

RESEARCH ARTICLE

# Pension Regulation between Global Challenges and National Peculiarities

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## Abstract

The present study intends to examine two of the main implications of the pension system reform meaning: the impact on the capital market and financing the costs of transitions, in a context in which the interference of different segments of the financial market is unanimously accepted. The common coordinates of pension systems (the public system peculiarities, the market size and its performances) represent as many variability elements, to which the boundary permeability, specific to the globalization phenomenon, adds new dimensions. The general conclusion, that the mutual empowering of pension funds market and capital market is established by their level of development, should not surprise us. These markets are, themselves, in a competition climate and it is known that an authentic and benefic competition to the business environment implies (relatively) equal partners. More, the pension system reform presumes a series of significant changes that bear costs, whose financing cannot be realized only with administrative and fiscal measures but implies new financial interferences. Thus, book debts financing (governmental bonds issuing) seems to be the most attractive politically speaking, as the real total costs glide toward the future tax payers, the participant generations, mainly, to the pension system reform by contributing to financing its introduction.

**Keywords:** *Assets allocation, Budgetary financing, Capital market, Costs of transition, Internal indebtedness, Pension reform, Portfolio distribution, Regulation, Taxation methods.*

## Introduction

Although from an educational point of view, we are speaking of different segments of the financial market (monetary, credit, capital, insurances, pension funds, etc.) or, by some authors, even different markets, their interference is beyond any doubt.

The investments of the insurance system and the pension fund represent significant resources for banks and capital market, the banks are playing the guardian/depositary role for the investment and private pension funds, the public securities are found in banks' and other financial institutions' portfolios, there are even common systems of distributing financial products on the bancassurance model and the examples could go on.

Even if, up to a point, these interferences are practically inevitable, their concrete size depend on the decisions made by the market operators, decisions that are based on opportunity and efficiency criteria. Decisions that also take into account the financial risks which manifest themselves on those market segments. We notice that the matrix itself (the manifesting framework) of the risks is approximate enough, the funds transfer between the segments being attached a proper transfer of associated risks.

The European integration process and other components of the globalization phenomenon highlights the interferences size and amplexness of the financial area, keeping though a series of national or, depending on the case, regional peculiarities that must be regarded both by the governments and the companies' management in the configuration of their main strategies and policies.

Of course the interferences issue of the financial area exceeds by much the space of expression of a scientific communication, from which reason we will next resume to emphasize the pension regulation impact on the capital market and the problems related to transition cost financing.

## Regulation Impact on the Capital Market

The influence of the pension system reform on the capital market continues to generate numerous debates over the matter, both in the academic environment as well as in the financial institutions who are interested by the debated phenomenon's amplexness and consequences.

Not long ago, the prevailing idea was that the impact of the population's aging phenomenon and the pension reform would be extremely powerful in the continental Europe states, based on the following three considerations: the expanse and the difficulties of the PAYG public pension systems in those countries, the relatively modest size of the capital markets and their somewhat reduced performances (compared to the American market, for example) [3].

The arguments for such an approach start from the idea that the population's aging process will impose on the younger generations to use private savings as a method of gaining some reasonable pensions, on a much larger scale. Thus, we will assist to a development of the capital markets, both regarding the volume and the number of the institutional investors, whose role will become thus more important than that of the intermediaries. More, these changes are meant to provide beneficial second effects, concerning productivity improvement and unit growth.

The saving process is estimated to be more pronounced between the years 2015 and 2030, after which the savings rates will become more reduced. The pension reform contributes to the growth of the saving level or, in worst case scenario, it cushions its decrease, although it is known that about one third of the pension savings comes from other savings schemes.

Obviously that, in such circumstances, the assets and bonds market will benefit from a higher share of these economies, which will improve significantly the level of stock exchange capitalization and will stimulate the corporatist bonds proliferation.

In addition, more and more experts say that there is a significant connection between the size of the capital market and the labor productivity level and even as a developed capital market where the financial investments and the pension funds can step in actively, it can contribute to corporative governance consolidation.

In other words, the negative effects of the aging population phenomenon on the capital markets, materialized especially in the process of savings diminishing, used as a source of income after retirement, can be lightened not only by the direct implications of the pension system reform (the growth of the aggregated level of savings, the liquidity growth on the capital markets, the growth in demand of titles with a fixed income value and the increase of the actives' performance rating on a long term), but also through its secondary effects.

