

## A Central EU Tax is not Superior to the Current System of National Contributions \_4

Vilen Lipatov · Alfons Weichenrieder

## “All Insurers are Currently Searching for Yield” \_8

Helmut Gründl

## Blockchain and Fintechs as Possible Game Changers for Payments \_14

Carl-Ludwig Thiele

Interview:

## “All Insurers are Currently Searching for Yield”



Helmut Gründl  
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### Which research questions are you currently focusing on?

At my chair, we focus on insurance and insurance regulation topics, currently especially with respect to life insurance. One ongoing project is on an insurance annuity product named tontine, which dates back to the Middle Ages. The idea behind is that a group of people pays into a pool and, thereafter, gets annuities which increase when group members die. We analyze whether a modernized form can be a valuable supplement for old age provision in an aging society. In another project we develop a systemic risk measure that takes into account the contagion period between a triggering event and a subsequent systemic event in order to determine factors that drive possible systemic risk in the insurance industry.

### Together with SAFE researchers Martin Götz and Irina Gemmo, you are also working on a paper that deals with the topic of insurance surrender, i.e. the premature termination of life insurance policies. What is your objective?

In a first step, we aim to identify individual and household characteristics that influence

liquidity demand in certain life phases because the termination of life insurance policies is usually associated with an urgent need for liquidity. We base our analysis on data of the Socio-Economic Panel which consists of long-term survey data from 11,000 German households. In contrast to other studies, which usually work with aggregated figures, we look at the individual household, which enables us to take the age of policy holders at the time of surrender into account (see Figure 1). For example, we find that the probability of a divorce to be a driver for a surrender decision increases with the age of the couple, which can be explained by the fact that the costs of divorces rise with age. With respect to the birth of a child, the surrender probability is especially high with young couples and those that have recently had their first child. Of course, we also control for other parameters such as unemployment, income and the acquisition of real estate that are well known to influence surrender decisions. By assigning certain surrender triggers to age groups, we are also able to derive more general predictions about how demographic change will affect life insurance surrender rates.

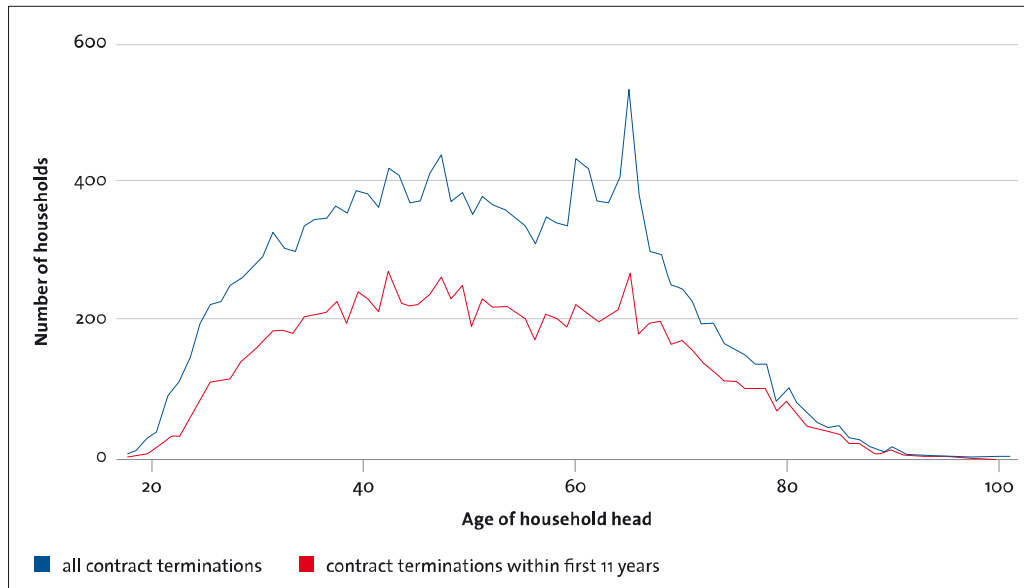
### These results will certainly be of interest for insurance companies.

Absolutely. Therefore, in a second step, we will insert these findings into a multi-period shareholder value model of a life insurance company with different investment choices. We aim to find out which impact surrender decisions have on the company's investment behavior. A large surrender rate might, for example, keep the insurer away from investing in long-term assets that would be important to secure considerable returns, especially in times of low interest rates.

### Can large surrender rates affect the stability of an insurance company? One could imagine that the companies set their prices according to this risk.

