

## About Aviva

- Aviva is the world's sixth largest insurance group\*, serving 53 million customers across UK, Europe, North America and Asia Pacific.
- Aviva's main business activities are long-term savings, fund management and general insurance, with worldwide total sales of £45.1 billion and funds under management of £379 billion at 31 December 2009.
- Aviva operates in Europe with a clear two part strategy to capture the considerable opportunity in the region: firstly Aviva Europe's "Quantum Leap" which is transforming the previously federated system of 12 companies into a single, effective and efficient pan-European business (Aviva Europe SE) and, secondly, the strategic development of our 58% holding in Delta Lloyd following the IPO in November 2009.
- In 2009, Aviva Europe generated more than £16.3 billion of sales (36% of group total) through its retail and Bancassurance distribution channels making a significant contribution to value creation and delivering £797 million IFRS operating profit (39% of group total).

\* based on gross worldwide premiums at 31 December 2009

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## Mind The Gap

Quantifying Europe's Pensions Gap

September 2010

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“We cannot ignore the fact that longer life expectancy brings with it new challenges for governments, individuals and industry. All relevant stakeholders should ensure that life is not just longer, but richer in every sense.”

# 1 Introduction



Demographic trends over the past 20 years show that European populations are ageing, with the ratio of retirees to workers set to increase from one to four in 2010 to one in two by 2060<sup>1</sup>. While scientific and medical developments should be celebrated for enhancing longevity, we can't ignore the fact that longer life expectancy and falling birth rates bring new challenges for governments, individuals and industry. All relevant stakeholders should ensure that life is not just longer, but richer in every sense.

Policies adopted by national governments to start to address this range from modest increases in the state retirement age, a shift towards defined contribution schemes, and the introduction of mandatory or voluntary private pension schemes for all workers. These are positive steps, but governments still face ever-increasing pressure on public pension provision. This has been further exacerbated by the recent financial crisis and means that individuals will have to take increasing responsibility for providing for their own future.

To date, efforts to understand the magnitude of the potential under-provision in retirement across Europe have been sporadic and focused at a national level. With this report, Aviva seeks to bring a consumer perspective to the debate by exploring the difference between what pension provision people need for an adequate standard of living in retirement and the pension amount they can currently expect to receive. We've worked with Deloitte to quantify this difference between expectations and reality – what we've termed the "pensions gap". The result of this analysis led us to question what assets people have beyond their pensions and how they feel about their financial prospects for retirement. To address these questions we explored the level of non-pension assets at the disposal of European citizens, and, in conjunction with The Futures Company, investigated people's attitudes to retirement.

This report takes you through the findings of this analytical journey, which I hope provides a thought-provoking snapshot of savings across the continent. We've focused deliberately on the adequacy side of the debate - exploring questions such as "who will have what?", "what will they need" and "where will it come from?" - to give the EU, national governments and citizens alike an insight into what the future may bring and its implications. I hope this report contributes to the debate by identifying the scale of the problem and how it differs across Europe. It represents the start of a longer-term commitment by Aviva to explore and address these issues in partnership with consumers, governments and regulators, at both a national and European level.

A handwritten signature in black ink that reads "Andrea".

**Andrea Moneta,**  
Chief Executive Officer, Aviva EMEA

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<sup>1</sup> EU27 forecast old age dependency ratio (2010 – 2060), Eurostat

# 2 The Pensions Gap across Europe

## 2.1 Across the European Union, the annual pension gap stands at €1.9 trillion

There is currently a disparity between the levels of pension provision people are set to receive and the level of provision they need in retirement. Aviva has quantified this “pensions gap” by looking at the additional annual amount which citizens retiring between 2011 and 2051 would need to save - in addition to their existing anticipated state and private pension income - in order to ensure an adequate lifestyle in retirement. Here “adequate” is defined as an average retirement income of 70% of pre-retirement income (a level used by the Organisation for Economic Co-operation and Development (OECD) and in line with our own consumer research - see section 7 for more detail).

Following this approach and looking exclusively at pensions assets, Aviva’s research shows that European citizens must find an additional €1.9 trillion in savings every year to fully close the pensions gap. That’s the equivalent of 19% of 2010 GDP and is higher than the estimated cost of the recent economic crisis<sup>2</sup>.

The pensions gap shows the difference between the pension provision that people retiring between 2011 and 2051 will need for an adequate standard of living in retirement and the pension amount they can currently expect to receive, expressed as an annual amount.

