Pension savings:A key question about returns

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by

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Introduction

The two key financial decisions that nearly all households have to make are related to a place to live (especially if this involves a mortgage), and the savings needed to have an acceptable income during retirement: pension savings.

In a previous paper: "After the Great Recession: the Laws of Unintended Consequences"[1] the writer sets outs the impact on U.S. mortgage holders as a result of the U.S. financial crisis of 2007-2008. This paper will explore the situation in the Eurozone countries (which share one base rate for the Euro, but have fundamentally different inflation rates and government bond yields) after first examining the links between the U.S. financial crisis and the pensions crisis in Europe.

Pension savings, by their very nature, represent postponed expenditure. This raises a number of issues: what are the returns going to be? Should such savings be made in collective vehicles - like pension funds, either company or industry wide ones - or in individual accounts?

Setting aside savings for future pension payments automatically affects an individual's current spending levels. The reward for postponing current spending depends mainly on Central Banks' and Governments' economic policies. As will be explained in this paper, the main problem is that government bond yields no longer compensate for inflation levels in some countries.

Pension savings are very much a national issue, rather than a Eurozone area one. Therefore national solutions need to be found, rather than pan-Eurozone ones. One option that will be explored is to compensate pension savers on their government bond holdings to a level equivalent of CPI levels plus 0.25%. The economic implications of this for both a central bank and a government will be set out in this paper. The Netherlands –as the country that in the Eurozone has the highest accumulated collective pension savings compared to its GDP- has been selected to show how this may work.

As the current levels of interest rates are a consequence of the 2007-2008 financial crisis that started in the U.S., attention will first be paid to what was, and what was not, done to solve that crisis.

[1] https://mpra.ub.uni-muenchen.de/92839/1/MPRA_paper_92839.pdf

1. The concept of savings

Any income not spent on consumption in a particular year is defined as "savings".

It is clear that savings made towards a future pension income implies postponing consumption in the current period. What is often misunderstood is that paying back a home mortgage has a similar effect for a household living in an owner-occupied property. By paying an amount on the mortgage each month, the owner-occupier is building up equity. This applies both for the principal sum and for the interest charged. Both pension savings and the building up of the equity base in one's own home leads (or should lead) to a higher disposable income in future, as opposed to where no such payments are being made. Paying rent, on the other hand, is expenditure out of current income that has no future benefit. Paying rent can therefore be classified as consumption, whilst paying off one's mortgage can be classified as savings.

Other borrowings such as car or credit card loans all increase current income and reduce future ones. Student loans are meant to help students to earn a higher income in later life (versus those without a university education). However, it is an intangible asset, and one that fully depends on the type of jobs available and the remuneration for such jobs. There is, by definition, no physical asset that can be turned into cash in later life or used to release "equity" when a higher level of income would be welcomed.

1.1 The risks to savings

If life was not difficult enough, savings for the long term are exposed to many market risks, including the risks and actions (or inactions) of governments and central banks.

The after-effects of the U.S. financial crisis of 2007-2008 are still being felt in the European financial markets. This has led to the current threat of cuts in pension payouts in a number of European countries. The similarity between pension payouts in some European countries with the U.S. mortgage payments (personal savings made to achieve the aim of owning one's own home outright) is striking.

Both rely on personal savings levels; both build up an asset base that creates a future income (pension savings), or reduces future expenditure levels. This results in enjoying a better income later in life as a consequence of having paid off the household's mortgage obligations. Both economic actions are subject to the vagaries of market movements.

The historic order in which economic developments took place should start with the U.S. home mortgage crisis.

