

# Effects on pensioners from leaving the EU

## Summary

1.1 HM Treasury's short-term document presented two scenarios for the immediate impact of leaving the EU on the UK economy: the 'shock' scenario and 'severe shock' scenario.<sup>1</sup> In both scenarios the UK would experience a recession, higher inflation, and falls in asset prices, which would have implications for both current and future pensioners (see Table 1.A.):

- pensioner incomes would be eroded in real terms by higher inflation.** The basic State Pension is due to rise in real terms this year and next under the triple lock if the UK remains in the EU. If the UK decided to leave, it would be eroded by the rise in inflation. **In the shock scenario, pensioners on the full basic State Pension would be worse off by £137 per year in real terms by 2017-18, compared with remaining in the EU.** In the severe shock scenario, they would be £142 per year worse off. In addition, pensioners who have annuity income which is fixed in nominal terms would see a reduction in their real incomes. **For someone receiving a basic State Pension and an average annuity, the real income loss would be around £190 a year in 2017-18**
- the value of pensioners' assets and investments would decline** due to falls in house prices, and falls in UK equity and bond prices. It is estimated that after 2 years **the total loss of wealth of those aged over 65 would be around £170 billion in the shock scenario and £300 billion in the severe shock scenario.** For a person aged over 65 with the median portfolio of housing and non-pension assets the loss in wealth is estimated to be around £18,000 in the shock scenario and around £32,000 in the severe shock scenario
- the long-term fall in incomes and profits would mean future pensioners were able to save less for their retirement, and earn lower investment returns.** An individual currently aged 50 on median earnings and with median defined contribution pension assets could lose between £3,800 and £5,800 from their pension savings by 2030 under the shock and severe shock scenarios respectively, in 2015 prices. Based on current annuity rates **that would mean pensioners losing retirement income of between £223 and £335 per year, compared with remaining in the EU**

**Table 1.A: The impact on current and future pensioners**

	Remain in EU	Shock	Severe Shock
<b>The basic State Pension</b>			
Real increase in the basic State Pension by 2017-18, compared with 2015-16 (2015-16 prices)	£169	£32	£27
Impact on the increase if the UK leaves the EU	-	-£137	-£142
<b>Current pensioners' assets</b>			
Total loss of wealth of those aged over 65 from falls in house, equity and bond prices from leaving the EU	-	£170 billion	£300 billion
<b>Future pensioners</b>			
Impact on pension saving by 2030 of current 50 year old on median earnings with median pension assets	-	-£3,800	-£5,800
Impact on annual retirement income if annuitised	-	-£223	-£335

<sup>1</sup> HM Treasury analysis: the immediate economic impact of leaving the EU. HM Government. (May 2016)

Source: Office of Budget Responsibility, Department for Work and Pensions; HM Treasury calculations based on scenarios in HM Treasury (April, May 2016)

## Technical background

**1.2** This note builds on the analysis that HM Treasury has already undertaken on the immediate and long-term implications for the economy from leaving the EU<sup>2</sup> to assess the effects on both current and future pensioners. In this note, these are referred to as the 'short term document' and the 'long term document'. The modelling in this note that goes beyond the horizon in the short-term document makes some assumptions, for example about pension returns, which are inevitably uncertain. Where additional assumptions are made they are noted.

## Effects on pensioner incomes

Table 1.B: The basic State Pension in real terms

	2015-16	2016-17	2017-18
<b>Value in 2015-16 prices</b>			
OBR March 2016 forecast	£6,046	£6,164	£6,215
<b>Change from 2015-16, in 2015-16 prices</b>			
OBR March 2016 forecast	0	+£118	+£169
Shock scenario	0	+£33	+£32
Severe shock scenario	0	+£12	+£27
<b>Change from OBR forecast, in 2015-16 prices</b>			
Shock scenario	0	-£85	-£137
Severe shock scenario	0	-£105	-£142

Source: OBR; DWP; HM Treasury calculations

**1.3** The **basic State Pension** is increased each year by the highest of the growth in consumer prices, earnings or 2.5% - the "triple lock". The increase for 2016-17 was 2.9%, and the Office for Budget Responsibility's (OBR) March 2016 forecast,<sup>3</sup> which is conditioned on the UK remaining in the EU, projects that inflation for 2016-17 will be 0.9%. It also projects that the basic State Pension will rise by 2.5% in 2017-18, as inflation at the time the rate is set is projected to be only 0.6% and earnings growth at the time the rate is set is projected to be 2.4%. Taking account of the inflation forecast for 2017-18, this would represent a real increase of £169 per annum compared with its 2015-16 level.

