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Identifying fiscal sustainability challenges in the areas of pension, health care and long-term care policies

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Comments and enquiries should be addressed to:

European Commission
Directorate-General for Economic and Financial Affairs
Unit Communication and interinstitutional relations
B-1049 Brussels
Belgium
E-mail: ecfin-info@ec.europa.eu

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Giuseppe Carone (Head of Unit, Sustainability of public finances) and Per Eckefeldt (Deputy Head of Unit, Sustainability of public finances) coordinated and supervised the production of the paper. The main contributors were Per Eckefeldt, Christoph Schwierz, Luigi Giamboni and Menno Aarnout. Contributions to an earlier version by Ana Xavier, Alexander Schwan and Barbara Lipszyc are gratefully acknowledged. Statistical support was provided by Etienne Sail.

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Comments on the report would be gratefully received and should be sent to:

Directorate-General for Economic and Financial Affairs
Unit C2: Sustainability of public finances
European Commission
BE-1049 Brussels

or by e-mail to ECFIN-SECRETARIAT-C2@ec.europa.eu

TABLE OF CONTENTS

LIST OF TABLES

LIST OF GRAPHS

1. INTRODUCTION

This paper presents a horizontal assessment framework used by the Commission services to identify structural-fiscal reforms that are deemed necessary to address fiscal sustainability challenges in the Member States. It describes the steps to ascertain the extent to which there is a policy challenge in ensuring progress towards fiscal sustainability and which policy dimensions merits closer scrutiny, taking into account the country-specific circumstances in the fields of, respectively: i) pension policy; ii) health care policy; and, iii) long-term care policy. The areas under scrutiny concern the design of national policies in the above-mentioned policy fields and are under the direct control of the Member States' governments. These areas are explicitly mentioned, in relevant cases, in the policy coordination process at EU level, the European Semester.

The deterioration in fiscal positions and increases in government debt since 2008, together with the budgetary pressures posed by population ageing, compound each other and make fiscal sustainability an acute policy challenge. Analysing prospective government debt developments and risks to fiscal sustainability is therefore crucial at the current juncture for euro-area countries and for the EU as a whole to be able to formulate appropriate policy responses and restore credibility and confidence. Developments in the recent past, in particular the sovereign debt crisis leading to conditions under which some Member States faced difficulties in accessing the market, have confirmed that fiscal sustainability challenges are not only of longer-term nature. The strengthening of the EU fiscal sustainability assessment framework as regards the short- and medium-term dimensions, as presented in the 2012 Fiscal Sustainability Report[1] is, therefore, all the more relevant in the context of the financial and economic crisis.

The economic and budgetary situations and prospects vary widely among EU countries at the current juncture, pointing to a diversified policy approach and different degrees of required fiscal consolidation. The appropriate combination of policies needed to ensure fiscal sustainability will depend on the main reasons behind the fiscal sustainability challenges the different Member States are facing.

In terms of adapting economic policies to changing circumstances, structural fiscal adjustment plays an important role. In order to provide policy advice to countries in a comparable manner, it is useful to consider robust indicators so as to underpin the recommendations. From the overarching point of view of enhancing fiscal sustainability, a logical starting point is the sustainability indicators used in EU budgetary surveillance. The sustainability indicators show the extent to which there is a need for large policy adjustment now or in the future (of fiscal or structural nature or a combination of the two). On this basis, it is necessary to analyse the main causes of the sustainability gap and how they should be addressed. Hence, this process entails two steps:

- identifying the extent to which there is an important fiscal sustainability challenge;
- establishing the nature of the challenge so as to devise appropriate policies to remedy the situation.

2. A THEMATIC ASSESSMENT FRAMEWORK FOR IDENTIFYING FISCAL SUSTAINABILITY CHALLENGES

A key objective in the EU is to ensure sustainability of the public finances, including in a long-term perspective. Fiscal sustainability refers to the ability to continue now and in the future current policies (with no changes regarding public services and taxation) without causing public debt to rise continuously as a share of GDP.

[1] European Commission (DG ECFIN), 2012, "*Fiscal Sustainability Report 2012*", European Economy, No. 8/2012, EC, Brussels, http://ec.europa.eu/economy_finance/publications/european_economy/2012/fiscal-sustainability-report_en.htm .

First, for the purposes of establishing whether on the basis of current policies a large adjustment in policy is required to ensure fiscal sustainability, we look at the sustainability indicators (the S1 and S2 indicators[2]) used in budgetary surveillance in the EU. This multidimensional approach enables assessing:

- medium-term challenges, through fiscal gaps related to the excess of projected expenditure, including age-related expenditure (notably on pensions, health care and long-term care) over projected revenue together with any gap with respect to the primary balance needed to bring the debt-to-GDP ratio to 60% of GDP by 2030 (**S1 indicator**). This indicator, therefore, takes into account age-related spending trends over the medium term and beyond, influenced by among others country-specific demographic prospects and country-specific arrangements of pension systems. Moreover and importantly, it incorporates the effort needed by high-debt countries to respect the Treaty threshold of 60% of GDP for government debt within a reasonable time span.
- long-term challenges, through fiscal gaps related to the excess of projected expenditure, including age-related expenditure (specifically on pension, health care and long-term care) over projected revenue together with any gap with respect to the primary balance needed to ensure that the debt-to-GDP ratio is not on an ever-increasing path (**S2 indicator**). This indicator, therefore, takes into account very long-term trends, which is highly relevant when analysing public spending programmes like pensions and health care.

Countries with high S1 or S2 values are classified to be at medium risk (S1 higher than zero or S2 higher than 2) and high risk (S1 higher than 2.5 or S2 higher than 6). Second, once a medium or high sustainability gap is identified, it is necessary to pinpoint the nature of it. This is done by looking at the relative importance of future spending pressures in the EU countries in the fields of pensions, health care and long-term care, respectively. The time horizons correspond to those of the sustainability indicators (covering the full period (to 2060) of projections available from the 2012 Ageing Report[3] in the case of the S2 indicator and the period up to 2030 for the S1 indicator). This implies that the underlying dynamics of the spending trends over time are given due attention (e.g. the time path of demographic trends and of institutional settings currently in place, thereby including the timing of pension reforms). Table 1 shows a set of indicators that merit attention so as to identify fiscal sustainability policy challenges, and in addition the source(s) behind those challenges.

The cost of ageing, a key element of the sustainability indicators, covers a longer time horizon (almost 50 years) and its impact comes from the projected changes in age-related expenditure, notably on pension, health care and long-term care (from the 2012 Ageing Report).

The largest expenditure item of these is public pension spending, accounting for about 11% of GDP in the EU as a whole. There is considerable variation across Member States in terms of both current expenditure levels and in terms of projected changes in pension spending, reflecting the different pension systems in place, and importantly, at which stage of the pension reform process countries find themselves.

The second largest expenditure item is expenditure on health care, accounting for about 7% of GDP for the EU as a whole. In addition to health care, consideration is given to expenditure on long-term care. Taken together, these items represent 9% of GDP in the EU. As for pensions, there is considerable variation across Member States in terms of both current expenditure levels and in terms of projected changes, reflecting the different health care and long-term care systems and arrangements in place.

The analysis provided above is useful in terms of identifying the scale and scope of fiscal policy challenges in the Member States, and in indicating the main reason(s) behind such challenges. On this basis, as noted above, the second step entails establishing the nature of the challenge so as to remedy the situation. Specifically, this is done by analysing the nature of the challenge taking into account the

[2] For details about the sustainability indicators, see Chapter 1 in European Commission (DG ECFIN), 2012, "*Fiscal Sustainability Report 2012*", European Economy, No. 8/2012, EC, Brussels.

[3] European Commission (DG ECFIN) and Economic Policy Committee (AWG), 2012, "*2012 Ageing Report: Economic and budgetary projections for the 27 EU Member States*", European Economy, No. 2/2012, EC, Brussels. http://ec.europa.eu/economy_finance/publications/european_economy/2012/2012-ageing-report_en.htm

county-specific circumstances in the fields of: i) pension policy, ii) health care policy and, iii) long-term care policy, respectively.

Table 1: Key indicators for fiscal sustainability challenges

	Sustainability indicator (S1)	2014-2030, of which:			Sustainability indicator (S2)	2014-2060, of which:			
		Pension	Health care	Long-term care		Pension	Health care	Long-term care	
BE	5.4	1.7	0.1	0.3	7.2	4.0	0.3	1.9	BE
BG	-1.2	0.7	0.2	0.0	3.4	1.8	0.4	0.2	BG
CZ	0.6	0.0	0.3	0.1	5.3	2.2	1.1	0.4	CZ
DK	-2.1	-0.4	0.3	0.5	2.2	-1.3	0.7	2.6	DK
DE	0.1	0.5	0.4	0.1	2.1	1.5	0.9	0.1	DE
EE	-2.8	0.1	0.2	0.0	1.9	0.1	0.7	0.2	EE
IE	5.2	0.6	0.3	0.1	3.2	3.0	1.1	1.2	IE
ES	2.6	-0.2	0.3	0.0	0.3	-0.4	1.2	0.4	ES
FR	2.2	0.1	0.3	-0.1	1.6	0.7	1.0	-0.1	FR
HR	*0.2*	-0.2	0.2	0.0	*2.2*	-0.3	2.2	0.0	HR
IT	1.5	-0.3	0.2	0.1	-1.6	-0.2	0.6	0.6	IT
LV	-2.4	-1.1	0.1	0.0	-0.1	-1.5	0.4	0.2	LV
LT	-1.0	0.4	0.1	0.1	4.3	3.1	0.4	0.7	LT
LU	0.4	1.7	0.1	0.2	10.2	6.5	0.7	1.5	LU
HU	-0.8	-1.1	0.2	0.1	0.6	-0.1	0.7	0.3	HU
MT	1.6	-0.1	0.6	0.2	6.2	3.0	1.9	0.6	MT
NL	1.2	0.4	0.4	0.5	5.3	1.0	0.7	2.7	NL
AT	1.7	1.2	0.4	0.2	3.5	1.7	1.1	0.8	AT
PL	0.2	-0.3	0.4	0.1	2.5	-0.8	1.5	0.6	PL
PT	2.6	0.1	0.3	0.0	-1.0	-0.3	1.3	0.2	PT
RO	-0.5	0.2	0.2	0.1	4.4	2.5	0.7	0.6	RO
SI	1.9	0.5	0.3	0.2	6.6	4.1	0.8	1.1	SI
SK	-0.1	-0.1	0.5	0.0	4.3	1.4	2.0	0.2	SK
FI	2.1	1.4	0.3	0.5	6.0	1.9	0.7	1.9	FI
SE	-1.6	0.0	0.2	0.4	3.4	0.0	0.5	2.0	SE
UK	4.3	-0.1	0.2	0.1	4.9	1.3	0.8	0.5	UK

Source: 2012 Ageing Report, Fiscal Sustainability Report 2012, Commission services

Notes: The sustainability indicators and projections of age-related expenditure in this table are calculated on the basis of the AWG reference scenario from the 2012 Ageing Report. Projections for BE, DK, ES, HU, NL, PL, LV, SK and SI have been updated after the publication of the 2012 Ageing Report in May 2012, to incorporate the impact of pension reforms, as verified by peer reviews by the Economic Policy Committee (EPC). Greece and Cyprus are implementing adjustment programmes monitored by the EU, the IMF and the ECB. The macroeconomic and budgetary prospects for these 'programme' countries are assessed more frequently than for the other Member States. The time horizon covered by the forecasts for these countries is also different than for the other Member States and assume full implementation of the adjustment programme. They are therefore not included here. Long-term projections for HR were not included in the 2012 Ageing Report. As proxies for long-term spending trends, the projections included in the 2012 pre-accession programme were used. It needs to be borne in mind that these projections are not comparable with those for the other 27 EU Member States. Column 1 (sustainability indicator S1): a value of more than 2.5 suggests high medium-term fiscal risk; a value between 0 and 2.5 suggest medium medium-term fiscal risk (high and medium risk highlighted in yellow), a value below zero suggests low medium-term fiscal risk. Column 5 (sustainability indicator S2): a value higher than 6 suggest high long-term fiscal risk and a value between 2 and 6 suggest medium long-term fiscal risk (high and medium risk highlighted in yellow), a value below two suggests low medium-term fiscal risk. Columns 2 to 4 and 6 to 8 (pensions, health care and long-term care): shows the contribution to the 'cost of ageing' from the specific spending programme.

2.1. COMPARING STRUCTURAL FISCAL CHALLENGES AND COUNTRY-SPECIFIC RECOMMENDATIONS (CSRs)

Europe 2020 is the European Union's ten-year growth and jobs strategy that was launched in 2010. It is about more than just overcoming the crisis from which our economies are now gradually recovering. It is also about addressing the shortcomings of our growth model and creating the

conditions for a smart, sustainable and inclusive growth.[4] Implementation of the Europe 2020 strategy is a core part of the policy coordination process at EU level through the annual European Semester. This entails formulating recommendations tailored to the situation in each Member State - Country-Specific Recommendations (CSRs). This section presents the outcome of the thematic assessment framework for structural fiscal reforms and makes a factual comparison with the 2014 CSRs (see Annexes 1-3 for the 2014 CSRs).