1.2 The case of the United States

The U.S. financial crisis of 2007-2008 created a recession: the Great Recession. A recession is technically declared over after two subsequent quarters of economic growth. By Q3 2009, the Great Recession was declared over. However, the laws of unintended consequences show a totally different picture. Between May 2007 and October 2009 nearly 7 million U.S. individuals lost their jobs and thereby their incomes[2].[3] It took just over ten years before the unemployment rate had dropped again to 4.4% - back to what it was in December 2006. Equally unintended was the development in the real median household income. In 2007 this income was $59,534[4]. It dropped to $54,569 for 2012 and only returned back to the levels of 2007 by 2016. Another unintended consequence was the difference between the fix for the banks in trouble and those for individual mortgage borrowers in trouble. Nearly all banks were bailed out in 2008, with the odd one declared bankrupt. For individual households/mortgage borrowers there was no respite in being pursued for outstanding mortgage debt. Over the period 2007-2014, 21.228 million U.S. households were confronted with foreclosure proceedings. This number represented 41.4% of all household mortgage holders in the U.S. House prices tumbled after 2007. The S&P/Case-Shiller national home price index seasonally adjusted stood at 184.52 in January 2007 and for the first time only exceeded this level by November 2018 at 184.87[5]. New housing starts also dropped significantly. In January 2006 the number was 2.273 million annualized new starts. The trend line moved from annualized 490,000 new starts in January 2009 to 1.230 million by January 2019[6]. Another main unintended consequence of the financial crisis was the effect on U.S. government borrowings. U.S. Federal debt increased by $4.8 trillion between Q4 2007 and Q4 2010[7], while real GDP still shrank. In three years the Federal Government's debt increased by more than 50% and its growth in government debt did not stop there. Another major change was in interest rates. Fed fund rates had not been so low for over 60 years, until recently[8]. All these factors show that a more streamlined approach to economic thinking is needed. The interactions between the financial markets and the real economy can be better handled.

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[2] https://fred.stlouisfed.org/series/PAYEMS
[3] https://fred.stlouisfed.org/series/UNRATE
[4] https://fred.stlouisfed.org/series/MEFAINUSA672N
[5] https://fred.stlouisfed.org/series/MEHOINUSA672N/
[6] https://fred.stlouisfed.org/series/HOUST
[7] https://fred.stlouisfed.org/series/GFDEBTN
[8] https://fred.stlouisfed.org/series/fedfunds

1.3 The case for putting a safety net under households' incomes

The effects of the U.S. financial sector activities on household jobs and incomes, on government debt levels and on other real sector activities such as new housing starts may all be well recognised, but now, 11 years after the Great Recession, they can be fully analysed.

Firstly, the causes of the financial crisis can be found in the actions at the time of banks, finance companies and hedge funds. Home mortgage loans cannot be created by hedge funds, so the principal responsibility for excessive mortgage lending can only be attributed to the U.S. banking and finance sector, including foreign banks operating in the U.S. Secondly, U.S. based banks and finance companies wanted to offload mortgage credit risks to third parties in order to be able to underwrite more mortgage loans. They did so in several ways. Hedge funds bought up a sizeable share of these loans. Loan obligations were split and sliced into various components and packaged for sale to the ultimate investors, supported by AA or AA+ ratings from the U.S. credit rating agencies. Such Mortgage-Backed Securities ("MBS") were bought by pension funds, asset managers and other interested parties around the world. American Insurance Group (AIG), among others, offered credit default swaps, which made such investments a low risk. Such securities could be traded on a daily basis, either on stock markets or through market makers. The conversion from long-term lending to daily pricing was complete: the conversion process. Was daily pricing a necessary evil? It depended on what one bought and the quality of the underlying product. A product that is based on other peoples' savings or debts is a totally different product than any consumer good for sale. Generally, households do not postpone consumption if there is any chance of losing money saved. This applies most of all to the lower income groups as they can least afford such losses. However, the lower income groups and nearly all of the younger generation households are the ones that cannot buy homes outright; they have to make use of other peoples' savings. The securitization of mortgage debt was widespread in the U.S. In 2007, all securitized mortgage debt reached in total a volume of $7.3 trillion. By Q4 2007, the level of households' liabilities on home mortgages reached the level of $10.6 trillion. The securitization level represented nearly 69% of all household mortgages and of which the level of subprime mortgages was $1.3 trillion[9].

In 2008, the U.S. government and the Federal Reserve put measures in place to rescue the U.S. economy. An excellent day-by-day overview has been published by "The Balance"[10].

The U.S. government's first main major step was to sign into law in October 2008, the "Troubled Asset Relief Program": TARP[11]. This Program was originally

[9] https://www.investopedia.com/ask/answers/041515/what-role-did-securitization-play-us-subprime-mortgage-crisis.asp
[10] https://www.thebalance.com/mortgage-crisis-overview-315684
[11] https://www.treasury.gov/initiatives/financial-stability/TARP-Programs/Pages/default.aspx