**1.4** However, if the UK voted to leave the EU, the two scenarios imply consumer prices would increase. This would reduce the real value of the 2016-17 pension and the 2017-18 pension compared with remaining in the EU. At the time the 2017-18 rate is set, inflation would rise from 0.6%, projected in the OBR March 2016 forecast, to 2.2% in the shock scenario and 2.6% in the severe shock scenario.<sup>4</sup> While the cash value of the 2017-18 basic State Pension would

<sup>2</sup> HM Treasury analysis: the long-term economic impacts of EU membership and the alternatives. HM Government. (April 2016)

HM Treasury analysis: the immediate economic impact of leaving the EU. HM Government. (May 2016)

<sup>3</sup> Economic and Fiscal Outlook, Office for Budget Responsibility, (March 2016)

<sup>4</sup> This higher inflation would feed through into the next uprating round.

therefore be broadly the same, this rise in inflation would mean that pensioners would be able to buy fewer goods and services from their pension income compared with the UK remaining in the EU. Inflation for the 2017-18 year as a whole would also be higher in both scenarios.

**1.5** Table 1.B. shows the implications for the basic State Pension:

- in the shock scenario, consumer price levels would be 2.3% higher in 2017-18 than in the OBR forecast. The basic State Pension would still be higher than in 2015-16 in real terms, but the increase would only be £32 per annum in real terms. This effect would be equivalent to a reduction in real incomes of around £137 per year compared with the OBR forecast of a £169 real increase were the UK to remain in the EU.
- in the severe shock scenario, consumer price levels would be 2.4% higher in 2017-18. In this case, the basic State Pension would be only £27 per annum higher than in 2015-16 in real terms. This effect would be equivalent to a reduction in real incomes of around £142 per year compared with the OBR forecast.<sup>5</sup>

**1.6** To preserve the same real increase in the basic State Pension if the UK were to leave the EU as pensioners would have received if the UK had voted to remain in the EU, would cost the Exchequer around an additional £1.5 billion.

**1.7** Pensioners who receive an **annuity income** would experience additional losses. The Association of British Insurers data show that there were around 6 million annuities in payment, with an average payment of £2,280 per annum in 2014.<sup>6</sup> The majority do not have inflation protection, meaning that these pensioners would see their purchasing power eroded in scenarios where the UK left the EU and prices rose.<sup>7</sup> Even for those with inflation protection, the delays between price rises in the scenarios where the UK leaves the EU and the annuities' indexation may result in an erosion of purchasing power in the short term. An individual with an average fixed cash annuity paying an income of £2,280 would experience a loss in real income of around £50 per annum in 2017-18. Those with larger annuities would experience larger losses. For someone receiving the basic State Pension and an average annuity income (£2,280 in 2014), the real income loss would amount to around £190 per annum in 2017-18 in the shock scenario.

**1.8** **Defined benefit pensions** are usually linked to inflation both pre and post retirement.<sup>8</sup> In the private sector compulsory indexation was only introduced in 1997,<sup>9</sup> however it was capped at 5% and subsequently this was reduced to 2.5% in 2005. Although practice varies, inflation higher than 2.5% would erode real incomes in many private sector defined benefit schemes. Even with full indexation, delays between price rises and the pension indexation may result in an erosion of purchasing power in the short term if the UK made the decision to leave the EU.

### Effects on pensioner wealth

**1.9** Aside from impacts on pensioners via the basic State Pension, annuities and accumulated pension savings, other non-pension assets are also important for pensioners and would be affected by the decision to leave the EU. According to the ONS Wealth and Assets survey,<sup>10</sup> among the over 65s:

---

<sup>5</sup> There will also be similar effects on the new state pension.

<sup>6</sup> *Business in force – Pensions and Retirement Income 2014. Table 10: pension annuities in force*, Association of British Insurers. (2014)

<sup>7</sup> *FCA Data Bulletin - retirement income market data tables*, FCA (2016).

<sup>8</sup> There would also be effects on the funding of defined benefit schemes, but these are not covered in this note.