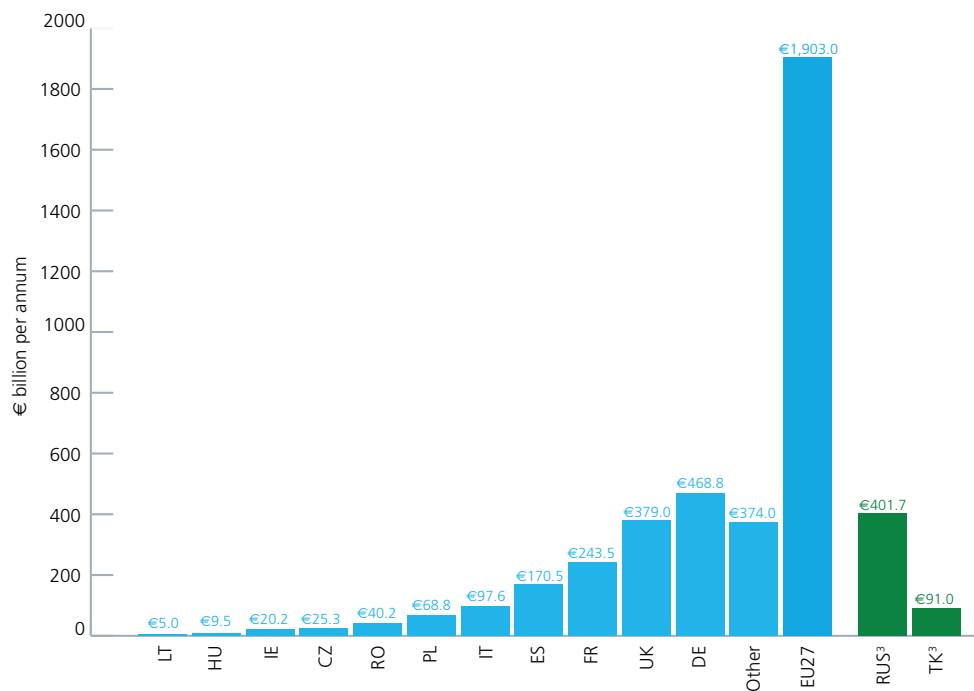


Figure 1: Total EU annual pension gap for individuals retiring 2011-2051

<sup>2</sup> Fiscal implications of the Global Economic and Financial Crisis (IMF, 2009)

<sup>3</sup> In addition the pension gap has been quantified for Russia and Turkey. See Technical Detail (section 7).

The pensions gap varies substantially between countries. In absolute terms, the largest shortfalls can be observed in Western European economies – the UK, France, Germany and Spain. These countries have larger populations and will therefore see more people retiring. These countries also have some of the highest levels of pre-retirement income across Europe which means that the levels of retirement income people in those countries need in their retirement have been estimated to be higher than in other markets.

Quantifying the annual pensions gap in Central and Eastern European countries triggered further reflection on what influences the gap and what the future will hold. In many of these countries the gap is smaller than in their Western counterparts, possibly demonstrating the effect of recent reforms to their pensions systems specifically designed to address issues of adequacy and sustainability.

Assumptions around wage inflation and informal earnings significantly influence the size of the gap in Central and Eastern European countries. Aviva has assumed that wages in these economies will, over time, converge with Western European economies, but has excluded informal earnings from the analysis. If estimates for informal earnings were included, the pensions gap would be almost 60% larger.

**Implication:** Despite the existence in Europe of comparatively well-developed state pension systems, a significant pensions gap exists and is only likely to widen as populations continue to age.



For individual consumers, a reduced standard of living in retirement may be staved off by a greater level of savings or the acceptance of a longer working life.

## 2.2 No single reform can close the gap completely on its own

Whilst the focus of this report is adequacy, we must also briefly address the issue of sustainability. The fiscal systems of many countries may simply not be able to continue to fund ageing populations at the present rate. The European Commission's 2009 Ageing Report shows the size of the increase in public pensions expenditure by 2050 as a percentage of expected GDP.