authorised for an amount of $700 billion. Later in 2010 it was reduced to $450 billion. The Program was managed by the Treasury Department. It allocated $250 billion to purchase preference shares in 8 U.S. banks. It allocated $82 billion to support the auto industry; $70 billion to support AIG; $46 billion to help Americans confronted with foreclosure proceedings; and $27 billion to restart credit markets. The Federal Reserve also took action. It rapidly lowered the Fed fund rates from 5.26% in July 2007 to 0.16% by December 2008. The longest period of ultra-low interest rates began and only by May 2017 did the interest rate marginally exceed the previous lowest rate, dating back all the way to 1955. The Fed also took major steps in buying up $3.7 trillion of U.S. Treasuries and mortgage backed securities over the period 2009-2012[12]. The U.S government spent $4.8 trillion more than it received in taxes over the period Q4 2007-Q4 2013, while real GDP levels still dropped. The distinction between a market-driven recession and a money-driven one was not used to help solve the problems caused by the subprime mortgage crisis. Market-driven recessions require macro solutions, such as lowering interest rates; even quantitative easing exercises would fall under this heading, as would additional government spending levels. U.S. banks were nearly all rescued, and interest rates were lowered to their lowest level for nearly 60 years. During 2008-2013, U.S. government debts increased at their fastest levels since war times. Money -or savings driven recessions- are linked with disposable household incomes. The 2007-2008 financial crisis was a money-driven crisis. Economic history is now known and it is perhaps a good time to discuss what might have been done to avoid this Financial Crisis.

Subprime mortgages (as well as all other mortgages) were household-related debt. The mix of prime, Alt A and subprime mortgages into MBS's increased the risk levels over such MBS's. Had each type of security only contained either Prime or Alt A mortgages, it would have been likely that losses on such loans would have been foreseeable by the buyers, and incorporated in the purchase price. Bankers devised more "creative" methods and incorporated all types of mortgages as well as all types of stripping and mixing of such mortgages. Not only that, U.S. credit rating agencies often awarded these products with an AA or AA+ rating.

The conclusion out of all of the above is that the U.S. Government allocated $46 billion out of its Tarp program to help households. To put this in context: if the total outstanding home mortgage portfolio of $10.6 trillion had been financed at the average interest mortgage rate of 6.4%, as it was in 2007, then the mortgage interest payments alone would have taken up $678 billion, let alone the repayment obligation that amounted to approximately $350 billion per annum for all 30-year mortgages.

1.4 Why and how to put a safety net under households' income levels?

Paying back a mortgage creates an equity position in an owner-occupied home. If a mortgage payment is missed, not just once but say for three consecutive

[12] www.cnbc.com/2017/11/24/the-fed-launched-qe-nine-years-ago--these-four-charts-show-its-impact.html

months, the lenders have the right to claim penalty interest rates and ultimately reclaim the ownership of the property. In 2008 and later years, many equity positions built up in homes were lost, especially for buyers who bought property in the few years before 2008.

One of the reasons that mortgage payments were missed in 2008 was that often very low start up interest rates were granted on a sizeable share of the mortgages granted in 2005, 2006 and 2007. These deals came to an end in 2008 and substantially increased mortgage payments were then enforced on a large number of these mortgagees. Unfortunately, house prices also started falling in 2007.

In this paper, speculators who bought more than one home for renting purposes are not included in these considerations.

The effects of the credit squeeze on the economy and on many individual households were devastating. Between May 2007 and October 2009, U.S. unemployment levels increased by 7 million individuals; many of the newly unemployed were heads of households. Real incomes dropped by 8.3% between 2007 and 2012 and did not return to the 2007 level until 2016. House building levels dropped by 78.5% in 2009 as compared to the 2006 level and still in 2019 this level currently runs at only 46% of the 2006 level. Average home prices were depressed for over a 10-year period from January 2007 to October 2018.

With all this evidence in place, a key thing that the U.S. government failed to do was to link income levels to mortgage expenses for owner-occupied households. Income levels are variable and monthly mortgage payments could change to reflect the changes up or down in income, all within a fixed ratio.

Why should a government do this? In the U.S., it is recommended that households spend no more than 28% of their gross income on servicing their mortgage related debt (including home insurance and property taxes) and no more than 36% of their gross income on all debts (including consumer loans and credit card debts).[13] Any excess expenditure gets households into financial trouble. In 2007 and 2008, many U.S. households had no other option than to exceed the 28/36% norm. Low start-up teaser mortgage rates were coming off and unemployment levels went up strongly. Real median household incomes dropped substantially and, on top of this, house prices were dropping rapidly.

With dropping real incomes, less job opportunities and falling house prices, the apparent only possible way out was for households to accept all these losses. For many, it meant giving up on the American dream of owning one's own property. Properties were handed back to lenders, who sold these homes at a discount to dispose of them quickly. This led to further falling house prices and further trouble for many American households.

