

THE THEORETICAL-METHODOLOGICAL BASIS OF THE MODEL OF MACRO-ECONOMIC FORECAST, OF LABOUR MARKET AND POPULATION

Georgeta MODIGA, Lecturer PHD.
“DANUBIUS” University of Galati

Abstract

During the last decade of the 20th century, modeling the macro-economic evolutions and implicitly modeling the evolutions in the social insurance systems, including and especially the pension systems, gained a very strong “anchor”, which allowed and allows at present the realization of multiple evolution scenarios, with a pretty big probability of achievement. This anchor, or better said this anchor-variable is the “inflation rate”, usually calculated as the consumption price index, respectively as its percentage variation from one period of time to another.

The last decades of the 20th century and the first five years of the 21st century were characterized by an extremely accelerated rhythm of innovation, as well as by an acceleration and a multiplication of capital flows, which practically led to the phenomenon known as “economy globalization” or simply as “globalization”, as it extended outside the economical sphere towards all the spheres and sectors of the social life.

This process has been accelerated by the “transition from plan to market” of the economies from Central and Eastern Europe, as a consequence of the fall of the totalitarian communist system, which dominated this part of Europe half a century, and of the end of the era known as “the Cold War”. The economic globalization movement, together with the transition from plan to market as well as with China’s entering into the international economic circuits, grew enormously the investment possibilities and thus the possibilities of placing the capital accumulated in the western countries during the autarchy period which characterized the Cold War era.

Key words: labor market, pension system, globalization

JEL Classification: J01, J26

INTRODUCTION

During the last decade of the 20th century, modeling the macro-economic evolutions and implicitly modeling the evolutions in the social insurance systems, including and especially the pension systems, gained a very strong “anchor”, which allowed and allows at present the realization of multiple evolution scenarios, with a pretty big probability of achievement. This anchor, or better said this anchor-variable is the “inflation rate”, usually calculated as the consumption price index, respectively as its percentage variation from one period of time to another.

This anchoring in a key macro-economic variable is nothing but the expression of the substantiation of the macro-economic models and of those aiming towards modeling the evolution of the variables connected to the social insurance systems, on what we could call “a function of

predictability”. The price, given its quality of “fundamental economic information” or information about attributes as it is named in the theory specific to the information economy, plays a fundamental role as market signal, guiding the demand and the offer flows. From this point of view the prices stability, or better said the prices evolution stability or predictability, the non-accelerated character of their evolution, expressed through the non-accelerated character of the inflation rate, generally give a predictability character to the economic evolutions, thus encouraging the movement of the capital flows, the medium and long term investment and especially the innovation, as the progress engine. Or the last decades of the 20th century and the first five years of the 21st century were characterized by an extremely accelerated rhythm of innovation, as well as by an acceleration and a multiplication of capital flows, which practically led to the

phenomenon known as “economy globalization” or simply as “globalization”, as it extended outside the economical sphere towards all the spheres and sectors of the social life.

This process has been accelerated by the “transition from plan to market” of the economies from Central and Eastern Europe, as a consequence of the fall of the totalitarian communist system, which dominated this part of Europe half a century, and of the end of the era known as “the Cold War”. The economic globalization movement, together with the transition from plan to market as well as with China’s entering into the international economic circuits, grew enormously the investment possibilities and thus the possibilities of placing the capital accumulated in the western countries during the autarchy period which characterized the Cold War era. The western capital placement in countries with an abundant production factor offer, the labor (work force) created the premises of an unprecedented growth of the goods and services offer, in conditions of high productivity, granted by the modern technologies, but also at very low prices, given the low costs of using the labor factor in countries where the offer for this production factor is, as we said, extremely abundant (both China and the countries in Central and Eastern Europe as well as countries from the former Soviet Union), which resulted in very low wages compared to those in the western countries. This growth of the output volume given the conditions where the global demand rose should lead to a general price growth, and thus to a rise of the inflation rate level, on “classic” conditions, so on conditions of relative “autarchy”. But if this very big demand, in continuous expansion of goods and services more and more varied, is fueled by an ultra-abundant offer, due to the technologies allowing the mass production of a very large number of goods and services, at lower and lower prices, given on the one hand the fierce competition between the producers situated now in a market with global opening, and on the other hand the possibilities of producing these goods and services in economies where labour factor costs represent only a fraction of the work force costs in the western countries, all this makes prices of the main goods and services categories practically register a decreasing dynamics. The produce that was considered a few years ago as the attribute of the elite, became a consumption good accessible to practically a huge mass of consumers. Because of this fact, not even the price rise of basic raw materials (oil, natural gas, iron ore) in the last years

