	2.62	0.009	.0173481	.12076
_cons	-.2480069	.1112418	-2.23	0.026	-.4660369	-.0299769
dUIIRL						
dUnemploymentrate						
L1.	-1.119357	.7068476	-1.58	0.113	-2.504753	.2660391
L2.	.9643417	.7660679	1.26	0.208	-.5371238	2.465807
L3.	-.9780209	.7599928	-1.29	0.198	-2.467579	.5115376
L4.	.0787449	.7713362	0.10	0.919	-1.433046	1.590536
L5.	-.6752031	.7566573	-0.89	0.372	-2.158224	.8078179
L6.	.4704968	.7442817	0.63	0.527	-.9882685	1.929262
L7.	.1192488	.6607962	0.18	0.857	-1.175888	1.414385
dLTGBY10Y						
L1.	.0109288	.429774	0.03	0.980	-.8314128	.8532704
L2.	-.3221203	.4272041	-0.75	0.451	-1.159425	.5151843
L3.	.3089876	.4215712	0.73	0.464	-.5172767	1.135252
L4.	.2992774	.4294938	0.70	0.486	-.542515	1.14107
L5.	.485086	.4294573	1.13	0.259	-.3566348	1.326807
L6.	-.4869816	.4467956	-1.09	0.276	-1.362685	.3887217
L7.	.1860199	.4324985	0.43	0.667	-.6616616	1.033701
Inflation						
L1.	-.1942012	.3884334	-0.50	0.617	-.9555168	.5671144
L2.	-.2609648	.3891324	-0.67	0.502	-1.02365	.5017206
L3.	.9940302	.4014217	2.48	0.013	.2072581	1.780802
L4.	-.8483257	.407907	-2.08	0.038	-1.647809	-.0488428
L5.	.6254416	.3935064	1.59	0.112	-.1458166	1.3967
L6.	-.5890439	.3942827	-1.49	0.135	-1.361824	.1837361
L7.	-.085851	.3728608	-0.23	0.818	-.8166448	.6449428
dUIIRL						
L1.	-.6575701	.0763741	-8.61	0.000	-.8072605	-.5078797
L2.	-.8010747	.092804	-8.63	0.000	-.9829673	-.6191822
L3.	-.4581086	.1157874	-3.96	0.000	-.6850477	-.2311696
L4.	-.503283	.1185315	-4.25	0.000	-.7356005	-.2709655
L5.	-.2798933	.1183503	-2.36	0.018	-.5118556	-.0479309
L6.	-.2190413	.1029335	-2.13	0.033	-.4207872	-.0172954
L7.	-.2084567	.0856353	-2.43	0.015	-.3762988	-.0406147
UIGER	.412303	.1371929	3.01	0.003	.1434098	.6811961
_cons	-1.402144	.5785054	-2.42	0.015	-2.535993	-.2682941

VAR 14. Ireland – VAR model with 7 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **ITALY**

Vector autoregression

Sample: 2008m4 thru 2022m12 — Number of obs = 177
Log likelihood = -353.8247 — AIC = 4.449996
FPE = .0010067 — HQIC = 4.741098
Det(Sigma_ml) = .0006404 — SBIC = 5.16777

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	10	.294295	0.0483	8.976487	0.4394
dLTGBY10Y	10	.267376	0.1185	23.79908	0.0046
Inflation	10	.344298	0.2551	60.6184	0.0000
UIITA	10	1.06504	0.5268	197.0317	0.0000

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.0146179	.075168	0.19	0.846	-.1327087	.1619445
L2.	-.0467305	.0748116	-0.62	0.532	-.1933585	.0998975
dLTGBY10Y						
L1.	-.089969	.0825181	-1.09	0.276	-.2517015	.0717635
L2.	.0589567	.0861835	0.68	0.494	-.1099598	.2278732
Inflation						
L1.	.0486326	.0640894	0.76	0.448	-.0769802	.1742455
L2.	-.064071	.060452	-1.06	0.289	-.1825548	.0544129
UIITA						
L1.	-.0412703	.0198059	-2.08	0.037	-.0800893	-.0024514
L2.	.0114383	.0205308	0.56	0.577	-.0288013	.051678
UIGER	.0010362	.0220736	0.05	0.963	-.0422273	.0442997
_cons	.1021423	.0783303	1.30	0.192	-.0513822	.2556669
dLTGBY10Y						
dUnemploymentrate						
L1.	-.0465423	.0682924	-0.68	0.496	-.180393	.0873083
L2.	.053915	.0679685	0.79	0.428	-.0793009	.1871309
dLTGBY10Y						
L1.	.2293382	.0749702	3.06	0.002	.0823993	.376277
L2.	-.0854668	.0783003	-1.09	0.275	-.2389325	.0679989
Inflation						
L1.	.00586	.0582271	0.10	0.920	-.1082631	.119983
L2.	.0449866	.0549225	0.82	0.413	-.0626595	.1526327
UIITA						
L1.	-.0184269	.0179943	-1.02	0.306	-.0536951	.0168412
L2.	.0056649	.0186528	0.30	0.761	-.030894	.0422238
UIGER	.0438454	.0200546	2.19	0.029	.0045392	.0831516
_cons	-.1540854	.0711654	-2.17	0.030	-.2935671	-.0146038
Inflation						
dUnemploymentrate						
L1.	.0440539	.0879398	0.50	0.616	-.1283049	.2164127
L2.	.0173461	.0875227	0.20	0.843	-.1541953	.1888875
dLTGBY10Y						
L1.	.3554595	.0965387	3.68	0.000	.1662472	.5446718
L2.	-.0194364	.1008268	-0.19	0.847	-.2170534	.1781806
Inflation						
L1.	.0149771	.0749788	0.20	0.842	-.1319786	.1619328
L2.	.209857	.0707234	2.97	0.003	.0712417	.3484723
UIITA						
L1.	.0005984	.0231711	0.03	0.979	-.0448162	.046013
L2.	-.0021112	.0240192	-0.09	0.930	-.0491879	.0449655
UIGER	.0775269	.0258242	3.00	0.003	.0269125	.1281413
_cons	-.2027543	.0916393	-2.21	0.027	-.382364	-.0231445
UIITA						
dUnemploymentrate						
L1.	-.3475386	.2720294	-1.28	0.201	-.8807065	.1856293
L2.	-.3980905	.2707394	-1.47	0.141	-.92873	.132549
dLTGBY10Y						
L1.	.5198051	.2986289	1.74	0.082	-.0654969	1.105107
L2.	-.6832747	.3118938	-2.19	0.028	-1.294575	-.0719741
Inflation						
L1.	-.042604	.2319363	-0.18	0.854	-.4971908	.4119829
L2.	.1874765	.218773	0.86	0.391	-.2413107	.6162637
UIITA						
L1.	.4322334	.0716767	6.03	0.000	.2917497	.5727171
L2.	.1938385	.0743	2.61	0.009	.0482133	.3394638
UIGER	.1895749	.0798834	2.37	0.018	.0330063	.3461435
_cons	.391367	.2834735	1.38	0.167	-.1642308	.9469647

VAR 15. Italy – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **LATVIA**

Vector autoregression

Sample: 2008m4 thru 2022m12 — Number of obs = 177
Log likelihood = −882.2128 — AIC = 10.42048
FPE = .3943394 — HQIC = 10.71158
Det(Sigma_ml) = .2508243 — SBIC = 11.13826

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	10	.221539	0.6837	382.5177	0.0000
dLTGBY10Y	10	.396478	0.2330	53.75558	0.0000
Inflation	10	.569509	0.3823	109.5462	0.0000
UILVA	10	11.6718	0.1468	30.44449	0.0004

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.9834738	.0738798	13.31	0.000	.838672	1.128276
L2.	−.2893404	.0747374	−3.87	0.000	−.435823	−.1428579
dLTGBY10Y						
L1.	.1030275	.0413185	2.49	0.013	.0220447	.1840102
L2.	.0336829	.0409548	0.82	0.411	−.0465871	.1139529
Inflation						
L1.	.0145979	.0296885	0.49	0.623	−.0435905	.0727862
L2.	.00062	.0286234	0.02	0.983	−.0554809	.0567208
UILVA						
L1.	.0007296	.0014324	0.51	0.611	−.0020778	.003537
L2.	−.0000945	.0013962	−0.07	0.946	−.0028309	.002642
UIGER	−.0127265	.0139708	−0.91	0.362	−.0401088	.0146558
_cons	.0418445	.057789	0.72	0.469	−.0714199	.1551088
dLTGBY10Y						
dUnemploymentrate						
L1.	.2367741	.1322189	1.79	0.073	−.0223703	.4959185
L2.	.1078177	.1337537	0.81	0.420	−.1543347	.3699701
dLTGBY10Y						
L1.	.3090605	.0739456	4.18	0.000	.1641298	.4539913
L2.	−.1457654	.0732948	−1.99	0.047	−.2894206	−.0021102
Inflation						
L1.	.1061903	.053132	2.00	0.046	.0020535	.210327
L2.	−.0330533	.0512259	−0.65	0.519	−.1334542	.0673476
UILVA						
L1.	.0010964	.0025634	0.43	0.669	−.0039278	.0061207
L2.	−.0029083	.0024987	−1.16	0.244	−.0078056	.001989
UIGER	.0177097	.0250029	0.71	0.479	−.0312951	.0667144
_cons	−.0792331	.1034221	−0.77	0.444	−.2819366	.1234705
Inflation						
dUnemploymentrate						
L1.	−.2695797	.1899221	−1.42	0.156	−.6418201	.1026607
L2.	−.0789258	.1921266	−0.41	0.681	−.455487	.2976354
dLTGBY10Y						
L1.	.1452431	.106217	1.37	0.171	−.0629385	.3534246
L2.	.04268	.1052822	0.41	0.685	−.1636693	.2490294
Inflation						
L1.	.4154517	.0763199	5.44	0.000	.2658674	.5650359
L2.	.0455231	.073582	0.62	0.536	−.0986949	.1897411
UILVA						
L1.	−.0004863	.0036822	−0.13	0.895	−.0077033	.0067306
L2.	−.0031082	.0035891	−0.87	0.386	−.0101428	.0039264
UIGER	.1287487	.0359147	3.58	0.000	.0583572	.1991401
_cons	−.3536716	.1485576	−2.38	0.017	−.6448392	−.062504
UILVA						
dUnemploymentrate						
L1.	−2.174078	3.892367	−0.56	0.576	−9.802978	5.454821
L2.	−2.664887	3.937548	−0.68	0.499	−10.38234	5.052565
dLTGBY10Y						
L1.	−.1754105	2.17687	−0.08	0.936	−4.441998	4.091177
L2.	−2.020926	2.157712	−0.94	0.349	−6.249963	2.208111
Inflation						
L1.	2.305578	1.564142	1.47	0.140	−.7600826	5.37124
L2.	−.2820897	1.508029	−0.19	0.852	−3.237772	2.673593
UILVA						
L1.	.0552785	.0754646	0.73	0.464	−.0926294	.2031865
L2.	−.1720486	.0735579	−2.34	0.019	−.3162194	−.0278778
UIGER	2.328392	.7360552	3.16	0.002	.8857503	3.771033
_cons	6.250529	3.044621	2.05	0.040	.2831807	12.21788