Table 2: Horizontal analysis of structural fiscal policy challenges and CSRs in 2014

	Pension	Health care	Long-term care	
BE	X Y		X Y	BE
BG	X Y	Y		BG
CZ	X Y	X Y		CZ
DK			X	DK
DE	X Y	(X) Y	Y	DE
EE				EE
IE	X	X Y	X	IE
ES		X Y		ES
FR	Y	X Y		FR
HR	Y	Y		HR
IT				IT
LV		Y		LV
LT	X Y			LT
LU	X Y		X Y	LU
HU				HU
MT	X Y	X Y	(X)	MT
NL	(X) Y	(X)	X Y	NL
AT	X Y	X Y	(X) Y	AT
PL	Y	X Y		PL
PT	Y	X Y		PT
RO	X Y	Y		RO
SI	X Y	(X) Y	X Y	SI
SK	(X)	X Y		SK
FI	X Y	(X) Y	X	FI
SE			X	SE
UK				UK

Source: Commission services
Notes: X- challenges based on the screening described in Table 1 above, Y- CSR in 2014 European Semester, ( ) denotes a borderline case. A country may be considered a borderline case if it has been identified as being at either medium or high risk according to the S1 or S2 indicator (see Table 1) and the contribution to the sustainability gap from the specific policy area (pension, health care or long-term care) is: i) very close to the average in the EU; and, ii) higher than on average in the EU only in one of the time dimensions considered and not both (i.e. according to either the S1 or the S2 indicator). This is the case for MT and AT (long-term care), NL (pension and health care), SI (health care), SK (pension), FI and DE (health care). Long-term projections for HR were not included in the 2012 Ageing Report. As proxies for long-term spending trends, the projections included in the 2012 pre-accession programme were used. It needs to be borne in mind that these projections are not comparable with those for the other 27 EU Member States.
Programme countries (EL and CY) are not included (see note to Table 1)

Generally, structural fiscal challenges and recommendations are broadly similar (see Table 2). There are also some differences, which do not necessary point to inconsistency but are often warranted by a series of valid reasons. First and foremost, some recommendations are not primarily motivated by concerns for fiscal sustainability, but for other reasons, taking account of special country specific circumstances. Second, the horizontal assessment framework may not take due account of very recent measures adopted or implemented in Member States, since they may not be captured yet by the

[4] Eor further information on the Europe 2020 strategy, the European Semester and the Country-Specific Recommendations, see the Commission's website: http://ec.europa.eu/europe2020/index_en.htm.

quantitative indicators used. Third, there are some borderline cases that merit specific attention (highlighted with a bracket). The individual areas for policy challenges (pension, health care and long-term care) are analysed in sections 3-5, respectively.

The thematic assessment framework described here is meant to provide guidance as to whether fiscal sustainability risks are important based on available indicators in DG ECFIN and should therefore not be taken as incorporating all the country-specific considerations relevant for the final formulation of country-specific recommendations.

3. PENSION POLICY CHALLENGES

As a result of the analysis of fiscal sustainability above, several countries face challenges in the area of pension systems. Next to the pension expenditure analysis, a broad set of indicators of current and future performance of pension systems is thus presented, based on a comparative analysis. It develops the possible specific areas where policy could be adapted to address the sustainability challenges tailored to the country-specific circumstances in the pension policy field.

Pension expenditure projections

Public pension expenditures in the EU are projected to increase by 1.0 p.p. of GDP over the period 2010-2060 from 11.4 % of GDP to a level of 12.1% of GDP (see Table 3).[5] In the euro area, an increase by 1.2 p.p. of GDP is projected. However, the range of projected changes in public pension expenditure is very large across MS. On the one hand, Latvia projects a decline of -3.7 p.p. of GDP. On the other hand, an increase of 9.4 p.p. of GDP can be observed for Luxembourg. Belgium, Malta and Slovenia project a public pension expenditure increase by more than 5 p.p. of GDP. On the contrary, the ratio decreases over the projection horizon between 2010 and 2060 in Bulgaria, Denmark, Estonia, Italy, Latvia and Poland. For the remaining countries, an increase of less than 4 p.p. of GDP is expected.

Potential reform approaches

For countries with medium/high fiscal challenges and high projected increases in public pension spending, there might be a need to implement sustainability-enhancing reform measures in their pension systems. In general, two ways to reform pension systems with the aim of increasing their sustainability can be distinguished:

***1. Eligibility-restricting reforms*:** These reforms have a decreasing impact on the coverage rate of pension systems. In many cases, reforms are related to the abolishment or restriction of early retirement schemes and other early-exit pathways, the increase in statutory retirement ages (also through introducing automatic links to the largely known changes in longevity over the medium- and long-term) or the harmonisation of retirement ages between men and women, .

2. Generosity-reducing reforms: As an alternative to restrictions in the coverage of a pension system, several other policy approaches can be applied that restrict the generosity of the pension. This is reflected in a decrease in the pension benefit ratio (defined as the average pension as a share of the average economy-wide wage). If benefit ratios are very high both in comparison to the reference wage and in comparison to other Member States, this could hint to the fact that a pension system is rather generous. Reducing the benefit ratio, i.e. the generosity of pension entitlements, can thus have a substantial decreasing or at least stabilising impact on public pension expenditure.

[5] European Commission (DG ECFIN) and Economic Policy Committee (Ageing Working Group), 2012, 'The 2012 Ageing Report: Economic and budgetary projections for the 27 EU Member States (2010-2060)', European Economy, No. 2/2012. (http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee2_en.pdf). Projections have been updated after the publication of the 2012 Ageing Report for Belgium, Denmark, Cyprus, Latvia, Hungary, the Netherlands, Poland, Slovenia and Slovakia. Those changes have also an influence on the EU and EA average.

Eligibility-restricting reforms

The following indicators are specifically investigated when analysing the eligibility of a pension system:

- *Coverage ratios:* To get an overview in which countries eligibility-restricting reforms might be necessary, the projected coverage ratio development over time is examined. The coverage ratio is defined as the total number of public pensioners as % of population aged 65 and older. In those countries where this ratio is projected to remain rather stable even in the long-run, a potential need to restrict the pension system's eligibility might exist (see Annex 4 for an overview).

- *Statutory and early retirement ages:* For countries with high projected increases in public pension spending (and potentially high coverage ratios), a necessary component might be to adjust the retirement age, given the expected gains in life expectancy in the coming decades. This would be the case for countries in which retirement ages are supposed to stay constant at a relatively low level even in the long-run under current legislation. Moreover, in countries where the gap between early retirement ages and statutory retirement ages are quite substantial, people might be tempted to leave the labour market too early. A restriction in early retirement schemes might be needed to increase the effective retirement age and pension spending.

Table 3 below shows the change in statutory and early retirement ages under current legislation as well as the change in the effective retirement age, split by gender. As a result of recent reforms in many MS, statutory and effective retirement ages will rise substantially until 2060, with major steps often taking place in the near future. Only in Croatia (for men), Luxembourg, Austria (for men), Portugal, Finland and Sweden, no retirement age increases are legislated to take place. The gap between early retirement ages and statutory retirement ages is in several cases quite substantial (e.g. Belgium, France, Luxembourg, Austria, Malta or Romania).

- *Retirement age gaps by gender:* Statutory retirement ages for males and females will gradually converge in almost all MS, except for Bulgaria and Romania (see Table 3). In other countries the retirement age harmonisation is only implemented very gradually, i.e. till 2030 and even beyond (Croatia, Austria and Poland). In all those countries, an introduction/acceleration of the retirement age harmonisation might be a potential reform option.

- *Effective retirement age projections and the gap between effective and statutory retirement ages:* In almost all countries, average effective retirement ages are lower than the respective statutory retirement ages and a gap is projected to remain in the long-run (see Table 3). This is often related to existing early retirement schemes, alternative early-exit pathways such as disability schemes or other government measures that provide pension income before reaching the statutory retirement age threshold. Potential measures to increase effective retirement ages are restrictions in early retirement and other early exit pathways, increases in statutory and early retirement ages or other incentives to stay longer on the labour market, as described below.

- *Penalties and bonuses for early and late retirement:* One way to increase the effective retirement age further in the direction of the statutory retirement age would hence be to reduce incentives to leave the labour market early. Next to the full abolishment of early retirement schemes or the increase of early retirement ages, higher early retirement penalties and bonuses for late retirement could lead to the warranted effects. The size of applied penalties and bonuses in the different Member States can vary quite substantially (overview in Annex 5).[6]

[6] For a general overview of actuarially neutral adjustment factors (i.e. penalties for early retirement), see Queisser, M. and E.R. Whitehouse (2006), "Neutral or Fair?: Actuarial Concepts and Pension-System Design", OECD Social, Employment and Migration Working Papers, No. 40, OECD Publishing. In that paper, an actuarially neutral penalty of around 6-7% is mentioned. This is also the average penalty in those countries that have a penalty system for early retirement. Bonuses for late retirement are in most of the countries slightly lower.

Table 3: Overview of relevant pension system indicators

	Public pension expenditure as % of GDP				Effective retirement age - males**			Effective retirement age - females**			Statutory (and early) retirement age - males			Statutory (and early) retirement age - females			LE	SF	Pensionable earnings base	Indexation rule	Benefit ratio (public pensions)			
	2010	2030	2060	change	2011	2030	2060	2011	2030	2060	2010	2030	2060	2010	2030	2060					2010	2030	2060	% change
BE	11.1	15.2	16.2	5.1	61.5	62.1	62.1	61.6	62.3	62.3	65 (60)	65 (62)	65 (62)	65 (60)	65 (62)	65 (62)			Full	P/CoL	39.6	40.6	37.7	-4.8
BG	9.9	9.6	11.1	1.1	63.2	64.7	64.7	61.5	62.5	62.5	63 (63)	65 (65)	65 (65)	60 (60)	63 (63)	63 (63)			Full	P/W	46.1	39.5	37.8	-18.1
CZ	9.1	8.9	11.8	2.7	62.9	64.3	65.6	60.1	62.6	65.1	62.2 (60)	65 (60)	69.3 (64.3)	58.7 (55.7)	64.7 (60)	69.3 (64.3)			Full	P/W	26.2	23.7	25.4	-3.0
DK	10.1	9.9	8.9	-1.1	64.2	67.0	67.2	62.3	65.5	66.3	65 (60)	68 (65)	72.5 (69.5)	65 (60)	68 (65)	72.5 (69.5)	x		YoR	W	35.8	32.9	30.4	-15.1
DE	10.8	12.0	13.4	2.6	64.3	65.7	65.7	63.5	65.3	65.3	65 (63)	67 (63)	67 (63)	65 (60)	67 (63)	67 (63)		x	Full	W	47.0	41.0	38.5	-18.1
EE	8.9	8.2	7.7	-1.1	63.8	65.4	65.4	64.5	65.0	65.0	63 (60)	65 (62)	65 (62)	61 (58)	65 (62)	65 (62)			Full	P/T	38.7	29.2	20.0	-48.5
IE	7.5	9.0	11.7	4.1	65.1	65.1	65.1	66.7	66.5	66.6	66 (65)	67 (65)	69 (65)	66 (65)	67 (65)	69 (65)			Contr	-				
EL	13.6	14.1	14.6	1.0	62.5	63.1	64.0	62.4	62.9	63.8	65 (60)	68.8 (63.8)	71.4 (66.4)	60 (55)	68.8 (63.8)	71.4 (66.4)		x	Full	P/GDP	35.9	35.1	27.6	-23.3
ES	10.0	10.0	9.6	-0.4	62.6	66.0	66.2	63.9	66.5	66.7	65 (61)	67 (63)	67 (63)	65 (61)	67 (63)	67 (63)		x	Last 25	IPR	56.2	50.3	34.3	-43.7
FR	14.6	14.9	15.1	0.5	60.1	62.8	62.8	60.2	62.8	62.8	60-65 (60)	62-67 (62)	62-67 (62)	60-65 (60)	62-67 (62)	62-67 (62)		x	Best 35	P	39.8	35.2	31.7	-20.4
HR	8.9	8.3	8.7	-0.2	60.6	60.6	60.6	60.6	60.6	60.6	65 (60)	65 (60)	65 (62)	60 (55)	65 (60)	65 (62)			Full	P/W				
IT	15.3	14.5	14.4	-0.9	61.7	66.1	67.3	61.4	65.4	67.5	65.3 (-)	67.8 (64.8)	70.3 (67.3)	60.3 (-)	67.8 (64.8)	70.3 (67.3)	x	x	Full	P	48.5	49.8	43.6	-10.2
CY	7.6	10.3	10.4	2.8	65.4	66.7	67.4	63.8	65.9	67.7	65 (63)	66 (63)	69 (63)	65 (63)	66 (63)	69 (63)	x		Full	P/W	30.3	32.2	26.9	-11.2
LV	9.7	6.0	6.0	-3.7	64.3	65.4	65.4	63.8	65.3	65.3	62 (60)	65 (63)	65 (63)	62 (60)	65 (63)	65 (63)		x	Full	P				
LT	8.6	8.4	12.1	3.5	63.5	64.3	64.3	61.7	63.8	63.8	62.5 (57.5)	65 (60)	65 (60)	60 (55)	65 (60)	65 (60)			Best 25	-	38.7	33.9	35.1	-9.2
LU	9.2	14.0	18.6	9.4	59.6	59.6	59.6	60.6	60.5	60.5	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)			Full	P/W	58.7	57.2	50.7	-13.6
HU	11.9	9.3	12.4	0.5	61.2	65.3	65.3	60.3	64.8	64.8	62 (60)	65 (65)	65 (65)	62 (59)	65 (65)	65 (65)			Full	P	31.2	27.7	25.5	-18.1
MT	10.4	10.4	15.9	5.5	61.3	64.0	64.0	60.3	62.6	62.6	61 (61)	65 (61)	65 (61)	60 (60)	65 (61)	65 (61)			Best 10	P/W	51.2	43.2	47.4	-7.5
NL	6.8	7.9	8.6	1.7	64.6	67.2	68.1	62.5	65.2	66.2	65 (65)	67.8 (67.8)	69.8 (69.8)	65 (65)	67.8 (67.8)	69.8 (69.8)	x		YoR	W				
AT	14.1	16.7	16.1	2.0	61.8	63.0	63.1	60.6	62.5	62.8	65 (62)	65 (62)	65 (62)	60 (60)	63.5 (62)	65 (62)			Best 40	P	42.3	41.1	35.5	-16.1
PL	11.8	10.3	9.8	-2.0	62.2	66.0	66.0	58.8	64.0	65.8	65 (-)	67 (65)	67 (65)	60 (55)	64.8 (62)	67 (62)		x	Full	P/W	46.7	39.4	23.7	-49.3
PT	12.5	13.2	12.7	0.2	64.5	65.8	65.8	64.7	65.7	65.7	65 (55)	66 (55)	66 (55)	65 (55)	66 (55)	66 (55)		x	Full/Best 10	P/GDP				
RO	9.8	10.3	13.5	3.7	63.1	64.0	64.0	61.2	62.6	62.6	64 (59)	65 (60)	65 (60)	59 (54)	63 (58)	63 (58)			Full	P/(W)	38.7	31.3	26.9	-30.5
SI	11.2	12.7	17.0	5.9	62.1	63.8	63.8	59.7	63.5	63.5	63 (58)	65 (60)	65 (60)	61 (56.7)	65 (60)	65 (60)			Best 24	P/W	19.2	16.4	16.3	-15.1
SK	8.0	8.1	10.6	2.7	61.4	62.6	66.2	58.7	62.4	65.9	62 (60)	63.9 (61.9)	67.7 (65.7)	57.9 (55.9)	62.6 (60.6)	63.9 (61.9)	x		Full	P/(W)	44.2	35.5	33.2	-24.8
FI	12.0	15.6	15.2	3.2	63.4	64.1	64.1	62.6	63.9	63.9	63-68 (62)	63-68 (62)	63-68 (62)	63-68 (62)	63-68 (62)	63-68 (62)		x	Full	P/W	49.4	48.2	44.1	-10.7
SE	9.6	10.1	10.2	0.6	65.1	65.6	65.6	64.0	64.4	64.4	61-67 (61)	61-67 (61)	61-67 (61)	61-67 (61)	61-67 (61)	61-67 (61)		x	Full	W	35.3	29.7	25.6	-27.7
UK	7.7	7.7	9.2	1.5	64.7	64.9	65.8	63.3	65.2	65.8	65 (65)	66 (66)	68 (68)	60 (60)	66 (66)	66 (66)			Contr	P/W/GDP				
EA***	12.1	12.8	13.4	1.2	62.8	64.4	64.8	62.3	64.1	64.7	64.1 (60.7)	65.8 (62.3)	66.7 (63.2)	62.2 (58.8)	65.5 (62.1)	66.6 (62.9)					40.9	37.0	32.5	-20.3
EU27***	11.3	11.7	12.3	1.0	62.9	64.5	64.8	62.0	63.9	64.5	64.4 (60.8)	66.1 (62.4)	67.3 (63.3)	63.1 (59.8)	66.0 (62.4)	67.3 (63.3)					42.9	39.8	35.3	-17.7