could stop the global economic growth or lead to an “overheating” of the main world economies, or in other words, lead to a growth of the inflation pressures, on the contrary, certain economies even confronted the “deflation” phenomenon.

The solidity of the inflationary anchor was consolidated also by the fact that the Central Banks gained, starting with the 1980s, independence from the Governments of the respective countries, which allowed them to pursue their own policies, through specific instruments, respectively through controlling the circulating monetary mass, as well as through controlling the reference interest rates. This led to the creation of a general perception of predictability of the global business and economic environment.

All these reasons linked to the macro-economic evolutions at global level justify the use of the inflation rate as anchor variable of the macro-economic modeling processes.

At the same time, the economic predictability, from the price variation point of view, justifies the use of the inflation rate as anchor variable also in the modeling of the processes and evolutions in the sphere of the social insurance system and especially in the sphere of the pension systems, no matter their philosophy. This is because the predictability gives both the companies, the house keepings, and the Governments and the Pension Funds the possibility to plan both the economising processes and especially the long term investment processes. The price variation predictability as determinant for the economic predictability, offers the possibility of diversifying the pension insurance, from the PAYG-type classic system to the systems based on individual economising or accumulation. This happens because both the contributions and the benefits can be better predicted on long term, general intervals. Both the beneficiaries, and the collective placement organisms (the pension funds) can project their financial assets portfolios so as to maximize the benefits and to minimize the risks on much longer time intervals. At the same time, the globalization gives the collective placement organisms the possibility to compensate their risk “exposure” (leverage) through a “hedging” as broad as possible and even to obtain supplementary profits from trading the “leverage” and the “hedging” portfolios as independent assets. This abundance of options regarding the possibilities of capital placement, and especially the existence of an abundance of insurance and “risk placement” options contributes to the draw of new capitals in

the market circuit, and thus to the increase of the abundance of the capital production factor offer, another element itself contributing to the global maintenance of a non-inflationist climate, which constitutes an important premise for diversifying placements in order to obtain in the end pension insurances.

At the same time though, the abundance of the capital factor also leads to a significant decrease of the earnings obtained through capital placements. So, it is necessary to have a portfolio management as active as possible, and especially, on short term, a leverage as broad as possible, covered by a hedging as diverse as possible and with market depth (hedging to hedging practically) in order to ensure truly positive benefits from capital placement. This mechanism works also with the pension funds, which slowly have to diversify their portfolios as much as possible and to practice an aggressive “leverage”, even a risky one, in order to be able to offer their clients, at the maturity of their placements, the pension insurances indeed able to ensure them an old age free of poverty.

All this means that practically, the price stability creates both risks and opportunities. If stability gives the possibility to make long term investment and economising decisions, it also means abundance of capitals and placement possibilities, the competition between different actors on the capital markets and the reduction of earnings from capital placements. In other words, the pension funds and the individuals, the house keepings and the companies will have to enlarge their market exposure degree, by diversifying their placements, at the same time with the sophistication of the hedging or the risk insurance modalities that come with the enlargement, the expansion of the leverage. Practically, the price stability makes the pensions that can be obtained through a single long term capital placement (respectively through the participation to the public pension system or to a single private pension system) lose touch with the wage income, or in other words, to reduce continuously the replacement rate calculated according to the wage income, respectively to the medium wage, as happens with the conventional reporting. This happens because the wages grow not only by taking into account the general price rise (the inflation rate) but also according to a fraction of the productivity growth which inherently must reflect also on the labour factor; while usually pensions have almost no connection to the productivity