VAR 16. Latvia – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **LITHUANIA**

```
Vector autoregression

Sample: 2008m5 thru 2022m12                     Number of obs     =        176
Log likelihood =    -876.19                     AIC               =   10.59307
FPE            =   .4690283                     HQIC              =   11.00223
Det(Sigma_ml)  =   .2478818                     SBIC              =   11.60186

Equation           Parms      RMSE     R-sq       chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e      14      .233866   0.5385   205.3334   0.0000
dLTGBY10Y             14      .648056   0.1385   28.30465   0.0082
Inflation             14      .517652   0.4279   131.6623   0.0000
UILTH                 14      7.68765   0.4451   141.1944   0.0000
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.6282707	.0744367	8.44	0.000	.4823775	.7741639
L2.	.0342138	.0883543	0.39	0.699	-.1389574	.2073851
L3.	.0614613	.0757232	0.81	0.417	-.0869536	.2098761
dLTGBY10Y						
L1.	.0407399	.0279059	1.46	0.144	-.0139547	.0954344
L2.	-.0395787	.0303684	-1.30	0.192	-.0990995	.0199422
L3.	.07119	.0314804	2.26	0.024	.0094896	.1328904
Inflation						
L1.	-.0134245	.0342718	-0.39	0.695	-.0805959	.053747
L2.	.0367909	.036382	1.01	0.312	-.0345165	.1080982
L3.	-.0037356	.0333062	-0.11	0.911	-.0690145	.0615432
UILTH						
L1.	.000023	.0022063	0.01	0.992	-.0043012	.0043472
L2.	-.0014364	.0021516	-0.67	0.504	-.0056534	.0027806
L3.	-.0006201	.0021475	-0.29	0.773	-.004829	.0035889
UIGER	-.0010708	.0184805	-0.06	0.954	-.0372919	.0351502
_cons	.0322962	.0622478	0.52	0.604	-.0897072	.1542997
dLTGBY10Y						
dUnemploymentrate						
L1.	-.1209477	.2062687	-0.59	0.558	-.5252269	.2833315
L2.	.1457109	.2448352	0.60	0.552	-.3341573	.6255792
L3.	.1232097	.2098338	0.59	0.557	-.2880571	.5344765
dLTGBY10Y						
L1.	.1373372	.077329	1.78	0.076	-.0142248	.2888991
L2.	.2414631	.0841526	2.87	0.004	.076527	.4063991
L3.	.0201976	.0872341	0.23	0.817	-.1507781	.1911732
Inflation						
L1.	.0684842	.0949692	0.72	0.471	-.117652	.2546204
L2.	.0437533	.1008167	0.43	0.664	-.1538438	.2413504
L3.	.0572663	.0922934	0.62	0.535	-.1236255	.2381581
UILTH						
L1.	.0084919	.0061137	1.39	0.165	-.0034907	.0204746
L2.	.0028225	.0059622	0.47	0.636	-.0088632	.0145081
L3.	-.0047462	.0059508	-0.80	0.425	-.0164095	.0069171
UIGER	-.0400737	.0512105	-0.78	0.434	-.1404444	.0602971
_cons	.0150132	.1724926	0.09	0.931	-.323066	.3530924
Inflation						
dUnemploymentrate						
L1.	.1542111	.1647626	0.94	0.349	-.1687177	.4771398
L2.	-.2386571	.1955687	-1.22	0.222	-.6219646	.1446505
L3.	-.1175055	.1676104	-0.70	0.483	-.4460158	.2110048
dLTGBY10Y						
L1.	-.1697856	.0617686	-2.75	0.006	-.2908497	-.0487214
L2.	.2376402	.0672191	3.54	0.000	.1058931	.3693873
L3.	-.0675564	.0696805	-0.97	0.332	-.2041278	.069015
Inflation						
L1.	.4679305	.0758592	6.17	0.000	.3192492	.6166117
L2.	-.1762084	.08053	-2.19	0.029	-.3340444	-.0183725
L3.	.168397	.0737218	2.28	0.022	.0239048	.3128891
UILTH						
L1.	-.0012926	.0048835	-0.26	0.791	-.0108641	.0082788
L2.	.0056795	.0047624	1.19	0.233	-.0036547	.0150137
L3.	-.0024794	.0047533	-0.52	0.602	-.0117958	.006837
UIGER	.123377	.0409058	3.02	0.003	.0432032	.2035508
_cons	-.3826773	.137783	-2.78	0.005	-.652727	-.1126275
UILTH						
dUnemploymentrate						
L1.	-6.350181	2.446889	-2.60	0.009	-11.146	-1.554367
L2.	3.666698	2.90439	1.26	0.207	-2.025801	9.359197
L3.	-.7979646	2.489181	-0.32	0.749	-5.676669	4.08074
dLTGBY10Y						
L1.	.8220698	.9173247	0.90	0.370	-.9758535	2.619993
L2.	.6679484	.998271	0.67	0.503	-1.288627	2.624524
L3.	-1.489575	1.034825	-1.44	0.150	-3.517796	.5386458
Inflation						
L1.	.6046717	1.126584	0.54	0.591	-1.603393	2.812737
L2.	-2.674188	1.195951	-2.24	0.025	-5.018209	-.3301669
L3.	3.300978	1.094843	3.02	0.003	1.155126	5.44683
UILTH						
L1.	.1881782	.0725246	2.59	0.009	.0460327	.3303238
L2.	.2520608	.070727	3.56	0.000	.1134384	.3906832
L3.	.2710039	.0705918	3.84	0.000	.1326465	.4093613
UIGER	.0679452	.6074911	0.11	0.911	-1.122716	1.258606
_cons	3.837057	2.046215	1.88	0.061	-.1734513	7.847565

VAR 17. Lithuania – VAR model with 3 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **LUXEMBOURG**

Vector autoregression

Sample: 2008m4 thru 2022m12		Number of obs	= 177
Log likelihood = -712.3135		AIC	= 8.500718
FPE = .0578265		HQIC	= 8.791819
Det(Sigma_ml) = .0367812		SBIC	= 9.218492

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	10	.126133	0.2274	52.10809	0.0000
dLTGBY10Y	10	.167196	0.1820	39.38999	0.0000
Inflation	10	.643581	0.1495	31.11799	0.0003
UILUX	10	16.1408	0.1068	21.17149	0.0119

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.453256	.0750068	6.04	0.000	.3062453	.6002667
L2.	.0108712	.07531	0.14	0.885	-.1367337	.1584761
dLTGBY10Y						
L1.	-.006555	.0570235	-0.11	0.908	-.118319	.105209
L2.	-.0079821	.0563438	-0.14	0.887	-.1184139	.1024498
Inflation						
L1.	-.0133234	.0147552	-0.90	0.367	-.042243	.0155962
L2.	-.0179856	.0147713	-1.22	0.223	-.0469369	.0109656
UILUX						
L1.	-.0001607	.0005876	-0.27	0.785	-.0013123	.000991
L2.	-.0001614	.0005844	-0.28	0.782	-.0013067	.0009839
UIGER	-.0003542	.0076952	-0.05	0.963	-.0154365	.014728
_cons	.0130911	.0332003	0.39	0.693	-.0519803	.0781625
dLTGBY10Y						
dUnemploymentrate						
L1.	.0496044	.099425	0.50	0.618	-.1452649	.2444738
L2.	-.0006566	.0998268	-0.01	0.995	-.1963136	.1950003
dLTGBY10Y						
L1.	.2460271	.0755872	3.25	0.001	.0978788	.3941754
L2.	-.050441	.0746863	-0.68	0.499	-.1968234	.0959415
Inflation						
L1.	.0273506	.0195586	1.40	0.162	-.0109836	.0656848
L2.	.0255203	.0195801	1.30	0.192	-.0128559	.0638965
UILUX						
L1.	.0005945	.0007789	0.76	0.445	-.0009321	.002121
L2.	.0000449	.0007746	0.06	0.954	-.0014732	.0015631
UIGER	.0302864	.0102003	2.97	0.003	.0102942	.0502786
_cons	-.1557967	.0440085	-3.54	0.000	-.2420517	-.0695416
Inflation						
dUnemploymentrate						
L1.	-.4634234	.3827134	-1.21	0.226	-1.213528	.286681
L2.	-.1293536	.3842601	-0.34	0.736	-.8824897	.6237824
dLTGBY10Y						
L1.	.4847974	.2909556	1.67	0.096	-.085465	1.05506
L2.	.2526635	.2874875	0.88	0.379	-.3108018	.8161287
Inflation						
L1.	-.3793978	.0752865	-5.04	0.000	-.5269565	-.231839
L2.	-.1105507	.0753689	-1.47	0.142	-.258271	.0371696
UILUX						
L1.	-.0019512	.0029981	-0.65	0.515	-.0078274	.003925
L2.	-.0003079	.0029816	-0.10	0.918	-.0061517	.0055359
UIGER	.0327281	.0392636	0.83	0.405	-.0442271	.1096834
_cons	.1460254	.1694005	0.86	0.389	-.1859935	.4780443
UILUX						
dUnemploymentrate						
L1.	-2.938592	9.598334	-0.31	0.759	-21.75098	15.8738
L2.	5.978305	9.637126	0.62	0.535	-12.91012	24.86673
dLTGBY10Y						
L1.	-2.23454	7.297077	-0.31	0.759	-16.53655	12.06747
L2.	7.065128	7.2101	0.98	0.327	-7.066408	21.19666
Inflation						
L1.	4.049472	1.888161	2.14	0.032	.3487436	7.7502
L2.	.256457	1.890228	0.14	0.892	-3.448322	3.961236
UILUX						
L1.	.0942025	.0751918	1.25	0.210	-.0531708	.2415758
L2.	.1445649	.0747771	1.93	0.053	-.0019955	.2911252
UIGER	1.558362	.9847189	1.58	0.114	-.3716513	3.488376
_cons	5.271356	4.248513	1.24	0.215	-3.055576	13.59829

VAR 18. Luxembourg – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **MALTA**

```
Vector autoregression

Sample: 2008m11 thru 2022m12                    Number of obs     =       170
Log likelihood =  -775.7368                     AIC               =   10.91455
FPE            =   .6661447                     HQIC              =   12.05229
Det(Sigma_ml)  =   .1080466                     SBIC              =   13.71832