Starting with the experience gained until the present time, we can appreciate that the impact of introducing mandatory private pension funds in the capital markets manifests itself in a few main directions, such as:

- The effect on the aggregated level of savings and assets allocation.

- Portfolio distribution.
- The "elaborate shell game".
- Regulation problems [10].

The consumption's life cycle pattern shows that, in the absence of factors like credit, the insertion of compulsory saving would compensate the households' tendencies of using loans to finance the current consumption, with the proper diminishing of the available income.

It is true that the points of view regarding the effect of boosting saving through the introduction of the pension pillar compulsory funded are still various. While some authors think there are no clear econometric proofs according to which introducing the private pension funds would stimulate saving [6], others appreciate that saving for retirement and the financial wealth are in a linked process of substitution [1].

More, there are opinions according to which we are assisting even to a so called "sensitizing" effect, the introduction of compulsory saving enhancing the degree of understanding the need to save for retirement, stimulating thus further the process of saving [12].

It is a certainty that the introduction of the mandatory pension funds affects the savings allocation between different types of actives, even though the economy's aggregated level remains unchanged. On capital markets, a larger share of savings will be introduced, a fact that will lead to an increase in demand for titles, in general and, especially, for the titles with a fixed performance rating.

**Table 1: Asset allocation by category (2010), as percentage of total**

|               | Stocks    | Bonds     | Cash     | Other     |
|---------------|-----------|-----------|----------|-----------|
| Australia     | 49        | 14        | 12       | 25        |
| Canada        | 41        | 36        | 2        | 21        |
| Japan         | 37        | 56        | 3        | 4         |
| Netherlands   | 33        | 50        | 1        | 16        |
| Switzerland   | 28        | 35        | 8        | 29        |
| UK            | 55        | 35        | 3        | 7         |
| United States | 49        | 27        | *        | 24        |
| <b>World</b>  | <b>47</b> | <b>33</b> | <b>1</b> | <b>19</b> |

Source: [www.towerswatson.com/assets/pdf/3761/Global-Pensions-Asset-Study-2011.pdf](http://www.towerswatson.com/assets/pdf/3761/Global-Pensions-Asset-Study-2011.pdf)

Regarding the portfolio distribution, this may present a difficult issue, especially for the countries in transition, due to the reduced level of development of the capital markets and the restrictions imposed on the process of investment.

There are even opinions according to which introducing the compulsory private pension system might be undesired in countries where the capital markets are under a certain level of development. Only above this level we can talk about what Vitas calls "symbiotic funding" [13] seen as a co-development of the

mandatory pension funds and local capital markets, in which the pension funds contribute to the development of institutional investors.

A solution for portfolio distribution may be exposure extension on foreign currencies denominated actives, as it happened during the 2000 – 2010 years in the Baltic countries, especially in Estonia and Lithuania, where the majority of the held actives were denominated in a foreign currency, mainly euro. This may be a positive strategy for risk diversification, but not necessarily for the development of the intern capital market.

There are still heated debates concerning imposing some restrictions on the actives' diversification on international investments. By limiting the outgoes of the pension fund's actives, the accumulating of funds has a greater potential of contribution to the development of local capital markets. On the other hand, such a development of the capital market might lead to prejudicing contributors' interests, being forced to support the supplementary risks generated by an insufficient portfolio distribution.

Prolonging the BERD financings in local currency may offer, also, a pension fund portfolio diversification opportunity. As long as the BERD allotted funds are channeled toward financing the Small and Medium-Sized Enterprises (SMEs), the benefic effect is represented by eventual deficits compensation, deficits that may appear in the development funds, as a consequence of introducing compulsory contributions for employers to the compulsory private pension system.

There is however a counter situation, where the majority of the actives are invested in government security on the local market, in which case, the differences between the PAYG pension systems and the fund based ones are practically insignificant. Actually, the implicit obligations of a PAYG system are replaced by the explicit obligations of the state bonds. In Russia's case, for example, their share exceeds 80%.

From a certain point of view such a situation can be actually favorable, taking into account that for any government it is difficult enough to renounce its explicit obligations. A study led by the World Bank even suggests transforming the implicit liabilities of the PAYG systems in state bonds indexed according to the GDP, as a method of improving the sustainability of the PAYG pension systems which have accumulated large deficits [11]. If the bonds could be afterward put on the market, this may facilitate, furthermore, the passing to the multi-pillar system, based on private pension funds.