Source: Commission services, EPC, Eurostat.

Notes: * recently legislated automatic link of retirement ages to life expectancy for CY. Only information on projected minimum full pension age available (classified here as early retirement). Gap between early and statutory age set as constant in the long-run.

** Figures for effective retirement ages are proxied by projections for effective exit ages from the labour market based on Commission services (DG ECFIN) Cohort Simulation Model (CSM) (reference age group 50-74) and EUROPOP2010. Figures are slightly diverging from the 2012 Ageing Report due to a different reference age group (50-70 in the 2012 Ageing Report). Data not updated for non-peer reviewed countries with recently legislated increases in statutory retirement ages and/or reforms with effects on effective retirement ages (Status May 2013).

***: Population-weighted averages for expenditures, simple averages for retirement ages (effective and statutory) and benefit ratios and retirement ages. For countries with statutory retirement age corridors, the median of the corridor has been taken into account.

****: Effective retirement age data for HR not available split by gender. Latest Eurostat data from 2009 is shown.

LE= retirement age link to life expectancy; SF=sustainability factor Pensionable earnings: Full= Full career, YoR=Years of residence, Contr=Contributions, Last/Best= Last/Best number of years

Indexation rule: P=price, W=wages, CoL=Cost of living, T= Taxes. IPR Index for pension revaluation.

Generosity-restricting reforms

As an alternative to restrictions in the coverage of a pension system, several other policy approaches can be applied that restrict the generosity of the pension system and thus – ceteris paribus – increase its sustainability. This might especially necessary in countries where benefit ratios are supposed to stay at a relatively high level over the coming decades (see Table 3).

Pensionable earnings reference: Increasing the pensionable earnings base in the direction of full career contributions or from final pay to average pay schemes would increase the pension system sustainability and could be applied in countries where only a share of contributory years or even the final salary are taken into account in the pension formula so far (see Table 3, e.g. France, Spain, Lithuania, Malta, Portugal, Slovenia).

Accrual rates: Accrual rates for public pension entitlements have been adjusted (downsized) in several countries to take into account longer contributory periods and increasing retirement ages. Moreover, in some countries they will decline due to stricter eligibility criteria for pension entitlements or a partial shift to second and third pillar schemes (e.g. in Estonia, Latvia, Lithuania and Slovakia). Yet, in several countries, accrual rates remain rather high also in the long-run (Spain, Luxembourg) (See Annex 6). In general, a lower accrual rate helps to decrease the generosity of the pension system by decreasing replacement rates and thus leads to reduced pension expenditures.

Indexation rule: A majority of MS will apply indexation rules of pension entitlements that do not fully reflect a 1:1 relationship with nominal wage increases, i.e. a mix of wage and price or pure price indexation rules (see Table 3). In countries with a pure wage indexation rule or a high share of wages in the indexation formula (e.g. Croatia, Netherlands, Slovenia), a restriction to a mix of wage/price indexation or a pure price indexation would help to push pension expenditures down in the long-run. The same logic applies for valorisation rules of pension contributions.

Sustainability factors: Many MS (e.g. Germany, France, Finland, Italy, Portugal, Slovakia Spain, Sweden and Greece for the supplementary pension) have introduced sustainability factors in their pension systems (see Table 3). These (often automatic) adjustment coefficients are taken into account in the calculation mechanism that determines either the exact amount of pension entitlements or the specific contribution period required to be entitled for a full pension. The factors change the size of the pension benefit, e.g. depending on expected demographic changes such as life expectancy at the time of retirement or changes in the ratio between contributions and pensions. Also the introduction of a closer link between pension contributions and the resulting pension benefits, as expressed in a shift from 'old' (actuarially too generous) DB or point systems to NDC systems (done in Italy, Latvia, Poland, Sweden and Greece for the supplementary pension scheme) can be seen as a sustainability enhancing factor.

In comparison to a retirement age link to life expectancy, higher reductions in future pension spending would potentially materialize with a rule that links pension benefits to longevity gains without adapting statutory retirement ages. However, this would also lead to lower pension levels. If people do not extend their working lives in order to maintain the level of pension benefits, serious adequacy problems may arise.

3.1. COMPARING PENSION CHALLENGES AND COUNTRY-SPECIFIC RECOMMENDATIONS (CSRs)

As shown in Table 1 and Table 2, a pension challenge is present in 16 Member States (Belgium, Bulgaria, the Czech Republic, Germany, Croatia, Lithuania, Luxembourg, Malta, the Netherlands, Austria, Poland, Romania, Slovenia and Finland). For another 3 countries (France, Poland and Portugal) with a recommendation to revise certain aspects of their pension systems (see Annex 1), long-term fiscal sustainability in the pension area is not the main concern. Those countries either show a decrease in public pension spending in the long-run up to 2060 (Poland) or only a slight increase (France, likely to be even lower following reforms in 2013 and Portugal). France implemented a reform that increased the full pension contribution period and Poland and Portugal legislated an increase in the statutory retirement age. These reforms have a positive effect on the sustainability of the pension systems.

Moreover, account should be taken of the fact that Slovakia and the Netherlands are borderline cases with respect to pension-related long-term sustainability challenges.[7] Both countries have recently legislated strong reforms that introduced a retirement age link to life expectancy gains. Furthermore, Spain has introduced a pension reform in 2013 with a significant sustainability-enhancing impact. In addition, recent and planned measures in the pension field in Member States need to be taken duly into consideration when assessing the extent to which a challenge is present.

4. HEALTH CARE POLICY CHALLENGES

As a result of the analysis of fiscal sustainability challenges above, several countries are seen to face a challenge in the area of health care. In addition to the analysis of health care expenditure (current and projected), a broad set of indicators can be used to look at the performance of the health care system across several of its dimensions. A comparative analysis of these indicators can help understanding what are the possible and more specific areas of health care provision where policy could be adapted to address the sustainability challenges, taken duly into consideration the country-specific circumstances in the health care field.

In order to identify more specific challenges and potential areas for health care policy reform, the assessment framework looks at a set of internationally available and commonly used health and health care-related indicators. These indicators cover the main dimensions of public expenditure on health and the main areas of health care provision: hospital care, ambulatory care, pharmaceuticals and administrative spending. In addition, health status indicators are considered as capturing the potential need for healthcare. Using mainstream statistical tools it is also possible to combine these individual indicators into composite indicators, one for each of the areas of provision and one for the health status indicators. These composite indicators can help summarising the information provided by the individual indicators.

The relative performance of countries is then assessed on the basis of this comprehensive pool of indicators in an attempt to identify specific areas for improvement. An indicator value which is clearly an outlier or is out of line with country peers may suggest a need for improving the performance in the respective areas of health care provision or improving health status.

Note that such an analysis does not necessarily replace a more careful country-specific analysis of the respective health system, which may lead to a more specific definition of challenges and a more specific flagging of reform policies. More extensive information on country-specific features of healthcare systems, their characteristics and country-specific recommendations, can be found in the "Joint EC(ECFIN)-EPC Report on Health Systems". Country-specific recommendations on health care formulated in the last round of the European Semester are available in Annex 2. Examples of a more detailed set of goals, recommendations and measures can be found in the Memoranda of Understanding of Cyprus, Portugal, Greece and Romania.[8] A detailed assessment of public expenditure on outpatient pharmaceuticals is provided in the working paper on "Cost-containment policies in public pharmaceutical spending in the EU".[9]

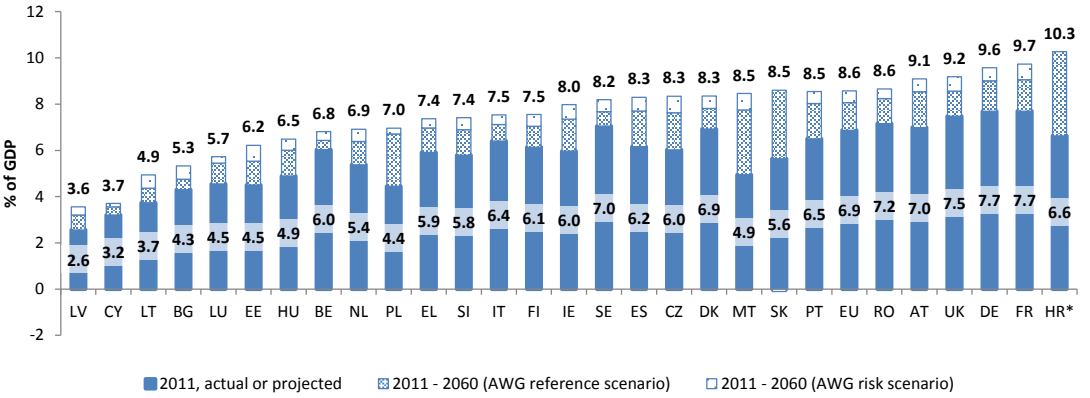
Health care expenditure – current and projected

Public spending on health care (excluding long-term nursing care) absorbs a significant and growing share of resources (6.9% of GDP in the EU in 2011) (Graph 1).[10] In addition, all EU Member States will face strong and growing pressures on their health systems in the coming decades, due to an ageing population and to non-demographic drivers (mostly technological factors). According to the 2012 Ageing Report and the 2012 Fiscal Sustainability Report, public expenditure on health care will rise at a higher rate than GDP growth: public spending on health care is expected to increase by 1.1 pp. of GDP due to ageing-related factors, compensated by some improvement in health status (AWG

[7] For a definition of a borderline case, see the notes to Table 2.
[8] http://ec.europa.eu/economy_finance/publications/occasional_paper/index_en.htm.
[9] http://ec.europa.eu/economy_finance/publications/economic_paper/2012/ecp461_en.htm
[10] The data presented was the latest available and used in the assessment of health care systems at the beginning of 2012. Thus, the presented data (as of Sep. 2014) is not the most recent, as in the meantime data for 2012 has been published.

reference scenario). When taking into account the impact of non-demographic drivers on future spending growth (AWG risk scenario), health care expenditure is expected to increase by 1.7 pp. of GDP from now till 2060. The projected expenditure on health care represents a considerable 30% of the total age-related increase in public spending till 2060.[11]

Graph 1: Current (2011) and projected (2011-2060) public expenditure on health



Source: 2012 Ageing Report, Fiscal Sustainability Report 2012, European Commission, own calculations.
Notes: The ranking of the countries deviates from the ranking in the Ageing Report, as the 2011 data has been updated for some countries according to data availability. Data for Croatia includes the projection of long-term care spending based on national sources, as no separate projection for health care and long-term care is available. No risk scenario is available for HR either.
Data excludes spending for long-term nursing care (HC.3 category of the system of health accounts).