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e      38      .190297   0.2273   49.99662   0.0751
dLTGBY10Y             38      .214087   0.1952   41.24011   0.2904
Inflation             38       .68916   0.7993   676.8619   0.0000
UIMLT                 38      19.5081   0.3933   110.2239   0.0000
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.1641045	.0761279	2.16	0.031	.0148966	.3133125
L2.	.0363448	.0781099	0.47	0.642	-.1167478	.1894374
L3.	-.2067951	.0781851	-2.64	0.008	-.3600351	-.0535552
L4.	-.0024843	.0791483	-0.03	0.975	-.1576121	.1526435
L5.	.0499702	.0750959	0.67	0.506	-.097215	.1971553
L6.	-.1266729	.0746185	-1.70	0.090	-.2729225	.0195767
L7.	.0247378	.0744727	0.33	0.740	-.121226	.1707015
L8.	.0479978	.0743813	0.65	0.519	-.097787	.1937825
L9.	-.0028517	.0741412	-0.04	0.969	-.1481657	.1424624
dLTGBY10Y						
L1.	.0039775	.0669238	0.06	0.953	-.1271908	.1351459
L2.	-.1184735	.0671499	-1.76	0.078	-.2500849	.013138
L3.	.041185	.0678431	0.61	0.544	-.091785	.174155
L4.	-.0983912	.068184	-1.44	0.149	-.2320293	.0352469
L5.	-.1163948	.0687659	-1.69	0.091	-.2511734	.0183838
L6.	.0570806	.0690417	0.83	0.408	-.0782386	.1923998
L7.	-.009023	.0705328	-0.13	0.898	-.1472648	.1292187
L8.	-.0827431	.0717626	-1.15	0.249	-.2233952	.057909
L9.	.0152571	.0717631	0.21	0.832	-.1253961	.1559103
Inflation						
L1.	.0098992	.0190512	0.52	0.603	-.0274405	.0472389
L2.	.0162052	.0190088	0.85	0.394	-.0210513	.0534617
L3.	-.0076075	.0179241	-0.42	0.671	-.042738	.0275231
L4.	.0166259	.0180998	0.92	0.358	-.018849	.0521008
L5.	-.0240191	.0171141	-1.40	0.160	-.0575622	.0095239
L6.	.0124601	.0180745	0.69	0.491	-.0229653	.0478854
L7.	.0188469	.0177681	1.06	0.289	-.0159778	.0536717
L8.	-.0205665	.0190871	-1.08	0.281	-.0579766	.0168436
L9.	.0188863	.0191442	0.99	0.324	-.0186356	.0564083
UIMLT						
L1.	-.0004743	.0007255	-0.65	0.513	-.0018962	.0009476
L2.	.000254	.000728	0.35	0.727	-.0011728	.0016808
L3.	-.0001679	.0007172	-0.23	0.815	-.0015736	.0012378
L4.	.0014944	.0007084	2.11	0.035	.0001061	.0028828
L5.	-.002076	.0007094	-2.93	0.003	-.0034664	-.0006856
L6.	.0002249	.0007538	0.30	0.765	-.0012526	.0017023
L7.	-.0000747	.0007415	-0.10	0.920	-.001528	.0013787
L8.	-.0005393	.0007433	-0.73	0.468	-.0019961	.0009175
L9.	.0007474	.0007098	1.05	0.292	-.0006438	.0021385
UIGER	.0009404	.0125218	0.08	0.940	-.0236019	.0254827
_cons	-.007035	.0702259	-0.10	0.920	-.1446752	.1306051
dLTGBY10Y						
dUnemploymentrate						
L1.	.2075051	.0856451	2.42	0.015	.0396438	.3753665
L2.	-.0289474	.0878749	-0.33	0.742	-.201179	.1432842
L3.	.1060703	.0879595	1.21	0.228	-.0663271	.2784677
L4.	-.1215782	.0890431	-1.37	0.172	-.2960995	.052943
L5.	-.0976496	.084484	-1.16	0.248	-.2632352	.0679361
L6.	-.0206077	.083947	-0.25	0.806	-.1851409	.1439254
L7.	.0103435	.083783	0.12	0.902	-.1538681	.174555
L8.	-.0128819	.0836802	-0.15	0.878	-.176892	.1511283
L9.	-.0463261	.08341	-0.56	0.579	-.2098067	.1171544
dLTGBY10Y						
L1.	-.0900669	.0752904	-1.20	0.232	-.2376334	.0574995
L2.	-.0081283	.0755447	-0.11	0.914	-.1561932	.1399367
L3.	.1692026	.0763245	2.22	0.027	.0196092	.3187959
L4.	.0750988	.076708	0.98	0.328	-.0752462	.2254438
L5.	-.041551	.0773627	-0.54	0.591	-.193179	.1100771
L6.	.054208	.077673	0.70	0.485	-.0980283	.2064442
L7.	.0019059	.0793505	0.02	0.981	-.1536183	.1574301
L8.	.0176488	.0807341	0.22	0.827	-.1405871	.1758846
L9.	-.13479	.0807347	-1.67	0.095	-.293027	.0234471
Inflation						
L1.	.0136861	.0214329	0.64	0.523	-.0283217	.0556939
L2.	.0195542	.0213852	0.91	0.361	-.0223599	.0614684
L3.	.006455	.0201649	0.32	0.749	-.0330674	.0459774
L4.	-.0326747	.0203625	-1.60	0.109	-.0725845	.0072352
L5.	.0043594	.0192537	0.23	0.821	-.0333771	.0420958
L6.	.0301644	.0203341	1.48	0.138	-.0096896	.0700185
L7.	.010018	.0199894	0.50	0.616	-.0291604	.0491964
L8.	.0221875	.0214733	1.03	0.301	-.0198994	.0642745
L9.	-.0211728	.0215375	-0.98	0.326	-.0633856	.02104
UIMLT						
L1.	.001059	.0008162	1.30	0.194	-.0005406	.0026587
L2.	.0002801	.000819	0.34	0.732	-.0013251	.0018853
L3.	-.0005024	.0008069	-0.62	0.534	-.0020839	.0010791
L4.	-.0002138	.0007969	-0.27	0.789	-.0017757	.0013482
L5.	-.0009083	.0007981	-1.14	0.255	-.0024725	.000656
L6.	-.0003533	.000848	-0.42	0.677	-.0020155	.0013088
L7.	.00093	.0008342	1.11	0.265	-.000705	.002565
L8.	.000657	.0008362	0.79	0.432	-.000982	.0022959
L9.	-.0001506	.0007985	-0.19	0.850	-.0017156	.0014145
UIGER	.0149316	.0140872	1.06	0.289	-.0126789	.042542
_cons	-.1150226	.0790052	-1.46	0.145	-.26987	.0398247

Inflation						
dUnemploymentrate						
L1.	.2294115	.2756969	0.83	0.405	-.3109444	.7697674
L2.	.1761453	.2828746	0.62	0.533	-.3782788	.7305694
L3.	-.0735294	.283147	-0.26	0.795	-.6284872	.4814284
L4.	.0583927	.2866352	0.20	0.839	-.5034019	.6201873
L5.	.2243867	.2719593	0.83	0.409	-.3086437	.7574171
L6.	.0732771	.2702307	0.27	0.786	-.4563652	.6029195
L7.	-.5356147	.2697025	-1.99	0.047	-1.064222	-.0070076
L8.	.101735	.2693717	0.38	0.706	-.4262238	.6296937
L9.	-.102028	.2685019	-0.38	0.704	-.6282819	.424226
dLTGBY10Y						
L1.	.1837343	.2423644	0.76	0.448	-.2912912	.6587597
L2.	-.1689212	.2431831	-0.69	0.487	-.6455514	.307709
L3.	-.3122981	.2456934	-1.27	0.204	-.7938483	.1692521
L4.	.4377908	.2469279	1.77	0.076	-.0461789	.9217606
L5.	.054571	.2490352	0.22	0.827	-.4335291	.5426711
L6.	.5203705	.2500341	2.08	0.037	.0303127	1.010428
L7.	.3524423	.2554343	1.38	0.168	-.1481996	.8530843
L8.	.1034364	.2598879	0.40	0.691	-.4059345	.6128073
L9.	.2536159	.2598899	0.98	0.329	-.2557589	.7629908
Inflation						
L1.	.0547846	.068994	0.79	0.427	-.0804411	.1900102
L2.	-.0618673	.0688401	-0.90	0.369	-.1967915	.0730569
L3.	-.4382004	.064912	-6.75	0.000	-.5654255	-.3109753
L4.	-.0280109	.0655482	-0.43	0.669	-.1564831	.1004612
L5.	-.2849947	.0619787	-4.60	0.000	-.4064707	-.1635187
L6.	-.3669729	.0654567	-5.61	0.000	-.4952656	-.2386801
L7.	-.3185749	.064347	-4.95	0.000	-.4446927	-.1924572
L8.	-.0410353	.069124	-0.59	0.553	-.1765158	.0944451
L9.	-.4182561	.0693306	-6.03	0.000	-.5541417	-.2823706
UIMLT						
L1.	.0004377	.0026273	0.17	0.868	-.0047117	.005587
L2.	-.003547	.0026364	-1.35	0.178	-.0087143	.0016202
L3.	.0055056	.0025974	2.12	0.034	.0004147	.0105965
L4.	-.004381	.0025654	-1.71	0.088	-.009409	.000647
L5.	-.0010962	.0025692	-0.43	0.670	-.0061317	.0039392
L6.	.0016679	.0027299	0.61	0.541	-.0036826	.0070185
L7.	.0027344	.0026854	1.02	0.309	-.0025289	.0079976
L8.	-.0043614	.0026918	-1.62	0.105	-.0096373	.0009145
L9.	.0022642	.0025705	0.88	0.378	-.0027738	.0073023
UIGER	.0932048	.0453477	2.06	0.040	.004325	.1820845
_cons	.1200537	.2543226	0.47	0.637	-.3784095	.6185169
UIMLT						
dUnemploymentrate						
L1.	-8.356138	7.804157	-1.07	0.284	-23.65201	6.939729
L2.	-5.857093	8.007339	-0.73	0.464	-21.55119	9.837003
L3.	3.067605	8.015048	0.38	0.702	-12.6416	18.77681
L4.	1.097654	8.113788	0.14	0.892	-14.80508	17.00039
L5.	3.85873	7.698357	0.50	0.616	-11.22977	18.94723
L6.	-4.684838	7.649425	-0.61	0.540	-19.67744	10.30776
L7.	2.540253	7.634474	0.33	0.739	-12.42304	17.50355
L8.	4.635537	7.62511	0.61	0.543	-10.3094	19.58048
L9.	2.346762	7.600488	0.31	0.758	-12.54992	17.24345
dLTGBY10Y						
L1.	6.279274	6.860614	0.92	0.360	-7.167282	19.72583
L2.	-1.158552	6.88379	-0.17	0.866	-14.65053	12.33343
L3.	5.743923	6.954848	0.83	0.409	-7.887329	19.37518
L4.	2.754725	6.989793	0.39	0.694	-10.94502	16.45447
L5.	-.431586	7.049446	-0.06	0.951	-14.24825	13.38507
L6.	-.3787148	7.077721	-0.05	0.957	-14.25079	13.49336
L7.	-14.19448	7.230584	-1.96	0.050	-28.36616	-.0227931
L8.	5.126803	7.356652	0.70	0.486	-9.291971	19.54558
L9.	-.0375498	7.356709	-0.01	0.996	-14.45643	14.38133
Inflation						
L1.	-.0531761	1.953014	-0.03	0.978	-3.881013	3.77466
L2.	-1.879759	1.948659	-0.96	0.335	-5.699061	1.939543
L3.	1.051109	1.837464	0.57	0.567	-2.550254	4.652473
L4.	-3.177668	1.855475	-1.71	0.087	-6.814333	.4589964
L5.	.9552915	1.754432	0.54	0.586	-2.483332	4.393915
L6.	3.276289	1.852884	1.77	0.077	-.3552967	6.907875
L7.	-2.274487	1.821472	-1.25	0.212	-5.844506	1.295531
L8.	-.3882783	1.956693	-0.20	0.843	-4.223327	3.44677
L9.	-2.308623	1.962544	-1.18	0.239	-6.155138	1.537893
UIMLT						
L1.	.2014293	.0743702	2.71	0.007	.0556664	.3471922
L2.	.0769859	.074629	1.03	0.302	-.0692842	.223256
L3.	.2013368	.073526	2.74	0.006	.0572285	.345445
L4.	-.0653442	.0726177	-0.90	0.368	-.2076724	.076984
L5.	.2539168	.0727252	3.49	0.000	.1113781	.3964555
L6.	-.1678856	.0772756	-2.17	0.030	-.319343	-.0164281
L7.	.0971401	.0760156	1.28	0.201	-.0518476	.2461279
L8.	-.0116493	.0761975	-0.15	0.878	-.1609937	.1376951
L9.	.1674018	.0727629	2.30	0.021	.0247891	.3100145
UIGER	.5049675	1.283657	0.39	0.694	-2.010954	3.020889
_cons	10.07792	7.199117	1.40	0.162	-4.032086	24.18793