The experts warn that such procedures can transform themselves into a more elaborated „shell game”, where introducing the compulsory system of retirement savings is not anything else but a disguised PAYG system [8].

Regarding the regulation issues, they concern on one side the risk-profit binomial optimization to the level of the system's beneficiaries, and on the other side the implications of some implicit options in case that the participants' individual options were not exercised.

If the regulation system must protect the insured against a high market risk exposure, it is also true that it must also allow the participants to enjoy high enough performance ratings that cannot be obtained in the context by imposing severe constraints on the fund's administrators. Thus, the restrictions that lead to sub-diversification lead to the deterioration of the managed funds' profile of risk.

Theoretically, optimal regulation presumes maximizing the probability for portfolios to be optimally allotted (along the border). The experts consider, though, that it is less likely that regulation authorities may achieve this satisfactorily, compared to fund administrators in the absence of such restraints regarding the allotment.

Excessive pension fund regulation may offer, also, perverse stimuli for the fund managers, meaning excessive concentrations of investments in state bonds. The phenomenon is visible in Poland where about two thirds of the actives were kept in state titles from the first days of the private funds system, apparently due to the penalties imposed by the supervisory authority for under-performance compared to the other funds.

Of course, the entire set of pension fund characteristics, such as implicit options, even though theoretically it shouldn't affect the economic decisions, must be regarded while regulating the interactions between pension funds and participants, because they may have significant effects on the actives allocation. It is important to be admitted that projecting a pension system may have unexpected reverberations over the saving individual behavior, a reason for which all the experts insist on process transparency.

Specific to pension funds related to the capital market is that the investments are made on a long term, which allows the development of primary markets of stocks and shares, it accelerates the financial innovation process and contributes to financial market stability in its whole. In the science world there are voices that warn that all the pension system's reform virtues related to the capital market may prove to be simple theoretical bench marks, with no effective lead to financial market consolidation.

The starting point is that different countries need different financial development, have different climates in the financial market, which may have a direct impact on the pension funds' role and performances. The differences contain regulations concerning pension funds investments, market efficiency, transparency, legal framework, market activities, as well as macroeconomic and financial conditions.

The investment behavior and the pension fund's actives allocation that belong to the two types of market are also different, which suggests that countries with a reduced financial development must make efforts to create conditions so that the pension funds have a positive impact over the capital market development.

In general, it is noticed that the pension fund's impact on the development of the capital market varies significantly according to the financial development level of the analyzed countries [9]. If we analyze the dynamic of the capital markets on a short term period of time, we will notice that countries with well developed financial systems expect to enjoy from significant benefits caused by pension funds growth, while for countries with a reduced level of financial development the existence of such benefits is less visible.

Some authors believe that the pension actives from many countries are used to finance public deficits or investment projects with political connections, but inefficient, without an impact on the country's economical development [7].

Others maintain that in order for the pension funds to have a positive impact on the capital market development, it must have an adequate size, fund regulation must allow a variety of investments and an optimal investment must be pursued.

Also noticed is that the investment options in the developing countries are, usually, riskier, reason for which pension funds investments in such countries are not encouraged, although they could stimulate the respective financial markets.

For the country's global sample it was assumed that pension fund actives have a positive impact both over the equity market's dimension and liquidity, and regarding the dimension of the corporatist bonds market.

By separating the analyzed countries in two groups, according to their level of financial development, it was noticed that the above mentioned effects are significant only for those countries with a high level of financial development and that the pension funds do not have a relevant impact on the capital market development for the countries with a more modest level of financial development.

The main indicators used in the analysis are:

- Stock market capitalization over GDP (MC/GDP).
- Stock market value traded over GDP (VT/GDP).
- Private bond market capitalization over GDP (PBMC/GDP).
- Pension fund financial assets as a proportion of GDP (PFFA/GDP).
- Real stock return (RSR).
- Real interest rate (RIR).
- Financial index (FI).

The data show that according to the GDP, financially developed countries register, in general, a higher level of equity market capitalization, of volumes of transaction and private bonds market capitalization, but also pension funds actives.