<sup>9</sup> Guaranteed Minimum Pensions were indexed from 1988

<sup>10</sup> *Wealth in Great Britain 2012-2014*. ONS (2015)

- 8.5 million individuals over 65 (78% of those in this age group) have net property wealth. Their aggregate net property wealth was £1.4 trillion in 2014
- nearly 4 million individuals have savings accounts, including cash ISAs. The aggregate value of their savings was £160 billion in 2014
- 1.1 million individuals own shares, with a median value of £8,800. The aggregate value of their shares was £126 billion in 2014
- 1.1 million individuals own investment ISAs. The aggregate value of these holdings was £70 billion in 2014
- 5.4 million individuals (half of this age group) have non-pension financial assets in excess of £25,000

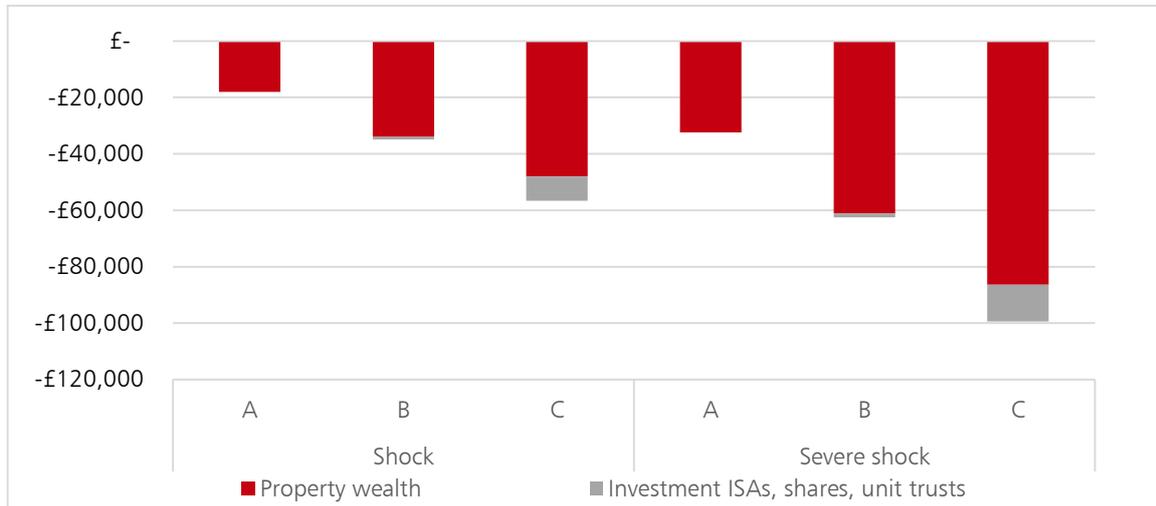
**1.10** The HM Treasury short-term document shows that the value of many of these other assets held by pensioners would also fall. House prices would be lower by 10% or 18% within two years under the shock and severe shock scenarios respectively. Those pensioners who hold UK financial assets such as shares and bonds would experience falls in their value if the UK were to leave the EU (see Table 1.D for details). UK equity prices, for example, would fall due to lower company profits and the effect of investors demanding a higher compensation for risk. These effects would be caused, in turn, by increased uncertainty and the transition effect of the economy becoming less open to trade and investment. The value of savings held in ISAs and other savings accounts are assumed to be unaffected (although their purchasing power would fall with rising inflation, as described above).<sup>11</sup>

---

<sup>11</sup> Consistent with the assumption in the analysis in the short-term document, the Bank of England's Bank rate remains unchanged in the two scenarios. Although household borrowing rates are assumed to rise, household deposit rates move in line with Bank rate and therefore they remain unchanged.

