Research Article

Pension Funds´ Challenges after the 2008 Global Crisis: Key Problems for Future Generations

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Abstract: Pension funds have been playing and will play an outstanding role in the global saving and investment process. However, in spite of the pension funds' power to centralize huge amount of "retirement savings from workers", workers do not seem to have a strong defense against the contemporary worldwide trends. By analyzing the impacts of the global scenario on the retirement savings of workers and the future flows of workers' income, this paper aims to favor a reflection on the pension funds´ challenges after the 2008 global crisis within OECD countries. Unlike those discussions that consider the short-term market performance, our perspective privileges a long-run perspective. The cutting questions proposed are: How might low interest rates and austerity programs affect the evolution of the workers´ retirement savings? How might the evolution of benefits and contributions affect the future of pension funds? Why do pension funds´ allocation strategies give support to short-term business practices within the private equity industry? The paper addresses that it is crucial to rethink the regulation of pension funds in terms of asset allocation and job creation.

Keywords: Pension funds, financial global crisis, quantitative easing, austerity programs, pension reforms, private equity funds.

1. INTRODUCTION:

Throughout the last forty years, the huge growth of deregulated finance has been associated to great transformations in the pattern of asset management, economic growth, job creation and income distribution. Most governments in Western countries supported the long-run process of financial expansion that turned out to be characterized as the "financialization" of the capitalist economy (Foster, 2009). Looking back, as Bello (2006) warned, in the 1990s, the Clinton administration embraced globalization as an American strategy. First, this strategy aimed to accelerate the integration of production and markets by transnational corporations. Secondly, it aimed to create a multilateral system of global governance centered on the World Trade Organization, the International Monetary Fund and the World Bank. As a result, global liquidity - that has been stimulated by the evolution of the American monetary policy since the early 1990s - favored the expansion of private capital flows and deepened the interconnections between national financial systems (Chesnais 1998). Accordingly Stockhammer (2009), the "finance dominated" accumulation regime has decisively shaped a pattern of accumulation where low economic growth rates and a high degree of financial fragility has been reinforced by the expansion of global banks and institutional investors. In this setting, the process of financial deregulation was overwhelmed by new investment and consumption patterns while higher levels of government spending became constrained by the new trends in global governance. The redefinition of the role of the national states enhanced the process of privatization and market reform while macroeconomic policies turned out to focus on inflationary targets and budget surplus.

The retreat of the state and the expansion of pension funds are correlated processes (Clark, 1999). As a matter of fact, the interconnections between deregulated credit, capital markets and changes in retirement plans revealed that, within this historical setting, the expansion of pension funds' assets has been stimulated by pension reforms and financial bubbles (Chesnais, 1998).

Individuals may participate in mandatory or quasi-mandatory pension plans and/or in one or several voluntary pension plans (OECD, 2008). By 2020, the largest pools of pension fund assets are projected to remain concentrated in the US and Europe. In North America, pension fund assets reached $19.3 trillion in 2012. The PwC report, Asset Management 2020: A Brave New World, estimates that by 2020, pension fund assets will rise by 5.7 percent a year to achieve over $30 trillion of the $56.5 trillion in total global assets, more than 50 percent of the global total. Indeed, according to PwC, demographic changes, accelerating urbanization, technological innovations and shifts in retirement plans are reshaping the asset management environment where pension funds have been playing and will play an outstanding role in the global saving and investment process.

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Table 1. Total amount of assets in retirement savings vehicles (including pension funds) in the OECD and non-OECD countries, 2007-2017, selected years.

Year	2007	2008	2009	2011	2013	2015	2017
OECD countries							
All retirement savings vehicles	28.2	23.0	26.2	30.2	36.5	37.1	43.4
Pension funds	19.8	16.1	18.2	20.8	24.6	24.7	28.5
Non-OECD countries							
All retirement savings vehicles	0.8	0.6	0.8	1.1	1.4	1.4	1.6
Pension funds	0.6	0.5	0.7	1.0	1.2	1.1	1.3

Source: OECD (2018).