On the profit-loss side there is indeed no real stability risk, given the observable surrender discounts. However, problems can arise on the liquidity side. In theory, what we know as “bank run” is also possible in the insurance sector. In particular against the background of the low and negative interest rate environment, it is not inconceivable that some life insurers get

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**Figure 1:** Aggregate surrender rates by age of household head. The blue line displays all contract termininations, including those at contract maturity, the red line displays only contract termininations within the first 11 years of policy holding.

into financial distress and, thus, customers lose trust in a single company or even in the industry as a whole. Another scenario would be rising interest rates after a period of very low rates. This might induce a large number of customers who hold policies with very low guaranteed investment returns to surrender because they would get better conditions elsewhere. As a mass behavior this could evoke a liquidity problem for life insurers – and not only for them. If insurers had to sell assets in a

“fire sale” situation, this could cause a downward spiral for asset prices and thus affect financial markets as a whole and even the economy beyond.

#### **Can insurance companies design their contracts in a way that would help to lower surrender rates?**

A general idea to overcome the problems that arise with either very low or rising interest rates would be to generally decrease the guaranteed

return rates. This may sound paradoxical but it would make all parties better off. The insurers could easily fulfil their commitments so that solvency risk would go down; the insurers would need less equity capital to back the guarantees. Thus, equity capital is set free to back riskier and, in the long run, more profitable investments. As a consequence, policyholders would benefit from higher surplus participation. The drawback however is that you cannot swap existing contracts. The change can only come into effect with new contracts. This implies that, for a very long time, companies have to continue to suffer from the sins of the past ...

#### **... which are especially painful given the current situation of negative interest rates.**

True. All insurers are currently searching for yield which they mainly try to find in long-term assets, for instance infrastructure investments. This brings us back to the question of an optimal investment strategy for insurers: how many long-term – but illiquid – assets can they hold to get the desired returns while, at the same time, disposing of sufficient liquidity to satisfy policy surrenders? With our project we aim to address this problem by giving more concrete information with respect to the long-term development of surrender-rates and the ensuing costs and benefits for the parties involved.

#### **What is the regulator’s approach to this problem?**

Insurance regulation faces a tradeoff. In terms of consumer protection, we observe the tendency to allow customers to surrender their policies whenever they like and grant them considerable surrender values. While this is certainly important when you think of these unforeseeable situations in life when cash is urgently needed, people often neglect that, by protecting customers who surrender, you harm those who stick to their contracts for old age provision. They forgo the illiquidity premiums that could be collected if insurers were able to follow a long-term investment strategy.

#### **Is a life insurance policy still an investment vehicle that people should consider?**

For sure. There is no other possibility to hedge longevity risk – the risk of out-living your money – as well as mortality risk when you think of term life insurances. I suppose that, in the long run, life insurers will concentrate on these two core parts of their business.

#### **References**

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# Demographic Change: Asset Returns, Wages and Distributional Effects



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In the European Union, the real return in financial markets – the difference between the interest rate based on EONIA (Euro Overnight Index Average) and the inflation rate – has been in negative territory since the outbreak of the crisis. Experts warn that we will be facing a “secular stagnation” over the next decades (Summers, 2014; Teulings and Baldwin, 2014) which means that growth rates will remain low and low interest rates will become the new normal. This paper discusses to what extent the demographic change could contribute to such a stagnation by analyzing the long-term developments in growth, asset returns, wages and inequality between and within generations.

The reasons for the current development are partly known: Low interest rates are a result of the expansive monetary policy, together with high uncertainty in the markets and hardly any attractive investment opportunities. This situation raises a couple of questions: How will

the long term development look once the effects of the crisis diminish? Is there a long term trend? Is this trend already reflected in today’s low returns?

The key factors that determine the demographic development are: life expectancy, birth rates and net migration. In Germany, the average life expectancy today is 81 years and will be 86 years on average in 2050 – growing more than one year per decade. The total fertility rate in Germany has been on a low level (around 1.4) since 1980. The long-run average net migration to Germany is around 200,000 people per year. In 2014, around 500,000 people moved to Germany, and in 2015, 1.1 million refugees came to this country (however, there is high uncertainty about this number due to possible double registration of people).

## Refugee scenario versus baseline scenario

In order to estimate the effects of net migration, two different scenarios are simulated. In the counterfactual scenario, it is assumed that net migration has been on a long-term average of 200,000 people per year from 2013 onwards

(“baseline scenario”). The second scenario factors in the actual migration flows to Germany in 2013 and 2014. Furthermore, it is assumed that 1.1 million refugees and 200,000 migrants came to Germany in 2015, and that net migration will be gradually decreasing to 200,000 people per year until 2020 (“refugee scenario”). Overall, in the refugee scenario 4.15 million more migrants will be coming to Germany than in the baseline scenario.