## Costs of Transition to a New Pension System and Financing them

The costs of transition to a multi pillar pension system are, at first sight, exclusively the responsibility of the transition generation, who has to finance both the present pensions of payment that belong to the pay-as-you-go system, as well as contributions to the individual funds for their future retirement revenues. As the model of "the sacrifice generation" is improper to democratic companies, the deficit generated by turning to private administration (to Pillar II) of part of the contribution imposes on insuring proper sources for coverage that do not alter the principle of solidarity between generations. From this reason, we will consider both the costs of transition and the future budgetary implications, the cost of transition summing the present financial deficit and the supplementary cost for paying the interest to the future public debt.

It is true that, the transfer of part of the current contribution to the capital accumulated funds generates a financial deficit for the public system, a deficit that must be covered. It's not less true, though, that – in the same time – the pressure on the public system is also reduced, represented by its payment obligations to the future beneficiaries of social security. Under these circumstances, the participation of the transition generation to the process' total cost may diminish or, in worst case scenario, we could talk about a financing effort flattening in time, with obvious effects on its sustainability.

The transfer of part of the contribution to the Pillar II may be considered as a transparent method of highlighting the pension system hidden debts. In advance payment for future pensions is made in deposit money and not in cash, in the form of individual accounts. Future effective payments will be accordingly reduced, as a result to supporting the costs of the public debt.

The ratio between the cost of covering the financial debt generated by the transition to the multi pillar system and the up-to-date net value of reducing the future debt of the public system depends on a large number of factors, out of which we mention [4]:

- The public debt service initial interest -  $d_{dp}$  (prior to the reform).
- The interest rate's initial elasticity according to the public debt level -  $e_{dp}$ .
- The public system's return on investment (the PAYG type) -  $r_{sp}$ .
- The share of pension fund actives to be invested in government bonds -  $p_{og}$ .

The ideal case and the less likely one to happen, in the same time, is that where:

$$d_{dp} = r_{sp} \quad \text{și} \quad e_{dp} = 1.$$

In such (hypothetic) situation, even though the share of pension fund actives to be invested in governmental bonds is sub-unitary, the cost of transition is null:

$$ct = 0.$$

Usually, the public debt interest exceeds the public system's return on investment, and the interest rate's elasticity according to the public debt level is supra-unitary:

$$d_{dp} > r_{sp} \quad \text{și} \quad e_{dp} > 1.$$

On a long term, pension system obligations (total debt -  $dt$ ) mean both continuing the payment for public system pensions (able to be absorbed by the public debt) -  $dp$ , as well as the sums of money accumulated in individual accounts (implicit debt) -  $di$ :

$$dt = dp + di.$$

As presented above, in the process of transition we assist to an increase in debt regarding public system pensions -  $\Delta dp$  and a decrease of the social security system's implicit debt -  $\Delta di$ .

Thus,

$$dt = dp + \Delta dp + di - \Delta di.$$

The costs of the two categories of obligations are:  $d_{dp}$  and, respectively,  $r_{sp}$ . If the first can be considered a fixed cost, the second is influenced by the options concerning the transition's exact conditions and the changes of the retirement age.

Regarding the pension fund portfolio, we are facing with two options [5]:

- Pension funds with just governmental bonds in their portfolio ( $p_{og} = 1$ ).
- Pension funds that can invest part of the contributions in other categories of financial instruments (equities, corporatist bonds etc.;  $0 < p_{og} \leq 1$ ).

In case of pension fund portfolios containing only governmental bonds ( $p_{og} = 1$ ), the supplementary offer of such financial instruments cover integrally the demand, and the transition cost -  $ct$  depends exclusively the abobe mentioned factors:

$$ct = \Delta dp (d_{dp} - r_{sp}).$$

If the legislation allows pension funds to also invest in other financial instruments categories, the difference between the offer and demand of governmental bonds (the latter depending on  $p_{og}$ ) and the interest rate elasticity in relation to this difference put a mark on the cost of transition:

$$ct = p_{og} \Delta dp (d_{dp} - r_{sp}) + (1 - p_{og}) \Delta dp (e_{dp} d_{dp} - r_{sp}).$$

Obviously, estimating the costs of transition to a multi-pillar pension system is slightly more complex. A strict model, in this matter, cannot skip at least the elements concerning:

- The attitude toward the new alternatives (the number of solicitors for the pension funds).
- The contributions dimension transferred to Pillar II.
- The pension funds accounting structure (liabilities/actives).