However, in spite of the pension funds' power to centralize huge amount of "savings from workers", workers do not seem to have a strong defense against contemporary world-wide trends. By analyzing the impacts of the scenario on the retirement savings of workers, this paper aims to favor a reflection on the pension funds´ challenges after the 2008 global crisis. Unlike the main discussions on the dynamics of pension funds - that considers short-term market performance - our perspective privileges a long-run perspective. The cutting questions proposed are: *How might low interest rates and austerity policies affect the evolution of the retirement savings of workers? Why do pension funds´ asset strategies give support to the new short-term business practices within the private equity industry? How might the evolution of benefits and contributions affect the future of pension funds?*

Section 1 underlines the pension funds´ performance after the 2008 financial turmoil among selected OCDE countries.[1] Section 2 discusses the impacts of pension reforms. Section 3 discusses the role of pension funds in the private equity industry. The final section suggests the need of a reassessment of the policy agenda on financial regulation and job creation.

2. PENSION FUNDS´ PERFORMANCE AFTER THE 2008 FINANCIAL TURMOIL

The 2008 global financial crisis revealed the inner economic, social and political tensions that have overwhelmed the outcomes of self-regulated markets. In the context of deregulated finance, pension funds´ asset management has mainly supported the "status quo", that is to say, the expansion of private money and liquid capital markets (Guttmann, 1998). In a context of uncertainty, pension funds are part of a set of financial links where there are interrelated balance sheets and cash flows between the income-producing system, the government and the financial institutions.

As of December 2007, in 13 out of 22 OECD countries over 50% of assets were invested in bonds and around 60% of these bonds were issued by governments (OECD, 2008). Between 1993 and October 2008, the average annual real rate of return of pension funds was 6.1% in the United-States and the United Kingdom, the countries that concentrate most of the pension funds´ assets.

In 2008, pension funds experienced, on average, a negative return of nearly 20% in nominal terms since the beginning of the year. Pension funds in the United States accounted for most of the loss (USD 2.2 trillion out of the total OECD loss of 3.3 trillion), being followed by the United Kingdom´s (USD 0.3 trillion) and Australia´s (USD 0.2 trillion) pension funds (OCDE, 2008). Indeed, the impact of the financial crisis on investment returns was deeper among those pension funds where equities represented over a third of total financial assets. While Irish pension funds were the most exposed to equities (66% of total assets on average), the United States, the United Kingdom, and Australia also followed this pattern of asset composition.

Consequently, by October 2008, within OECD countries, the total assets of all pension funds declined almost USD 3.3 trillion (20% relative to December 2007). Including other private pension assets (personal pension plans), the total loss amounted USD 5 trillion (OCDE, 2008).

After the global crisis, pension assets in the OECD area have kept growing between 2007 and 2017. Those assets amounted the record USD 43.4 trillion in 2017 - a higher level than the pre-crisis amount of USD 28.2 trillion – while two thirds were held in pension funds that hit USD 28.5 trillion in 2017 (See Table **1**). Throughout the last ten years, the largest increases in pension funds´ assets were observed in countries that set up mandatory plans and funded occupational schemes (as in Greece). In contrast, the size of the funded and private pension systems turned out to shrink in some countries where pension reforms adopted the pay-as-you-go system, such as Hungary.

Table **2** shows that pension assets are unevenly distributed among world regions and across countries. While there is a

[1] http://www.oecd.org/about/membersandpartners/list-oecd-member-countries.htm

concentration in the OECD area, the largest amounts of pension assets are located in the United States, Australia, Canada, Japan, the Netherlands, Switzerland and the United Kingdom. As of 2017, the United States held the largest amount of pension assets (USD 16.2 trillion), followed by the United Kingdom (USD 2.9 trillion), Australia (USD 1.7 trillion), the Netherlands (USD 1.6 trillion) and Canada (USD 1.4 trillion).

Table 2. Pension assets: percentage of total OECD pension assets, selected countries, 2017, in %

OECD Selected Countries	% of Total OECD Pension Assets
United States	64,9
United Kingdom	6,7
Canada	6,1
Australia	4,1
Netherlands	3,7
Japan	3,2
Switzerland	2,3
Other OECD countries	9,0

Source: OECD (2018)

After the global crisis, quantitative easing policies have been favoring the expansion of liquidity. The new near-zero interest rate environment inflated asset valuations in the capital markets and influenced financial investment strategies. Regarding the annual performance of pension funds in the OECD area, over the last 15 years, between 2002 and 2017, the highest real average annual returns (net of investment expenses) were achieved in Canada (5.5%) and the Netherlands (5.3%)(See Table **3**).