VAR 19. Malta – VAR model with 9 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **NETHERLANDS**

Vector autoregression

Sample: 2008m5 thru 2022m12		Number of obs	= 176
Log likelihood = -362.3997		AIC	= 4.754542
FPE = .0013663		HQIC	= 5.163702
Det(Sigma_ml) = .0007221		SBIC	= 5.763332

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	14	.126547	0.2280	51.97354	0.0000
dLTGBY10Y	14	.155432	0.2612	62.22657	0.0000
Inflation	14	.597595	0.2286	52.1622	0.0000
UINLD	14	2.74898	0.6889	389.6904	0.0000

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.2356179	.0755935	3.12	0.002	.0874574	.3837784
L2.	.2738433	.0747596	3.66	0.000	.1273173	.4203693
L3.	.0102503	.0735293	0.14	0.889	-.1338644	.154365
dLTGBY10Y						
L1.	-.05995	.058751	-1.02	0.308	-.1750998	.0551998
L2.	.0148568	.0598091	0.25	0.804	-.1023668	.1320805
L3.	.0654977	.0581479	1.13	0.260	-.04847	.1794654
Inflation						
L1.	-.000079	.015487	-0.01	0.996	-.030433	.0302751
L2.	.010239	.0168177	0.61	0.543	-.0227232	.0432012
L3.	-.0088937	.017381	-0.51	0.609	-.0429599	.0251725
UINLD						
L1.	-.0042194	.0033153	-1.27	0.203	-.0107172	.0022784
L2.	.0030412	.0035051	0.87	0.386	-.0038286	.009911
L3.	.0000616	.0033339	0.02	0.985	-.0064727	.0065958
UIGER	-.0076509	.0096045	-0.80	0.426	-.0264754	.0111737
_cons	.0403252	.0350417	1.15	0.250	-.0283552	.1090057
dLTGBY10Y						
dUnemploymentrate						
L1.	-.0437935	.092848	-0.47	0.637	-.2257723	.1381854
L2.	.1490078	.0918238	1.62	0.105	-.0309635	.3289791
L3.	-.1441459	.0903127	-1.60	0.110	-.3211556	.0328637
dLTGBY10Y						
L1.	.1615531	.0721612	2.24	0.025	.0201198	.3029864
L2.	-.1435907	.0734608	-1.95	0.051	-.2875713	.0003898
L3.	.0946468	.0714204	1.33	0.185	-.0453346	.2346282
Inflation						
L1.	.0525341	.019022	2.76	0.006	.0152516	.0898166
L2.	.035236	.0206565	1.71	0.088	-.0052499	.075722
L3.	.0497557	.0213483	2.33	0.020	.0079137	.0915977
UINLD						
L1.	-.0006558	.004072	-0.16	0.872	-.0086367	.0073252
L2.	-.0060314	.0043051	-1.40	0.161	-.0144693	.0024064
L3.	.0088176	.0040948	2.15	0.031	.0007919	.0168434
UIGER	.0161593	.0117968	1.37	0.171	-.0069621	.0392806
_cons	-.1277708	.0430401	-2.97	0.003	-.2121279	-.0434137
Inflation						
dUnemploymentrate						
L1.	.3331215	.3569759	0.93	0.351	-.3665384	1.032781
L2.	.0870527	.3530379	0.25	0.805	-.6048888	.7789943
L3.	.1199437	.3472281	0.35	0.730	-.5606109	.8004983
dLTGBY10Y						
L1.	.4973441	.2774404	1.79	0.073	-.0464291	1.041117
L2.	-.5589064	.2824371	-1.98	0.048	-1.112473	-.0053398
L3.	1.031903	.2745923	3.76	0.000	.4937124	1.570094
Inflation						
L1.	.1235029	.0731346	1.69	0.091	-.0198384	.2668442
L2.	-.2169404	.0794186	-2.73	0.006	-.3725981	-.0612828
L3.	-.2336662	.0820787	-2.85	0.004	-.3945375	-.072795
UINLD						
L1.	.0213152	.0156557	1.36	0.173	-.0093694	.0519998
L2.	-.0174422	.016552	-1.05	0.292	-.0498835	.0149991
L3.	.0028894	.0157436	0.18	0.854	-.0279674	.0337462
UIGER	.1069386	.0453556	2.36	0.018	.0180432	.1958339
_cons	-.2477374	.1654778	-1.50	0.134	-.5720679	.0765931
UINLD						
dUnemploymentrate						
L1.	.0565276	1.642119	0.03	0.973	-3.161966	3.275021
L2.	-.0939123	1.624003	-0.06	0.954	-3.276901	3.089076
L3.	-.7491352	1.597278	-0.47	0.639	-3.879742	2.381472
dLTGBY10Y						
L1.	-1.514294	1.276249	-1.19	0.235	-4.015696	.9871077
L2.	-2.034227	1.299234	-1.57	0.117	-4.580679	.5122255
L3.	1.636464	1.263147	1.30	0.195	-.8392586	4.112187
Inflation						
L1.	.1533878	.3364254	0.46	0.648	-.5059939	.8127696
L2.	-.2274766	.3653322	-0.62	0.534	-.9435145	.4885614
L3.	-.1677607	.3775687	-0.44	0.657	-.9077817	.5722604
UINLD						
L1.	.3932193	.0720175	5.46	0.000	.2520676	.534371
L2.	.1444249	.0761405	1.90	0.058	-.0048076	.2936575
L3.	.134155	.0724217	1.85	0.064	-.0077889	.2760989
UIGER	1.10611	.2086396	5.30	0.000	.6971835	1.515036
_cons	-1.07251	.7612114	-1.41	0.159	-2.564457	.4194374

