Insurance Sector Profitability and the Macroeconomic Environment

Cristina Dorofti[20] and Petr Jakubik[21,22]

Abstract

Profitability is one of the most important determinants of insurers' performance and healthiness. This article empirically investigates the link between the macroeconomic environment and insurers' profitability using cross-country European aggregate data. Our empirical results suggest that low interest rates along with limited economic growth, poor equity market performance and high inflation has a negative impact on insurance profitability. The conducted empirical analysis allows regulators to better understand and roughly quantify those effects which might support discussion with insurers resulting in some mitigating actions. Further research needs to be done to develop top-down stress test methodologies to fully assess the impact of the low yield environment in combination with a sharp increase of risk premiums (the so called double hit scenario), on insurers' profitability as well as solvency positions.

1. Introduction

The insurance sector plays an important role in the financial services industry, contributing to economic growth, efficient resource allocation, reduction of transaction costs, creation of liquidity, facilitation of economics of scale in investment, and spread of financial losses (Haiss and Sümegi, 2008). Although insurers have generally not been seen as being a significant potential source of systemic risk and they are regarded as relatively stable segments of the financial system, the interaction between insurers, financial markets, banks, pension funds and other financial intermediaries has been growing considerably over time.[23] Hence, they can be important for financial stability due to their size, interconnectedness and the economic function of insurance. The aim of this article is to find suitable models that

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[20] Institute of Economic Studies of Charles University in Prague.

[21] European Insurance and Occupational Pensions Authority (EIOPA).

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[23] However, we have seen some cases when distress of insurance companies impacted financial market significantly.

explain the role of macroeconomic development in insurance companies' profitability over economic cycles.

A lot of macroeconomic indicators are usually considered as determinants of profitability. The most frequent drivers mentioned in the literature are GDP growth, inflation and interest rates (Staikouras and Wood, 2004; Macit, 2012; Ameur and Mhiri, 2013, Goddard, Molyneux, and Wilson, 2004). Each of these authors found at least one significant relation between banks profit ratios and a macroeconomic factor. Moreover, Bekeris (2012) studied the correlation between macro factors and corporate profitability of small and medium-sized enterprises of Lithuania. His findings reveal that interbank interest rate changes and unemployment have the strongest impact on profitability. Empirical analysis of Christophersen and Jakubik (2014) revealed a strong link between insurance companies' premiums, on one side, and economic growth and unemployment on the other. Nissim (2010) also argues that the overall economic activity affects insurance carriers' growth, because the demand for their products is affected by the available income. Further, he underlines that the investment income is highly sensitive to interest rates, both on the short and on the long run. D'Arcy and Gorvett (2000) argue that inflation heavily affects the liability side of property-liability insurers' balance sheets. Feyen et al (2011) and Beck & Webb (2003) investigate three types of determinants for insurance growth using penetration ratios as dependent variables to proxy insurance demand. With respect to economic ones they both find a significant positive correlation with GDP and income per capita, but a negative one with inflation. Also the second study finds a positive impact of real interest rates on life savings products demand. However, this is only a segment of life insurance business, so the actual effect of interest rates level is rather ambiguous.

The remainder of the article is structured as follows. Section 2 provides a description of the dataset and some descriptive statistics on the profitability development in EU member states. Section 3 focuses on the econometric methodology which is applied for quantifying the relationship between profitability and the macroeconomic environment. On this basis, section 4 presents the results of the applied econometric models which quantify this relationship. The last section concludes.

2. Data, Stylized Facts and Hypotheses

The dataset for this study is constructed by a combination of firm-level information with country level indicators. The initial dataset contains 30 European countries over eight years' long time series (2005-2012) with an annual frequency. The information

about aggregated figures of enterprises by country is regularly published by EIOPA and information on macro variables was available on Eurostat databases.