Thus, the potential number of participants to the pension funds depends on the legal regulations concerning: the categories of contributors compulsory included in the new system, the ones for which the participation is voluntary and the exclusions explicit. The pension funds transfer dimension is, in its turn, closely related to the level of taxation, to the deductibility regime and, not lastly, to the system's potential of collecting the afferent contributions.

Financing the costs of transition is not only a resource issue, even if their long term dimension represents a significant restriction of pension systems reform, under the aspect of its sustainability. The all interested factors support: social partners (syndicates-patronages), pension beneficiaries, political factors - it is essential in the ongoing process of transition, under the aspect of dimension, speed and, especially, of its efficiency. Especially since, the interests of each of the above mentioned categories are far from being convergent [2]:

- The new generations of contributors are, regularly, interested in participating to a pension system based on contributions individuality and their capitalization, even though the "pressure" put by the aging persons in the family cannot be neglected.
- Previous generations and those that are to be retired await, from the public system, gracing their obligations to provide steady benefits, based on the contributions made in time.
- Syndicates always oppose resistance to increasing the level of contributions and diminishing the benefits from public funds.
- The patronages are, in turn, refractory to any increase in taxation.
- The political factors are also subjected to multiple constraints: ensuring social cohesion, realizing a budgetary equilibrium, the social security imperative system reform.

Rarely do we assist from the beginning to the coverage of all segments of population with a multi-pillar pension insurance system. Changes regarding the level rates that are to be paid for the pay-as-you-go system and the contributions to the accumulation funds are made gradually.

We are practically facing a diminishing in value of the incomes for the public funds, part of the contributions further financing the private systems, under circumstances in which the phenomenon of aging population accentuates the implied deficit. For ensuring the transition process sustainability, theoretically we are facing two categories of options, not necessarily disjointed such as:

- Consume reducing.
- Income growth.

Consume diminishing due to pension value decrease presumes that retired population should receive less than it normally would before the reform, which can be translated by reducing the average rates of replacement. We are facing an unsustainable policy on a long term - which already is among the discriminated categories – and would generate, without a doubt, political pressures for the increase of the pension amount.

So the only reasonable ways to reduce consume remain raising the retirement age and lowering the governmental spending for other activities. It should be demonstrated that raising the retirement age is meant to cover, in the first place, the effects of the population aging phenomenon, reason for which its contribution to solving the problem of resources deficit will be reduced enough.

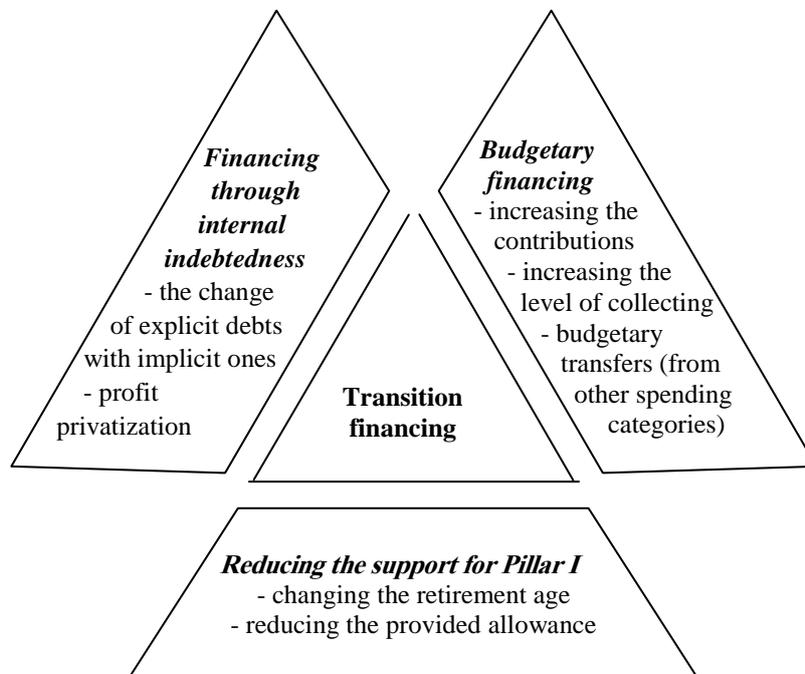
Pension reform is a long time process, whose dimension exceeds, allot, the amplitude of an electoral cycle. Political benefits being postponed, it's presumed that government's options to reduce the spending in other sectors and use the released funds for pension reform financing will manifest itself in a small manner. The advantage of funding the transition with current budgetary incomes is that there is no direct cost of such a financing, but only an opportunity cost (the involved incomes cannot be reallocated).