As of 2017, the real investment rates of return (net of investment expenses) were above 5% in 22 in 12 OECD reporting countries. High positive results have been mainly associated to increasing equity prices among those countries where equities are relevant within pension assets: in 2017, the real net investment rate of return of Poland was 14.5%, followed by the United States (7.5%) and Australia (7.3%). Despite the booming of the stock market, the high proportion of investments in bills and bonds in some countries might be explained on behalf of regulation constraints or even the lack of domestic investment opportunities to asset diversification. It is also worth noting that long-term interest rates have reached historical low levels after the global crisis.

Taking into account the real returns over the long-term perspective (15-years from December 2002-December 2017 and 10-years over December 2007-December 2017), the average annual real net returns were positive in most of the OECD reported countries. Only four OECD countries presented a negative net return during this 10 year-period that covered the global financial crisis: Bulgaria (-0.4%), the Czech Republic (-0.1%), Estonia (-1.3%) and the Slovak Republic (-0.3%).

Table 3. Selected OECD countries: Nominal and real average annual investment rates of return of pension assets, net of investment expenses, over the last 5, 10 and 15 years, in %.

Average Annual Investment Rates	Nominal			Real		
Period/OECD Countries	5-year	10-year	15-year	5-year	10-year	15-year
Australia	9.6	4.9	6.7	7.5	2.5	4.2
Austria	4.8	2.9	4.0	3.3	1.1	2.0
Belgium	6.4	3.9	6.1	5.1	2.1	4.0
Canada	8.1	5.6	7.3	6.5	4.0	5.5
Chile	7.5	5.1	7.4	4.0	2.0	4.1
Czech Republic	1.1	1.6	2.3	-0.1	-0.1	0.2
Denmark	5.3	5.8	6.3	4.6	4.4	4.7
Estonia	3.2	1.0	3.0	2.1	-1.3	-0.2
Germany	4.0	3.9	4.1	2.9	2.6	2.6
Iceland	7.1	5.6	8.1	4.8	0.8	3.2
Israel	6.0	5.5	..	5.9	4.0	..
Italy	3.5	3.0	3.7	3.0	1.7	2.0
Korea	3.5	4.0	4.1	2.3	1.8	1.6
Latvia	2.9	2.6	3.5	2.0	0.5	-0.5
Luxembourg	3.9	2.9	..	2.9	1.3	..
Mexico	4.8	6.2	..	0.7	1.9	..
Netherlands	7.1	6.0	6.9	6.0	4.4	5.3
Norway	7.0	5.3	6.7	4.6	3.2	4.7
Portugal	4.1	2.1	4.5	3.5	0.9	2.8
Spain	4.4	3.0	..	4.0	1.7	..
Switzerland	4.9	3.0	3.9	5.1	3.0	3.5
Turkey	8.1	9.9	..	-0.8	1.3	..
United States	5.7	2.1	3.9	4.2	0.5	1.7

Source: OECD (2018). Note: 15 years December 2002-December 2017; 10 years December 2007-December 2017; 5 years December 2012-December 2017.

Considering the composition of pension assets in the calendar year of 2017, Table **4** shows that equities represented more than 50% of the investments of pension assets in 2

countries of the OECD area: Australia (58.2%) and Poland (85.2%). As of 2017, a large part of the OECD countries privileged bill and bonds in more than 50% of their pension assets: Chile, Norway, Estonia, Luxembourg, Mexico, Portugal, Israel, Turkey, Greece, Hungary, Germany, Slovak Republic, Slovenia, Czech Republic. Besides, in a context of uncertainty, pension asset managers, in many OECD countries, revealed interest in investing in liquid assets, such as in France, Turkey, Iceland, Korea, Slovak Republic, Slovenia and Czech Republic.