In the light of available literature discussed above, we consider the following macroeconomic variables as explanatory variables: real gross domestic product, long term interest rates (Maastricht criterion), inflation, unemployment rates and stock market index. The empirical analysis of complete panel data consisting of 25 countries for non-life insurance and 24 countries for life insurance for the period 2005-2012 is used to estimate the coefficients and the significance of each input factor.[24]

Unlike many other industries, life insurance is a long term business, by means of the products and services it provides. Accordingly, it would only be fitting to look at its performance through a long lens, as current cash flows display a partial picture of value creation and the net outcome of a life insurance policy can be precisely appraised at the termination date of the contract. Unfortunately there is no such universal measure that would provide a complete picture of profitability. Nonetheless, there are the generally accepted, accounting-based performance metrics like return on assets and return on equity. The advantage of using such indicators stands in the fact that they are readily accessible, rely on public data and are calculated in accordance to strict, prudent accounting rules. Also there is a wide range of users from senior management to analysts and investors that resort to such indicators when assessing the financial strength of a company. Thus ROA and ROE are to be treated as dependent variables in this study. Each of the explanatory parameters' influence is discussed in greater detail below.

A key indicator of a healthy economy is reflected through its GDP growth. In general, the insurance industry is considered to be procyclical, so it is expected that the performance of insurance companies will go hand in hand with the overall development of the country (e.g. Haiss and Salmegi, 2008). The subdued economic growth of the last few years has had a direct impact on the disposable income of individuals, which was translated into less money flowing towards the insurance sector among others. Also, if a country's economy does not grow it can be argued that a large or increasing number of insurance carriers would intensify the competition, resulting in reduced profits per unit.

The high unemployment rate undermines insurer's growth prospects (e.g. Beenstock et al., 1988). It makes it more difficult for insurance companies to grow as households

[24] Some countries have to be excluded from the original sample due data incompleteness.

are more reluctant to use the limited income they earn for non-life as well as life insurance or annuities. Moreover, elevated unemployment figures make policyholders more sensitive to prices and less capable to buy new properties and goods which typically need some insurance coverage. This constrains demand for insurance. Hence, it might also negatively affect the overall profitability.

Perhaps the biggest threat insurers are facing is an unsteady and sluggish economic recovery that constrains policymakers to continually cut interest rates in order to support the entire economy. Since the financial crisis in 2007 emerged, the European Central Bank has steadily decreased the base rates to the near zero bound and the long term curve is being dragged further down along. This puts pressure especially on life insurers. On the asset side, the investment income is reduced to the level of the guaranteed rates that were offered on previous policies, making it impossible for the company to issue more similar contracts, narrowing the extent of its sales and dragging down the profitability. On the other side, liabilities inflate as future payments are discounted at lower rates encumbering the burden of meeting the contracting obligations towards the policyholder. Moreover, insurers suffer problems not only from the high guaranteed returns that are on their balance sheets, but also because of the duration mismatch between their long-term liabilities and their shorter term investments. Considering the long tail of the life business the impact of the interest rates is expected to be significant, negative and persistent in time. In relation to the non-life business the overall structure of the investment portfolio is similar to those of life entities. Nevertheless the liabilities of property-casualty insurers differ significantly both in terms of duration and content. There are three major balance sheet liability items that could be subject to interest rates changes: the loss reserve, the loss adjustment expense reserve, and the unearned premium reserve (D'Arcy and Gorvett, 2000). The estimates of the first two items are usually based on historical patterns which are affected by historical economic variables like inflation and interest rates. Therefore, the value of loss and loss adjustment expense reserves calculated now depends on how those factors behaved in prior years. Although the nominal values of claims that are established already and are supposed to be covered by these reserves should not change, its economic value does, as the future cash flow will be discounted by a different rate. Another important aspect of the non-life liabilities is that some losses are fixed, but there are also intangible damages, the valuation of which takes time and money, as it puts the entire loss reserve under the pressure of future inflationary changes. Ergo, the response of non-life profitability to interest rates is inclined to be delayed.

Although market rates are used as a tool to cope with macroeconomic threats their effect is not immediate, so it is worth examining the influence of inflation on insurance business, as it erodes both households and companies' financial resources. This can be achieved either by employing these rates as a new explanatory variable or by integrating them with the long term interest rates, thus determining the real interest rates using the Fisher equation. Currently there are concerns about deflation given the low inflation environment, which combined with low interest rates can severely affect investment returns, asset valuations and future insurance liabilities. For non-life insurers, inflation alters mostly long-tailed business by increasing the value of future claims. For life insurers, both inflation and deflation are key risks that interfere with the demand for insurance products and with the benefits they entail.