The growing importance of public expenditure on health care as a share of GDP and in total government expenditure and the need for budgetary consolidation all across the European Union has brought public expenditure on health care into the spotlight within the policy debate on how to ensure the medium- and long-term sustainability of public finances and in addition to other areas of public spending such as pensions.

In this context, it is important to assess the performance of health systems and identify areas where reforms may be needed to reduce or control expenditure growth through a more efficient use of public resources. In so doing, reforms can increase the cost-effectiveness of public health systems to address pressures in demand and strong resource constraints. While spending on health care can contribute to better health, and therefore add to economic prosperity through higher labour market participation and productivity, it also limits public spending in other areas which can contribute to health and economic growth (education, R&D, poverty reduction). Moreover, health spending appears not to be producing the same value across countries in that countries with similar levels of expenditure have different levels of health.

This has been highlighted by the 2010 Council Conclusions[12] on the 2010 EPC-EC (DG ECFIN) Joint Report on health systems in the EU, which recognize the need to strengthen measures aiming at improving value for money and constraining excessive growth in health care spending. The 2010 EPC-EC (DG ECFIN) Joint Report on health systems in the EU has been an important basis for pooling together the indicators used in this thematic assessment framework on health.

Assessing potential areas for policy reform

As said, to identify possible challenges and potential areas for policy reform, a comprehensive set of indicators is used covering public expenditure on health and the main areas of health care provision: hospital care, ambulatory care, pharmaceuticals and administrative spending. In addition, indicators of health status are considered. Individual indicators may also be combined into composite indicators to summarise the pool of information available. Countries are then assessed on the basis of this comprehensive pool of indicators. The aim is to look at the allocation of resources (proxied by

[11] An alternative projection method can be explored in Medeiros J., and C. Schwierz (2013).
[12] See: http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/ecofin/118273.pdf

expenditure and input indicators) across areas of health care provision and then look at how much each system is getting out of those inputs by looking at process and output indicators. However, this is done in a simple and purely descriptive manner; no cost-efficiency or cost-effectiveness analysis is conducted.

Overall, we assess six groups of indicators collected in the following domains: 1) public expenditure on health care; 2) hospital care; 3) ambulatory care; 4) pharmaceutical spending; 5) administrative spending and; 6) health status. A list of the potential individual indicators that can be used to assess health care systems in these areas is available in Annex 7.

1) Public expenditure on health care: Public expenditure on health care is defined as expenditure on health care incurred by state, regional and local government bodies and social security schemes. Expenditure indicators include (a non-exhaustive list): public expenditure on healthcare as % of GDP; projected public expenditure on healthcare as pp. of GDP; public expenditure on healthcare per capita in purchasing power standards (PPS); public in total (private and public) expenditure on healthcare; and public expenditure on healthcare as a share of total government expenditure.

The rationale for looking at spending using these various indicators is to explore the concept of "affordability" by looking at recent expenditure trends and expenditure forecasts (i.e. taking into consideration the impact of ageing and other cost-drivers). In other words, is the country spending "too much" compared to others? Is its expenditure due to increase by more than others? Is this fiscally sustainable? In general, from a fiscal point of view, it can be assumed that higher levels of expenditure on health may place a higher challenge to the fiscal sustainability of health systems and fiscal sustainability in general. It can also be assumed that a growing share of health in total government expenditure may limit the fiscal space for government spending in other economic areas, increasing the fiscal pressure on government budget. Table A.9.1 in Annex 9 provides an overview of the expenditure indicators used. Next to the individual indicators, the ranking of countries (from highest to lowest) is depicted.

2) Hospital care: Public expenditure on hospital care includes all expenditure by state, regional and local government bodies and social security schemes on hospitals, including general hospitals, mental health, substance abuse hospitals and other specialty hospitals. Public expenditure on hospitals represents a very large share of total public expenditure on health care (on average more than 40%) and has not changed significantly in the past decade despite calls for policy reform that moves health care from hospital to primary and community settings.

Due to the intensity of care provided, hospital care tends to be more expensive than other forms of care such as ambulatory care. This is especially the case for inpatient care, which is defined as all admissions during which patients stay overnight before discharge. However, large treatment variations can be observed within and across Member States i.e. patients are treated differently for the same condition: in some cases as inpatient in others as ambulatory (day-case), in some countries patients stay longer in hospital than in other countries for the same condition. This reflects the fact that hospital care provision and therefore spending depends on numerous factors other than patients' needs or severity of condition. These factors include budgetary incentives associated with hospital remuneration, constraints on hospitals and their staff, lack of competition among providers, lack of monitoring and benchmarking, excess bed capacity and excess equipment for example.

Therefore, assessing the importance (including fiscal importance) of the hospital sector and its performance can be done by using a group of hospital-related indicators of which the most common include: public expenditure on hospital care as % of GDP; public expenditure on hospital care as % of public current health expenditure (CHE); number of acute care beds per 1 000 inhabitants; acute care bed occupancy rate; average length of stay (ALOS) in acute care hospitals; and hospital day cases as a % of all hospital discharges.

The rationale to look at hospital indicators is to try and understand if a particular country system is "too" hospital centred and "too" inpatient centred i.e. if a Member State is potentially using unnecessarily and more expensive hospital resources to treat patient conditions which can be treated in other settings such as primary care or as ambulatory day-cases. Too high spending on hospital care, too low bed occupancy rates, too high ALOS and too small a share of day-cases may provide an indication that efficiency gains can be made through changes in service delivery or changes in incentives that affect service delivery, without a negative impact on patients.

For each country, the indicators are presented alongside their ranking, where a high ranking represents relatively low performance in hospital care relative to the other EU Member States. It is assumed that this correlates with a possible need for improving hospital care. The purple colour is assigned to countries with a level of performance below the EU median. To ease readiness, the individual indicators are further synthesized, also for the other areas of health care spending, (See Table A.9.2 in Annex 9) into one composite index of "hospital care" (see Annex 8 for methodological details). As an example, the results indicate a potential need for policy reform in the area of hospital care in Bulgaria. Bulgaria health care system seems relatively hospital centric: It has one of the highest share of health care spending on hospitals, high hospital bed density, low occupancy rates and an estimated very low level of day discharges. Thus, Bulgaria seems to have some potential to improve allocative efficiency of health spending out from the hospital towards other spending areas of care.

3) *Ambulatory care*: Ambulatory care, in contrast with inpatient hospital care, refers in general terms to primary care and outpatient secondary care. Primary care is generally understood as the care provided by physicians - usually general practitioners - and nurses, which are the initial point of consultation for patients in a health care system. Secondary care refers to work by medical specialists (e.g. cardiologists, urologists) and often occurs after a referral from a primary care physician. Primary care is usually provided outside of the hospital system, more so than secondary specialist care which in some Member States is mostly delivered in hospital outpatient departments.

The departing point for analysing ambulatory care indicators and notably primary care indicators is that countries with strong ambulatory and notably strong primary care provision may have been successful in reducing costs while maintaining or improving health status. However, if Member States wish to encourage the use of primary care as a means to ensure cost-effective provision of services, then measures have to be implemented to guarantee sufficient numbers and good geographic distribution of trained and practising primary care physicians and nurses.

Therefore indicators of ambulatory and primary care include for example: public expenditure on ambulatory care as % of GDP; public expenditure on ambulatory care as % of public current health expenditure (CHE); the number of general practitioners (GPs) per 100 000 inhabitants; the share of general practitioners in all physicians; the ratio of nurses and midwives to physicians; and the ratio of outpatient to inpatient contacts per capita to mention a few. As in the previous section, the individual indicators are synthesized (See Table A.9.3 in Annex 9) into one composite index of "ambulatory care". As an example, the results indicate a potential need for policy reform in the area of ambulatory care in Cyprus: Few resources are spent on ambulatory care and there is a low number of general practitioners and nurses, potentially increasing the need for more costly treatment in the hospital sector.

The rationale for using such types of indicators is as follows. Relatively low numbers of GPs vis-à-vis other physicians and limited access to primary care facilities may result in long-waiting times for primary care consultations. This makes patients seek more expensive specialist and emergency care when not medically necessary (i.e. when in the presence of common illnesses). It also renders referral systems from primary to secondary care less effective and being bypassed by patients. This may result in additional costs, for example, through unnecessary consultations and (duplicated) medical tests, as well as through unnecessary health infections associated with use of hospital care. Low numbers of outpatient contacts may also indicate an unnecessary high supply/use of hospital care.

Therefore, Member States may be able to improve the fiscal sustainability and performance of their health systems by shifting care and therefore costs from hospital to ambulatory care, strengthening the role of and possibly increasing the number of general practitioners relative to specialists, and training and increasing the responsibilities of primary care nurses relative to physicians.

4) Pharmaceutical care: Pharmaceuticals include medicinal preparations, branded and generic medicines, patent medicines, serums and vaccines, vitamins and minerals and oral contraceptives. Demand for pharmaceuticals is sizeable and the potential benefits of pharmaceutical consumption significant. However, these benefits come at a substantial and increasing direct cost. Because pharmaceutical expenditure is increasing, pharmaceutical policies aiming at a cost-effective use of pharmaceuticals and ensuring expenditure control in this area are receiving stronger attention by Member States. Policy makers are growing more aware that, by regulating pharmaceutical markets correctly, savings can be achieved without compromising the quality of care.

Pharmaceuticals are consumed in the inpatient setting (mostly hospitals) and outpatient setting (mostly pharmacies). However, comparable cross-country data on pharmaceutical indicators mostly refers to the outpatient setting (i.e. associated with medicines bought in pharmacies and not those consumed during hospitalisation). Therefore, potential indicators in this area include: public expenditure on outpatient pharmaceuticals as % of GDP; public expenditure on outpatient pharmaceuticals as % of public current expenditure on health; public in total (private and public) expenditure on outpatient pharmaceuticals; public per capita spending on outpatient pharmaceuticals in purchasing power standards; and market share of generics in volume and in value. As in the previous section, the individual indicators are synthesized (See Table A.9.4 in Annex 9) into one composite index of "pharmaceutical spending". As an example, the results indicate a potential need for policy reform in the area of pharmaceutical care in Ireland: Ireland is a relatively high spender on outpatient pharmaceuticals (in terms of the different spending indicators) and has low penetration rates of generic medicines.

Very high spending on pharmaceuticals may point to the need to reform current pharmaceutical policies to improve health system performance while increasing the volume share of generics may help increase the fiscal space for other interventions.

5) Administrative spending: To complement the previous indicators and their assessment, one may also look at the spending allocated to the system administration and insurance both as a share of GDP and a share of total current public spending on healthcare. As in the previous section, the individual indicators are synthesized (See Table A.9.5 in Annex 9) into one composite index of "administrative spending ". Public spending on administration and insurance relates to the expenditure by central and local authorities and social security institutions on activities such as formulation, planning, regulation, co-ordination and monitoring of overall health policies, programmes and budgets and the collection of funds and handling of claims of the delivery system. This is typically a small but non-negligible part of health expenditure. Therefore, high expenditure on administration may suggest the need to simplify/streamline administrative structures and clarify responsibilities across decision-making structures. As an example, the results indicate a potential need for policy reform in the area of administrative spending care in Belgium, spending relatively much on this area of health care spending.

6) Health status: Finally, in addition to assessing particular dimensions of service provision, one may need to look at measures of health status. A poor health status may result in higher demand for health services and therefore spending. Low health status flags the need to improve health which may require health promotion and disease prevention policies or indeed policies outside the health care sector (i.e. suggesting a more holistic Health in All Policies approach to improving health). In addition if a country is also underperforming in certain areas of health care service provision, then there may be a potential to introduce reforms, reduce costs or improve health with the same spending, or do both. As said, the assessment here does not establish an analytical link between health status and health spending, but only highlights possible problems and the potential for improvement.