**Figure 1.A: Change in value of pensioner assets in three illustrative examples by 2017-18**

Portfolio	A (50 <sup>th</sup> percentile)	B (80 <sup>th</sup> percentile)	C (90 <sup>th</sup> percentile)
Property wealth	£180,000	£340,000	£480,000
Savings (including cash ISAs)	£1,500	£20,000	£50,000
Investment ISAs, shares, unit trusts	£0	£5,700	£57,000



Source: ONS Wealth and Assets Survey (2015), HM Treasury calculations

**1.11** If the UK were to leave the EU, the aggregate wealth of those aged over 65 would fall by around £170 billion in the shock scenario and by around £300 billion in the severe shock scenario, by 2017-18. In both cases, the main impact would be from lower house prices. For individuals, the effects would vary, depending on the amount and the composition of the assets they own. Figure 1.A shows three illustrative examples: <sup>12</sup>

- example A comprises a portfolio that reflects the holdings at the 50<sup>th</sup> percentile of each distribution for housing wealth, savings and investments. The loss of wealth in this case is estimated to be around £18,000 in the shock scenario and around £32,000 in the severe shock scenario
- example B reflects the holdings at the 80<sup>th</sup> percentile of each distribution. The loss of wealth in this case is estimated to be around £35,000 in the shock scenario and around £62,000 in the severe shock scenario
- example C reflects the holdings at the 90<sup>th</sup> percentile of each distribution. The loss of wealth in this case is estimated to be around £57,000 in the shock scenario and around £99,000 in the severe shock scenario

### Effects on future pensioners

**1.12** HM Treasury analysis in the long-term document highlights that productivity and incomes would be lower by 2030 if the UK were to leave the EU, as the UK economy would be less open. The size of the fall would depend on what alternative arrangements were put in place with

<sup>12</sup> These calculations assume that the composition of investment portfolios are equally weighted between equities and debt securities.

respect to Britain's trade and investment with both EU and non-EU countries. In the case of a negotiated bilateral agreement the central estimate of the annual loss of GDP after 15 years would amount to around £4,300 per household in 2015 terms relative to remaining in the EU.

**1.13 This loss of national income would mean future pensioners would have lower pensions if the UK were to leave the EU.** This would arise from the adjustment of asset prices to the prospect that output would be lower in the long run. The value of the shares and corporate and government bonds held by pension funds would all be lower than otherwise. While the sterling value of foreign assets would rise as a result of the depreciation of the currency, the overall value of a typical fund's asset portfolio would be lower.

**1.14** As an illustrative example, an individual with a defined contribution pension pot worth £60,000 invested through a typical pension fund would see its value drop by around £1,900 (down 3%) in the shock scenario and £5,200 (down 9%) in the severe shock scenario.<sup>13</sup> The larger fall in the severe shock scenario reflects larger falls in asset prices in the UK and in the rest of the world. While an increase in annuity rates might mean each pound could buy more income in retirement, the fall in defined contribution asset values would erode the value of the annuity the individual could afford.

**1.15** Those expecting to retire around 2030 (today's 50-55 year olds) would experience a reduction in their pension wealth at retirement. 3.6 million people aged 45 to 55 have undrawn defined contribution pension assets, with a median value of £20,000. However those assets will grow over time due to additional pension contributions, and the investment returns on their accumulated pension assets. Both pension contributions (because real wages are lower) and investment returns (because firms' incomes and dividends are lower) would be lower if the UK were to leave the EU. In addition, the fall in UK asset prices that would follow a vote to leave the EU would reduce the value of existing pension investments.

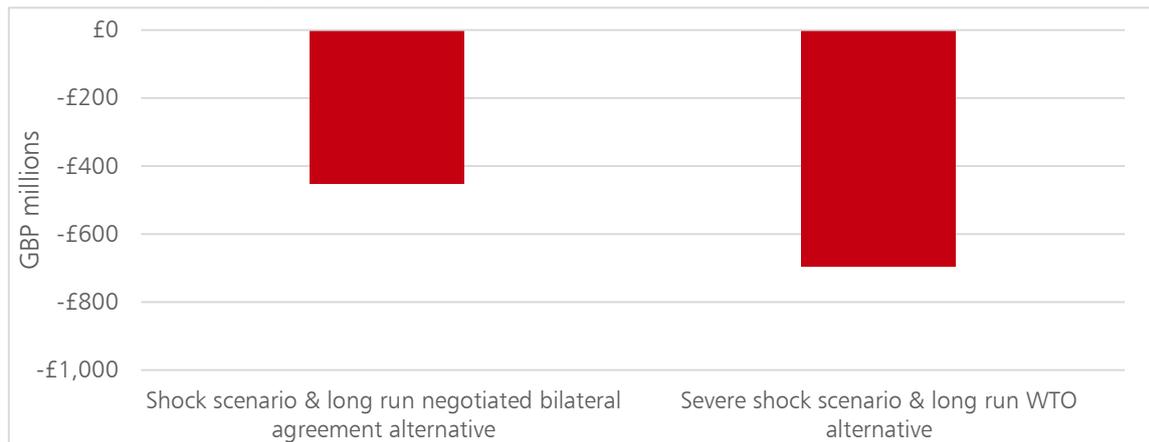
**1.16** Taken together, these effects would reduce the real value of the pension pot of those retiring around 2030. The aggregate defined contribution pension assets held by the cohort of those aged 65 in 2030 (today's 50 year olds) could be lower by around £450 million in a shock scenario that was then followed by a negotiated bilateral agreement alternative (Figure 1.B). The reduction could be around £700 million in a severe shock scenario that was then followed with UK trade governed by the WTO alternative.<sup>14</sup>