Table 4. Selected OECD countries: composition of pension assets, 2017, in %

OECD Countries	Equity	Bills and Bonds	Cash and Deposits	CIS (when look-Through Unavailable)	Other
Poland	85.2	7.4	5.9	0.0	1.4
Australia	58.2	4.8	11.2	..	25.7
Lithuania	45.9	46.2	5.2	..	2.7
Belgium	41.5	45.1	5.7	..	7.6
Chile	40.8	58.4	0.2	..	0.5
Finland	39.5	27.9	3.5	..	29.1
France	38.1	22.4	34.5	..	5.0
Norway	36.9	54.2	2.4	..	6.5
Estonia	36.1	59.5	4.1	..	0.4
Austria	35.5	44.4	7.0	..	13.1
New Zealand	33.2	23.7	7.0	34.5	1.6
United States	32.9	21.6	2.4	33.3	9.8
Ireland	32.3	40.9	2.9	..	23.9
Netherlands	31.7	43.6	3.3	..	21.4
Switzerland	31.1	30.6	5.0	..	33.2
Canada	30.5	31.7	4.3	..	33.5
Iceland	30.5	44.0	10.0	..	15.5
Luxembourg	29.1	60.0	4.1	..	6.7
Latvia	27.9	61.7	7.1	..	3.4
Denmark	25.6	29.9	2.0	4.1	38.4
Mexico	21.5	75.6	0.9	..	2.0
Portugal	20.4	58.1	6.3	..	15.1
Italy	20.1	45.0	6.2	..	28.8
Israel	18.1	65.1	7.1	..	9.6
Sweden	13.9	14.5	0.9	65.2	5.4
Spain	13.2	45.5	11.0	21.8	8.5
United Kingdom	13.1	28.0	2.1	28.5	28.3
Turkey	13.1	50.5	25.2	..	11.3
Greece	11.4	58.7	7.8	20.8	1.3
Japan	10.5	30.4	8.0	..	51.1
Hungary	7.1	60.1	3.7	26.6	2.4
Germany	6.2	51.9	3.8	..	38.0
Korea	3.1	44.2	16.6	6.3	29.8
Slovak Republic	2.2	57.8	12.0	23.5	4.4
Slovenia	1.9	59.6	12.3	24.6	1.7
Czech Republic	0.6	76.9	19.1	2.1	1.3

Source: OECD (2018) Note: CSI is a term that refers to assets being supervised by regulators. For more information see https://www.theclearinghouse.org/banking-perspectives/2017/2017-q1-banking-perspectives/articles/csi-complexities

Regarding the asset-liability management of pension funds among the OECD countries, it is worth noting that the continuity of liquidity-driven monetary policies and a decline in the long-term interest rates might affect the valuation of liabilities in a context where pension funds should have to redefine their asset strategies searching for higher real annual returns. In other words, continued low interest rates might impact the future profitability of pension funds, particularly in those portfolios where income-fixed assets predominate. As a result, the evolution of a low income-fixed portfolio performance might stimulate the search for alternative assets.

3. PENSION FUNDS´ PERFORMANCE AND PENSION REFORMS

As the 2008 global crisis showed, Central Banks´ and governments´ decisions have not been independent from political and market pressures. Ten years after the crisis, one relevant question relies on how austerity programs may influence pension funds' future strategies and performance.

Among other challenges related to the asset management of pension funds, the adoption of austerity programs should be considered as a factor that affected the evolution of the pension system. Regarding the European experience, soon after the 2008 crisis, many countries announced that they would need to make budget reductions in order to manage the pub-

lic deficit. At this respect, Table **5** shows some of the austerity measures concerning retirement rights and pensions in selected OECD countries that include cuts in public sector wages, cuts in social welfare programs, reduction in the levels of investment tax increases, changes in retirement age and pension payments. These austerity measures certainly affect the real incomes of older people and the retirement possibilities of future generations.

Table 5. OECD Countries: Austerity Measures Concerning Retirement Rights and Pensions

Country	Measures Concerning Retirement Rights and Pensions
United Kingdom	Raising the retirement age from 65 to 66 by 2020
Spain	Automatic inflation-adjustments for pensions will be suspended
Poland	Tightening pension requirements (but not raising the retirement age)
Netherlands	Measures will include higher retirement age
Hungary	Measures implemented by the previous government in 2009, include a gradual three-year increase in the retirement age of 65
Belgium	Stalemate in domestic politics after deadlocked elections has paralyzed action on austerity measures. When a new government is formed, it will find proposals on the table for new taxes: on pensions.
Czech Republic	Taxes will be applied to pensions of workers who earn three times the national average wage. More reforms to pension and healthcare are expected to be announced.
France	The pay-as-you-go pension system is being raised by half a year to 41.5 years of required work for full pension; pension contributions from employees' pay will rise to 10.55 percent from 7.85 percent
Greece	The average retirement age is set to rise from 61.4 to 63.5 along with other expected pension cuts.
Lithuania	Pension reforms are expected to be adopted