Potential indicators of health status are many and include the usual objective indicators such as life expectancy at age one, infant mortality or amenable mortality. One may also complement these with other widely available subjective indicators such as self-perceived general health or limitations (see also the section on long-term care). As in the previous section, the individual indicators are synthesized (See Table A.9.6 in Annex 9) into one composite index of "health status". As an example, the results indicate a potential need for improving health status in Latvia. The Latvian population has a relatively low life expectancy, high amenable mortality rates and a high infant mortality rate.

Summarising potential reform areas in healthcare

Based on the comparative approach, as outlined above, one way to summarise the potential policy challenges in each of the areas of health care provision is to use composite indices. These composite indices capture correlations between the various individual indicators in each of these areas using standard statistical methods (see "Handbook of Constructing Composite Indicators", OECD 2008) (see Annex 8 for methodological details). They are constructed for the most relevant areas of public expenditure on health: hospital care, ambulatory care, pharmaceuticals and administrative spending. Values obtained in the composite indices may indicate a specific need to improve the performance in the respective domain relative to other EU Member States.

Table 4 summarizes the results based on a comparison of countries carried out using composite indicators. Cells highlighted in purple correspond to a particular challenge in the respective domain, such as: in 1) to a worse health status; in 2) to a combination of higher hospital expenditure and lower hospital activity; in 3) to a combination of lower expenditure on ambulatory care, lower numbers of GPs per 100 000 inhabitants, lower ratio of GPs and nurses to physicians and lower outpatient activity; in 4) to a combination of higher expenditure on pharmaceuticals, higher pharmaceutical price levels and a lower share of generic medicines in volume; and in 5) to a higher expenditure on administration and insurance. As such and as an example, the results indicate a potential need for policy reform in the area of pharmaceutical and administrative spending in Belgium.

As indicated, these results are based on a broad framework and do not replace a careful country-specific analysis of the respective health care system.[13] More extensive information on country-specific features of healthcare systems, their characteristics and country-specific recommendations, can be found in the "Joint EC(ECFIN)-EPC Report on Health Systems" by DG ECFIN and the Economic Policy Committee. Therefore, the results developed here should be considered as an initial tool for detecting possible policy challenges the area of health care and do not replace a careful country-specific analysis of the respective health care system. A more detailed assessment based on additional pieces of information, not reviewed in the current framework analysis, may lead to more specific or additional/ different policy challenges.

[13] More extensive information on country-specific features of healthcare systems, their characteristics and country-specific recommendations, can be found in the "Joint EC(ECFIN)-EPC Report on Health Systems" by DG ECFIN and the Economic Policy Committee.

Table 4: Overview of main results: country classification for potential reform areas in healthcare

	Health status (1)	Main spending areas of public health care				
		Hospital care (2)	Ambulatory care (3)	Pharmaceutical spending (4)	Administrative spending (5)	
BE	20	21	28	7	1	BE
BG	3	2	5	25	24	BG
CZ	10	1	20	14	8	CZ
DK	12	16	24	27	25	DK
DE	16	5	26	4	2	DE
EE	8	10	9	20	16	EE
IE	13	28	23	2	12	IE
EL	15	7	1	1	15	EL
ES	27	17	14	5	17	ES
FR	28	18	25	6	4	FR
HR	7	19	12	-	-	HR
IT	26	23	11	22	27	IT
CY	21	24	2	26	3	CY
LV	1	14	4	24	11	LV
LT	4	3	10	21	14	LT
LU	25	12	22	11	26	LU
HU	5	13	7	9	22	HU
MT	11	27	13	12	10	MT
NL	23	4	16	13	5	NL
AT	19	6	18	10	9	AT
PL	9	22	8	23	19	PL
PT	18	15	21	15	23	PT
RO	2	9	3	17	20	RO
SI	22	8	15	16	13	SI
SK	6	11	17	3	6	SK
FI	17	25	27	18	18	FI
SE	24	20	6	19	21	SE
UK	14	26	19	8	7	UK

Source: Commission services. Health indicators based on Eurostat and OECD health data.

Notes: Each composite index is calculated as a weighted average of the individual indicators, as explained above and specified in Annex 9. A higher ranking corresponds: in 1) to a worse health status; in 2) to a combination of higher hospital expenditure and lower hospital activity; in 3) to a combination of lower expenditure on ambulatory care, lower numbers of GPs per 100 000 inhabitants, lower ratio of GPs and nurses to physicians and lower outpatient activity; in 4) to a combination of higher expenditure on pharmaceuticals, higher pharmaceutical price levels and a lower share of generic medicines in volume; and in 5) to a higher expenditure on administration and insurance. All countries above the median (the threshold) in each of the indices are flagged in purple.

(1) Health status index composed of:
- Life expectancy at age 1 for females
- Life expectancy at age 1 for males
- Amenable mortality
- Infant mortality rate per 1 000 life births

(2) Hospital care index composed of:
- Public hospital expenditure as % of GDP
- Public hospital expenditure as % of public CHE
- Acute hospital beds per 1 000 pop
- Acute care bed occupancy rates
- Average acute care length of stay in days**
- % of day in total discharges

(3) Ambulatory care index composed of:
- Public ambulatory care expenditure as % of GDP
- Public exp. on ambulatory care as % of public CHE
- Number of GPs per 100 000 inhabitants
- Share of GPs in total number of physicians
- Ratio of nurses to physicians
- Ratio of outpatient to inpatient contacts per capita

(4) Pharmaceutical spending index composed of:
- Public outpatient pharmaceutical expenditure as % of GDP
- Public exp. on outpatient pharmaceuticals as % of public CHE
- Public as % of total expenditure on pharmaceuticals
- Expenditure in per capita PPS
- Generic market shares in volume

(5) Administrative spending index composed of:
- Public administrative expenditure as % of GDP
- Public exp. On administration and insurance as % of public CHE.

4.1. COMPARING HEALTH CARE CHALLENGES AND COUNTRY-SPECIFIC RECOMMENDATIONS (CSRs)

As shown above (see Table 1 and 2), a health care challenge is present in 13 countries: the Czech Republic, Germany, Ireland, Spain, France, Malta, the Netherlands, Austria, Poland, Portugal, Slovenia, Slovakia and Finland. Compared with 2014 CSRs, this entails that Bulgaria, Croatia, Latvia and Romania would not have a health care challenge with regard to fiscal sustainability. Rather, for these countries, the CSRs in 2014 relate to access to health care. Note that compared to the 2014 CSRs an addition challenge seems present for the Netherlands, although they are a borderline case.[14] Moreover, recent and planned measures in the health care field in Member States need to be taken duly into consideration when assessing the extent to which a challenge is present.

5. LONG-TERM CARE POLICY CHALLENGES

As a result of the analysis of fiscal sustainability challenges above, several countries are seen to face challenges in the area of long term care (LTC). Therefore, a specific LTC assessment framework can provide the tools and guidance for assessing the performance of a LTC system across several of its dimensions. More specific challenges of national LTC systems can then be identified along with areas where policy may be adapted to address the sustainability challenges, taken duly into consideration the country-specific circumstances in the LTC field.

The framework uses a set of indicators to help screening LTC systems and to sketch how Member States compare relative to each other. This set of indicators, both qualitative and quantitative, includes public expenditure indicators, the unit cost of care, indicators that measure need for care and coverage of those needs. The framework takes also account of specific long-term care system features and how they differ across Member States.

Expenditure on LTC

Public expenditure on LTC is defined as expenditure for LTC benefits incurred by state, regional and local government bodies and social security schemes. The size and (recent and expected) growing importance of public expenditure on LTC in total government expenditure and the need for budgetary consolidation all across the European Union make LTC expenditure a topic of growing importance in the policy debate on how to ensure the medium- and long-term sustainability of public finances, beside the areas of pensions and (acute) health care.

On average, public spending on LTC currently absorbs a limited but (sometimes) increasing share of resources[15] (1.9% of GDP in the EU in 2011) (Table 5). This figure covers a variety of realities across Member States: from a small share of GDP in Cyprus (0.2%) to a significant share of GDP in Denmark (4.8%).[16] It is assumed that higher levels of expenditure on LTC as % of GDP place a higher challenge to the fiscal sustainability of LTC systems and fiscal sustainability in general.

The projected ageing of the population is expected to put pressure on governments to provide more formal LTC benefits. Very old people often develop multi-morbidity conditions, which require not only long-term medical care but assistance with a number of daily tasks.

According to the 2012 Ageing Report[17], LTC expenditure will rise at a higher rate than GDP growth: public spending on LTC is expected to increase by 1.5 pp. of GDP due to ageing-related factors even if one accounts for some improvements in disability status of the population (the so-called "AWG reference scenario"). This corresponds to a potential increase from 1.9 % of GDP in the EU in 2011 to

[14] For a definition of a borderline case, see the notes to Table 2.

[15] Though the recent years have shown a quite controlled increase in most Member States, reinforced by the recent economic downturn and associated stronger resource constraints.

[16] It is interesting to note that high LTC spending is not perfectly correlated with HC spending. This is also an indicator of the relative emphasis on the two items in different Member States. In addition, the frontier between the two is not similar in all Member States, with some expenditure pertaining to LTC in some Member States but to HC in others. Therefore, it is important to keep an eye on both items in parallel.

[17] See http://ec.europa.eu/economy_finance/publications/european_economy/2012/2012-ageing-report_en.htm

3.4% of GDP in 2060. The projected expenditure increase in LTC represents on average more than 40% of the total age-related increase in public spending till 2060.[18]

In general it is assumed that Member States with lower projected increases of public expenditure on LTC as pp. of GDP are in a better position in terms of fiscal sustainability of LTC systems, and vice-versa.[19]

Distribution of LTC spending

Within formal care provision, the relative importance of institutional care versus home care and the possibility to recourse to cash benefits vary substantially across Member States. While traditionally in most EU Member States, formal LTC services were first and foremost provided in institutions, there is a growing trend to promote home care services for LTC patients.

Several indicators have been selected to capture spending on different types of care, indicating potential overspending or inefficiencies in the setup of LTC arrangements (see Table 5). In the EU, 60% of in-kind spending was directed towards institutional care and 40% towards home care. Member States with a relatively strong focus on institutional care may reap efficiency gains by encouraging home care.

The shares of spending between formal in-kind care and cash benefits vary widely. CY spends only 6% on formal in-kind arrangements and 94% on cash benefits, while MT and IE spend exclusively on formal in-kind with no cash benefits available. In RO, PT and SE only a very small part of the public LTC is being spent as cash benefits.

In general, Member States with higher spending levels have higher shares of in-kind. Very low shares of in-kind spending may indicate a situation of under-provision of LTC services. On the other hand, countries with a higher share of in-kind spending, also compared with cash benefits, might want to consider a shift from in-kind to cash benefits (which might be a cheaper alternative at least for some types of LTC services).

Need for care

When assessing LTC systems, it is informative to look at indicators reflecting the potential need for care services. Expected years in sickness or disability, percentage of people having longstanding illness or health problems and the percentage of the population having self-perceived severe limitation in daily activities are some of the indicators that can point to the potential need for LTC. In the case of LTC systems, the potential need for care may indicate the pressure on LTC systems to provide sufficient/additional coverage, which may translate into a fiscal sustainability challenge for LTC systems.

In general, if a country shows a potential high need for LTC services, then there may be a need to introduce reforms that improve the health status of the population or the efficiency of LTC spending or both. The care needs index is presented in Table 5 and the components used for the calculation of the index can be found in Annex 10.

LTC coverage

Looking at the extent to which LTC covers the needs of dependents[20], helps to better understand the functioning of the national systems. Comparing expenditure with estimated coverage of people in need for LTC may hint on how efficient LTC systems are and signal the potential for policy reform aiming at efficiency increases. Several indicators have been selected to capture the extent and the types of coverage. In Table 5 below the coverage as percentage of the total population and as percentage of the dependents is presented. In general, these coverage indicators point in the same direction. It counts for almost all Member States that, when a large percentage of the population

[18] The other spending categories are pensions, health care, education and unemployment benefits.

[19] Note that correlations between the indicators of current and projected expenditure are strongly positive (except for the "projected increase in %"), which indicates that the current level of expenditure – both in % of GDP and in share of total Government's expenditure – is a strong determinant of projected increase in expenditure.

[20] Dependency generally refers to the inability to perform daily personal care tasks. To calculate dependency rates, this paper uses the EU-SILC data on the item "(Severe) limitation in activities because of health problems [for at least the last 6 months]".

receives care, also a large part of the actual dependent population is covered. In general it also holds that Member States that spend a relatively large share of GDP have high coverage.

Unit costs

In addition to the coverage dimension of LTC, unit costs (average costs for treating one dependent) are a key determinant of LTC expenditure. LTC unit costs vary according to the type of care provided. They tend to be highest for institutional care, followed by home care. Cash benefits are showing a relatively low unit cost.