[13] https://www.investopedia.com/ask/answers/12/reasonable-amount-of-debt.asp

At this point, the question should have been asked: does the pursuit of profits by the banking sector outweigh the importance of continued economic growth levels in the country as a whole? Most banking profits are monetary gains, made from allocating savings from some households to others who are short of savings. Banks did what their shareholders expected of them and lent the funds, only to experience that collectively they lent a greater amount than most of their home mortgage customers could support out of their income levels. From early 2008, the pursuit of profits by the banking sector became a loss-limitation exercise, bringing with it all of its negative consequences on house prices for all homeowners, whether mortgagees or not. The same loss-limitation exercise also put excessive pressure on many household incomes, thereby causing demand for other goods and services to drop at a remarkably fast pace. Government tax revenues also experienced substantial drops.

A money-driven recession can be counteracted, but not by the banking sector. These bank loss limitation strategies have been proven to be counterproductive to maintaining economic growth levels.

What banks cannot do is provide mortgages on a basis of a fixed percentage of a customer's income as such income levels may well fluctuate for a considerable length of time. However, this is exactly what was needed in 2008 and if U.S. economic forecasts are correct, such mechanism may soon be needed again. Something needs to change!

1.5 The Scheme

The writer proposes that a new scheme is needed to balance incomes with expenditure. A key element of the "Scheme" is to recognize that the U.S. collective banking sector made many and serious credit risk mistakes in the years 2004 to 2008. It granted mortgages that exceeded the ability of a substantial number of borrowers to repay such borrowings. Banks started a loss-limitation exercise in 2008 and later years.

What mortgage borrowers needed was a stability of disposable income after mortgage costs. The only way to achieve this objective is to set the standard at 28% of gross income. Instead of going for foreclosure proceedings, a National Mortgage Bank (NMB) could have been established owned by the U.S. Treasury. This NMB could, at the request of a borrower, take over the mortgage loan from the private sector bank at a 10% penalty to the bank for error-prone lending. Once the transaction completed, the 28% of income rule would be applied to the mortgage. The mortgagee would stay in the home, as owner, so there would be no forced sale. The mortgagee would pay the NMB each month the 28% of gross income that includes insurance and property taxes.

As the NMB would be a government-owned company, it could and should accept that the 28% of gross income will vary over the working life of the mortgagee. There will be underpayments and overpayments periods over a 30-year period. The great advantage would have been that consumption levels would have been less affected in the economic downturn period. However, in a more prosperous period, higher mortgage payment levels based on increased income levels would be the logical extension.

The main attraction of the scheme is that macro-economically speaking, the mortgage borrowers, in line with their earnings, can maintain consumption levels. Secondly, the mortgagee does not lose its savings in the property as the property ownership remains unaffected. The mortgagee also does not need to look for rented accommodation. The negative pressure on house prices (through the forced sales system as a consequence of households falling behind with their mortgage payments) is taken away.

If such a system had been put in place in 2008, it would have avoided the deep downturn in economic growth. Consumers would not have had to reallocate a larger than 28% share of their incomes to mortgage servicing. The government would have simultaneously stabilized house prices, as fewer homes would have been offered for sale at rock-bottom prices. All homeowners would have benefitted.

In a recent report on the state of the U.S. housing market, Attom concluded the following:
"Nationwide, the Q4 2018 home affordability index of 91 was down from an index of 94 in the previous quarter and an index of 106 in Q4 2017 to the lowest level since Q3 2008, when the index was 87".[14]

Perhaps it might be just as helpful to establish the NMB in 2019, as it would have been in 2008.

[14] https://www.attomdata.com/news/market-trends/q4-2018-u-s-home-affordability-report/

2. A pension savings scheme for some European countries.

2.1 The links between the U.S. financial crisis of 2007-2008 and the current pension crisis in some countries in Europe.

The U.S. financial crisis of 2007-2008 fundamentally changed the financial landscape for all savings products in Europe. This was due to the many financial and trading links between Europe and the U.S. The European Central Bank (ECB) followed in the footsteps of the Federal Reserve Bank. In March 2003, it increased its refinancing rate from 2.5% in two steps to 4.25% in July 2008, to be followed by reducing this rate in four steps to 0.0% in March 2016. The ECB also followed the U.S. with a program of Quantitative Easing. Since 2015, the ECB has invested €2.5 trillion into buying up Eurozone government debt paper. This equaled 22.3% of Eurozone's GDP in 2017.