Source: Pietras (2009)

In truth, after the global crisis, many governments in OCDE countries have been committed to structural reforms in labour markets and pension plans. Indeed, the current era of austerity has deep impacts on the diversification of types of pension plans. According to OCDE (2018), in a mandatory pension plan, a) employers setup a plan for their employees, b) employees contribute to a state funded pension scheme or c) employees contribute a private pension fund of their choice. In a quasi-mandatory pension plan, employers need to setup a pension plan as a result of labour agreements. In some countries, there are automatic enrolment programs at the national level where employees have the option to opt out of the plan under certain conditions.

Table 6. Pension Plans by Systems: Selected OECD Countries, 2017, in %

OECD Countries	Mandatory/Quasi-Mandatory	Auto-enrolment	Voluntary
Latvia	100.0		
Sweden	100.0		
Finland	89.8		
Iceland	87.7		
Chile	85.7		
Denmark	84.3		
Estonia	83.4		
Israel	80.7		
Australia	75.5		
Switzerland	73.6		
Germany			70.4
Lithuania			69.5
New Zealand		68.0	
Poland			66.2
Mexico	63.3		
Norway	59.4		
Czech Republic			52.1
Japan			51.4
United States			47.1
Ireland			46.7
United Kingdom		45.0	
Slovenia			39.1
Slovak Republic	37.7		
Spain			26.1
Italy		19.6	
Portugal			17.2
Korea	16.9		
Turkey		16.6	

Source: OECD (2018).

As Table **6** shows, there has been a diversification among the OECD countries in relation to the systems of pension plans. For example, Latvia, Sweden, Finland, Iceland, Chile, Denmark, Estonia, Israel, Australia, Switzerland, Mexico, Norway, Slovak Republic and Korea adopted mandatory/ quasi-mandatory systems of pension plans. The success of the introduction of automatic enrolment programs was high in New Zealand and the United Kingdom, although its success was more limited in Italy, where only 20% of the working age population was covered by a pension plan in 2017. Some other countries have also just introduced automatic enrolment programs (e.g. Germany in 2018) or are working on the new legislation (e.g. Ireland, Lithuania and Poland). Within this scenario, it is worth noting that pension coverage in terms of population has been higher in those countries with mandatory systems (OECD, 2018).

Table 7. Pension Assets by type of Plan: OECD Countries, 2017.

OECD Countries	Occupational DB	Occupational DC	Personal
Finland	89.4	0.6	10.0
Switzerland	89.1	..	10.9
Portugal	68.9	18.2	12.9
Canada	60.1	3.7	36.2
Israel	59.3	..	40.7
Turkey	47.9	5.1	47.0
Spain	39.4	6.4	54.2
United States	32.1	25.7	42.1
Korea	29.8	11.1	59.1
France	23.5	66.5	10.0
New Zealand	17.6	25.5	57.0
Mexico	13.3	0.9	85.8
Australia	9.6	30.5	59.8
Iceland	8.6	76.6	14.8
Italy	4.7	64.2	31.1
Denmark	1.3	69.1	29.7
Albania	..	63.2	36.8
Poland	..	6.3	93.7
Latvia	..	1.8	98.2
Chile	..	..	100.0
Czech Republic	..	..	100.0
Estonia	..	..	100.0
Hungary	..	..	100.0
Lithuania	..	..	100.0
Slovak Republic	..	..	100.0

Source: OECD (2018). Note: Defined benefit (DB), Defined contribution (DC).

In addition, regarding the type of pension plans, they can be occupational or personal. The occupational plans can be classified as pension plans of defined benefit (DB) or defined contribution (DC).

In this setting, the PwC report (2014) warns that government-incentivized or government-mandated retirement plans turns out to privilege the use of defined contribution (DC) pension plans (such as the United States). In a defined contribution (DC) pension plan the employer, the employee or both make contributions on a regular basis in individual accounts.

As matter of fact, after the global crisis, the traditional occupational defined benefit (DB) pension plans have been losing ground in many countries, such as Australia, Iceland, Israel, the Netherlands, Mexico, New Zealand, Sweden and the United States. Broadbent et al. (2006) observed that the shift to occupational defined contribution (DC) plans seemed to be linked to pension underfunding. Table **8** aggregated data show the evolution of contributions and benefits as of 2017. Regarding the DB plans, lower discount rates used to value liabilities (as a result of quantitative easing policies) have been important factors to rethink the financial sustainability of pension funds. Besides, the increase in life expectancy result in longer periods of benefit payments to retirees for DB pension funds for a given retirement age (OECD, 2014).