Last but not least, the stock market index performance is directly linked to the asset side of the insurance companies' balance sheets as equities are always an important part of the total investments. An analysis of trends in life insurance earnings' based on accounting data determined that profitability suffers when financial market conditions weaken (Sigma Re No.1, 2012). Volatility of indices' performance amplifies the risk of earning the promised return for holders of both traditional and unit linked contracts. Consequently, a direct positive relation between the stock market index and the company's profitability ratio is anticipated. More than that, the effect is more likely to be prompt rather than delayed.

The following table provide the list of all variables and their transformations employed in our empirical analysis.

Table 1: Variables description and transformations:

ROA_l / ROA_nl	**Annual ROA of life and non-life enterprises.**	**Stationary**	**Source**
ROE_l/ ROE_nl	Annual ROE of life and non-life enterprises.	Stationary	EIOPA
IR	Annual interest rates - Maastricht criterion bond yields are long-term interest rates, used as a convergence criterion for the European Monetary Union.	First- differenced	Eurostat
U	Annual unemployment rate	First- differenced	Eurostat

GDP	Real GDP year on year growth rate	Stationary	Eurostat
Inflation	HICP - inflation rate - annual average rate of change.	Stationary	ECB
SMI	National stock market indices (share prices).	Log first-differenced	Eurostat

3. Methodology

The panel data approach is used in this section to empirically investigate the relationship between insurance profitability and the macroeconomic environment. Considering the scarcity of insurance companies' data, using a panel approach instead of several short time series seems to be the best way of estimating and testing the mentioned link. The upside of a panel data regression is that it allows for the observation of differences across subjects and within them over time, while controlling for the effects of unobserved or missing variables.

Although, a static model provides us with insight of the individual behaviour in a repetitive scenario, it does not consider the possibility that both the dependent and the explanatory variables can have a contemporaneous impact on each other, which is a preferable feature particularly when using low frequency data. Hence, a dynamic panel approach is more suitable in our situation. It enables to adjust the model for deviations from long run equilibrium as well as to investigate the effect of lagged explanatory variables and deal with omitted variables' bias. In this case, the ordinary least square (OLS), fixed effects (FE), random effects (RE) and general least squares (GLS) estimates are biased and inconsistent, due to endogeneity. Using Generalized Method of Moments as proposed by Arellano and Bond (1991) would lead to consistent and unbiased estimators. More specifically, we address these issues following Blundell and Bond's (1998) methodology, also known as system GMM estimator. This estimator is designed for datasets with many panels, but few periods which is exactly the case of the hereby available dataset. Compared to a differenced GMM estimator, a system GMM assumes that there are weak correlations between the current and lagged levels of all variables. Blundell and Bond showed that these biases could be reduced by incorporating more informative moment conditions that are valid under quite reasonable stationarity restrictions on the initial conditions process. Basically, this method uses lagged first-differences as instruments for equations in

levels, besides the usual lagged levels of the series that are only weakly correlated with subsequent first differences. Because we cannot assume strict exogeneity, we can declare the independent variables as being predetermined, if we believe that the error term has some feedback on the subsequent realizations of it. In other words using past realizations that are not correlated with current errors, as instruments for our suspected endogeneous variables is more plausible than looking for new variables.

All in all, this method assumes that there is no autocorrelation in the idiosyncratic errors and requires the initial condition that the panel-level effects are uncorrelated with the first difference of the first observation of the dependent variable. The Arellano and Bond test for autocorrelation has a null hypothesis of no autocorrelation and is applied to the differenced residuals. However, we are more interested in the test for autoregressive model of order 2 - AR(2), because it detects autocorrelation in terms of levels. So if AR(1) yields a p-value smaller than 0.05 it does not mean that the model is misspecified, whereas this cannot hold for AR(2). The validity of the instrumental variables is confirmed using the postestimation Sargan test of over-identifying restrictions. Overall, this technique is the most appropriate one in generating consistent estimations of the parameters.

Consequently we use dynamic panel estimation to investigate selected determinants of life insurance profitability in 24 European countries and those of non-life in 25 countries, during the period 2005-2012.