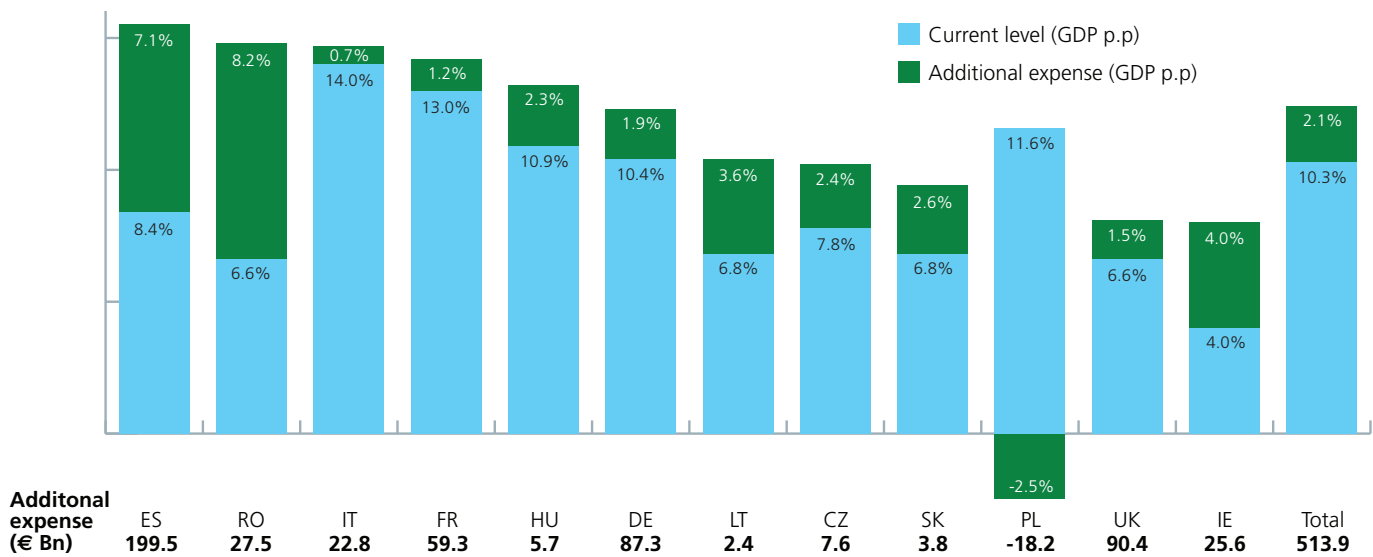


Figure 2: Increase in public pensions expenditure by 2050, (as a % of expected GDP)  
Source: The 2009 Ageing Report (European Commission, 2008)

To tackle the pensions gap governments will need to consider a range of options. Increasing the rate of pensions savings would provide a firm foundation, and statistics show that savings rates have increased marginally in the last few years, but factors such as people's ability or inclination to save will always play a role here, as well as outstanding debt that needs to be repaid.

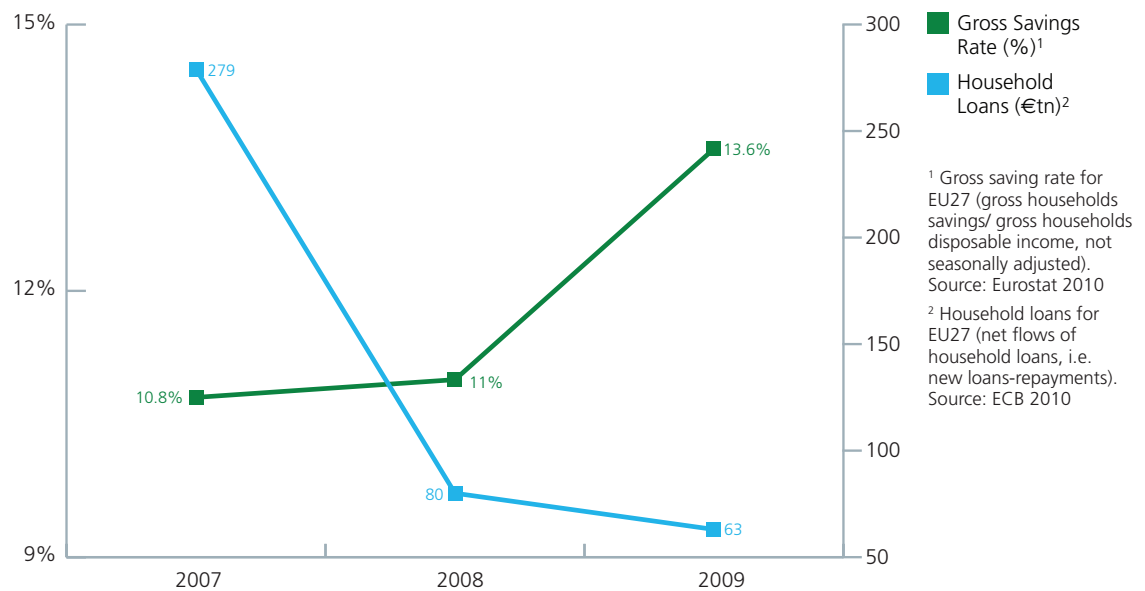


Figure 3: European gross savings rate and household loans  
Source: Households savings rates (Eurostat statistical database 2010)

Aviva has investigated a range of potential levers for addressing the pensions gap by changing and calibrating key inputs into our annual pensions gap model. This analysis yields important insights into the size and nature of the pensions gap and sheds light on the significant challenges faced by policy-makers in Europe.

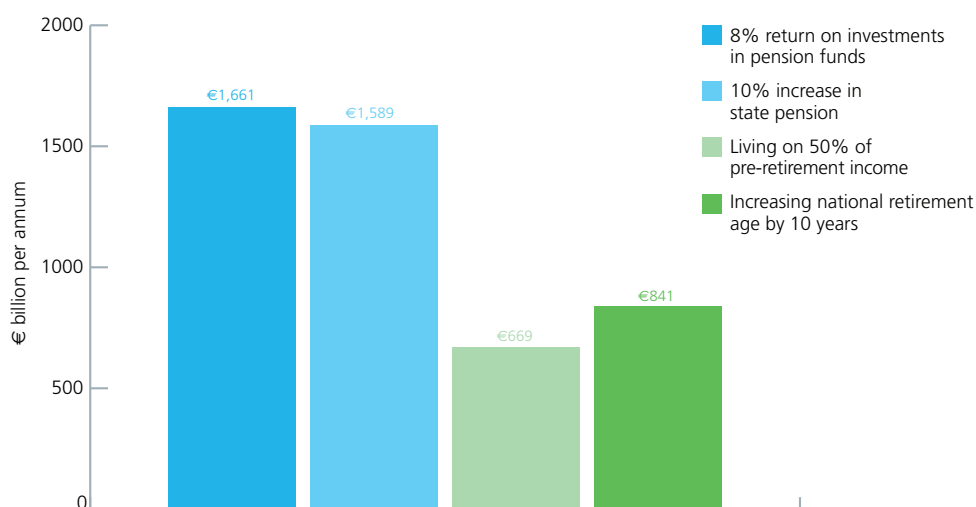


Figure 4: Total EU annual pensions gap for individuals retiring 2011 – 2051 based on variable economic conditions or policy levers