VAR 20. Netherlands – VAR model with 3 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **POLAND**

```
Vector autoregression

Sample: 2008m5 thru 2022m12                     Number of obs     =         176
Log likelihood =   488.3168                     AIC               =   -4.583146
FPE            =   7.06e-09                     HQIC              =   -3.962099
Det(Sigma_ml)  =   2.68e-09                     SBIC              =   -3.051946

Equation            Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e       17   .128906   0.3813   108.446   0.0000
dLTGBY10Y              17   .255927   0.2699   65.86374   0.0000
Inflation              17   .414745   0.4042   119.4122   0.0000
UIPOL                  17   1.13165   0.6613   343.6097   0.0000
dPLNEUR                17   .005168   0.1361   27.72136   0.0341
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.4870681	.07503	6.49	0.000	.3400119	.6341243
L2.	.1294524	.0831345	1.56	0.119	-.0334883	.292393
L3.	-.0885784	.074996	-1.18	0.238	-.2355677	.058411
dLTGBY10Y						
L1.	.0314371	.0430433	0.73	0.465	-.0529261	.1158003
L2.	-.0292775	.0446408	-0.66	0.512	-.1167718	.0582168
L3.	.0051179	.0482074	0.11	0.915	-.0893668	.0996026
Inflation						
L1.	-.0373837	.0270039	-1.38	0.166	-.0903103	.015543
L2.	.0368587	.0266594	1.38	0.167	-.0153927	.0891101
L3.	.0280344	.0269313	1.04	0.298	-.0247499	.0808188
UIPOL						
L1.	-.008046	.0082693	-1.08	0.279	-.0251535	.0072614
L2.	-.0095014	.0082256	-1.16	0.248	-.0256233	.0066204
L3.	.0147388	.0081323	1.81	0.070	-.0012002	.0306778
dPLNEUR						
L1.	-2.339701	1.89014	-1.24	0.216	-6.044307	1.364905
L2.	-.7191091	1.956632	-0.37	0.713	-4.554037	3.115818
L3.	-3.711522	1.890291	-1.96	0.050	-7.416424	-.0066204
UIGER	.0002127	.0103154	0.02	0.984	-.020005	.0204305
_cons	-.0105361	.0339111	-0.31	0.756	-.0770006	.0559285
dLTGBY10Y						
dUnemploymentrate						
L1.	-.0006743	.1489634	-0.00	0.996	-.2926372	.2912885
L2.	-.1158389	.1650538	-0.70	0.483	-.4393384	.2076607
L3.	-.0104723	.1488957	-0.07	0.944	-.3023025	.2813579
dLTGBY10Y						
L1.	.2150257	.0854573	2.52	0.012	.0475324	.382519
L2.	-.2979638	.0886291	-3.36	0.001	-.4716736	-.124254
L3.	.0132667	.0957101	0.14	0.890	-.1743216	.200855
Inflation						
L1.	.1553003	.0536131	2.90	0.004	.0502205	.26038
L2.	-.0064139	.052929	-0.12	0.904	-.110153	.0973251
L3.	-.0725	.053469	-1.36	0.175	-.1772972	.0322972
UIPOL						
L1.	.0173461	.0164177	1.06	0.291	-.014832	.0495241
L2.	.0064207	.016331	0.39	0.694	-.0255874	.0384288
L3.	-.009292	.0161457	-0.58	0.565	-.040937	.0223531
dPLNEUR						
L1.	-2.636681	3.752652	-0.70	0.482	-9.991744	4.718381
L2.	-.2216259	3.884664	-0.06	0.955	-7.835427	7.392175
L3.	-.4352397	3.752951	-0.12	0.908	-7.79089	6.92041
UIGER	.0352677	.0204799	1.72	0.085	-.0048723	.0754076
_cons	-.2164731	.0673265	-3.22	0.001	-.3484307	-.0845155
Inflation						
dUnemploymentrate						
L1.	.2092449	.2414042	0.87	0.386	-.2638987	.6823884
L2.	.220185	.2674798	0.82	0.410	-.3040658	.7444358
L3.	.0755463	.2412946	0.31	0.754	-.3973824	.5484749
dLTGBY10Y						
L1.	.1521412	.1384888	1.10	0.272	-.119292	.4235743
L2.	-.1546793	.1436288	-1.08	0.282	-.4361866	.126828
L3.	.1292669	.155104	0.83	0.405	-.1747313	.4332652
Inflation						
L1.	.1803346	.0868833	2.08	0.038	.0100465	.3506228
L2.	.1828477	.0857747	2.13	0.033	.0147322	.3509631
L3.	-.0720708	.0866497	-0.83	0.406	-.2419011	.0977596
UIPOL						
L1.	.0388861	.0266058	1.46	0.144	-.0132603	.0910326
L2.	.0343053	.0264653	1.30	0.195	-.0175657	.0861764
L3.	.0353899	.0261651	1.35	0.176	-.0158928	.0866726
dPLNEUR						
L1.	-9.590342	6.081401	-1.58	0.115	-21.50967	2.328985
L2.	-7.146475	6.295334	-1.14	0.256	-19.4851	5.192153
L3.	3.847935	6.081887	0.63	0.527	-8.072344	15.76821
UIGER	.0233357	.033189	0.70	0.482	-.0417135	.088385
_cons	-.2343295	.1091068	-2.15	0.032	-.4481749	-.0204842
UIPOL						
dUnemploymentrate						
L1.	.2658221	.6586808	0.40	0.687	-1.025169	1.556813
L2.	-.1672734	.7298291	-0.23	0.819	-1.597712	1.263165
L3.	-.1787329	.6583816	-0.27	0.786	-1.469137	1.111671
dLTGBY10Y						
L1.	-.1678685	.3778722	-0.44	0.657	-.9084844	.5727475
L2.	.2162716	.3918968	0.55	0.581	-.551832	.9843751
L3.	-.1453591	.4232073	-0.34	0.731	-.9748302	.6841121
Inflation						
L1.	.1826519	.2370645	0.77	0.441	-.281986	.6472899
L2.	.3497195	.2340397	1.49	0.135	-.1089899	.808429
L3.	-.0685164	.2364271	-0.29	0.772	-.531905	.3948723
UIPOL						
L1.	.2066141	.072595	2.85	0.004	.0643305	.3488977
L2.	.0884653	.0722116	1.23	0.221	-.0530668	.2299975
L3.	.2563464	.0713926	3.59	0.000	.1164195	.3962732
dPLNEUR						
L1.	23.18859	16.59334	1.40	0.162	-9.333759	55.71094
L2.	-18.39257	17.17706	-1.07	0.284	-52.059	15.27386
L3.	7.197538	16.59467	0.43	0.664	-25.32741	39.72248
UIGER	.4499299	.0905575	4.97	0.000	.2724405	.6274192
_cons	-.580268	.2977021	-1.95	0.051	-1.163753	.0032173
dPLNEUR						
dUnemploymentrate						
L1.	.0030924	.0030083	1.03	0.304	-.0028038	.0089886
L2.	.0024281	.0033333	0.73	0.466	-.004105	.0089612
L3.	-.0010264	.003007	-0.34	0.733	-.0069199	.0048671
dLTGBY10Y						
L1.	.0038672	.0017258	2.24	0.025	.0004847	.0072498
L2.	.0003486	.0017899	0.19	0.846	-.0031595	.0038567
L3.	-.0008406	.0019329	-0.43	0.664	-.004629	.0029477
Inflation						
L1.	-.0014117	.0010827	-1.30	0.192	-.0035338	.0007104
L2.	.000976	.0010689	0.91	0.361	-.001119	.003071
L3.	.0004389	.0010798	0.41	0.684	-.0016775	.0025552
UIPOL						
L1.	-.0004266	.0003316	-1.29	0.198	-.0010765	.0002232
L2.	-.0001416	.0003298	-0.43	0.668	-.000788	.0005048
L3.	.0006753	.0003261	2.07	0.038	.0000362	.0013143
dPLNEUR						
L1.	.2200679	.0757849	2.90	0.004	.0715322	.3686036
L2.	.0716189	.0784509	0.91	0.361	-.082142	.2253798
L3.	.0594692	.075791	0.78	0.433	-.0890784	.2080168
UIGER	-.0004328	.0004136	-1.05	0.295	-.0012434	.0003778
_cons	.0013398	.0013597	0.99	0.324	-.0013251	.0040046

VAR 21. Poland – VAR model with 3 lags for unemployment rate, inflation, long term government bond 10 years, the country's currency over euro (HUF/EUR) and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **PORTUGAL**

```
Vector autoregression

Sample: 2008m9 thru 2022m12                     Number of obs     =        172
Log likelihood =  -592.9146                     AIC               =   8.289705
FPE            =   .0474827                     HQIC              =   9.180649
Det(Sigma_ml)  =   .0115953                     SBIC              =   10.48563

Equation           Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e      30      .232877   0.3889   109.4375   0.0000
dLTGBY10Y             30       .39998   0.2582   59.87205   0.0006
Inflation             30      .482246   0.5998   257.7379   0.0000
UIPRT                 30      3.59994   0.7861   632.0609   0.0000
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.3783098	.0717409	5.27	0.000	.2377003	.5189193
L2.	.1513647	.0770225	1.97	0.049	.0004034	.302326
L3.	.006094	.0785015	0.08	0.938	-.147766	.1599541
L4.	-.0391634	.0795057	-0.49	0.622	-.1949918	.116665
L5.	-.0423024	.0788043	-0.54	0.591	-.196756	.1121511
L6.	.0296986	.0778235	0.38	0.703	-.1228326	.1822298
L7.	.1951271	.0728583	2.68	0.007	.0523274	.3379267
dLTGBY10Y						
L1.	.0068185	.0439814	0.16	0.877	-.0793834	.0930204
L2.	.0526276	.0445786	1.18	0.238	-.0347448	.14
L3.	.0794025	.0440868	1.80	0.072	-.0070061	.165811
L4.	-.0507539	.0463531	-1.09	0.274	-.1416043	.0400965
L5.	.0477903	.0447282	1.07	0.285	-.0398754	.135456
L6.	-.0435334	.0450084	-0.97	0.333	-.1317484	.0446815
L7.	.0782742	.0445529	1.76	0.079	-.0090479	.1655963
Inflation						
L1.	-.0794904	.0354844	-2.24	0.025	-.1490386	-.0099422
L2.	-.0455507	.0315793	-1.44	0.149	-.1074451	.0163436
L3.	.0603513	.0331487	1.82	0.069	-.0046189	.1253216
L4.	-.01939	.0314575	-0.62	0.538	-.0810457	.0422656
L5.	.0134518	.0333133	0.40	0.686	-.0518411	.0787448
L6.	-.0486904	.0312789	-1.56	0.120	-.1099959	.0126152
L7.	.1260734	.035176	3.58	0.000	.0571297	.1950172
UIPRT						
L1.	.0067303	.0048672	1.38	0.167	-.0028091	.0162698
L2.	-.0062248	.0050506	-1.23	0.218	-.0161237	.0036741
L3.	-.0006202	.0048586	-0.13	0.898	-.0101428	.0089024
L4.	.0002987	.0050439	0.06	0.953	-.0095872	.0101846
L5.	-.0014046	.0047936	-0.29	0.770	-.0107999	.0079907
L6.	-.0082614	.0050774	-1.63	0.104	-.0182129	.0016901
L7.	.0101664	.0050112	2.03	0.042	.0003446	.0199882
UIGER	-.0032874	.0176911	-0.19	0.853	-.0379614	.0313866
_cons	.0060869	.0618739	0.10	0.922	-.1151836	.1273575
dLTGBY10Y						
dUnemploymentrate						
L1.	.0175781	.1232192	0.14	0.887	-.2239271	.2590832
L2.	-.0921339	.1322907	-0.70	0.486	-.3514189	.1671511
L3.	.0064946	.134831	0.05	0.962	-.2577692	.2707584
L4.	.1232273	.1365559	0.90	0.367	-.1444173	.3908718
L5.	.0166815	.135351	0.12	0.902	-.2486017	.2819647
L6.	-.2352863	.1336664	-1.76	0.078	-.4972678	.0266951
L7.	.1869987	.1251384	1.49	0.135	-.0582681	.4322656
dLTGBY10Y						
L1.	.1336491	.0755406	1.77	0.077	-.0144078	.2817059
L2.	.0878539	.0765663	1.15	0.251	-.0622133	.2379211
L3.	.2613338	.0757217	3.45	0.001	.112922	.4097457
L4.	-.006187	.0796142	-0.08	0.938	-.1622279	.149854
L5.	.1286406	.0768234	1.67	0.094	-.0219304	.2792116
L6.	-.0745619	.0773047	-0.96	0.335	-.2260763	.0769525
L7.	.0483416	.0765222	0.63	0.528	-.1016392	.1983225
Inflation						
L1.	.0128926	.0609466	0.21	0.832	-.1065605	.1323458
L2.	.0288107	.0542394	0.53	0.595	-.0774966	.1351179
L3.	-.0391175	.0569348	-0.69	0.492	-.1507078	.0724727
L4.	.0342044	.0540302	0.63	0.527	-.0716928	.1401017
L5.	-.1482874	.0572176	-2.59	0.010	-.2604319	-.036143
L6.	.0744487	.0537234	1.39	0.166	-.0308472	.1797447
L7.	-.1134948	.0604169	-1.88	0.060	-.2319098	.0049201
UIPRT						
L1.	.0066691	.0083596	0.80	0.425	-.0097155	.0230537
L2.	.0119796	.0086746	1.38	0.167	-.0050223	.0289816
L3.	.0040772	.0083449	0.49	0.625	-.0122785	.0204329
L4.	-.0010849	.0086632	-0.13	0.900	-.0180645	.0158947
L5.	-.0191769	.0082333	-2.33	0.020	-.0353138	-.0030399
L6.	-.0048084	.0087207	-0.55	0.581	-.0219007	.012284
L7.	-.0026135	.0086071	-0.30	0.761	-.019483	.0142561
UIGER	.0657915	.0303856	2.17	0.030	.0062369	.1253461
_cons	-.229114	.1062721	-2.16	0.031	-.4374035	-.0208246