Ten years after the global crisis, the funding ratio of occupation defined benefit (DB) pension plans was below their pre-financial crisis levels in most of the OECD reporting countries. However, in Iceland, Indonesia, Mexico, the United Kingdom and the United States the funding ratio had already been below 100% for several years. Many factors drove the evolution of the funding ration and the asset-liability management of DB pension plans: a) low interest rates, b) composition of assets, c) number of members and wages, d) benefits paid, e) age structure of members, f) aggregate price level.

Therefore, the current main issue at stake is the path of evolution of benefits and contributions in different types of pension plans and how this evolution may affect the financial sustainability of pension funds. As a result, the search for higher profitability among alternative assets has been a commitment among the pension funds´ managers.

Table 8. Average annual income and expenses of DB plans in selected jurisdictions, 2017, in %.

OECD Countries	Annual Growth Rate of Investments	Contributions	Benefits
Luxembourg	25.1	37.1	-6.8
New Zealand	8.0	18.3	-23.3
Gibraltar	23.9	17.6	-3.6
Iceland	2.3	9.6	-13.0
Norway	11.5	8.4	-3.6
Liechtenstein	-1.0	8.4	-5.0
Switzerland	4.8	8.3	-5.0
Germany	9.5	7.7	-5.0
Spain	1.2	5.6	-7.9
Canada	8.3	5.2	-5.4
Portugal	-2.9	4.6	-3.3
Indonesia	5.9	4.6	-8.3
Belgium	-0.2	4.0	-2.8
Netherlands	7.5	3.9	-3.3
Namibia	19.8	3.8	-3.0
Guyana	7.6	3.3	-2.6
Finland	6.8	2.5	-3.5
Denmark	3.0	1.6	-3.5
Costa Rica	5.3	0.5	-7.4

Source: OECD (2018)

4. PENSION INVESTMENTS AND THE PRIVATE EQUITY INDUSTRY

As we already highlighted, the connection between pension plans and speculative finance is one of the contemporary features of financialization. Accordingly the Uni Global Union survey that covered the large 116 pension funds in the UK, Continental Europe, Japan, Australia and South Africa, the pension funds´ participation in private equity could vary. As of the 2008 global crisis, almost half of the pension funds allocate less than 2% of their assets to private equity, another 35% allocate between 2% and 4%, 16% allocate more than 4% (Uni Global Union, 2008). The highest average allocations were found in the Netherlands, UK and Sweden. However, in all these markets the average allocations were well below the average exposure for US pension plans that achieve nearly 25% (Gonçalves and Madi, 2011).

After the global crisis, pension funds managers have been searching for alternative investments outside of traditional stocks and bonds, such as private equity investments. Between 2008 and 2017, most of pension funds (public and private of all sizes) in developed markets had expanded their allocations to alternative asset classes from 7.2% of assets under management in 2008 to 11.8% in 2017, a 63 percent increase on average. In emerging markets, on average, pension funds increased their alternative investments from 0.97% in 2008 to 6.6% in 2017. Among the alternative asset investments, private equity and real estate have been the most relevant (Ivashina and Lerner, 2108). It is well remembering that, between 2008 and 2017, the policy of quantitative easing has been a driver of private equity deals and increasing asset prices in leveraged buyouts (LBOs) oriented to short-term returns. Indeed, Ivashina and Lerner (208) address that alternative investments have proven to be intensely controversial choices for pension funds because of the risk and liquidity commitments that should be matched to privilege the long term horizons of pension funds.