---

<sup>13</sup> The typical portfolio weights are based on ONS data on the asset holdings of long-term insurance companies at end 2014. *Investment by insurance companies, pension funds and trusts*. ONS (2016).

<sup>14</sup> Both figures have been deflated to 2015 prices.

**Figure 1.B: Change in aggregate defined contribution wealth of those aged 65 in 2030 relative to remaining in the EU (at 2015 prices)**



Source: ONS Wealth and Assets Survey, ONS Annual Survey of Hours and Earnings, HM Treasury calculations

**1.17** Two illustrative scenarios are used to estimate the magnitude of these effects on future pensioners:

- the first one uses economic analysis from the shock scenario in the short-term document until 2018 Q2 and analysis based on the central estimate of the negotiated bilateral agreement alternative in 2030. It assumes that there is a linear transition in the profiles of real and nominal GDP in the intervening years
- the second uses economic analysis from the severe shock scenario in the short-term document until 2018 Q2 and analysis based on the central estimate of the WTO alternative in 2030. It also assumes that there is a linear transition in the profile of real and nominal GDP in the intervening years

**1.18** Both examples consider the effects on the pension assets of an individual currently aged 50, who is on median earnings, currently has median levels of defined contribution pension assets of £20,000, and contributes 8% of annual earnings into the pension between now and 2030.<sup>15</sup>

**1.19** Under the assumptions above, that individual's pension assets would be around £3,800 lower in 2030 (in 2015 prices) than if the UK were to remain in the EU in the first illustrative scenario, and around £5,800 lower (in 2015 prices) in the second illustrative scenario. If these amounts were annuitised, then based on current annuity rates, and in 2015 prices, an individual would be £223 per year worse off in the shock scenario compared with remaining in the EU, and £335 per year worse off in the severe shock scenario. This would equate to £4,460 over a 20 year period in the shock scenario and £6,700 over a 20 year period in the severe shock scenario.

**1.20** Box 1.A. considers the effects of uncertainty and financial market volatility on the value of pension fund assets and the numbers of people contributing to pension savings over the past 30 years.

<sup>15</sup> The average rates of return on pensions would be 28 basis points lower in the shock scenario, and 34 basis points in the severe shock scenario.

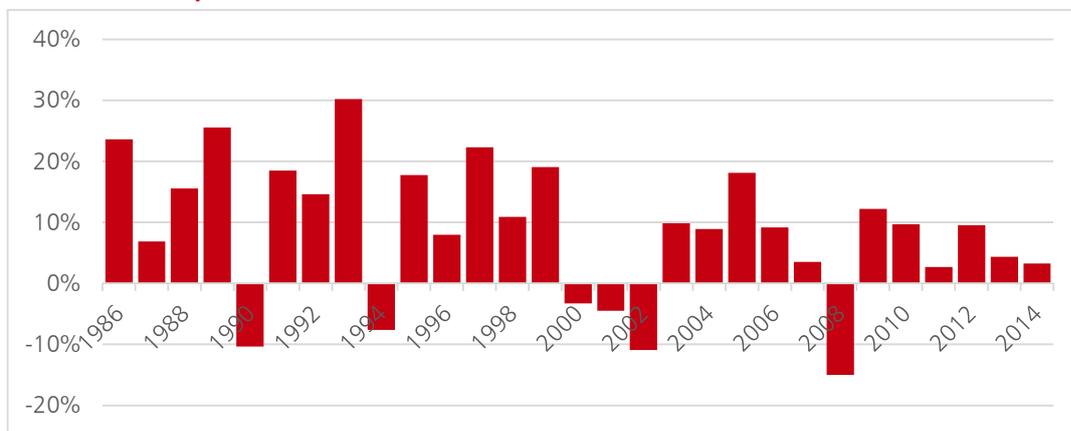
### Box 1.A: Pension assets over the past thirty years