Our analysis shows that:

- ▶ **The amount of savings matters more than the return:** Improving the return on investments in a pension fund has limited impact on the gap – our model presumes a 5% rate of return, but even at 8% return the gap is still €1.66 trillion.
- ▶ **Increasing the level of state pensions would only reduce the gap by one sixth:** A 10% increase in state pension provision only brings the gap down to €1.59 trillion, and in any case with the current economic environment and pressure on public finances, an increase in state pension provision is unlikely.
- ▶ **Living on less in retirement reduces the gap by two thirds:** Living on just 50% of pre-retirement income results in a €669 billion pensions gap (although this is below what people believe they need to live comfortably in retirement (see section 4)).
- ▶ **A significant increase in the national retirement age would be effective but controversial:** Increasing the retirement age by 10 years brings the gap down to €841 billion, but such a change would need to be introduced over a long timeframe to meet peoples' understanding and expectations of increased longevity.

**Implication:** Many national governments have either recently introduced, or are currently debating, a number of these options, but they will recognise that no single policy measure is likely to fully overcome the pensions gap on its own. Government reforms will need to consider a combination of measures, from how to encourage more savings, increases to the state pension age, and how best to work with private providers to deliver pensions solutions that address consumers' needs.

## 2.3 Non-pension assets may only fill as little as 20% of the pensions gap

Many Europeans consider other assets, beyond those invested in pensions, as part of their plans for a secure retirement. But to what extent can non-pension assets, such as property, be converted to retirement incomes that help address the shortfall in retirement income?

The extent to which non-pension assets fill the pensions gap depends on the assumptions made around bequests (i.e. how much people leave to family, friends and others), unexpected expenses and consumption (related to people's uncertainty around how long they will live, and therefore the extent to which they are able to draw down on their assets in retirement). It is essential that society and individuals think about how assets may need to be used to cover costs such as long term care and how the patterns of passing wealth on to subsequent generations will change.

Uncertainty about the extent to which non-pension assets will be available to fund retirement income mean that estimates will vary considerably. Based on some simple scenarios, Aviva estimates that, on an annual basis, Europeans will have somewhere between 20% of the pensions gap and 60% of the pensions gap in non-pension assets potentially to draw on in their retirement.

	Contribution from Non-Pension Assets			
	Annual Savings Gap (€bn)	With bequests/other expenses of 100% home equity and 50% non-life assets	No bequests or other expenses other than 100% home equity	No deductions except tax
France	243.5	30%	40%	80%
Czech Republic	25.3	10%	15%	45%
Germany	468.8	20%	30%	55%
Hungary	9.5	20%	35%	115%
Ireland	20.2	30%	45%	90%
Italy	97.6	55%	85%	220%
Lithuania	5	20%	35%	50%
Poland	68.8	15%	30%	65%
Romania	40.2	5%	10%	25%
Spain	170.5	15%	25%	85%
UK	379	15%	25%	50%
Russia	401.7	5%	5%	10%
Turkey	91	5%	10%	15%
<b>Total</b>		<b>17%</b>	<b>27%</b>	<b>60%</b>

Fig. 5: Country level use of non-pension assets to address the pensions gap

It is clear that non-pension assets do not, on their own, fill the pensions gap, even assuming people were able or willing to spend down the totality of their non-pension assets in retirement.

**Implication:** At the macro-level, non pension assets will not be sufficient on their own to fully close the pensions gap. Current levels of non-pension assets should therefore be considered as just one element of a wider strategy to save for retirement.

# 3 The Pensions Gap for individuals

## 3.1 Some citizens would need to increase savings by an average of €12,000 each year to fully close the pensions gap

The scale of the pensions gap at an aggregated national level can make it difficult to understand the implications for individuals. The table below shows the average amount each person retiring between 2011 and 2051 would need to save every year in order to fully close their personal pensions gap.

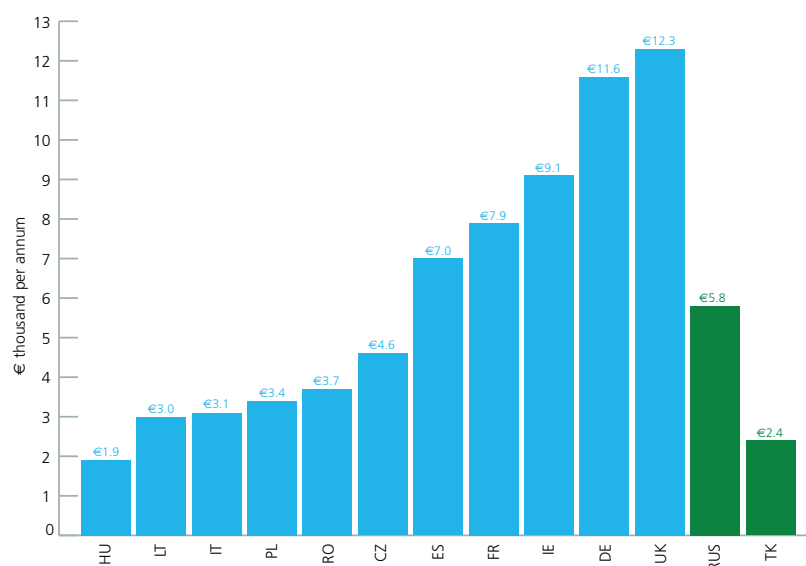


Figure 6: Average annual pensions gap per person for individuals retiring 2011 – 2051 (€)