The U.S. government debt situation and the one from the Eurozone countries was fairly equal in Q4 2007[15] at 62.9% versus the Eurozone figure of 65.6% in 2007[16]. However, since that point, the U.S debt to GDP level has followed a different growth path from the Eurozone countries. The U.S debt to GDP level increased from 62.9% Q4 2007 to 103.2% by Q2 2019. The Eurozone government debt to GDP level moved from 65.6% in 2007 to a peak of 92.0% in 2014 and then down to 86.1% in 2019.

Additionally, the ECB started its Quantitative Easing exercise in 2015. A simple conclusion can be drawn that at the same time as Eurozone countries were reducing their government debt to GDP levels, the Eurozone government bonds available to the open markets were reduced by the €2.5 trillion purchases made by the ECB. The ECB purchases of government bonds had the effect to speed up the ever-declining interest rates on Eurozone government bonds, particularly in the stronger Eurozone countries like Germany and The Netherlands.

2.2 The character of pension savings

Individuals set money aside from their incomes during their working life in order to ensure that after a retirement date, they have a reasonable income to provide for their expenses. In this concept, there is no prescribed level of contribution. There is also no market mechanism of supply and demand and furthermore, there is no set retirement date. However, the reality in quite a few countries is different. Governments have drawn up rules and regulations which specify retirement dates, level of contributions and whether the pension funds are funded well enough to provide current and future pensioners with an adequate income.

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[15] https://fred.stlouisfed.org/series/gfdegdq188S

[16] https://ec.europa.eu/eurostat/documents/2995521/9510404/2-21012019-AP-EN.pdf/97de2ad5-5b7e-4de9-ab36-7bbf8773aad0

It is important to emphasize that there is one highly relevant element in this whole process that can create a gap between the build-up phase (the savers building up a pension pot) and the beneficiaries (the retirees). This element is the interest rate received over government bonds.

With all this government oversight, the regulators have become the decision makers on what is acceptable and what is not. Decisions about payouts are no longer up to the fund managers or to the collective beneficiaries.

What regulators seem to have overlooked is that quantitative easing has a cost to pension funds and other savers. The reason for this is that each purchase of a government bond by a central bank does not cost such central bank any money; the central bank just creates the money. The asset (government bond) acquired is not one based on savings. What QE does is that it replaces the ownership of an asset and the "costs" attached to it (the reduction in yields) is handed over to the savers in general, and to pension funds in particular. Add to that the lowering of interest rates - especially in the Eurozone area - and pension funds in a number of Eurozone countries are facing a perfect storm. The storm started in 2008 and the force of the wind has only got stronger since.

As Table 1 below illustrates, the situation for pension funds in the Eurozone is dire. 30-year bond yields are delivering returns which are substantially below inflation levels. The outlook for more QE and further lowering of interest rates seems likely, given the current economic slowdown.

Table 1 will set out the reward on 30-year government bonds for a selected group of countries for 2018 and the June 2019 CPI inflation levels for these countries.

Table 1

30-year bond yields compared to CPI inflation levels for selected countries[17]

Country	30-years Government Bond rate 2018 Annual Yield	CPI Annual Inflation as per June 2019
Belgium	**0.720**	**1.73**
France	**0.784**	**1.90**
Germany	**0.397**	**1.70**
Italy	**2.610**	**0.90**
Netherlands	**0.577**	**2.70**
Spain	**1.419**	**0.90**
U.K.	**1.461**	**1.80**
U.S.	**2.910**	**1.80**

The data for Belgium, France, Germany, The Netherlands and the United Kingdom all show that the 30-year government bond yields do not compensate for the inflation levels in their respective countries. Within the Eurozone countries, the data also shows that the southern region of Spain and Italy differ substantially from the northern region of Germany, France, Belgium and The Netherlands.

The OECD collects statistics on the funded pension savings as a percentage of GDP[18]. For the OECD countries, the countries with the largest savings pots as a percentage of the GDP in 2017 were respectively: The Netherlands with 184.2%, the United Kingdom with 105.3%, the United States with 84.1%, Denmark with 46.3% and Spain, Belgium, Italy, Germany and France with respectively 9.5%, 7.8%, 7.6%, 6.9% and 0.7%.

[17] OECD statistics for 2018 government bond yields and latest inflation levels https://data.oecd.org/price/inflation-cpi.http

[18] https://stats.oecd.org/Index.aspx?DatasetCode=PNNI_NEW

2.3 The pension income gap

Since the last financial crisis in 2008, the ECB has initially pursued a policy of lowering interest rates. From March 2015, it added a policy of buying up government bonds from Eurozone member states to the extent of €2.5 trillion.