HM Treasury analysis in the short-term document showed that periods of uncertainty are typically associated with financial market volatility. The value of pension fund assets has been closely related to fluctuations in economic confidence and prospects. Over the past thirty years there have been several instances when the value of pension assets has fallen. These have generally been associated with heightened uncertainty or with an economic recession, including in:

- 1990, coinciding with recession
- 2008, reflecting the systemic disruption in financial markets and the associated Great Recession

Other occasions when pension assets fell were in 1994, following a fall in the bond market triggered by an unexpected tightening in US monetary policy, and in 2000-02 following the end of the dot-com boom.

#### The change in value of assets held by pension funds and long-term insurance companies (%)



Source: ONS, *Investment by Insurance Companies, Pension Funds and Trusts (2015)*

The HM Treasury short-term analysis showed that a vote to leave the EU would instigate another period of increased uncertainty. This would reduce the value of pension investments.

Periods of uncertainty may also lead some people to cut back on their pension saving. For example, HMRC estimate that the number of people making contributions to personal and stakeholder pensions in the UK fell from 7.6 million in 2007-08 to 6.4 million in 2008-09.<sup>16</sup> The number of people contributing to personal and stakeholder pensions remained lower at 6.4 million in 2013-14, with an annual average contribution of £2,840.

The introduction of automatic enrolment has contributed to a marked increase in the number of people contributing to workplace pensions since 2012. Between 2004 and 2012, there was a general downward trend in workplace pension participation from 63% (11.9 million eligible employees) to a low of 55% (10.7 million). Between 2012 and 2014 there was a significant increase of 3.2 million to 13.9 million eligible employees participating in a workplace pension (70%). The government's policy is to increase the number of people contributing to pensions. The uncertainty and shock of leaving the EU could undermine that objective.

**Table 1.C: Summary of effects on pensioner real incomes**

	<b>Impact on income in 2017–18<sup>17</sup></b>	<b>Number of pensioners applies to<sup>18</sup></b>
Basic State Pension (UK residents)	Higher prices would erode effective purchasing power by £137 and £142 per annum in the shock and severe shocks scenarios respectively	11.7 million
Annuity	Higher prices would erode effective purchasing power by around £50 per annum on an average fixed income annuity income in both scenarios.	Around 5 million with fixed income annuities
Defined Benefit pensions in payment	Payments are usually linked to inflation. However, delays between price rises and pension indexation may result in an erosion of purchasing power in the short term.	Around 4.5 million
Saving income (including ISAs)	Higher prices would erode effective purchasing power of any income from savings by 2.3% in the shock scenario, and 2.4% in the severe shock scenario.	3.9 million
Income from investment bonds or debt securities	Higher prices would erode effective purchasing power of income received by 2.3% in the shock scenario, and 2.4% in the severe shock scenario.	Around 1.2 million
Dividend income from shares	Lower on average, as lower corporate profits would reduce dividend prospects.	Around 1.1 million

*Source: ONS Wealth and Assets Survey, DWP, HM Treasury calculations*

**Table 1.D: Summary of effects on value of pensioner assets from change in asset prices**

	<b>Impact on value of assets in 2018 Q2 in scenario</b>		<b>Number of pensioners applies to</b>
	<b>Shock scenario</b>	<b>Severe shock scenario</b>	
Housing	10% lower	18% lower	8.5 million
UK corporate debt securities	10% lower	16% lower	0.1 million
Shares in UK companies	20% lower	29% lower	Around 1.1 million
Saving accounts including ISAs	Assumed unchanged	Assumed unchanged	3.9 million

*Source: ONS Wealth and Assets Survey, HM Treasury calculations*

<sup>16</sup> Personal pensions: contribution and tax relief statistics, PEN 6 table. HMRC

<sup>17</sup> The cash values of State Pensions and level annuities and the income received from investment bonds and debt securities would be unchanged. Higher prices would erode effective purchasing power of income as set out in table 1.A.

<sup>18</sup> The number of pensioners receiving the basic State Pension is from 2015, and all other data from 2014.