Inflation						
dUnemploymentrate						
L1.	-.3309566	.1485622	-2.23	0.026	-.6221333	-.03978
L2.	.4578967	.1594995	2.87	0.004	.1452834	.7705101
L3.	-.2619787	.1625622	-1.61	0.107	-.5805948	.0566375
L4.	.2256916	.1646419	1.37	0.170	-.0970007	.5483838
L5.	.1683953	.1631893	1.03	0.302	-.1514499	.4882405
L6.	-.2862224	.1611582	-1.78	0.076	-.6020868	.0296419
L7.	.439006	.1508762	2.91	0.004	.143294	.734718
dLTGBY10Y						
L1.	.2226207	.0910774	2.44	0.015	.0441123	.4011291
L2.	-.0451489	.0923141	-0.49	0.625	-.2260812	.1357833
L3.	.1097235	.0912958	1.20	0.229	-.0692129	.2886598
L4.	.1085394	.0959888	1.13	0.258	-.0795952	.2966739
L5.	.010954	.092624	0.12	0.906	-.1705857	.1924936
L6.	.0167339	.0932043	0.18	0.858	-.1659432	.1994109
L7.	-.1512536	.0922609	-1.64	0.101	-.3320817	.0295745
Inflation						
L1.	.2993792	.0734818	4.07	0.000	.1553576	.4434008
L2.	-.2399166	.065395	-3.67	0.000	-.3680885	-.1117447
L3.	-.0076246	.0686449	-0.11	0.912	-.1421661	.126917
L4.	-.2311792	.0651428	-3.55	0.000	-.3588568	-.1035016
L5.	-.0329069	.0689858	-0.48	0.633	-.1681166	.1023029
L6.	.5394088	.064773	8.33	0.000	.4124561	.6663615
L7.	-.256033	.0728431	-3.51	0.000	-.3988029	-.1132631
UIPRT						
L1.	.0057458	.010079	0.57	0.569	-.0140086	.0255003
L2.	.0036558	.0104588	0.35	0.727	-.016843	.0241547
L3.	-.0022532	.0100612	-0.22	0.823	-.0219729	.0174664
L4.	.0127336	.010445	1.22	0.223	-.0077384	.0332055
L5.	-.0152701	.0099267	-1.54	0.124	-.0347261	.0041858
L6.	.0065341	.0105144	0.62	0.534	-.0140737	.0271419
L7.	.0033231	.0103773	0.32	0.749	-.0170161	.0236622
UIGER	.0246526	.0366351	0.67	0.501	-.0471509	.0964561
_cons	-.1225907	.1281295	-0.96	0.339	-.37372	.1285386
UIPRT						
dUnemploymentrate						
L1.	1.065682	1.10901	0.96	0.337	-1.107939	3.239302
L2.	.4799106	1.190657	0.40	0.687	-1.853734	2.813555
L3.	-2.310289	1.21352	-1.90	0.057	-4.688744	.0681659
L4.	-.5598661	1.229044	-0.46	0.649	-2.968749	1.849017
L5.	.8053113	1.218201	0.66	0.509	-1.582318	3.192941
L6.	-.4942973	1.203039	-0.41	0.681	-2.85221	1.863616
L7.	-1.180259	1.126284	-1.05	0.295	-3.387735	1.027218
dLTGBY10Y						
L1.	-.1842929	.6798885	-0.27	0.786	-1.51685	1.148264
L2.	-2.032973	.6891203	-2.95	0.003	-3.383624	-.6823221
L3.	-.5045277	.6815187	-0.74	0.459	-1.84028	.8312243
L4.	.2457427	.716552	0.34	0.732	-1.158673	1.650159
L5.	.3997304	.6914337	0.58	0.563	-.9554548	1.754916
L6.	.4732093	.6957658	0.68	0.496	-.8904665	1.836885
L7.	.3154031	.6887236	0.46	0.647	-1.03447	1.665277
Inflation						
L1.	.7919404	.548538	1.44	0.149	-.2831743	1.867055
L2.	.0690031	.4881709	0.14	0.888	-.8877942	1.0258
L3.	.136151	.512431	0.27	0.790	-.8681953	1.140497
L4.	.5645778	.4862883	1.16	0.246	-.3885298	1.517685
L5.	.2906146	.5149761	0.56	0.573	-.71872	1.299949
L6.	.5831931	.4835272	1.21	0.228	-.3645029	1.530889
L7.	-1.030854	.5437705	-1.90	0.058	-2.096625	.0349168
UIPRT						
L1.	.1748002	.0752393	2.32	0.020	.027334	.3222665
L2.	-.0413513	.0780743	-0.53	0.596	-.1943741	.1116715
L3.	.278087	.0751066	3.70	0.000	.1308809	.4252932
L4.	.0793315	.0779718	1.02	0.309	-.0734904	.2321534
L5.	.2605854	.0741023	3.52	0.000	.1153476	.4058233
L6.	.0300157	.0784893	0.38	0.702	-.1238205	.1838518
L7.	.1205468	.0774662	1.56	0.120	-.0312842	.2723778
UIGER	.4216439	.2734794	1.54	0.123	-.114366	.9576538
_cons	-.4769967	.9564813	-0.50	0.618	-2.351665	1.397672