To illustrate the interest rate policy with one example, let us look at the ECB's refinancing rate for the Eurozone banking system. From a level of 4.25% per annum on 9 July 2008, this rate was dropped to 0% per annum from March 2016 onwards, where it remains today. If banks want to place excess liquidity with the ECB, as of the 16th of July 2019, the rate for such activity was a payment to the ECB of 0.40% per annum for a one-month deposit.

Pension funds around Europe have tried hard to overcome the blow of lower interest rates levels and the impact on the yield curve from QE exercises. The lowering of central bank interest rates since 2008 and the event of QE as a policy instrument to counter the 2008 financial crisis have led to a near permanent situation of very low or even negative interest rates in the open markets. Belgium, Denmark, France, Germany, The Netherlands and the U.K. are some of the countries that have been affected by the pension income gap. With a slowing Eurozone economic growth level, further cuts in interest rates and further Quantitative Easing measures cannot be excluded.

This is highlighted by a few of the recent newspaper headlines: "UK 'scarily' exposed to next major downturn"[19]. "Only one in 25 see fixed rate ISA's (Individual Savings Accounts) nest eggs beat inflation".[20]

In an article in Investments and Pensions Europe[21] , 18th July 2019, it stipulated that "the two largest pension funds in the Netherlands, ABP and PFZW, face imminent benefit cuts for their 6 million members next year, despite their solid returns on investments in the second quarter of 2019. Since March, interest rates have dropped 30bps to 0.88% causing funding levels at Dutch pension funds to fall by several percentage points."

The long term effects on pension savings as a consequence of the 2008 financial crisis and the actions taken by the ECB, both through lowering the base rate to zero and below and through the quantitative easing exercise to the extent of €2.5 trillion, have led to a level of compensation on pension savings that is, for many countries, far below their respective CPI inflation rates.

The forecasts for economic growth for the Eurozone countries for 2020 have very recently been lowered to 1.6% according to Euronews[22].

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[19] https://www.telegraph.co.uk/business/2019/07/15/uk-scarily-exposed-next-major-downturn-economists-warn/
[20] https://www.dailymail.co.uk/news/article-7271047/Just-one-25-fixed-rate-ISAs-return-beats-current-two-percent-inflation-rate.html
[21] www.ipe.com/countries/netherlands/biggest-dutch-pension-funds-face-imminent-benefit-cuts-following-new-rules/
[22] https://www.euronews.com/2019/07/10/eu-lowers-eurozone-2020-growth-forecast

The pension savers in many countries, including the group of retirees, have no opportunity other than to save even more in current periods, or accept a benefit cut. The threat of another recession in the near future leads to an even greater urgency to seek a solution to this problem.

2.4 Structural changes in pension provision

A number of structural changes have taken place since 2008.

In 2011, an article from Pinsent Masons, a U.K. law firm, stated:

"Employers with defined benefit pension schemes, such as final salary schemes, are increasingly looking for ways to reduce their exposure to heavy financial liability. Many such schemes are already closed to new joiners, but more and more companies are looking at closing schemes to existing members so that no more benefits can be earned under the scheme. This is also known as ceasing future accrual".[23]

Since 2011, many company-defined benefits schemes have been closed, not only for new employees, but also for existing ones due to the explosive increase in costs attached to such schemes. This applied not only to the U.K., but also for many multinationals and other large and smaller companies in Europe.

In an FT article about the U.K pension crisis, written by Alex Cunningham[24] on November 28, 2017, he wrote:

"It is becoming increasingly clear that the quality of retirement many pensioners are enjoying now will not be available to current and future generations of workers. There are only 500,000 private sector employees in defined benefit pension schemes, which are open to new members, according to the Office for National Statistics. This shows how quickly "final salary" pensions have declined — in 2000, there were more than 6m. Today, the vast majority of private sector employees are in defined contribution schemes. Many of these are at the lowest level required for auto-enrolment with employees and employers currently paying the minimum 1 per cent contribution, albeit soon to be increased. The move from defined benefit to individual defined contribution pensions has been a move from cost efficiency to inefficiency, from security to insecurity. Employers have been able to push the investment risk on to their employees."

The same transfer of risks did not only happen in the U.K., but also in many of the Eurozone countries.

Therefore a valid question is: is it fair that individual households should become the victims (losers) due to government and central bank policies? These latter policies were devised to counteract the recessionary effects of the 2008 financial crisis, but they have simultaneously created many losers who saw their savings

[23] https://www.pinsentmasons.com/out-law/guides/closing-defined-benefit-pension-schemes
[24] https://www.ft.com/content/5a7f8378-d354-11e7-a303-9060cb1e5f44

whittled away by the low returns on government bonds; below the CPI inflation rate. What happened to promises made by companies and governments?