## 3.2 Older people will need to rely on multiple strategies for generating a sufficient retirement income, while younger people have more time to increase their levels of annual pensions savings

More detailed analysis reveals that a significant proportion of the pensions gap is generated by inadequate pensions incomes for those close to retirement now (within 10 years of state retirement age). These individuals will not have time to build up adequate savings to close the pensions gap before retirement and will need to consider drawing on non-pension assets, working longer or lowering their expectations in retirement. By contrast, younger people have more time to address the gap through increased savings: there is still time to address the issue.

## 3.3 Middle income earners are likely to feel the greatest impact of the pensions gap

For those close to retirement, the use of non-pension assets is likely to form an element of a multi-faceted strategy to close their pensions gap. This may not be a problem for wealthy individuals with extensive non-pension assets, but for the remaining 80% of the population, non-pension assets will provide only somewhere between €420 and €1,300 per annum of additional income (again, the range depends on the assumptions around consumption and bequests). Whilst lower income groups are more likely to be provided for by state pension and welfare systems, middle income earners are likely to be the most exposed.

**Implication:** Individual consumers will need to take greater responsibility for their retirement savings, and do so earlier in their lives. They will need to be aware of and consider their financial situation both now and in the future. Those unable to increase the rate at which they save, or who choose not to invest for the long-term will, in all likelihood, have to work longer (and retire later) or accept a reduced standard of living in retirement.

# 4 Consumer Attitudes to Saving

Quantifying the annual pensions gap has highlighted that people need to save more where they can. But how do citizens feel about this and what are their current expectations of retirement? A recent survey carried out for Aviva by The Futures Company explored the attitudes and expectations of working-age consumers to retirement.

## 4.1 Retirement worries are common, but this has not led to reduced expectations surrounding income levels in retirement

A majority of people in each country surveyed are worried that they will not have enough money in retirement to fund an adequate standard of living. Two-thirds of the people surveyed estimated that they would need at least half (50%) of their pre-retirement income just to get by in retirement, and the majority would prefer to have at least three quarters (75%) of their monthly income.