VAR 22. Portugal – VAR model with 7 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **ROMANIA**

```
Vector autoregression

Sample: 2008m5 thru 2022m12                     Number of obs     =       176
Log likelihood =   171.6708                     AIC               =  -.9848956
FPE            =   2.58e-07                     HQIC              =  -.3638486
Det(Sigma_ml)  =   9.78e-08                     SBIC              =    .546304

Equation             Parms      RMSE     R-sq      chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e        17    .204756   0.1604    33.63525   0.0061
dLTGBY10Y               17    .362077   0.2161     48.5168   0.0000
Inflation               17    .472349   0.2916    72.43418   0.0000
UIRON                   17    3.88852   0.4454    141.3179   0.0000
dRONEUR                 17    .003126   0.1174    23.40941   0.1032
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	-.2429529	.0739972	-3.28	0.001	-.3879847	-.097921
L2.	.2109601	.0754149	2.80	0.005	.0631496	.3587706
L3.	.2220819	.0740723	3.00	0.003	.0769028	.367261
dLTGBY10Y						
L1.	.1127481	.0432274	2.61	0.009	.0280238	.1974723
L2.	.0338573	.0446646	0.76	0.448	-.0536837	.1213983
L3.	.0058418	.0434828	0.13	0.893	-.079383	.0910666
Inflation						
L1.	-.0109433	.0329736	-0.33	0.740	-.0755703	.0536837
L2.	-.0262464	.0349655	-0.75	0.453	-.0947775	.0422847
L3.	.0295555	.0330037	0.90	0.371	-.0351305	.0942415
UIRON						
L1.	-.0001145	.0036611	-0.03	0.975	-.0072902	.0070612
L2.	.0000631	.0035681	0.02	0.986	-.0069303	.0070564
L3.	-.0015155	.0038659	-0.39	0.695	-.0090925	.0060615
dRONEUR						
L1.	.6379835	4.963025	0.13	0.898	-9.089368	10.36533
L2.	4.240911	5.182392	0.82	0.413	-5.916392	14.39821
L3.	-1.886639	5.245597	-0.36	0.719	-12.16782	8.394543
UIGER	-.0060917	.0152613	-0.40	0.690	-.0360034	.0238199
_cons	.0445338	.0560179	0.79	0.427	-.0652592	.1543268
dLTGBY10Y						
dUnemploymentrate						
L1.	-.1798211	.1308518	-1.37	0.169	-.436286	.0766438
L2.	-.1758288	.1333588	-1.32	0.187	-.4372073	.0855496
L3.	-.1770818	.1309847	-1.35	0.176	-.4338071	.0796435
dLTGBY10Y						
L1.	-.1228708	.0764406	-1.61	0.108	-.2726916	.02695
L2.	-.236142	.078982	-2.99	0.003	-.3909438	-.0813402
L3.	-.0207125	.0768922	-0.27	0.788	-.1714185	.1299935
Inflation						
L1.	.1291305	.0583083	2.21	0.027	.0148483	.2434127
L2.	-.0073722	.0618307	-0.12	0.905	-.1285581	.1138137
L3.	-.007185	.0583615	-0.12	0.902	-.1215715	.1072015
UIRON						
L1.	.0125183	.0064741	1.93	0.053	-.0001708	.0252073
L2.	.0115633	.0063096	1.83	0.067	-.0008033	.0239299
L3.	.0150363	.0068362	2.20	0.028	.0016377	.0284349
dRONEUR						
L1.	-16.87381	8.776291	-1.92	0.055	-34.07503	.3274
L2.	1.118108	9.164205	0.12	0.903	-16.8434	19.07962
L3.	-22.05057	9.275973	-2.38	0.017	-40.23114	-3.869997
UIGER	-.0174013	.0269871	-0.64	0.519	-.0702951	.0354925
_cons	-.3454025	.0990584	-3.49	0.000	-.5395533	-.1512517
Inflation						
dUnemploymentrate						
L1.	.2034155	.1707036	1.19	0.233	-.1311574	.5379883
L2.	.0717448	.1739741	0.41	0.680	-.269238	.4127277
L3.	-.160822	.1708769	-0.94	0.347	-.4957346	.1740905
dLTGBY10Y						
L1.	.1693056	.0997211	1.70	0.090	-.0261441	.3647553
L2.	-.0038146	.1030364	-0.04	0.970	-.2057623	.198133
L3.	-.0663877	.1003102	-0.66	0.508	-.2629922	.1302167
Inflation						
L1.	.320747	.0760665	4.22	0.000	.1716594	.4698345
L2.	.0773649	.0806616	0.96	0.337	-.0807289	.2354587
L3.	-.0349172	.0761359	-0.46	0.647	-.1841409	.1143064
UIRON						
L1.	.0178386	.0084458	2.11	0.035	.0012851	.0343921
L2.	-.0009541	.0082312	-0.12	0.908	-.017087	.0151789
L3.	-.0181546	.0089182	-2.04	0.042	-.0356339	-.0006753
dRONEUR						
L1.	-20.8835	11.44917	-1.82	0.068	-43.32345	1.556454
L2.	-6.521126	11.95522	-0.55	0.585	-29.95293	16.91068
L3.	-9.685328	12.10103	-0.80	0.423	-33.40291	14.03225
UIGER	.0840065	.0352062	2.41	0.016	.0150036	.1539094
_cons	-.1630871	.1292272	-1.26	0.207	-.4163677	.0901936
UIRON						
dUnemploymentrate						
L1.	-.2113503	1.405282	-0.15	0.880	-2.965652	2.542952
L2.	.2551414	1.432206	0.18	0.859	-2.55193	3.062213
L3.	-.8863292	1.406709	-0.63	0.529	-3.643428	1.87077
dLTGBY10Y						
L1.	.1787232	.8209331	0.22	0.828	-1.430276	1.787723
L2.	.623096	.848226	0.73	0.463	-1.039396	2.285588
L3.	.2207454	.8257834	0.27	0.789	-1.39776	1.839251
Inflation						
L1.	-.3219857	.6262014	-0.51	0.607	-1.549318	.9053466
L2.	1.649445	.6640299	2.48	0.013	.3479702	2.950919
L3.	-1.276735	.6267731	-2.04	0.042	-2.505188	-.0482824
UIRON						
L1.	.1943014	.0695285	2.79	0.005	.058028	.3305748
L2.	.1405492	.067762	2.07	0.038	.0077381	.2733603
L3.	.1048099	.0734169	1.43	0.153	-.0390846	.2487045
dRONEUR						
L1.	196.1222	94.2529	2.08	0.037	11.38991	380.8545
L2.	293.8222	98.4189	2.99	0.003	100.9247	486.7197
L3.	-329.7473	99.61923	-3.31	0.001	-524.9974	-134.4972
UIGER	1.053236	.2898279	3.63	0.000	.4851835	1.621288
_cons	1.020903	1.063836	0.96	0.337	-1.064178	3.105984
dRONEUR						
dUnemploymentrate						
L1.	.0003739	.0011297	0.33	0.741	-.0018403	.0025882
L2.	.0000113	.0011514	0.01	0.992	-.0022454	.0022679
L3.	-.0008862	.0011309	-0.78	0.433	-.0031027	.0013303
dLTGBY10Y						
L1.	-.0001534	.00066	-0.23	0.816	-.0014469	.0011401
L2.	.0000742	.0006819	0.11	0.913	-.0012623	.0014107
L3.	.0008511	.0006639	1.28	0.200	-.0004501	.0021522
Inflation						
L1.	-.0001856	.0005034	-0.37	0.712	-.0011723	.000801
L2.	.0002838	.0005338	0.53	0.595	-.0007624	.0013301
L3.	.000477	.0005039	0.95	0.344	-.0005106	.0014645
UIRON						
L1.	-.0001019	.0000559	-1.82	0.068	-.0002115	7.65e-06
L2.	.0000478	.0000545	0.88	0.381	-.000059	.0001545
L3.	-.0002124	.000059	-3.60	0.000	-.0003281	-.0000967
dRONEUR						
L1.	.0567425	.0757719	0.75	0.454	-.0917676	.2052527
L2.	-.0446424	.079121	-0.56	0.573	-.1997167	.1104319
L3.	.0723535	.080086	0.90	0.366	-.0846121	.2293191
UIGER	.0004105	.000233	1.76	0.078	-.0000462	.0008672
_cons	.0002125	.0008552	0.25	0.804	-.0014638	.0018887

VAR 23. Romania – VAR model with 3 lags for unemployment rate, inflation, long term government bond 10 years, the country's currency over euro (RON/EUR) and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **SLOVAKIA**

Vector autoregression

Sample: 2008m4 thru 2022m12		Number of obs	= 177
Log likelihood = -380.6006		AIC	= 4.75255
FPE = .0013624		HQIC	= 5.043651
Det(Sigma_ml) = .0008666		SBIC	= 5.470323

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	10	.131361	0.5225	193.6818	0.0000
dLTGBY10Y	10	.201733	0.2536	60.12934	0.0000
Inflation	10	.34647	0.3644	101.477	0.0000
UISVK	10	3.82399	0.2139	48.15722	0.0000

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.5440457	.0734552	7.41	0.000	.4000762	.6880152
L2.	.2296562	.0735727	3.12	0.002	.0854564	.3738561
dLTGBY10Y						
L1.	-.0592394	.0476249	-1.24	0.214	-.1525825	.0341037
L2.	.061009	.0479291	1.27	0.203	-.0329302	.1549483
Inflation						
L1.	-.0072964	.0283231	-0.26	0.797	-.0628086	.0482158
L2.	-.0137946	.028403	-0.49	0.627	-.0694634	.0418742
UISVK						
L1.	-.0001087	.002578	-0.04	0.966	-.0051615	.004944
L2.	.000112	.0025297	0.04	0.965	-.0048461	.0050702
UIGER	.0069643	.0085477	0.81	0.415	-.009789	.0237176
_cons	-.0294343	.0359875	-0.82	0.413	-.0999685	.0411
dLTGBY10Y						
dUnemploymentrate						
L1.	-.1677852	.112806	-1.49	0.137	-.3888808	.0533104
L2.	.1149482	.1129864	1.02	0.309	-.1065011	.3363975
dLTGBY10Y						
L1.	.3290692	.0731381	4.50	0.000	.1857211	.4724173
L2.	-.3323137	.0736052	-4.51	0.000	-.4765773	-.1880501
Inflation						
L1.	.0973794	.043496	2.24	0.025	.0121288	.1826301
L2.	.0618576	.0436188	1.42	0.156	-.0236336	.1473489
UISVK						
L1.	-.0026585	.0039591	-0.67	0.502	-.0104181	.0051011
L2.	.0041746	.0038849	1.07	0.283	-.0034396	.0117888
UIGER	.0157182	.0131269	1.20	0.231	-.01001	.0414464
_cons	-.1179355	.0552664	-2.13	0.033	-.2262557	-.0096153
Inflation						
dUnemploymentrate						
L1.	-.1092986	.1937406	-0.56	0.573	-.4890231	.270426
L2.	.0538191	.1940505	0.28	0.782	-.3265129	.4341511
dLTGBY10Y						
L1.	.1814159	.1256123	1.44	0.149	-.0647797	.4276116
L2.	-.0245729	.1264146	-0.19	0.846	-.2723409	.2231951
Inflation						
L1.	.1661117	.074703	2.22	0.026	.0196965	.312527
L2.	.3123806	.0749138	4.17	0.000	.1655521	.459209
UISVK						
L1.	.0033293	.0067996	0.49	0.624	-.0099976	.0166562
L2.	-.0007421	.0066722	-0.11	0.911	-.0138192	.0123351
UIGER	.065792	.022545	2.92	0.004	.0216046	.1099793
_cons	-.1751283	.0949183	-1.85	0.065	-.3611648	.0109082
UISVK						
dUnemploymentrate						
L1.	-.1036706	2.138314	-0.05	0.961	-4.29469	4.087349
L2.	-3.975025	2.141735	-1.86	0.063	-8.172748	.2226992
dLTGBY10Y						
L1.	.9114522	1.386383	0.66	0.511	-1.805809	3.628713
L2.	-.2508719	1.395237	-0.18	0.857	-2.985487	2.483743
Inflation						
L1.	2.261082	.8244972	2.74	0.006	.6450968	3.877067
L2.	-1.433233	.8268241	-1.73	0.083	-3.053779	.1873119
UISVK						
L1.	.1870679	.0750467	2.49	0.013	.039979	.3341567
L2.	-.0074073	.0736406	-0.10	0.920	-.1517403	.1369257
UIGER	.497228	.2488287	2.00	0.046	.0095326	.9849233
_cons	1.947336	1.047613	1.86	0.063	-.1059484	4.00062

VAR 24. Slovakia – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **SLOVENIA**

Vector autoregression

Sample: 2008m4 thru 2022m12 — Number of obs = 177
Log likelihood = -717.966 — AIC = 8.564587
FPE = .0616403 — HQIC = 8.855688
Det(Sigma_ml) = .0392071 — SBIC = 9.282361

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	10	.159514	0.4440	141.3693	0.0000
dLTGBY10Y	10	.271624	0.2348	54.30035	0.0000
Inflation	10	.654859	0.1335	27.27473	0.0013
UISVN	10	7.94	0.1631	34.49149	0.0001

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.6930882	.0721707	9.60	0.000	.5516363	.8345401
L2.	-.1849908	.0725696	-2.55	0.011	-.3272247	-.0427569
dLTGBY10Y						
L1.	.0046142	.043244	0.11	0.915	-.0801424	.0893708
L2.	-.1122698	.0446766	-2.51	0.012	-.1998343	-.0247053
Inflation						
L1.	-.0191913	.0179937	-1.07	0.286	-.0544583	.0160758
L2.	.0077224	.0180122	0.43	0.668	-.0275808	.0430256
UISVN						
L1.	-.0017854	.0014952	-1.19	0.232	-.0047159	.0011452
L2.	-.0021145	.0014795	-1.43	0.153	-.0050142	.0007853
UIGER	.0063142	.0097651	0.65	0.518	-.0128251	.0254535
_cons	.0107218	.0397422	0.27	0.787	-.0671715	.088615
dLTGBY10Y						
dUnemploymentrate						
L1.	.4160469	.1228938	3.39	0.001	.1751794	.6569144
L2.	-.1618104	.1235732	-1.31	0.190	-.4040094	.0803887
dLTGBY10Y						
L1.	.3867027	.0736368	5.25	0.000	.2423773	.5310282
L2.	-.1122838	.0760763	-1.48	0.140	-.2613905	.036823
Inflation						
L1.	.001285	.0306401	0.04	0.967	-.0587685	.0613385
L2.	.0444386	.0306716	1.45	0.147	-.0156765	.1045537
UISVN						
L1.	.0003993	.0025461	0.16	0.875	-.0045909	.0053895
L2.	.0029881	.0025193	1.19	0.236	-.0019497	.0079259
UIGER	.0297595	.0166283	1.79	0.074	-.0028312	.0623503
_cons	-.1709768	.0676739	-2.53	0.012	-.3036152	-.0383384
Inflation						
dUnemploymentrate						
L1.	-.3703775	.2962849	-1.25	0.211	-.9510852	.2103302
L2.	.4769387	.2979228	1.60	0.109	-.1069792	1.060857
dLTGBY10Y						
L1.	.095312	.177531	0.54	0.591	-.2526423	.4432664
L2.	-.0184707	.1834124	-0.10	0.920	-.3779523	.3410109
Inflation						
L1.	.3014144	.0738702	4.08	0.000	.1566314	.4461974
L2.	-.1734641	.0739461	-2.35	0.019	-.3183957	-.0285324
UISVN						
L1.	-.0016241	.0061383	-0.26	0.791	-.013655	.0104068
L2.	.0018768	.0060738	0.31	0.757	-.0100277	.0137813
UIGER	.0502869	.0400891	1.25	0.210	-.0282863	.12886
_cons	-.0757984	.163155	-0.46	0.642	-.3955764	.2439795
UISVN						
dUnemploymentrate						
L1.	-2.180454	3.592375	-0.61	0.544	-9.22138	4.860473
L2.	1.059869	3.612234	0.29	0.769	-6.01998	8.139719
dLTGBY10Y						
L1.	5.620899	2.152516	2.61	0.009	1.402045	9.839753
L2.	-2.598512	2.223826	-1.17	0.243	-6.957131	1.760107
Inflation						
L1.	-.9121054	.8956572	-1.02	0.309	-2.667561	.8433504
L2.	1.634003	.8965766	1.82	0.068	-.1232547	3.391261
UISVN						
L1.	.1177393	.0744257	1.58	0.114	-.0281324	.2636109
L2.	.0215069	.0736438	0.29	0.770	-.1228322	.165846
UIGER	1.479102	.4860695	3.04	0.002	.5264235	2.431781
_cons	2.525021	1.978211	1.28	0.202	-1.352202	6.402244

VAR 25. Slovenia – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **SPAIN**

```
Vector autoregression

Sample: 2008m5 thru 2022m12                     Number of obs     =        176
Log likelihood =  -303.2739                     AIC               =   4.082657
FPE            =   .0006979                     HQIC              =   4.491818
Det(Sigma_ml)  =   .0003688                     SBIC              =   5.091448