We consider the following general model.

$$Y_{it} = \alpha_{0i} + \alpha_2 X_{it} + \varepsilon_{it} \qquad (1)$$

Where Y_{it} is ROA, respectively ROE of country *i* in year *t*, : is the vector of macroeconomic variables that includes real GDP growth, unemployment rates, the stock market index, long-term interest rates, inflation rates and alternatively real interest rates calculated by the Fisher equation. We are interested in the consistent estimation of the parameters $_6$ when the number of panels is large N, and the time periods are fixed T. We consider that the vector of the explanatory variables is potentially correlated with the error term. For that reason we construct a dynamic representation of that model as follows:

$$; \; L_4 E_5 ;_{?5} E_6 : E_7 :_{?5} E \qquad (2)$$

The first differences are taken for unemployment rates, natural logarithm of stock market indices, long-term interest rates and real interest rates in order to ensure their stationarity (see Table 4 in Annex for summary statistics). Considering the short time

series and the applied transformations, only one lags are allowed for all variables. Blundell and Bond (1998) also argue that further lagged differences are redundant if all available moment conditions in first differences are exploited.

4. Empirical results

Return on equity as a profitability metric is more suitable for non-life business than for life, because this unit is mostly affected by claims where the amount and timing is often under great uncertainty. Hence, there is the necessity of holding more capital. However, both indicators are commonly used by investors, therefore we have modelled both measures by macroeconomic factors. Hence, the preliminary tests indicated a high degree of correlation between the unemployment rate and GDP. We decided to keep only GDP among potential regressors as the better proxy from the overall macroeconomic environment.

4.1 Non-life insurance models

Profitability for non-life insurance business seems to be clearly linked to the macroeconomic environment. The following table 2 provides the obtained empirical results.

Table 2: Model of non-life insurance profitability

	Model 1 robust	**Model 2 robust**	**Model 3 robust**	**Model 4 robust**	**Model 5 robust**	**Model 6 GMM**
Variable	ROE_nl	ROE_nl	ROA_nl	ROA_nl	ROA_nl	ROA_nl
ROE/ ROA_nlt-1	0.072 (0.121)	0.0513 (0.131)	0.096 (0.080)	0.090 (0.087)	0.150* (0.080)	0.134** (0.068)
GDPt	-0.108 (0.297)		0.037 (0.079)		0.101 (0.091)	
GDPt-1	0.831** (0.372)	0.476** (0.243)	0.218** (0.090)	0.207** (0.088)	0.222** (0.101)	0.207*** (0.055)
SMIt	7.564** (3.235)	6.080*** (2.300)	2.188***	2.593*** 0.987***	2.516*** (0.811)	3.132*** (0.686)

			0.734			
SMIt-1	-8.829 (5.360)		-2.507* (1.306)	-2.419** (1.210)	-2.843** (1.271)	-2.483*** (0.765)
IRt	0.392 (0.414)	0.815** (0.328)	0.247** (0.098)	0.207** (0.088)		
IRt-1	0.672 (0.456)	0.948** (0.418)	0.242** (0.133)	0.204** (0.092)		
Inflationt	-0.225 (0.276)	-0.820** (0.382)	-0.081 (0.092)			
Inflationt-1	-0.199 (0.529)		-0.300 (0.154)			
RIRt					0.210*** (0.075)	
RIRt-1					0.020 (0.088)	0.112** (0.052)
Constant	7.278*** (1.854)	9.110*** (1.893)	1.864*** (0.439)	1.635*** (0.417)	1.437*** (0.471)	1.611*** (0.248)
Number of obs.	139	139	139	139	140	140

Model 1 provides estimates for profitability of non-life insurance measured by ROE considering one lag for all regressors. In the next stage we eliminated the first lags in case that there were not significant and re-estimated the original model. Finally, we re-estimated models only for the regressors with significant coefficients at least at 10% confidence level (model 2). We further tried to replace nominal interest rates and inflation by real interest rates. However, real interest rates turned to be insignificant. Hence, we report only model 2 as our preferred model for modelling ROE in non-life insurance. Furthermore, model 3 provides estimates for profitability of non-life insurance measured by ROA considering one lag for all regressors. In the next step we

eliminated the insignificant first lags and later all insignificant coefficients to obtain model 4. Finally, we replaced nominal interest rates and inflation by real interest rates and continued the same process using two alternative methods to obtain standard errors of the coefficients (model 5, 6).