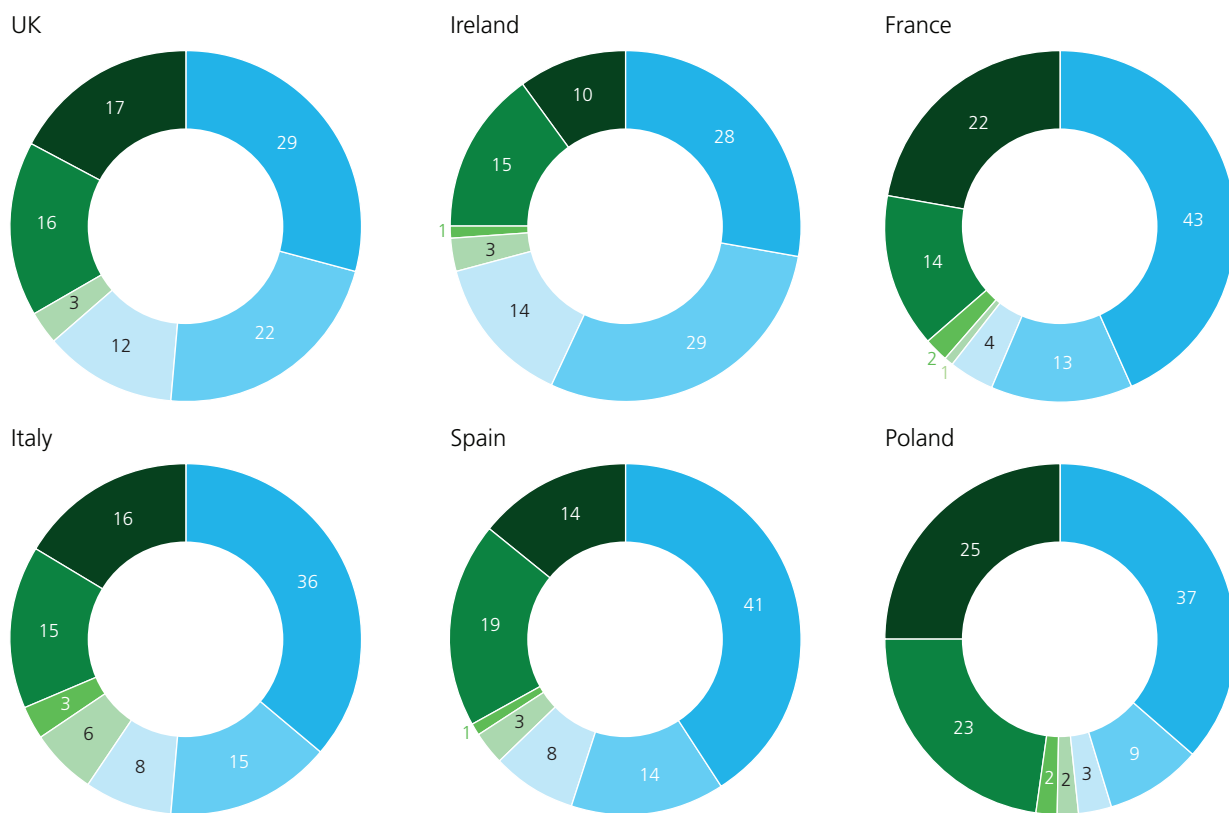


Figure 7: How much of your likely total monthly income prior to retirement do you think you would need for a comfortable retirement?

- 100% of my monthly income
- About 3/4 of my monthly income
- About 1/2 of my monthly income
- About 1/4 of my monthly income
- Less than 1/4 of my monthly income
- I have not considered the income I would need
- Don't know

All figures in charts expressed as percentages

## 4.2 European citizens still expect to rely heavily on their national state pension to fund their retirement

At least two in ten people surveyed expected to depend on a national state pension as the most important part of their retirement income, with this rising to four in ten in countries such as Spain and Poland. Other important elements for retirement provision included pensions and savings, investment in property, or simply working longer.

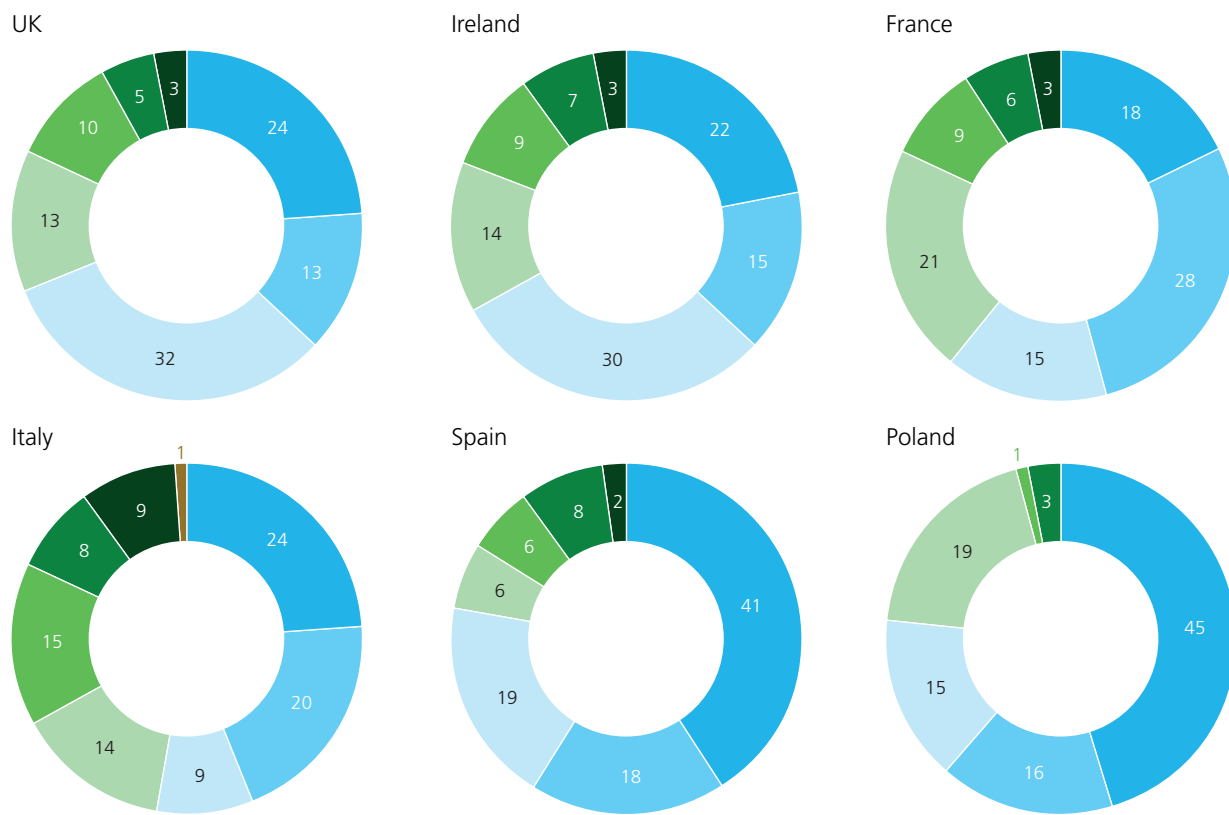


Figure 8: What will be the most important element of funding your retirement?

- A state pension
- Regular saving for retirement
- Pension plan from a financial provider
- Working beyond retirement age
- Your home
- Property other than your main home
- Money provided by your family
- Valuables which you plan to sell

All figures in charts expressed as percentages

When asked directly, a surprisingly high number of people accepted that they may have to work beyond the normal retirement age. Moreover four in ten people in countries such as Spain and Poland even welcomed this, rising to five in ten in Ireland, which can be seen as a reflection on expanding longevity and improvements in health. This does of course bring with it new challenges as employers will need to adapt to an older workforce and employees may look for alternative employment opportunities as they get older.