High costs in institutional care are partly due to the higher treatment needs (due to higher severe disability/dependency levels) of institutionalised patients. This induces higher labour costs. Higher capital costs relative to home care are another reason. In addition, high unit costs may be related to inefficiencies, due to organizational or institutional inefficiencies, wrong payment incentives for providers and suboptimal levels of care leading to high costs (due to over/-under-treatment). Also, care may be cost-ineffective, e.g. if an adequate level of care could be provided at home at a lower cost. To address these issues, Member States try to control the costs of LTC by encouraging home care, giving choice for the adequate form of care to the dependent (cash benefits) and regulating the supply of LTC arrangements. The figures in Table 5 show large difference between Member States, as far as unit costs per recipient of institutional care are concerned.

The ratio of unit costs per dependent in institutional to home care shows how much more expensive it is to treat an individual in institutional care relative to home care. For the EU, the ratio is 3.2. It varies widely across Member States. Member States with high ratios (for example HU and EE) may reap cost-effectiveness gains by shifting care from institutions to homes. Note that caution is needed when interpreting these figures. Indeed, while differences in unit costs per user in institutional and home care depend strongly on the profile of patients (i.e. the range of severity of the conditions) being treated in institutional care facilities versus those being treated through home care, data on unit costs data is not fully accurate or fully available for all Member States.

System features

In addition to the previous quantitative indicators, one may need to look at more descriptive indicators capturing important dimensions of the provision of LTC services. Indeed, the organisational features of the LTC system may reinforce the effect of ageing and need for care and help to better understand differences in coverage, spending and unit costs across Member States.

The presence of a threshold criterion - on the basis of dependency levels – according to which potential beneficiaries of LTC services become eligible to such care benefits is one of those more descriptive indicators that says something about how the LTC system is set up. The rationale is that the existence and strictness of such criteria controls the number of beneficiaries and therefore formal public spending on LTC. As can be seen from Table 5, there are several Member States for which there appears to be no threshold criterion on the basis of dependency.

Table 5 also presents information on whether access to and amount of LTC services in kind or cash is dependent on the individual's (or household's) income or assets i.e. whether eligibility is means-tested. Again, the rationale is that the existence and strictness of such criteria controls the number of beneficiaries and the amount of benefits provided and therefore overall spending on LTC. As can be seen, there are several Member States for which there appears to be no means-tested criterion for either in-kind or cash benefits or both. For the list of the potential individual indicators for LTC and the respective definition see Annex 11.

Table 5: Overview of main long-term care indicators

				spending		Coverage		Unit costs		System features		
	Total LTC spending in 2011 (%GDP)	Increase in LTC spending until 2060 (pp)	Care needs index	% of spending on institutional as part of formal in-kind spending	% of formal in-kind spending in total spending	population (aged 15+) receiving formal in-kind LTC and/or cash benefits	dependents (aged 15+) receiving formal in-kind LTC and/or cash benefits	Unit costs in institutional care per recipient, as % of GDP per capita	Ratio of unit costs per recipient in institutional to home care	Eligibility: minimum dependency criterion	Eligibility: means tested criterion	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
BE	2.5%	2.7%	(21)	69%	81%	10%	100%	103%	7.5	yes	yes	BE
BG	0.5%	3.0%	(28)	100%	35%	2%	34%	29%	:	yes	no	BG
CZ	0.7%	0.7%	(22)	79%	35%	5%	72%	21%	3.3	yes	no	CZ
DK	4.8%	3.5%	(26)	46%	55%	7%	82%	88%	1.7	no	no	DK
DE	2.0%	1.7%	(2)	59%	68%	4%	36%	66%	3.1	yes	yes	DE
EE	1.0%	0.3%	(1)	93%	37%	3%	34%	31%	21.4	no	no	EE
IE	0.6%	1.5%	(24)	83%	100%	5%	90%	182%	11.6	yes	yes	IE
EL	1.5%	1.2%	(16)	13%	75%	7%	75%	13%	0.3	no	no	EL
ES	1.1%	0.7%	(18)	68%	83%	3%	44%	79%	3.3	yes	yes	ES
FR	2.3%	2.1%	(7)	76%	84%	6%	58%	182%	6.0	yes	yes	FR
HR	0.4%		(13)									HR
IT	1.9%	0.9%	(10)	53%	55%	5%	64%	120%	3.2	yes	yes	IT
CY	0.2%	0.1%	(8)	100%	6%	2%	25%	2%	:	no	yes	CY
LV	0.7%	0.4%	(11)	92%	82%	1%	20%	97%	10.9	no	yes	LV
LT	1.4%	1.1%	(19)	51%	80%	9%	85%	26%	1.9	yes	yes	LT
LU	1.3%	2.1%	(25)	63%	91%	3%	44%	70%	2.8	yes	no	LU
HU	1.0%	0.6%	(12)	96%	31%	5%	48%	27%	15.8	yes	yes	HU
MT	1.0%	0.9%	(23)	86%	100%	6%	92%	23%	2.1	no	yes	MT
NL	3.7%	4.1%	(15)	79%	66%	10%	100%	98%	6.9	no	no	NL
AT	2.8%	1.2%	(9)	42%	50%	10%	89%	32%	1.4	yes	yes	AT
PL	0.8%	1.0%	(14)	82%	50%	5%	70%	89%	1.6	yes	yes	PL
PT	0.5%	0.3%	(5)	25%	99%	3%	24%	13%	0.5	no	yes	PT
RO	0.6%	1.1%	(20)	6%	99%	3%	38%	7%	0.1	yes	yes	RO
SI	1.7%	1.6%	(4)	78%	64%	4%	37%	59%	2.0	yes	yes	SI
SK	0.2%	0.4%	(6)	39%	81%	3%	25%	15%	1.0	yes	yes	SK
FI	2.5%	2.6%	(3)	68%	88%	10%	100%	75%	1.3	yes	no	FI
SE	3.7%	2.5%	(27)	50%	96%	9%	98%	76%	1.0	no	no	SE
UK	1.1%	0.7%	(17)	39%	72%	5%	58%	152%	2.8	yes	yes	UK
EU avg	1.9%	1.5%		60%	72%	5%	57%	105%	3.2			EU avg
EU med	1.1%	1.1%		68%	75%	5%	58%	66%	2.1			EU med

Source: Commission services.

5.1. COMPARING LONG-TERM CARE CHALLENGES AND COUNTRY-SPECIFIC RECOMMENDATIONS (CSRs)

As shown above (see Table 1 and 2), a long-term care spending challenge seems present in 10 countries (Belgium, Denmark, Ireland, Luxembourg, Malta, the Netherlands, Austria, Slovenia, Finland, and Sweden). In the 2014 European Semester, Germany got a CSR on long-term care policy though the country does not have a fiscal sustainability challenge, given current legislation in place. Indeed, the CSR for Germany in 2014 was not primarily motivated by concerns of medium and long-term fiscal sustainability. On the contrary, a number of countries (Denmark, Ireland, Finland, Sweden and Malta) for which a long-term care spending challenge seems present did not get a CSR in 2014 (though Malta stands as a borderline case).[21] Of course, additional country-specific information on recent and planned policy measures needs to be duly taken into consideration when assessing the extent to which a challenge is present.

[21] For a definition of a borderline case, see the notes to Table 2.

ANNEX 1 –2014 PENSION CSRs

Country	CSR 2014
BE	CSR 3: Contain future public expenditure growth relating to ageing, in particular from pensions and long-term care, by stepping up efforts to reduce the gap between the effective and statutory retirement age, bringing forward the reduction of early-exit possibilities, promoting active ageing, aligning the retirement age to changes in life expectancy, and improving the cost-effectiveness of public spending on long-term care.
BG	CSR 2: Adopt a long-term strategy for the pension system, proceeding with the planned annual increase in the statutory retirement age and setting out a mechanism to link the statutory retirement age to life expectancy in the long term, while phasing out early retirement options and equalising the statutory retirement age for men and women. Tighten eligibility criteria and procedures for the allocation of invalidity pensions, for example by taking better account of the remaining work capacity of applicants.
CZ	CSR 2: Ensure the long-term sustainability of the public pension scheme, in particular by accelerating the increase of the statutory retirement age and then by linking it more clearly to changes in life expectancy. Promote the employability of older workers and review the pension indexation mechanism.
DE	CSR 1: Ensure the sustainability of the public pension system by (i) changing the financing of new non-insurance/extraneous benefits ('Mütterrente') to funding from tax revenues, also in order to avoid a further increase of social security contributions, (ii) increasing incentives for later retirement, and (iii) increasing the coverage in second and third pillar pension schemes.
FR	CSR 1: (...) In particular, take steps to reduce significantly the increase in social security spending as from 2015 as planned, by setting more ambitious annual healthcare spending targets, containing pension costs, and streamlining family benefits and housing allowances. (...)
HR	CSR 2: Reduce access to early retirement. Adopt legislation by March 2015 to accelerate the planned harmonisation of statutory retirement ages of women and men and to advance the planned increase of the statutory retirement age to 67 years. Ensure enforcement of tighter disability pensions assessments and controls and accelerate the integration of pensions under special schemes into the general pension system.
LT	CSR 2: Adopt and implement legislation on a comprehensive pension system reform. In particular, align the statutory retirement age with life expectancy restrict access to early retirement, establish clear rules for the indexation of pensions and promote the use of complementary savings schemes.
LU	CSR 2: In view of ensuring fiscal sustainability, curb age-related expenditure by making long-term care more cost-effective, pursue the pension reform so as to increase the effective retirement age, including by limiting early retirement, by aligning retirement age or pension benefits to change in life expectancy.
MT	CSR 2: To ensure the long-term sustainability of public finances continue the ongoing pension reform, such as by accelerating the already enacted increase in the statutory retirement age and by consecutively linking it to changes in life expectancy. Ensure that a comprehensive reform of the public health system delivers a cost-effective and sustainable use of available resources, such as strengthening primary care.
NL	CSR 3:Implement reforms of the second pillar of the pension system, ensuring an appropriate intra- and inter-generational distribution of costs and risks.

AT	CSR 2: Improve the long-term sustainability of the pension system; in particular by bringing forward the harmonisation of the statutory retirement age for men and women, by increasing the effective retirement age and by aligning the retirement age to changes in life expectancy. Monitor the implementation of recent reforms restricting access to early retirement.
PL	CSR 3: Include farmers in the general pension system, starting by speeding up the creation of the system for the assessment and recording of farmers' incomes. Phase out the special pension system for miners with a view to integrating them into the general scheme.
PT	CSR 1: Develop by the end of 2014 new comprehensive measures as part of the ongoing pension reform, aimed at improving the medium-term sustainability of the pension system. Control healthcare expenditure growth and proceed with the hospital reform.
RO	CSR 2: Finalise the pension reform started in 2010 by equalising the pensionable age for men and women.
SI	CSR 2: Based on the public consultation, agree measures to ensure the sustainability of the pension system and adequacy of pensions beyond 2020, encompassing adjustments of key parameters, such as linking the statutory retirement age to gains in life expectancy and encouraging private contributions to the second pillar of the pension system.
FI	CSR 3: (...) increasing the effective retirement age, by reducing early exit pathways and aligning the retirement age or pension benefits to changes in life expectancy. (...)

Source: Council recommendations in the 2014 European Semester, available at: http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/index_en.htm

ANNEX 2 – 2014 HEALTH CARE CSRs

Country	CSR 2014
BG	CSR2: "Ensure cost effective provision of healthcare including by improving the pricing of healthcare services while linking hospitals' financing to outcomes, accelerating the optimisation of the hospital network and developing out-patient care."
CZ	CSR3: "Take measures to improve significantly the cost-effectiveness and governance of the healthcare sector, in particular for hospital care."
DE	CSR1: "Make additional efforts to increase the cost-effectiveness of public spending on healthcare and long-term care."
IE	CSR 2: "Advance the reform of the healthcare sector initiated under the Future Health strategic framework to increase cost-effectiveness. Pursue additional measures to reduce pharmaceutical spending, including through more frequent price realignment exercise for patented medicines, increased generic penetration and improved prescribing practices. Reform the financial management systems of the national health authority to streamline systems across all providers and to support better claims management. Roll out individual health identifiers starting by the end of the first quarter of 2015 at the latest."
ES	CSR1: "Continue to increase the cost-effectiveness of the healthcare sector, in particular by further rationalising pharmaceutical spending, including in hospitals and strengthening coordination across types of care, while maintaining accessibility for vulnerable groups."
FR	CSR1: " In particular, take steps to reduce significantly the increase in social security spending as from 2015 as planned, by setting more ambitious annual healthcare spending targets, (…). Beyond the need for short-term savings, take steps to tackle the increase in public expenditure on health projected over the medium and long term, including in the area of pharmaceutical spending, (…)"
HR	CSR2: "Strengthen the cost-effectiveness of the healthcare sector, including in hospitals."
LV	CSR3: "(…) Improve the cost-effectiveness, quality and accessibility of the healthcare system."
MT	CSR2: "Ensure that a comprehensive reform of the public health system delivers a cost-effective and sustainable use of available resources, such as strengthening primary care."
AT	CSR 2: "Further improve the cost effectiveness and sustainability of health care and long-term care services."
PL	CSR1: " In that regard, […]improve the targeting of social policies and the cost effectiveness of spending and the overall efficiency of the healthcare sector, …"
PT	CSR1: "Control healthcare expenditure growth and proceed with the hospital reform".
RO	CSR3: "Step up reforms in the health sector to increase its efficiency, quality and accessibility, including for disadvantaged people and remote and isolated communities. Increase efforts to curb informal payments, including through proper management and control systems."