From the outcomes we can see that one year lagged GDP has a positive impact on ROE as well as ROA (all models), confirming that this industry is slower at adjusting price lists and business plans to economic changes. On the other hand, this sector has direct and close connection to the overall macro environment. So, whenever an improvement is forecasted, it induces an encouraging market sentiment and contributes to non-life companies' performance. Furthermore, we find that contemporaneous stock market development has a highly significant positive impact on companies' performance. On the contrary, one lagged positive development of a stock market has rather negative or mitigating effect on non-life insurance profitability reflecting the fact that a high performance in the past might rather imply lower performance in the future. However, the overall effect of equity market development is positive (model 2, 4, 6). All in all, it indicates that financial markets' movements should be monitored as they are closely linked to non-life firms either directly through return provided by its investments in equity securities or indirectly due to net flows (earned premiums and claim payouts).

As insurers typically invest in high quality bonds they suffer from the low interest rates environment. This is confirmed by the positive and significant coefficients for nominal interest rate (models 2, 3 and 4). Basically, only the investment income that is in excess of the interest rates used for pricing goes to shareholders. However, falling yields translate only slowly into declining profits, such that the majority of income stems from previous years' investments. Because short term policies are backed by 1 year bonds, low interest rates impact profitability also with some lag. Hence, one might argue that only a cumulative effect captures the whole negative impact on ROE. It is only after the underwriting result is declared deficient that the investment income is expected to ameliorate profitability levels. And when even that is not enough, it does not only cause losses but forces shareholders to contribute with additional capital in order to support the business. Although non-life policies are usually short lived there are lines of business (casualty) where the uncertainty of the insured event is high and it might take several years between the premium is cashed in and the claim is paid out. For this situation non-life insurers need, to the best of their ability, match their liabilities with suitable assets. A potential mismatch and an unfavourable interest rate environment could result in lower profits. Another

important aspect to be acknowledged is that non-life insurers that carry short term activities are more preoccupied by the combined ratio rather than the investment income.

The combined ratio measures the performance of non-life carriers in their daily operations. It is more a matter of minimizing costs and losses, and maximizing earned premiums. When the latter is reluctant to happen, as in practice, non-life insurers proved to be slower at reacting to declining interest rates, vastly due to competitive pressures.

Apart from interest rate risk, non-life insurers are greatly exposed to inflationary pressures that reduce both companies' and households' financial resources. High and protracted inflation period increases the value of claims, especially of those emerging from long tailed business, as reserves might prove insufficient in the long run. Its adverse effect is suggested for the ROE model by regression 2 suggesting that inflation is a real threat that affects the profitability by compromising the demand for new business, rising level of firms' expenses and diminishing the return from certain assets.

Unlike the first four models regressions 5 and 6 deliver estimates of real interest rates' (RIR) effects on ROA rather than the previous separate measurement for long term rates and inflation. Coefficients are significantly positive as we would expect, since this variable accounts for the actual return a company gets on its investments. We can see that this effect is lagged by one year (model 6).

4.2 Life Business Models

The link between profitability for life insurance business and macroeconomic indicators is less clear from our empirical results compared to non-life business, especially when using ROA as a proxy for the dependent variable. It might be driven by the fact that the investigated link might be more difficult to capture in the long term by relatively short time series. The following table 3 provides the obtained empirical results.

Table 3: Model of life insurance profitability

	Model 1 GMM	**Model 2 GMM**	**Model 3 GMM**	**Model 4 robust**	**Model 5 robust**	**Model 6 GMM**
Variable	ROE_l	ROE_l	ROE_l	ROA_l	ROA_nl	ROA_nl
ROE/ ROA_lt-1	0.402*** (0.075)	0.397*** (0.069)	-0.339*** (0.059)	-0.187 (0.196)	-0.092 (0.188)	-0.122 (0.177)
GDPt	1.486* (0.810)			0.052 (0.083)		-0.052 (0.093)
GDPt-1	-0.707 (0.544)			0.075 (0.054)		0.101* (0.057)
SMIt	10.884 (8.644)	20.058*** (5.228)	21.677** (4.312)	3.754* (2.244)		4.003* (2.286)
SMIt-1	-0.312 (7.322)			-2.308*** (0.673)	-1.599** (0.619)	-3.261*** (1.141)
IRt	3.785*** (1.122)	3.078*** (1.069)		-0.136 (0.116)	-0.282* (0.147)	
IRt-1	1.844* (1.016)	2.015** (0.896)		-0.227* (0.135)	-0.227** (0.111)	
Inflationt	-1.754* (0.957)	-1.381** (0.654)		-0.105 (0.137)		
Inflationt-1	2.544** (1.005)			0.485** (0.216)	0.2365** (0.113)	
RIRt			2.124***			0.034 (0.089)