growth, being practically correlated with the inflation rate, thus with the price and the tariff rise. Since the latter have smaller and smaller variations (the effect of predictability in the conditions of a globalized economy), pensions grow from one period to another in smaller and smaller proportions, which makes them lose touch with the wage earnings and not being able to ensure the individual, after retiring from activity, income and implicitly a standard of living comparable to that before retiring. The connection between the inflation rate evolution and the pension indexation mechanism, or the rise of the real and nominal value of these so that it can ensure the pensioner a decent living, makes it appear, in conditions of low inflation, the absolute necessity to diversify the placements in order to obtain pension insurances, or in other words to obtain pensions, in order to keep thus the connection between the wage earning and implicitly the standard of living before retiring and the standard of living after retiring, thus preventing the individuals and the house keepings from becoming poor after retiring from the active living no matter how late it might take place, mainly because of the increase of the pensioning age as a consequence of the demographic pressure (the aging of the population as a consequence of the rise of the life expectancy at birth and so of the rise in the weight of the persons of age in the total population, enhanced by the natality decrease).

On the other hand, given the capital factor abundance, the benefits that different placements can produce become smaller and smaller. To maximize them, it is necessary to create scale economies and purpose economies, as far as the investment and the economising processes are concerned. So there appears the necessity for each individual and each housekeeping to diversify his own leverage, in the conditions of an adequate hedging of course, in order to be able to thus ensure the continuity of his living standard after retiring. In other words, in conditions of price stability – reduced inflation- enhanced by the abundance of capitals and placement possibilities, so in the conditions of lower and lower interest rates, another effect itself of a non-inflationist economic climate, of some reduced unitary earnings from capital placements, the key to maintain some consistent replacement rates able to maintain the living standard of individuals and house keepings after retiring, at comparable levels to those before retiring, is both the diversifying (the “purpose” increase) of the capital placements, and especially the growth of the capital placements volume (the

“scale” increase). This only points out the necessity for individuals to economise more and to invest as much as possible from this economising into assets which can be converted into pensions at the anticipated moment of retiring from activity. Hence the necessity of the alternative pension systems, including those of occupational, sectorial, or branch type or those according to the anglo-saxon model, the enterprise/company/corporation type.

Starting from these reasons, it is obvious, we believe, that the whole modeling exercise we propose and which will have as purpose to explain the necessity of the occupational pension funds and in general of the pension systems alternative to the PAYG in Romania, it uses as an exogen, explanatory variable the *inflation rate*, as it is expressed, even in an imperfect manner, by the annual percentage variations (current December to last December) of the consumption prices index (IPC/CPI%).

2. The impact of the integration in the European Union on the evolutions of the macro-economic variables with influence on the pension funds profitability

The main macro-economic variables influencing the evolution of the occupational pension funds profitability, must be forecast in their short term evolution, respectively for the next ten years, and must be designed on long term, respectively until 2030-2040, so that we can include the population evolution and the macro-economic evolutions that influence the profitability of the pension funds placements, placements which usually have a long maturing term (if the occupational pension funds were created for example this year, the first payments wouldn't take place sooner than 15 years from now, in other words, the investments made by these funds must have in view mainly a long term profitability and speculative earnings as in the case of the ordinary investment funds.

In consequence, we will proceed in this subchapter to the forecast of 16 macro-economic variables whose later evolutions will influence the evolutions of the occupational pension funds profitability as well as the population evolutions and, from this point of view, of the basis of insured persons.

The variables whose evolution will be forecast and analyzed in correlation with the evolution implications on the occupational pension

funds profitability cover the following problematical areas:

- the general economic development and the development of the commercial exchanges;
- the labour market evolutions (wages, occupancy, unemployment);
- the evolutions in the living standards (poverty, income inequality, RIP/inhabitant)

In consequence, the list of variables included in the forecast exercise is the following:

- the nominal RIP in billion USD;
- the RIP annual percentage variation (RIP%), also known as economic growth;
- the annual percentage variation of the consumption prices index (the inflation rate-CPI%);
- the liberalization index (LibIdx) until reaching the cumulative value of 10;
- the Stability index (StbIdx);
- the wages share in the total of the available income (%);
- the work productivity expressed as RIP/occupied person;
- the occupied population (occupancy), expressed in millions of occupied persons;
- the unemployment rate (BIM);
- the raw medium wage in USD;
- the medium pension in USD;
- the share of the occupied population in agriculture (the agricultural occupancy) in the totality of the occupied population (%);
- the openness to trade (OT, calculated as the percentage ratio between the sum of exports and imports in mld USD and the nominal RIP expressed also in billion USD);
- the poverty rate, calculated, as share of the whole country's population, of the people under the 50% threshold of the medium income;
- the income inequality (the Gini Index).