SI	CSR1: ". Launch a comprehensive review of expenditure covering state and local government levels, direct and indirect budget users and municipality-owned providers of utilities and services in the area of health care by the end of 2014 with a view to realising budgetary savings in 2015 and beyond."
SK	CSR1: "Improve the long term sustainability of public finance by increasing the cost-effectiveness of the health-care sector, in particular by rationalising hospital care and management and by strengthening primary care."
FI	CSR2:"Ensure effective implementation of the ongoing administrative reforms concerning municipal structure and social and healthcare services, in order to increase the cost-effectiveness in the provision of public services."

Source: Council recommendations in the 2014 European Semester, available at: http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/index_en.htm

ANNEX 3 – 2014 LONG-TERM CARE CSRs

Country	CSR 2014
BE	CSR3: "Contain future public expenditure growth relating to ageing, in particular from pensions and long-term care, by […] and improving the cost-effectiveness of public spending on long-term care."
DE	CSR1: "Make additional efforts to increase the cost-effectiveness of public spending on healthcare and long-term care."
LU	CSR2: "In view of ensuring fiscal sustainability, curb age-related expenditure by making long-term care more cost-effective […]."
NL	CSR3: " Implement the envisaged reform in the area of long-term care with a view to ensure sustainability, while ensuring fair access and the quality of services and monitor its effects.."
AT	CSR 2: "Further improve the cost effectiveness and sustainability of health care and long-term care services." CSR 3: Reinforce measures to improve labour market prospects of people with a migrant background, women and older workers. This includes further improving childcare and long-term care services and the recognition of migrants' qualifications.
SI	CSR2: " Contain age-related expenditure on long-term care by targeting benefits to those most in need and refocusing care provision from institutional to home care."

Source: Council recommendations in the 2014 European Semester, available at: http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/index_en.htm

ANNEX 4 – COVERAGE RATIO DEVELOPMENT 2010-2060

Table A.4.1: Coverage ratio development 2010-2060 (Total number of public pensioners as % of population aged 65 and older)

	2010	2020	2030	2040	2050	2060	Change 2010 - 2060 in p.p.
BE	145.7	141.9	137.3	134.5	135.0	134.0	-11.7
BG	165.3	139.8	126.2	113.5	107.0	106.3	-59.0
CZ	175.3	134.2	125.2	115.5	106.5	103.4	-71.9
DK	137.8	119.9	105.6	96.8	93.8	87.7	-50.1
DE	119.6	116.0	107.9	103.6	102.9	102.3	-17.4
EE	168.8	148.1	134.0	128.9	122.4	118.8	-50.0
IE	162.9	143.1	125.2	118.7	112.6	116.5	-46.4
EL	128.3	117.2	109.3	102.9	99.7	100.0	-28.2
ES	107.5	106.3	103.2	99.2	96.0	95.1	-12.4
FR	149.0	129.0	121.9	116.6	116.9	116.1	-32.8
HR	:	:	:	:	:	:	:
IT	128.1	106.9	98.0	92.2	90.6	87.4	-40.7
CY	118.4	107.3	103.7	107.3	106.3	103.9	-14.5
LV	147.1	129.7	116.6	113.9	111.6	108.7	-38.4
LT	175.2	165.1	144.8	136.5	133.2	124.9	-50.2
LU	220.3	228.9	226.5	220.9	224.0	226.0	5.7
HU	175.5	137.3	129.5	122.7	113.2	109.5	-66.0
MT	136.2	115.9	105.7	107.5	105.1	105.7	-30.5
NL	135.9	120.6	109.7	108.2	107.9	102.6	-33.3
AT	149.9	149.2	134.5	122.8	126.7	124.3	-25.6
PL	183.0	132.3	115.9	110.5	105.3	102.1	-80.9
PT	137.5	129.5	123.9	119.0	113.3	113.0	-24.5
RO	183.5	167.9	161.6	141.8	124.2	116.9	-66.6
SI	169.3	160.4	145.1	142.7	136.8	133.9	-35.4
SK	192.6	159.0	142.3	135.0	121.1	111.4	-81.2
FI	142.7	122.2	115.9	114.4	112.7	111.2	-31.5
SE	136.4	128.3	131.7	130.3	129.6	126.0	-10.4
UK	122.3	102.2	102.4	100.5	94.9	95.2	-27.2
EA	130.3	119.2	111.5	106.5	105.0	103.7	-26.6
EU28	137.4	121.1	113.6	108.5	105.7	104.2	-33.2

Source: Commission services, EPC.

Notes: No data available for HR. The coverage ratio is calculated as the total number of public pensioners as a share of the population aged 65 and older. In case the number of pensioners is not provided by the MS, in order to quantify the coverage ratio, the number of pensioners is proxied by the number of pensions, as the dynamics of the two variables should be comparable at least in the long run. Projected numbers of pensions and pensioners are identical for BE, IE, CY, LU, NL, RO and SI.

ANNEX 5 – PENALTIES AND BONUSES FOR EARLY AND LATE RETIREMENT

	Penalties for early retirement (fiche)	Bonuses for late retirement (fiche)		Penalties for early retirement (fiche)	Bonuses for late retirement (fiche)
BE	Self-employed: 25% (60), 18% (61), 12% (62), 7% (63) 3% (64) . Not appliable to career longer than 43 years.	Civil servants: 0.125% of the annual pension rate for each worked month between the age of 60 and 62 year (1.5% on an annual base), and to 0.167% from the age of 62 (2% on an annual base)	LT	by 0.4% per month of early retirement (4.8% on an annual base)	0.67 % per month of late retirement (8% on an annual base)
BG	Absent	4% per year of late retirement	LU	Absent	Absent
CZ	0.9%, 1.2% and1,5% of person's calculation base for every period of 90 calendar days up to 360 days, from 361st day to 720th day and from the 721st day on. (3.6%, 4.8% and 6% on an annual base for the considered time intervals)	1.5% of person's calculation base for every additional completed 90 calendar days (6% on an annual base)	HU	Absent	Absent
DK	Absent	Absent	MT	Absent	Absent
DE	0.3 % per month of early retirement (3.6% on an annual base)	Higher accrual of 0.5 % for each month worked after the statutory retirement age. (6% on an annual base)	NL	Absent	Absent
EE	0.4% per month of early retirement (4.8% on annual base)	0.9% higher pension benefit for each month of postponement (10.8% on an annual base)	AT	4.2% per year till a max of 15%	4.2% per year till a max of 12.6%
IE	Absent	Absent	PL	Partial retirement 50% of pension entitlements, actuarial adjustment based on NDC	Absent - Actuarial adjustment based on NDC
EL	0.5% per month of early retirement	Absent	PT	0.5% per month of early retirement (6% on an annual base)	Monthly rates of 0.33%, 0.5%, 0.65% and 1% for contributory careers of 15 to 24, 25 to 34, 35 to 39 and more than 40 years. (4%, 6%, 7.8% and 12% on annual base for the mentioned contributory periods)
ES	From 6% to 8% a year depending on the contributory period	2%, 2%%, and 4% for an extra year, respectively, for careers below 25 years, between 25 and 37, and over 37	RO	Absent	Absent
FR	5% for each year of early retirement	5% per year of late retirement	SI	0.3 % per month of early retirement (3.6% on an annual base)	4% per year for prolonging working career after having met minimum retirement conditions for early and old-age pension
HR	0.15% per month (1.8% per year) for 40 years of qualifying period; 0.34% per month (4.08% per year) for less than 37 years	0.15% per month (1.8% per year) above required pension age	SK	0.5% per month of early retirement (6% on an annual base)	0.5% per month of late retirement (6% on an annual base)
IT	Absent - Actuarial adjustment based on NDC	Absent - Actuarial adjustment based on NDC	FI	0.6% per month of early retirement (7.2% on an annual base)	0.6% per month of late retirement, reduced to 0.4% after age 68 (7.2% and 4.8% respectively on an annual base)
CY	0.5% per month of early retirement	Absent	SE	Absent - Actuarial adjustment based on NDC	Absent - Actuarial adjustment based on NDC
LV	Absent - Actuarial adjustment based on NDC	Absent - Actuarial adjustment based on NDC	UK	Absent	10.4% per year of late retirement

Source: Commission services, EPC.
Notes: Bonus for late retirement in Belgium is only granted until reaching the statutory retirement age. Hence, it is not a "late" retirement bonus as such.

ANNEX 6 – ACCRUAL RATES

	2010	2020	2030	2040	2050	2060	2010-60 (change in %)
BE	1.5	1.5	1.5	1.5	1.4	1.4	-6.7
BG	1.1	1.2	1.2	1.2	1.2	1.2	9.1
CZ	1.7	1.7	1.7	1.6	1.5	1.6	-7.7
DK	:	:	:	:	:	:	
DE	:	:	:	:	:	:	
EE	2.0	1.6	1.4	1.4	1.2	1.1	-45.7
IE	:	:	:	:	:	:	
EL	2.5	2.1	1.7	1.5	1.4	1.5	-41.7
ES	2.4	2.4	2.3	2.3	2.2	2.2	-8.6
FR	2.0	1.7	1.7	1.6	1.7	1.7	-15.6
HR							
IT	1.9	1.9	1.7	1.7	1.7	1.7	-13.9
CY	1.5	1.5	1.4	1.4	1.4	1.4	-3.1
LV	1.1	0.9	0.8	0.7	0.6	0.6	-47.1
LT	0.5	0.5	0.4	0.4	0.4	0.4	-16.0
LU	1.9	1.9	1.9	1.9	1.9	1.9	0.0
HU	1.3	1.3	1.3	1.3	1.3	1.3	0.0
MT	:	:	:	:	:	:	
NL	2.0	2.0	2.0	2.0	2.0	2.0	0.0
AT	1.3	1.3	1.2	1.1	1.1	1.0	-25.3
PL	:	:	:	:	:	:	
PT	2.0	2.2	2.2	2.3	2.3	2.3	11.9
RO	:	:	:	:	:	:	
SI	1.6	1.5	1.5	1.5	1.5	1.5	-7.9
SK	1.3	1.3	1.1	1.0	1.1	1.2	-3.3
FI	1.6	1.6	1.6	1.6	1.6	1.6	2.5
SE	1.0	1.0	0.9	0.9	0.9	0.8	-13.4
UK	:	:	:	:	:	:	
NO	1.1	0.9	1.1	1.1	1.0	1.0	-7.5
EU 27*	1.6	1.5	1.5	1.4	1.4	1.4	-11.7
EA*	1.8	1.7	1.6	1.6	1.5	1.5	-14.0

Source: Commission services, EPC.

Notes:

*:Simple average

DK and IE: Flat-rate system with new pensions not depending on accrual rates.

DE and RO: Point systems are not depending on accrual rates but on point value and average pension point development. Respective alternative decomposition provided during peer review process.

ES, PT and FI: Accrual rates are ex-post downsized via the sustainability factor (see respective "SF" lines). No data available for remaining countries mentioned in box on sustainability factors above.

CY: Accrual rate decrease mainly due to the increasing share of female insured persons, who, compared to male pensioners, are entitled to a lower effective accrual rate under the basic part of the GSIS (general social insurance scheme) since they are not typically entitled to a dependants' increase in their basic pension.

MT, PL and UK: No data provided.

NL: Average years of residence.

SE: Figures for the NDC system.

ANNEX 7 – DEFINITION OF INDIVIDUAL INDICATORS IN HEALTH CARE

Composite index	#	Individual indicator	Definition
Public expenditure index	1	Public current health expenditure (CHE) as % of GDP	General government and social security funds (HF.1) current expenditure (HC.1 - HC.9), including long-term nursing care (HC.3), but excluding social services of long-term care (HC.R.6.1) and capital investment in health (HC.R.1); If available, the projected 2010 GDP has been replaced by the real 2010 GDP.
	2	Projected increase in pp. of GDP over 2010-2060**	Projected increase in public expenditure on health care over 2010 - 2060 based on the "AWG reference scenario" and the "AWG risk scenario" in the Ageing Report 2012. The "AWG reference scenario" projects the impact of ageing and an income elasticity of health care demand of 1.1. on expenditure growth. The "AWG risk scenario" projects the impact of demographic and non-demographic drivers, such as income and techological changes and equalling an elasticity of health care demand of 1.3, on expenditure growth.
	3	ln per capita PPS	As definition 1, measured in purchasing power standard per capita
	4	Public CHE % of total current health expenditure	As definition 1, where total is defined as public and private expenditure on health, where private comprises of the categories: private sector (HF.2), rest of the world (HF.3) and not elsewhere classified (HF.0).
	5	Public CHE % of total government expenditure	Public CHE % of total government expenditure, based on the COFOG database.
Health outcomes index	6	Life expectancy at birth for females	Life expectancy at birth for females.
	7	Life expectancy at birth for males	Life expectancy at birth for males.
	8	Amenable mortality	Standardized death rates for causes of death with amenable mortality per 100 000 inhabitants. Causes of death selected The selection based on AMIEHS (2011) and availability in Eurostat. In AMIEHS, causes of death were identified that can be considered 'amenable'. International classification of diseases (ICD) 10 codes: Human immunodeficiency virus [HIV] disease (B20-B24); Malignant neoplasm of colon (C18); Malignant neoplasm of breast (C50); Malignant neoplasm of cervix uteri (C53); Ischaemic heart diseases (I20-I25); Cerebrovascular diseases (I60-I69).
	9	Infant mortality rate per 1 000 life births	The infant mortality rate is the number of deaths of children under one year of age in a given year, expressed per 1 000 live births.
Hospital care index	10	Public hospital expenditure % of GDP	General government and social security funds (HF.1) expenditure on hospitals (HP.1), including general hospitals (HP.11), mental health and substance abuse hospitals (HP.12) and other specialty hospitals (HP.13), measured as % of GDP
	11	Public hospital expenditure % of public CHE	As definition 10, measured as % of public CHE.
	12	Acute hospital beds per 1 000 pop	Curative (Eurostat: HBED_CUR) care beds in hospitals (HP.1), excluding psychiatric care beds in hospitals (Eurostat: HBED_PSY), long-term care beds (HBED_LT), and other beds(HBED_OTH), measured per 1 000 inhabitants.
	13	Acute care bed occupancy rates	Number of acute care beds effectively occupied (beddays) in in-patient institutions divided by the number of available acute care beds and multiplied by 100.