			(0.420)			
RIRt-1						-0.150 (0.124)
Constant	8.680** (3.791)	16.076*** (2.644)	11.890*** (1.556)	-0.088 (0.505)	0.090 (0.314)	0.985** (0.438)
Number of obs.	139	139	162	139	140	139

Unlike non-life units, life insurance companies hold a smaller portion of capital (equity), since the claims and payments are more predictable, Hence their reserves do not face a great magnitude of volatility. Still, ROE does provide a useful and necessary insight of how effectively a company's management handles investors' money. Additionally, ROA reveals a clearer picture of the firm's financial health, now that its assets mainly consist of investments the return on which is responsible for a smooth operating activity.

The results of models using ROE as a dependent variable are in line with the expectations corresponding with the results for non-life insurance (models 1, 2, 3). Our estimates are robust to different specifications showing the negative impact of the low interest rates on insurance profitability. On the other hand, the impact of stock market performance is by far the largest and strongest in all models using ROE as dependent variable. Life insurance companies relate to this variable by means of its investments in equities and contracted unit-linked policies that became more popular since the market rates started declining.

The results of the models for ROA (models 4, 5, 6) are a bit mixed not allowing a conclusion. However, it is quite clear that there are probably other factors not captured in our models which might drive the results. Further empirical analysis would be needed to make some clear conclusion.

Lastly, all final regressions have been tested for over-identification restrictions and for serial correlation in the first-differenced errors. A p-value higher than 0.05 for the Sargan test suggests that employed instruments are valid, and for the AR(2) test – that there is no correlation in the errors of higher order than one, therefore the models are not misspecified.

Conclusion

The current low yield environment and prevailing macroeconomic imbalances in Europe impose extremely challenging conditions for the profitability of insurance firms. Due to the current European quantitative easing policy, the low yield environment is very unlikely to be changed in the short to medium run. Hence, it is extremely important for regulators to be able to analyse and assess the potential impact of the persistent low yield environment. This thematic article contributes to this work by providing econometrical models linking macroeconomic environment including interest rates to insurance firms' profitability.

This thematic article employs panel data of the European Union countries to investigate the impact of interest rates along with economic growth, inflation and equity market developments on insurance firms' profitability. Our results clearly revealed the important role of interest rates on profitability of both life and non-life insurance business. Low nominal as well as real interest rates negatively affect insurance profitability via lower investment income. Similarly, high inflation, low economic growth and poor equity market performance has a negative impact on the performance of insures. These links are empirically revealed for both life and non-life insurers when using the rentability on equity as a proxy for profitability robust to different model specifications. The results for rentability on assets are a bit mixed and don't clearly confirm similar conclusions for life insurance business. It might be related to the fact that life business is much more long-term and some of the mentioned effects might be revealed when using longer time series. Despite, some further research needs to be done, this study clearly points out the sensitivities of insurers to the macroeconomic environment.

Although the impact of low interest rates and other macroeconomic variables might be quite complicated depending on the applied business models and further microeconomic variables, the estimated models can provide a first insight into the assessment of the low yield environment on insurers' profitability. It can serve as a rough estimate of the potential impact of some adverse macroeconomic scenarios on insurance sectors. However, for a more precise estimate, more elaborated models using companies' data would need to be applied. The comprehensive stress testing framework would need to be applied to assess the overall effect of different adverse market scenarios.

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Annex

Table 4: Summary statistics of transform variables

	Mean	Std. Dev.	Median	10%-q	90%-q	Max	Min
ROE non-life	8.545	9.002	9.246	-1.143	17.644	30.430	-32.562
ROA non-life	2.264	2.652	2.458	-0.300	5.563	9.181	-11.102
ROE life	8.342	18.955	8.023	-4.690	21.831	186.705	-83.747
ROA life	0.908	2.878	0.633	-0.407	2.970	-15.842	26.421
GDP	1.850	4.045	1.595	-3.700	6.300	-17.700	11.00
SMI	-0.046	0.304	-0.020	-0.394	0.275	0.751	-1.373
IR	0.148	1.546	0.090	-0.960	1.140	-8.430	8.390
Inflation	2.906	2.129	2.500	0.900	5.500	15.300	-1.700
RIR	0.148	2.835	-0.187	-2.311	2.810	16.464	-10.040