System's income growth can be made on a larger number of coordinates, each with its advantages, disadvantages and its limits such as:

- Financing through taxation methods.
- Financing through internal indebtedness.
- Using supplementary incomes from the public budget.
- Raising the degree of collecting the contributions.

Thus, financing by raising the incomes through taxation, through contributions or regular taxes, is advisable in countries with a rate of contribution relatively small with a stable labor market. The cost of introducing the second pillar is transferred to the taxation participants and it presumes a reduction of the present daily consumption. Such a procedure might be considered incorrect for the present generation, which has already a difficult task to support.

In order to keep the taxation rates at an acceptable level, it is recommended the use of economies able to be realized to the existent budgetary spending, the increase of the contributions collecting degree and the use of other categories of income, such as-for example - the ones coming from privatization. In this case, we are not dealing with a direct cost for financing the transition, only the opportunity cost, the spent sums of money unable to be used for other purposes.



**Fig. 1: The complex financing of the costs of transition to a new pension system**

Book debts financing (the issue of governmental bonds) is, of course, much more attractive politically speaking, the level of contributions and taxes for the “transition generation” is unaffected, the process’ costs consequently being transferred to the next

generations. Practically, the real total costs are gliding toward future tax payers, participant generations, mainly, to pension system regulation contributing to its introduction funding. Of course that, such a method of financing the pension system does not reduce the

regular consume, but it influences the dimension of the explicit debt, as supplementary costs with interests are to be paid.

Financing the transition through internal indebtedness represents, in fact, the transformation of implicit debt into an explicit one and – in a favorable case – where the costs of the two public debts are close to one another, the costs of regulation financing are insignificant.

In any case, we must not omit that the apparition of Pillar II, financed by fund accumulation implies future reducing the obligations of pension system for the next generations.

Without the claim of a systematic approach to the process of transition to the multipillar pension systems, we'll mention – as an example – Estonia's experience which, in terms of a relatively stable labor market, the level of contributions was sufficiently low, has opted for a funding sustained, mainly, by the taxation growth dedicated to social securities.

States like Poland and Hungary preferred to introduce measures meant to reduce the present and future spending to the pay-as-you-go system (Pillar I), using the resulting surpluses to finance the contribution costs for Pillar II. Specific to Poland is that based on special laws, the budgetary subventions used to finance the deficit in the pay-as-you-go system was covered with the incomes coming from privatization.

In Romania's case, the financing options for the pension system reform were reduced enough, taking into account that, on the one hand, the pension's actual level is low enough and, in the same time, the working population's contributions are at a level above which they cannot be operated – without significant social consequences – ample supplementing, with a taxation considered already burdening.

## Conclusions

If in the publishing domain and even in the political environment a statement like “pension system

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regulation contributes to the development of the capital market” is acceptable, the rigor specific to the academic area is not only compelling us to check the trustworthiness of that affirmation but also to highlight the circumstances in which such an assertion can be valid.

We'll notice thus that the impact of introducing compulsory private pension funds on capital markets manifests in a few main directions such as: the aggregated level of saving and assets allocation, for portfolio distribution, closely related to public securities and on the regulation issues.

More, the virtues of the pension system regulation related to the capital market may prove to be simple theoretical benchmarks, without the process to actually contribute to the financial markets consolidation, if the market's development level is feeble and the regulations are too restrictive.

Thus, countries with well-developed financial systems can expect to enjoy from significant benefits due to pension funds increase, while for countries with a more reduced level of financial development the existence of such benefits is less visible.

Transition to multi-pillar pension systems bears important costs and financing these costs amplifies the range of interferences from the financial market, if we were to consider even only the state bonds.

Besides, the experts recommend on this matter a mix of policies, where the administrative and fiscal measures must be doubled by the use of mechanisms specific to the financial markets, so the burden of supporting the transition costs can be distributed equitably.

## Notes

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