As an anchor explanatory variable for the forecast until 2014 as well as for the ulterior projections until 2029, we took the inflation rate or the annual percentage variation of the consumption prices index. Its values were established in a normative manner, taking into account the parameter's importance, which had been justified in the previous chapter. So the forecasts made taking into account this explanatory variable started

from the objective of a annual medium inflation rate that had to be around 2,7-2,9% for the year 2013-14, a year considered by us as the most probable and feasible for Romania's entering the Euro zone and its implicit adhesion to the Stability Pact rules, assuming of course they remain the same, at least in general terms, until the respective time. Then, until 2029, a year when the first business cycle manifests itself, the inflation rate has been kept as anchor variable, taking into account the fact that the stability in prices is a demand of the Stability Pact on the one hand, and on the other hand taking into account the fact that a market economy in the incipient stage (an emergent market) as Romania will be considered until that time, including from the point of view of the capital flows and markets, maintaining the price stability as a guarantee of the evolutions predictability in the business environment and especially as a precondition of a continuous and accelerated economic growth, will be essential for drawing and stimulating investors, both the direct ones and the portfolios ones. After this date, the anchor explanatory variable changes, the role of the inflation rate being taken over by the economic growth, which is used in this capacity for the projections until the year 2040.

We must also mention that the evolutions of the inflation rate in its capacity of anchor variable for the forecast until 2014 are taken into consideration only after reaching the critical transition mass, so starting with 1999, considering that between 1997-1998 the "critical mass" was reached and overcome, on the liberalization index scale (moreover the series for this variable stop in 2004, when value 10 is reached – "the end of the transition"). In this approach we start from the considerations made in the previous chapter, according to which the evolutions before reaching the critical mass, specific almost exclusively to the transition from plan to market, are practically impossible to repeat and in consequence can't be taken into consideration for a forecast and especially for the anchor explanatory variable (it is hard to believe the inflation rate will reach again values of 155%). The evolutions of the inflation rate, in its capacity of anchor explanatory variable, manage to forecast pretty accurately the evolutions of all the macro variables enumerated in the list in this paragraph, thus actually underlining the importance of the stability in prices, as a guarantee of the economic and implicitly the social progress, in the conditions in which, of course, these prices are established through competition mechanisms

and in which they are strengthened through a monetary prudentially of the Central Bank. The only two variables whose evolutions can be forecast based on another explanatory variable, which has actually been achieved, are the occupancy and the unemployment rate, which are sensitive to the economic growth variations and less sensitive to the inflation rate variations. Yet, taking into account that the economic growth itself depends on the inflation rate, it is obvious that the latter keeps its role as anchor variable also for the two essential labour market variables. Moreover, taking into account the rigidity of these two latter variables, their predictable evolutions for the year 2014 are, as it was expected, unspectacular.

Next, we will present the evolutions forecast for each variable in part, for the year 2014 and projections until 2040 for a part of them, respectively for:

- the annual RIP percentage variation;
- the inflation rate;
- the wages share in the totality of the house keepings' available income;
- the openness to trade;
- the RIP/inhabitant to PPC in USD.

Romania's nominal RIP will see a relatively marking growth in the next period, as a consequence of both its integration in the economic space of the European Union, which will offer the Romanian economy a broader and more free commodity market, and because of the rise in the stability and predictability degree of the economic environment, manifested first through the rise in the prices stability. So we can forecast that from a current RIP value expressed in 56 billion US dollars at the end of 2007, so in other words at the end of the year Romania becomes an effective member of the European Union, it will represent the equivalent of 85 billion US dollars. Starting from this value and taking into consideration a continuous economic growth trend, similar to the one registered by a part of the 10 states which entered the Union on May 1st 2004, but which had annual medium values a little higher, considering the massive productivity reserves Romania has by releasing work force from agriculture, and if the prices stability is maintained (it is anyway a precondition for the integration in the Euro Zone), we can appreciate that Romanian economy's dimension expressed by this indicator will reach in 2014 approximately 130 billion US dollars.