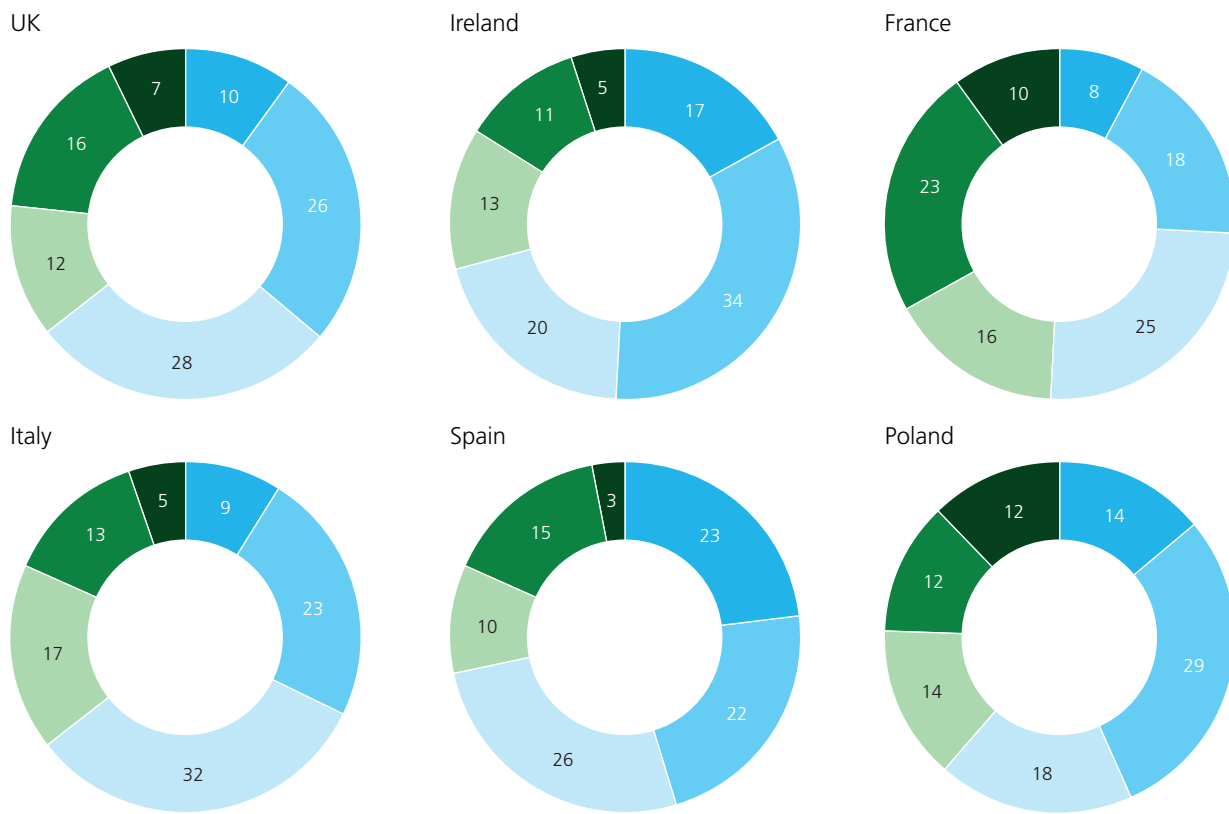


Figure 9: "I would like to work, either full time or part time, after the usual retirement age"

■ Agree strongly    ■ Neither agree nor disagree    ■ Disagree strongly  
■ Agree slightly    ■ Disagree slightly    ■ Don't know

All figures in charts expressed as percentages

**Implication:** Consumers are beginning to be aware of their personal pensions gap, but further efforts are required by governments and private providers to communicate with them about their retirement needs and options. Simply relying on the state to provide for retirement income is no longer an option, as state pension systems come under increasing pressure from ageing populations living longer. More work is required to help consumers understand the extent to which non-pension assets will be able to contribute to their retirement needs.

Finding new ways to encourage greater saving will be extremely important. As governments seek to reduce the reliance on state pensions and encourage consumers to save, attaching clear and attractive incentives to savings vehicles will undoubtedly be a powerful tool to encourage greater self-reliance in later years. Private providers, in the meantime, must provide products that are simple, clear and trusted.