3. The interaction of a government and its central bank

3.1 The roles of a government acting as a borrower

The standard role of governments is to issue bonds for funding its deficits. The need for such issuance is linked to the economic policies chosen and the volume of tax receipts during a specific period. For instance, in the aftermath of the U.S. financial crisis, the total Federal Government debt increased from U.S. $ 10.024 trillion in 2008 to $21.606 trillion by 2018. Over the same period the U.S. population increased from 304.09 million in 2008 to 327.17 million by 2018, an increase of 7.59%. Government debt per capita increased from $32,964 in 2008 to $66,039 in 2018; a doubling of per capita debt in just 10 years!

For other countries, like in the Netherlands, the debt to GDP ratio moved up from 54.7% in 2008 to its peak of 67.9% in 2014 and then lowered back to 52.4% in 2018. The Netherlands government debt level was € 401.9 billion at the end of 2018. On a population of 17.1 million, this translates into a debt per capita of €23,500.

In the Netherlands, as was the case in some other Eurozone countries, pension promises were made for inflation proof pensions. However, the promised pension payments (promised especially but not exclusively to civil servants) did not and have not turned out to be inflation-proof after all. Whatever the excuses governments have come up with, none seems to have put even partial blame on the ECB for its QE program and its lowering of interest rates far below inflation levels.

Dutch pension savers, including civil servants, have accumulated a pension reserve over the years of 184.2% of Dutch GDP in 2017, according to the latest data. This was equivalent to €1.267 trillion in savings. With an average life expectancy of 81.4 years in the Netherlands, a very rough estimate based on an average starting date of pension saving at the age of 25 years is that the accumulated pension savings of € 1.267 trillion can be divided over 56.4 years. This results in an annual pension savings amount of roughly € 22.5 billion.

3.2 The role of a government acting as a regulator of pensions

In a number of countries the supervision role over pension funds is sometimes delegated to a central bank, like in the Netherlands, or to a special pension regulator as in the U.K. In the U.K. the Pensions Regulator (TPR) is the UK regulator of work-based pension schemes. It works with trustees, employers, pension specialists and business advisers, giving guidance on what is expected of them. TPR is an executive non-departmental public body, sponsored by the Department for Work and Pensions.

The rule making is usually entrusted to Parliaments and executed by the pension regulators.

3.3 The key role of macro-economic management in some Eurozone countries.

The European Central Bank is the key player in setting interest rates for the Eurozone countries. It also takes decisions on QE exercises. The Board taking such decisions consists of the Presidents of the National Central Banks of the Eurozone.

If, for a future pension benefit, a saver puts money aside in the current period, he foregoes consumption in the current period. If the ECB buys government bonds from Eurozone countries, it does not forego current consumption; it just creates the money to pay for such bonds. The ECB competes with individual pension savers, but not on equal terms. It costs the ECB nothing to purchase Eurozone government bonds. However, such competition for financial assets leaves pension savers in a disadvantageous position. The latter lose out in terms of compensation levels over such bonds. When the ECB, in its recent QE program, injected €2.5 trillion into the Eurozone government bond markets, inevitably the demand for existing bonds went up and the yields came down. The losers: the collective of individual pension savers (among others).

Take Italy for example. In 2009, Italy's government debt as compared to its GDP was 112.5% of its GDP. By 2018 its government debt was 132.2% of GDP. In 2009 Italy paid a yield to its 10-year government bondholders of 4.36% per annum. The debt went up by 17.5% over these years and the reward for the 10-year bondholders went down to 1.55% by August 1 2019. May this perhaps have something to do with the ECB's QE program? What is clear is that there has been a negative correlation between the level of government debt and its pricing. Such pricing is highly detrimental to those who try to save for a pension.

A main objective of the ECB is to maintain an inflation level at 2% or slightly below that level per annum. For the main Southern European countries like Italy and Spain the inflation target has not achieved its objective. For Belgium, Germany and France the result has been close. In the Netherlands the target was exceeded.

Is it not extraordinary that among the Eurozone countries the countries with the relatively highest CPI inflation levels (Belgium, France Germany and the Netherlands) also have the lowest yields on government bonds? These levels are well below the CPI inflation levels. Meanwhile in Spain and Italy, the reverse is true: long term government yields are well above inflation levels.