As a result, the population size will decrease less until 2060 in the refugee scenario compared to the baseline scenario (see Figure 1.1). On the other hand, the ratio between the 20 to 64 year olds and the total population (working age population ratio) will equally decline in both scenarios until 2040. After 2040, it will slightly increase in the refugee scenario because of the young age structure of the migrants while it will stay on a low level in the baseline scenario (see Figure 1.2). The ratio between the retired population and the working age population (old age dependency ratio) will also be slightly lower in the refugee scenario than in the baseline scenario until 2060 (see Figure 1.3). Hence,

a higher migration rate could help to alleviate the problems caused by the demographic change if the migrants can be successfully integrated into the labor market.

### Macroeconomic effects

The demographic change entails two macroeconomic effects. Firstly, the demand for investments will be decreasing because an economy with a larger proportion of old people has a smaller labor force and produces fewer goods. This will reduce the growth rate. According to forecasts, the trend growth rate of per capita

income will drop from currently 1.5 percent per year to 1–0.7 percent until 2030 (e.g. Börsch-Supan, Härtl, Ludwig, 2014). Secondly, there will be an oversupply of savings due to the increasing life expectancy and the decline in pension income relative to wage income in many industrialized countries. Accordingly, the high capital supply and the relatively low demand for capital will lead to decreasing returns on investment. Furthermore, the demand for safe assets will increase in an aging economy because older people have a higher preference for investments in safe assets such

as German government bonds. This will result in even lower returns on these assets.

At the same time, the shrinking labor force will lead to higher gross wages. This will also increase net wages if the rise is not absorbed by a simultaneous dramatic increase in social insurance contributions or taxes. The combination of low returns on investments and higher real wages has a redistributive effect and could reduce income inequality. Therefore, higher wages and low interest rates could lead to net welfare gains for future generations.

Overall, the macroeconomic effects of higher migration to Germany, as assumed in the refugee scenario, are relatively small when compared to possible effects of various labor market and pension reforms which, for example, induce a later retirement or a higher employment rate of women (Börsch-Supan, Härtl, Ludwig, 2014).

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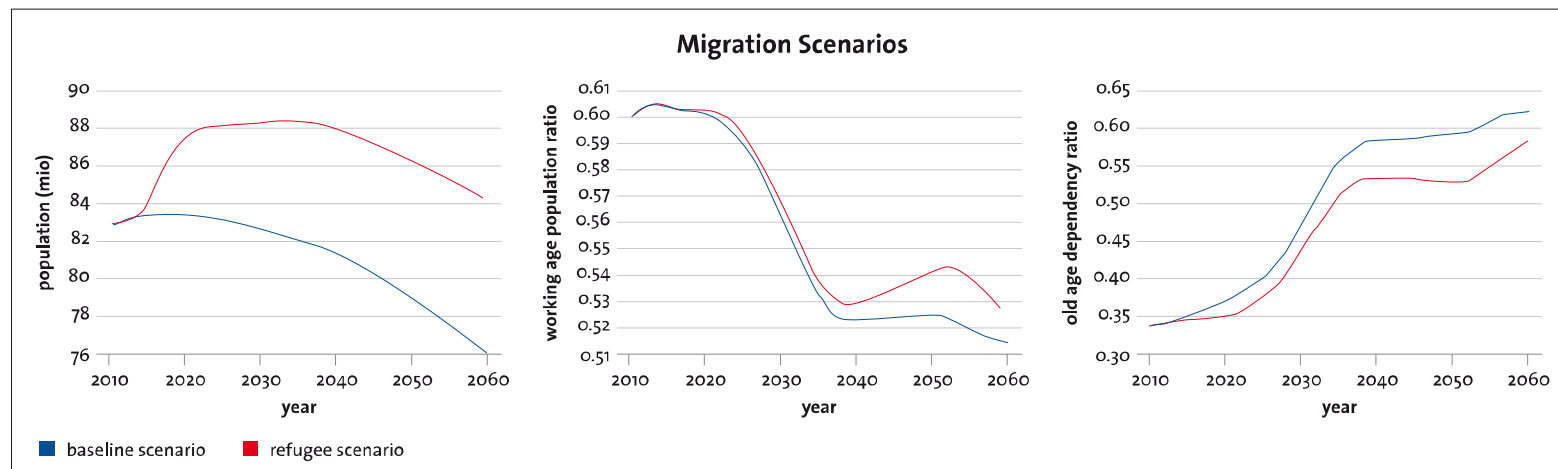
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*The full paper is available as SAFE Policy White Paper No. 38 at:*

[http://safe-frankfurt.de/demographic\\_change](http://safe-frankfurt.de/demographic_change)



**Figure 1:** Simulations of population size, working age population ratio (20 to 64 year olds to total population) and old age dependency ratio (retired population to working age population) in a baseline scenario as well as a scenario with increased migration