Equation             Parms      RMSE     R-sq       chi2     P>chi2
------------------------------------------------------------------
dUnemploymentr~e        14    .162907   0.7065   423.6856   0.0000
dLTGBY10Y               14    .222902   0.2391   55.31562   0.0000
Inflation               14    .589328   0.2554     60.379   0.0000
UIESP                   14    1.09778   0.8219   812.1053   0.0000
------------------------------------------------------------------
```

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	.65664	.0731784	8.97	0.000	.513213	.800067
L2.	.2772977	.0832822	3.33	0.001	.1140676	.4405279
L3.	-.0741429	.0737274	-1.01	0.315	-.2186459	.0703601
dLTGBY10Y						
L1.	-.0816577	.0540034	-1.51	0.131	-.1875025	.0241871
L2.	-.0358794	.0545696	-0.66	0.511	-.1428339	.0710751
L3.	.0878389	.0529788	1.66	0.097	-.0159976	.1916754
Inflation						
L1.	.0189942	.0187561	1.01	0.311	-.0177671	.0557555
L2.	-.031738	.0192671	-1.65	0.100	-.0695007	.0060248
L3.	.0270084	.0193909	1.39	0.164	-.0109972	.0650139
UIESP						
L1.	-.0072411	.0108071	-0.67	0.503	-.0284227	.0139405
L2.	.0234093	.0120474	1.94	0.052	-.0002032	.0470218
L3.	-.0229722	.010334	-2.22	0.026	-.0432264	-.0027179
UIGER	.018798	.012492	1.50	0.132	-.0056859	.043282
_cons	-.0498789	.0429421	-1.16	0.245	-.1340438	.034286
dLTGBY10Y						
dUnemploymentrate						
L1.	.1642151	.1001284	1.64	0.101	-.0320331	.3604632
L2.	-.1630746	.1139533	-1.43	0.152	-.386419	.0602698
L3.	.0624619	.1008796	0.62	0.536	-.1352584	.2601823
dLTGBY10Y						
L1.	.1459301	.0738917	1.97	0.048	.001105	.2907553
L2.	-.1657067	.0746665	-2.22	0.026	-.3120503	-.0193631
L3.	-.0828094	.0724898	-1.14	0.253	-.2248867	.0592679
Inflation						
L1.	.0705091	.0256636	2.75	0.006	.0202094	.1208089
L2.	.0164876	.0263627	0.63	0.532	-.0351824	.0681576
L3.	.054654	.0265322	2.06	0.039	.0026518	.1066562
UIESP						
L1.	-.0303012	.0147872	-2.05	0.040	-.0592835	-.0013189
L2.	.0014427	.0164842	0.09	0.930	-.0308658	.0337511
L3.	.0167467	.0141398	1.18	0.236	-.0109668	.0444601
UIGER	.0660029	.0170926	3.86	0.000	.032502	.0995038
_cons	-.2486421	.0587567	-4.23	0.000	-.3638031	-.133481
Inflation						
dUnemploymentrate						
L1.	-.2752141	.2647287	-1.04	0.299	-.7940729	.2436447
L2.	.015889	.3012802	0.05	0.958	-.5746093	.6063873
L3.	.047013	.2667147	0.18	0.860	-.4757382	.5697642
dLTGBY10Y						
L1.	.4618203	.1953617	2.36	0.018	.0789184	.8447223
L2.	-.1764964	.19741	-0.89	0.371	-.5634129	.2104202
L3.	.1736357	.1916551	0.91	0.365	-.2020014	.5492727
Inflation						
L1.	.1192399	.0678518	1.76	0.079	-.0137472	.2522269
L2.	-.0549232	.0697002	-0.79	0.431	-.191533	.0816866
L3.	-.4418422	.0701483	-6.30	0.000	-.5793304	-.3043541
UIESP						
L1.	-.001086	.0390956	-0.03	0.978	-.0777121	.0755401
L2.	.0206221	.0435825	0.47	0.636	-.064798	.1060422
L3.	-.0215431	.037384	-0.58	0.564	-.0948144	.0517283
UIGER	.0718431	.045191	1.59	0.112	-.0167296	.1604158
_cons	-.0941508	.1553464	-0.61	0.544	-.398624	.2103225
UIESP						
dUnemploymentrate						
L1.	-.5202763	.4931295	-1.06	0.291	-1.486792	.4462398
L2.	.1069199	.5612165	0.19	0.849	-.9930443	1.206884
L3.	-.1563428	.4968289	-0.31	0.753	-1.13011	.8174239
dLTGBY10Y						
L1.	-.1550806	.3639146	-0.43	0.670	-.8683401	.5581788
L2.	-.7278971	.3677301	-1.98	0.048	-1.448635	-.0071594
L3.	-.06841	.3570098	-0.19	0.848	-.7681365	.6313164
Inflation						
L1.	-.1477983	.1263925	-1.17	0.242	-.395523	.0999263
L2.	-.0295404	.1298356	-0.23	0.820	-.2840134	.2249326
L3.	.2631919	.1306703	2.01	0.044	.0070828	.519301
UIESP						
L1.	.484268	.0728263	6.65	0.000	.341531	.6270049
L2.	.1539969	.0811843	1.90	0.058	-.0051213	.3131152
L3.	.1437195	.069638	2.06	0.039	.0072316	.2802075
UIGER	.3668762	.0841805	4.36	0.000	.2018854	.531867
_cons	-.4319282	.289375	-1.49	0.136	-.9990927	.1352364

VAR 26. Spain – VAR model with 3 lags for unemployment rate, inflation, long term government bond 10 years and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.

- **SWEDEN**

Vector autoregression

Sample: 2008m4 thru 2022m12			Number of obs	=	177
Log likelihood =	342.5287		AIC	=	-3.192415
FPE =	2.83e-08		HQIC	=	-2.755763
Det(Sigma_ml) =	1.43e-08		SBIC	=	-2.115754

Equation	Parms	RMSE	R-sq	chi2	P>chi2
dUnemploymentr~e	12	.343382	0.2458	57.69784	0.0000
dLTGBY10Y	12	.168498	0.1679	35.70762	0.0002
Inflation	12	.462324	0.2105	47.18079	0.0000
UISWE	12	3.1752	0.3901	113.2149	0.0000
dSEKEUR	12	.001792	0.0414	7.649761	0.7443

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
dUnemploymentrate						
dUnemploymentrate						
L1.	-.4678044	.0718166	-6.51	0.000	-.6085624	-.3270464
L2.	-.2291922	.071752	-3.19	0.001	-.3698235	-.0885609
dLTGBY10Y						
L1.	.2068617	.1601937	1.29	0.197	-.1071122	.5208355
L2.	-.2885186	.1600327	-1.80	0.071	-.6021769	.0251398
Inflation						
L1.	-.0045172	.0570903	-0.08	0.937	-.1164121	.1073776
L2.	.0349837	.0566308	0.62	0.537	-.0760107	.1459781
UISWE						
L1.	-.008092	.0085052	-0.95	0.341	-.0247619	.0085779
L2.	.0162094	.0081101	2.00	0.046	.0003139	.0321049
dSEKEUR						
L1.	7.360182	14.66656	0.50	0.616	-21.38574	36.1061
L2.	-1.868625	14.72553	-0.13	0.899	-30.73014	26.99289
UIGER	-.0571186	.0255518	-2.24	0.025	-.1071992	-.0070381
_cons	.1880656	.09203	2.04	0.041	.00769	.3684411
dLTGBY10Y						
dUnemploymentrate						
L1.	-.0430962	.0352405	-1.22	0.221	-.1121664	.0259739
L2.	-.0251984	.0352088	-0.72	0.474	-.0942064	.0438096
dLTGBY10Y						
L1.	.3440728	.0786073	4.38	0.000	.1900053	.4981403
L2.	-.1165918	.0785283	-1.48	0.138	-.2705045	.0373208
Inflation						
L1.	.0134317	.0280143	0.48	0.632	-.0414753	.0683387
L2.	-.0101013	.0277888	-0.36	0.716	-.0645665	.0443638
UISWE						
L1.	-.002717	.0041735	-0.65	0.515	-.0108969	.005463
L2.	.0036125	.0039796	0.91	0.364	-.0041874	.0114125
dSEKEUR						
L1.	8.433771	7.196902	1.17	0.241	-5.671898	22.53944
L2.	3.518916	7.225842	0.49	0.626	-10.64347	17.68131
UIGER	.017494	.0125383	1.40	0.163	-.0070806	.0420686
_cons	-.0887478	.0451593	-1.97	0.049	-.1772584	-.0002373
Inflation						
dUnemploymentrate						
L1.	-.1122424	.0966929	-1.16	0.246	-.3017571	.0772722
L2.	-.1659822	.0966059	-1.72	0.086	-.3553262	.0233618
dLTGBY10Y						
L1.	-.1441738	.2156825	-0.67	0.504	-.5669039	.2785562
L2.	.4945035	.2154658	2.30	0.022	.0721983	.9168087
Inflation						
L1.	-.1084581	.0768655	-1.41	0.158	-.2591117	.0421956
L2.	.010075	.076247	0.13	0.895	-.1393663	.1595164
UISWE						
L1.	.0159008	.0114513	1.39	0.165	-.0065433	.0383449
L2.	-.0050008	.0109193	-0.46	0.647	-.0264023	.0164007
dSEKEUR						
L1.	6.081031	19.74685	0.31	0.758	-32.62208	44.78414
L2.	21.57542	19.82625	1.09	0.276	-17.28332	60.43416
UIGER	.1225755	.0344025	3.56	0.000	.0551478	.1900032
_cons	-.4211489	.1239079	-3.40	0.001	-.664004	-.1782938
UISWE						
dUnemploymentrate						
L1.	.1918074	.6640783	0.29	0.773	-1.109762	1.493377
L2.	.4159696	.6634806	0.63	0.531	-.8844284	1.716368
dLTGBY10Y						
L1.	2.387424	1.481289	1.61	0.107	-.5158486	5.290696
L2.	-1.677605	1.4798	-1.13	0.257	-4.57796	1.22275
Inflation						
L1.	.6154397	.5279056	1.17	0.244	-.4192363	1.650116
L2.	1.191601	.5236575	2.28	0.023	.1652515	2.217951
UISWE						
L1.	.320632	.0786464	4.08	0.000	.166488	.474776
L2.	.0173278	.0749929	0.23	0.817	-.1296556	.1643112
dSEKEUR						
L1.	-132.5986	135.6196	-0.98	0.328	-398.4081	133.2109
L2.	30.02681	136.1649	0.22	0.825	-236.8516	296.9052
UIGER	.7239853	.2362735	3.06	0.002	.2608978	1.187073
_cons	1.842051	.8509889	2.16	0.030	.1741431	3.509958
dSEKEUR						
dUnemploymentrate						
L1.	.0001413	.0003747	0.38	0.706	-.0005932	.0008758
L2.	.0002999	.0003744	0.80	0.423	-.000434	.0010337
dLTGBY10Y						
L1.	.0010928	.0008359	1.31	0.191	-.0005455	.0027311
L2.	.0005144	.0008351	0.62	0.538	-.0011223	.0021511
Inflation						
L1.	-.0002999	.0002979	-1.01	0.314	-.0008838	.000284
L2.	-.0001323	.0002955	-0.45	0.654	-.0007115	.0004468
UISWE						
L1.	-.00007	.0000444	-1.58	0.115	-.000157	.000017
L2.	.0000328	.0000423	0.77	0.439	-.0000502	.0001157
dSEKEUR						
L1.	-.0995006	.0765311	-1.30	0.194	-.2494988	.0504976
L2.	.0332401	.0768388	0.43	0.665	-.1173613	.1838414
UIGER	.0000354	.0001333	0.27	0.791	-.0002259	.0002967
_cons	.0001181	.0004802	0.25	0.806	-.0008231	.0010593

VAR 27. Sweden – VAR model with 2 lags for unemployment rate, inflation, long term government bond 10 years, the country's currency over euro (SEK/EUR) and Uncertainty Index, with exogenous variable the Uncertainty Index of Germany.