Reaching a value higher than 120 billion US dollars that year or even earlier is absolutely

necessary, in order to avoid the effective “isolation” of Romania’s economy in the European economy and to thus become a “really attractive” market both for direct investments and for portfolio investments.

The inflation rate, anchor variable of this development period, must have over the next period of time continuously smaller values, so that from a forecast rate of approximately 9% for the end of 2004, of approximately 7 % for the end of 2005, at the end of 2007 it should be of approximately 4%. Next, reducing the inflation rate will have to be done in small steps, so that on the one hand it should reach an annual medium rate situated between 2 and 3, which will allow Romania’s integration in the Euro zone towards the years 2013-2014 with its corollary, respectively with respecting the Stability Pact rules, at the same time with maintaining high economic growth rhythms to allow the catching up of the accumulated advances because of the “stop and go”-type transition.

So the inflation rate will have to descend one percentage point in approximately 5 years, respectively starting with 2008 until 2012, when the value of 3% must be reached so that the broad money supply is sufficient to maintain an economic growth rhythm of around 8-9% each year. In other words, maintaining the decreasing trend of the inflation rate so that the price stability and the predictability of the national economic evolutions are strengthened, as a precondition for the development of the domestic investment/economising tendency and the draw of exterior investments, the broad money supply will have to be maintained at a level sufficient enough to allow the accelerated economic development. In other words, a “certain warmth in the economy’s canals” must be kept which will have to be gradually reduced so that the economic growth isn’t affected. In this context both the reference interest rate and the prudential regulations concerning the credits will play an extremely important role in

maintaining the slightly decreasing trend of the inflation rate after 2007-2008, at the same time with maintaining a broad money supply at a sufficient level to sustain an economic growth, whose average value will have to be 4-5 percentage points higher than the medium value of the 2000-2004 period. This conditioning is imposed first by the economy’s structure, where there will continue to prevail branches with low and medium added value, that don’t achieve a sufficiently high productivity, so that they can give up the inflationist expectancy, respectively the constant growth expectancy, even if gradual and predictable, of the prices on the market, as a stimulant of the production development. In other words, there will have to be maintained a certain inflationist pressure in the economy, so that the branches ensuring the economic growth engine aren’t discouraged and in order to maintain the economic growth rhythm. A classical type economy as Romania’s reacts well at such stimuli, a too sudden reduction of the inflation rate, respectively from 4% to 2%, could have the effect of strangling the broad money supply and, in consequence, of strangling the economic growth, just restarted, or of continuing it at a rhythm where it wouldn’t be possible for the Romanian economy to reach a dimension allowing it to get out of the “European secondary economy” status and thus attract investments. Moreover, a too sudden reduction of the inflationist pressure, respectively the much too rapid reach of the 2% threshold, without a transition period of a few years, although it would allow it to enter the Euro zone a little faster, would involve a reduction of the economic growth rhythm, on the background of entering the national currency and of adopting too fast the European currency, if the economic structure as a whole weren’t very much different from the one existing today. In the labour market plan, it would give way to an effective occupancy standstill and to an unemployment rise especially, as a consequence of a too accelerated release of work force from agriculture.

Bibliography

Athanasiu Al., *Dreptul securitatii sociale*, Ed, Actami, 1995

Gnirararu, C.C., *Eficienta pietii muncii, cai si metode de ameliorare a eficientei pietei muncii*, Teza doctorat, Bucuresti, 2003

World Bank, *Transition, the first ten years, Lessons and experiences from Europe and Central Asia*

Tofan, C., *Forme de asigurari sociale in Romania*, Casa de editura si presa Sansa SRL, Bucuresti, 1994

Kay, S., *Unexpected Privatizations. Politics and social security reforms in the southern cone*, *Comparative politics*, n.31/1999