# 5 Conclusions

The pensions gap raises significant challenges across Europe. Whilst the nature of these challenges and the potential solutions will vary depending on the structure of existing provision in each country and the social and cultural conditions in which this operates, Aviva has drawn the following conclusions which apply across the region as a whole:

## Conclusions for governments

- The pensions gap is significant and will only increase unless urgent action is taken
- In reality there is no single lever that can be pulled to fully close the pensions gap. Governments will have to combine various measures such as increasing the retirement age or incentivising greater private pension saving, especially for middle income earners
- There is a need to raise people's awareness that they should start saving more and earlier

## Conclusions for individuals

- Individuals will need to take greater responsibility for their own retirement
- The biggest influence on an individual's ability to maintain their standard of living is how much they save during their working lives relative to their retirement expectations
- Non-pension assets, such as property, can only be one part of a wider strategy to cover an individual's retirement needs

# 6 Calls to Action

To address the pensions gap and incentivise higher levels of saving, Aviva calls for:

## At a European level

- The creation of a European Quality Standard for Pensions: allowing providers to demonstrate the quality and security of their products, facilitating comparability and increasing consumer confidence
- The establishment of a European Pensions Savings Target: variable by country, and calculated as a percentage of GDP and / or by distribution across each pillar. A pensions savings target would encourage national governments to facilitate a greater savings culture in their country and move towards a greater percentage of funded schemes

## At a national level

- The issuing of regular pension statements to all citizens: this would encourage consumers to consider the state pension as only part of a mixed strategy for providing for their future, and prompt them to take action as a result of seeing clearly what they stand to get in retirement
- A review of national measures to encourage savings: this could consider the effectiveness of existing incentive schemes for pension saving, their impact and visibility and whether they are appropriately targeted at changing the behaviour of the people who need the most encouragement to save



# Technical detail

# 7 Technical detail

## 7.1 Quantifying the Pensions Gap

### Methodology

The methodology employed to quantify the pensions gap is based on bottom up analysis of the following countries: Czech Republic, Germany, Spain, France, Hungary, Ireland, Italy, Lithuania, Poland, Romania, and the UK. In addition the pensions gap has been quantified for Russia and Turkey – countries that Aviva operates within - to allow comparison and analysis against non-EU27 countries.

In each case, a detailed analysis was carried out to quantify the annual retirement income gap and the capital shortfall at retirement to derive a figure for the additional savings required to meet the capital shortfall at retirement.

The heterogeneity of pensions systems across EU member states necessitates some degree of simplification to allow for meaningful cross-country analysis. Three categories were identified:

- State pensions
- Mandatory and voluntary private sector Defined Benefit (DB) pensions
- Mandatory and voluntary private sector Defined Contribution (DC) pensions

Non-pensions products that are solely used to provide retirement income are also included in the analysis under the 'private DC pension' category. Only three such examples were identified:

- In Hungary, where voluntary individual retirement accounts are operated by banks and stockbrokers
- In Germany and Spain, where insurance contracts are used specifically to provide retirement income

### Data

The inputs for this analysis are based on a programme of secondary research conducted by Deloitte and review sessions held with country experts across Aviva. Initial analysis covered ten EU Member states covering c. 80% of the EU population. Results were then extrapolated to estimate the EU-wide pensions gap.

### Base Case

The base case assumptions used for the purposes of this analysis are as follows:

Variable	Assumption
Replacement Rates	Low income: 90%; mid income: 65%; high income : 55%
Return on Savings	5% p.a.
Retirement Age	Average age of retirement by country

Sensitivities used for the purpose of testing alternative scenarios are variations on the base case assumptions.

## 7.2 Calculating levels of non-pension assets

### Scope and data

Data to size non-pension assets have been sourced from a global model of personal financial assets developed by Aviva in conjunction with Oliver Wyman. While differences exist in the period of time covered by this model and the Deloitte work, in both cases an annualised figure can be calculated to create a direct comparison between the amounts that people need to be saving to close the pensions gap and that being saved annually in non-pension assets.

Quantifying non-pension assets relies heavily on the assumptions made regarding deductions – that is, the tax effects on the sale of non-pension assets and the degree to which these assets will fund long-term care requirements, or will form part of a bequest to family or friends. In all cases we used a 10% tax rate on income realised from all assets.

Aviva's analysis of non-pension assets analysis used three scenarios:

1. Retirees realising income from 100% of life assets, 50% of other liquid assets but nothing from home equity (other assets are either bequeathed to next generation or are used to cover other unexpected costs (e.g. healthcare/ long term care etc.);
2. Retirees realising income from all assets except home equity
3. Retirees realising income from all assets including home equity (although unlikely and would require accurate prediction of life span!).

The levels of contribution towards the pensions gap from non-pension assets are rounded to the nearest 5% to reflect the likely accuracy and uncertainty on how much of these assets would actually be available to fund retirement.

Of these scenarios, the first is the closest to the situation today, although consistent data across the region is scarce on unexpected costs and level of bequests. Scenario 3 is highly optimistic, not only does this require the efficient de-accumulation of assets and individuals making an accurate prediction of how long they will live for - the scenario does not take account of the impact of a reduction in bequeathed assets received by later cohorts in the model.

## 7.3 Investigating Consumer Attitudes to Saving

### Consumer Attitudes Survey

The Consumer Attitudes to Savings Survey, now in its 7th year, is a global quantitative study of consumer attitudes to such topics as risk, advice, investment and retirement undertaken for Aviva by The Futures Company. It is a nationally representative survey of adults aged 18 plus to identify and track consumer attitudes to savings and to provide a high level assessment of the consumer issues in each country. Aviva's 2010 survey covers six European markets: UK, France, Italy, Spain, Poland and Ireland. One thousand respondents were interviewed in each market.