As Gonçalves and Madi (2011) explained, a private equity fund obtains commitments from investors - also pension funds. In the second stage, the managers identify potential companies to acquire. In the third stage, after the buyout of the target company, the target is to increase its value. The aim is to sell the company at a profit up to 10 years in order to support the expectations of the investors. Under this business model, the private equity managers turn out to consider their companies in terms of their short-term financial performance and they are under pressure to produce results quickly. The Workers´ Guide to Private Equity Buyouts clearly explains the short-term investors´ perspective:

"*The short-term, unsustainable system of dividend recaps perfectly illustrates the logic of private equity buyouts. Private equity firms buy a company as a financial asset with the potential to generate an instant cash flow to the new owners in the short term. Huge returns are generated through aggressive restructuring to cut costs and by financial reengineering based on large quantities of debt*" (IUF, 2007:10)

As private equity managers are committed to short-term profits, the firms of the funds' portfolio turn out to be subordinated to efficiency targets that shape labor relations overwhelmed by longer working hours, job destruction, turnover, outsourcing, workforce displacement and loss of retirement rights. Changes in corporate ownership, through waves of mergers and acquisitions, are part of this new business models where companies turn out to be bundles of assets and liabilities to be traded. As a result, the recent experience of workers has been negative as the asset management strategy of private equity funds is based on short-term financial performance. Indeed, the private equity business model threatens the long-run workers' savings because of job losses, reductions in pay conditions and retirement incomes (Tate, 2007). In this setting, labor turns out to be the main focus of cost saving measures, first through longer working hours,

then the abolition of holiday pay and finally through changes in retirement plans

Current global finance suggests a new articulation among investment and labor that has also been supported by pension funds. The level of employment and the types of labor contracts have turned out to be subordinated to economic efficiency targets aimed at cost reduction (Gonçalves and Madi, 2011). This scenario, characterized by precarious jobs mainly based on short-term contracts, has enhanced the vulnerability of workers (The Economist, 2011). Indeed, changing labor organizing principles coped with the dictates of short-term profitability. In addition to subcontracting, outsourcing, temporary jobs and supply chain restructuring that have imposed heavy losses to workers, automatic production control, redefinition of tasks, job rotation and crowdsourcing put pressure on labor unions and reduced their strength to achieve collective demands (IUF, 2007). Besides, boosts in productivity have been associated with the increasing reliance on casualization and precarious jobs (IUF, 2008). All these trends have affected the evolution of workers' current incomes and retirement savings because of the impacts on job creation and on the inflows to pension plans.

This scenario certainly reveals the contradictions of the pension funds´ dynamics. At this respect, Skerrett et al. (2018) put in question whether, despite the impact of global financial markets, trade unions can exert meaningful control over the asset investments of pension funds, and therefore help produce enduring benefits for workers.

5. FINAL CONSIDERATIONS

The financial crises observed in the last decades give strong reasons to think about systemic problems. In particular, the 2008 financial crisis has restated the menace of deep depressions among the current challenges (Foster, 2009). In this setting, the evolution of financial deregulation, macroeconomic policies and market reforms can be costly, socially and politically, and they will certainly affect the evolution of pension funds´ performance.

Considering the previous analysis on pension funds, two key trends can be highlighted ten years after the global crisis: a) A shift from defined benefit (DB) to defined contribution (DC) pension plans, b) The increasing role of alternative assets, such as private equity funds, among pension assets.

The consequences of these trends are relevant. If the total liabilities of DB plans keep on growing faster than the amount of assets, the declining funding ratio of pension funds below 100% turns out to be a source of concern. In order to avoid the underfunding of pension funds, financial regulators need to monitor the evolution of funding ratios in order to protect members and sponsors.

In addition, the shift to alternative assets between 2008 and 2017 will certainly affect future returns and the evolution of the retirement savings, mainly in a downturn. Indeed, the illiquidity of these positions in private equity arise new issues for financial regulation in order to monitor the composition of pension assets.

In the context of contemporary financial dynamics, Minsky (1986) emphasized the need of shaping a thorough agenda of institutional reform so as to control the working of a capitalist economy. Following Minsky, we can say "pension funds cannot be left to the free markets". As the organization of economic and social institutions helps to define policy goals and outcomes, an agenda on pension funds could privilege changes in financial regulation that could

a) aim to favor hedge financing in pension funds regarding the weight of equities, bonds and alternative investments in total assets;

b) articule alternative investment strategies in the private equity industry with job creation.

The apprehension of this political and social reality is decisive to rethink the policy agenda towards pension funds that can produce enduring benefits for workers. Future research should privilege new perspectives in the analysis of the relationship between pension funds and sustainable growth that could favor a reflection on the outcomes of the financial transformations on economies and societies. It is urgent to consider pension funds as a public good in order to create new conventions and institutional set ups that could cope with solutions focused on sustainable livelihoods.

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