Somehow one has to conclude that the treatment for savers is different for northern European countries than those living in their southern neighboring countries.

3.4 The key question

The conclusion drawn from the above was that countries within the Eurozone differ in the state of their pension savings, the state of their government debt levels, and the state of their CPI inflation levels.

Therefore, a solution to the deterioration in the provision of inflation-proof pensions cannot be solved by changes in interest rates and more QE, but should be found on a country-by-country basis.

Now, a possible solution will be illustrated for the country with the highest pension savings ratio as compared to GDP: the Netherlands.

In order to come up with a possible solution, one has to accept the premise that the principal cause of the long-term decline in interest rates in Europe was the 2008 financial crisis. This crisis was caused by the U.S. banking system, including European banks operating in the U.S., lending excessively to U.S. homeowners.

The U.S. government never seriously explored the possibility of helping the mortgagees. The possibility of a temporary transfer of ownership of a property to a government agency against a regular payment of 28% of the mortgagee's income was never considered. The result: excessive house price drops, large numbers of repossessions, the collapse of the new construction industry and many households declared bankrupt. Instead of an income-based approach, the U.S. government opted for lowering the interest rates and for Quantitative Easing to the extent of $3.5 trillion as well as a substantial increase in government deficits as mentioned in the above.

As the financial obligations of U.S. homeowners were internationalized through the syndication of prime and subprime bonds, European investors and banks were also affected by the developments in the U.S. Some European banks had to be rescued.

In hindsight, it would have been quicker and much cheaper in macro-economic terms if the U.S. government had opted for an income-based approach for struggling homeowners, as explored above. Economic growth levels would have been less affected. The need for QE would have been reduced, if not made totally superfluous. The key to continued economic growth would have been the capacity by the mortgagees to continue spending rather than allocating very large shares of their reduced incomes to debt servicing.

Of course, economies are interlinked through trade and financial arrangements. The Eurozone countries also saw their economic growth affected after the 2008 U.S. financial crisis.

There are great parallels between the pension savers in the Eurozone and the American mortgagees. Both try to save for either a home or a future income: the first group by borrowing, and subsequently saving up, the value of a mortgage out of income; and the latter to set aside current income for future use. The link is that both actions are income led. The risk for the mortgagee is that incomes could drop and that house prices could drop below the outstanding mortgage amount; the risk for the pension saver is that the rewards received are inadequate to guarantee an inflation-proof income in later years.

4. A possible alternative solution for the Netherlands pension funds crisis

If mortgage borrowers in the U.S. could have been supported by allowing them to pay a fixed percentage of their variable incomes to a National Mortgage Bank, then pension savers in the Netherlands could be saved through a similar arrangement through the establishment of a National Pension Bank (NPB).

The main objective of an NPB would be to increase the reward of government bonds to CPI, or CPI plus 0.25% levels. In the Dutch situation, one has to note that the collective pension savings in the Netherlands have reached 184.1% of Dutch GDP in 2017 while government debt to GDP stood at 58.7% in the same year. Such a situation already requires the extensive purchase of foreign bonds by Dutch pension fund managers.

The main objective of a NPB is not one of dictating which other (foreign) government bonds would be acceptable. That would be the role of the Dutch Central Bank as a pension funds regulator.

The current threat in the Netherlands is that the two largest pension funds plus 49 smaller ones are actively considering - or are being forced by government rules - to cut pension payouts next year. Such action will affect some 6 million individuals out of a population of just over 17 million.

In order to stabilize the performance of pension funds in the Netherlands, a rule of thumb could point to a portfolio of around 50% of government bonds. The NPB could receive funds from the Finance Ministry. These funds should be sufficient to cover the interest gap between CPI levels and actual interest due over the incremental purchase of new government bonds in a particular year. If the NPB guarantees that in future years this same process will be maintained, a substantial element of pension funds' performances would be taken care of.

How should the payments between the Finance Ministry and the NPB be recorded? Such payments should be seen as advances to pension savers, who in due course will have to pay tax over their incomes. It should therefore be recorded as a different category of government debt; different in the sense that such advances are not actual government expenditure, but a type of loan and gift that will be partially repaid through higher future spending levels by the pensioners, and future tax receipts collected out of income taxes.

In this context, one has also to consider the detrimental effects that cutbacks on pension pay-outs will have on economic growth levels if benefit cuts are executed.

On balance, one might come to the conclusion that at a time of expected slow economic growth, the timing of getting an NPB up and running is as opportune to-day as it will ever be.

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