Composite index	#	Individual indicator	Definition
Hospital care index	14	Average acute care length of stay in days	Average length of stay in curative care beds is calculated by dividing the number of days stayed (from the date of admission in an hospital or other in-patient institution) by the number of discharges during the year. It includes deaths in hospitals, but excludes same-day separations.
	15	% of day in total discharges	Hospital discharges for all diagnoses (ICD 10: All causes of diseases (A00-Z99) excluding V00-Y98); Day cases: Day care comprises patients that are formally admitted for receiving health care being discharge on the day of admission (Eurostat: hlth_co_disch3). An episode of care for a patient who stays overnight is classified as an in-patient case (Eurostat: hlth_co_disch1).
Ambulatory care index	16	Public ambulatory expenditure as % GDP	General government and social security funds (HF.1) expenditure on providers of ambulatory health care (HP.3) including offices of physicians (HP.31), dentists (HP.32), other health practitioners (HP.33), out-patient care centres (HP.34), medical and diagnostic laboratories (HP.35), providers of home health care services (HP.36) and other providers of ambulatory health care (HP.39), measured as % of public CHE.
	17	Public ambulatory as % of public CHE	As definition 17, measured as % of public CHE.
	18	Number of GPs per 100 000 inhabitants	Generalist medical practitioners (Eurostat: variable "GEN" in dataset "hlth_rs_spec") per 100 000 inhabitants.
	19	Share of GPs in all physicians	Share of generalist medical practitioners in all physicians.
	20	Ratio of nurses to physicians	Ratio of practicing nursing and caring professionals including midwives (Eurostat: hlth_rs_prsns) to the total number of practicing physicians
	21	Ratio of outpatient to inpatient contacts per capita	Ratio of the number of outpatient contacts with a physician (in a physician's office or at patient's home) excluding dentists consultations to the number of all hospital discharges (including day cases and inpatient cases, as defined in indicator 14).
Pharmaceutical spending index	22	Public outpatient pharmaceutical as % of GDP	Public outpatient pharmaceutical as % of public CHE, based on pharmaceuticals and other medical non-durables (HC.51) dispensed to out-patients. Data on pharmaceutical spending is not available for the inpatient sector for most of the EU Member States. In some countries (e.g. BG, CY, HU), outpatient pharmaceuticals may be also part of hospital expenditure.
	23	Public outpatient pharmaceutical as % of public CHE	As definition 22, but measured as % of public CHE.
	24	Public as % of total expenditure on outpatient pharmaceuticals	Public (definition 1) in total (definition 3) expenditure on pharmaceuticals (definition 22).
	25	In per capita PPS	As definition 22, measured in purchasing power standard per capita.
	26	Generic market shares in volume	Market shares in volume of generics in all pharmaceutical products consumed, 2010 or most recent data; Generics are therapeutic alternatives to originator medicines. They are as effective, but on average cheaper than the respective off-patent originals.
	27	Generic market shares in value	As definition 26, but measured in value.
Administrative spending index	28	As % of public GDP	Expenditure on health administration and health insurance (HC.7) as % of GDP.
	29	As % of public CHE	As definition 28, measured as % of public CHE.

ANNEX 8 – METHODOLOGY TO CONSTRUCT COMPOSITE INDICES

The composite indices (CI) constructed in this note follow the general methodology described in the "Handbook of Constructing Composite Indicators" (OECD 2008). The construction of CIs involves several basic steps:

Theoretical considerations guided the subsequent analysis, based on the in-depths analysis of European health care systems as described in the "Joint EC(ECFIN)-EPC Report on Health Systems" by DG ECFIN and the Economic Policy Committee.[22]

1. Data was selected from the international sources of data according to three "Expenditure Classification Systems". These are: the System of Health Accounts (SHA) / joint OECD-Eurostat-WHO questionnaire[23], [24], ESSPROS[25] and COFOG. [26] The selection of variables was guided by theoretical considerations and data availability, which had to cover as many EU Member States as possible.
2. Missing data was imputed using the method of multiple imputation. Hereby, missing values are obtained from regression analysis. The dependent variable is hosting the missing values and the selected regressors have a high correlation with the dependent variable. The purpose of regression imputation is not to re-create the true individual missing values but to handle missing data in a way resulting in valid statistical inference.
3. Individual indicators were transformed with natural logarithm to lessen (positive) skew, where applicable. All individual indicators were then normalized using z-scores. These are formed by subtracting from the country-specific value of each indicator the EU average countries and dividing by the standard deviation. In other words, for each country the standardized deviation from the EU unweighted average is estimated.
4. Zero weights were a priori assigned to some indicators according to specific reasons. For the remaining indicators, weights were estimated using factor analysis. Factor analysis groups individual indicators, which are correlated, to form a composite indicator. This composite indicator is supposed to capture as much information of the individual indicators as possible. For each set of individual indicators, a separate standard factor analysis has been done. First, factors have been retained which have eigenvalues larger than one and contribute individually to explaining overall variance of the data by more than 10% (see OECD 2008, pp. 89). Second, factors have been rotated to obtain factor loadings. Third, weights from the matrix of factor loadings were estimated.
5. Based on theoretical considerations, each individual indicator was assigned a positive or negative relationship to the composite indices (**Error! Reference source not found.**). For instance, the ranking of countries in the index of "health status" is increasing with lower levels of life expectancy and higher levels of infant mortality (High ranking is associated with low performance levels).

[22] http://ec.europa.eu/economy_finance/publications/occasional_paper/2010/pdf/ocp74_en.pdf
[23] http://stats.oecd.org
[24] http://epp.eurostat.ec.europa.eu/portal/page/portal/health/public_health/data_public_health/database
[25] http://epp.eurostat.ec.europa.eu/portal/page/portal/social_protection/data/database
[26] Classification of the functions of government (COFOG)
(http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database).

ANNEX 9 – DETAILED TABLES OF INDIVIDUAL INDICATORS IN HEALTH CARE

Table A.9.1: Indicators of public expenditure on health, 2011 or most recent

	Year of data	Public expenditure level, as % of GDP*		Projected increase in expenditure over 2010-2060, in pp. of GDP** AWG reference		AWG risk scenario		In per capita PPS		In % of total current health expenditure		In % of total government expenditure		
BE	2011	6.0	(12)	0.4	(27)	0.8	(26)	1871	(8)	76%	(15)	11.5	(16)	**BE**
BG	2011 - proj	4.3	(24)	0.5	(26)	1.1	(22)	571	(28)	54%	(27)	11.5	(15)	**BG**
CZ	2011	6.0	(13)	1.7	(5)	2.4	(4)	1280	(17)	84%	(6)	13.9	(4)	**CZ**
DK	2011	6.9	(6)	0.9	(19)	1.5	(17)	2164	(6)	84%	(5)	12.0	(12)	**DK**
DE	2011	7.7	(3)	1.4	(8)	2.0	(7)	2364	(3)	77%	(14)	17.1	(1)	**DE**
EE	2011	4.5	(22)	1.1	(14)	1.8	(9)	909	(21)	80%	(10)	11.9	(13)	**EE**
IE	2011 - incl. HC3	6.0	(14)	1.1	(16)	1.7	(11)	1752	(11)	68%	(22)	12.7	(11)	**IE**
EL	2011	5.9	(15)	0.9	(20)	1.2	(21)	1296	(15)	66%	(23)	11.4	(17)	**EL**
ES	2011	6.2	(10)	1.3	(9)	1.9	(8)	1506	(13)	73%	(18)	13.4	(8)	**ES**
FR	2011	7.7	(2)	1.4	(7)	2.1	(6)	2139	(7)	77%	(13)	13.8	(5)	**FR**
HR	2011 - incl. HC3	6.6	(7)	3.6	(1)			1060	(20)	85%	(4)	:		**HR**
IT	2011 - proj	6.4	(9)	0.6	(25)	1.0	(24)	1584	(12)	80%	(9)	12.8	(10)	**IT**
CY	2012	3.2	(28)	0.4	(28)	0.5	(27)	754	(24)	52%	(28)	6.9	(27)	**CY**
LV	2011 - proj	3.9	(26)	0.7	(23)	1.1	(23)	656	(25)	60%	(26)	9.0	(26)	**LV**
LT	2011 - proj	3.7	(27)	0.7	(22)	1.3	(19)	647	(26)	72%	(20)	9.2	(25)	**LT**
LU	2011	4.5	(21)	0.7	(21)	1.0	(25)	3209	(1)	87%	(2)	10.6	(20)	**LU**
HU	2011	4.9	(20)	1.1	(10)	1.7	(12)	881	(22)	63%	(25)	9.8	(23)	**HU**
MT	2011 - proj	4.9	(19)	2.9	(3)	3.6	(1)	1120	(18)	84%	(7)	11.9	(14)	**MT**
NL	2011 - proj	5.4	(18)	1.1	(15)	1.6	(15)	1771	(10)	86%	(3)	10.5	(21)	**NL**
AT	2011	7.0	(5)	1.6	(6)	2.2	(5)	2344	(4)	77%	(12)	13.7	(6)	**AT**
PL	2011	4.4	(23)	2.3	(4)	2.6	(3)	787	(23)	71%	(21)	10.2	(22)	**PL**
PT	2011	6.5	(8)	1.1	(11)	1.6	(14)	1286	(16)	66%	(24)	13.2	(9)	**PT**
RO	2011	3.9	(25)	1.0	(17)	1.4	(18)	592	(27)	78%	(11)	9.7	(24)	**RO**
SI	2011	5.8	(16)	1.1	(13)	1.7	(13)	1392	(14)	73%	(19)	11.4	(18)	**SI**
SK	2011	5.6	(17)	3.0	(2)	3.0	(2)	1063	(19)	74%	(17)	14.7	(3)	**SK**
FI	2011	6.1	(11)	1.0	(18)	1.5	(16)	1837	(9)	75%	(16)	11.1	(19)	**FI**
SE	2011	7.0	(4)	0.7	(24)	1.2	(20)	2313	(5)	82%	(8)	13.7	(7)	**SE**
UK	2011 - incl. HC3	7.8	(1)	1.1	(12)	1.8	(10)	2427	(2)	88%	(1)	15.7	(2)	**UK**
EU		6.9		1.2		1.7		1958		78%		13.9		**EU**
Avg. EU		5.7		1.3		1.7		1485		75%		12.0		**Avg. EU**

Source: Fiscal Sustainability Report 2012, Commission services, based on Eurostat and OECD health data.
Notes: * Actual or projected 2011 value as in the Fiscal Sustainability Report 2012, excluding long-term nursing care;
** Projected expenditure as in the Fiscal Sustainability Report 2012;
Values in brackets refer to the country ranking position from high (1) to low (27). A higher ranking means higher expenditure.

Table A.9.2: Indicators of hospital care, 2011 or most recent

	Public hospital expenditure as % GDP		Public hospital expenditure % of public current health expenditure		Acute hospital beds per 1 000 pop		Acute care bed occupancy rates		Average acute care length of stay in days**		% of day in total discharges		Hospital care index	
BE	2.5	(18)	31.0	(28)	4.2	(9)	78%	(20)	7.1	(4)	45%	(24)	21	BE
BG	2.3	(21)	61.0	(2)	5.2	(4)	70%	(4)	5.1	(25)	0% *	(1)	2	BG
CZ	3.2	(9)	51.0	(8)	5.0	(5)	73%	(10)	7.0	(5)	2%	(2)	1	CZ
DK	4.5	(1)	51.0	(8)	2.9	(20)	71% *	(8)	3.6	(28)	23%	(14)	16	DK
DE	2.9	(13)	34.0	(25)	5.3	(2)	79%	(22)	7.3	(3)	3%	(3)	5	DE
EE	2.6	(16)	57.0	(3)	3.5	(16)	71%	(6)	5.5	(20)	18%	(11)	10	EE
IE	2.9	(14)	46.3 *	(14)	2.2	(26)	92%	(28)	6.1	(16)	59%	(27)	28	IE
EL	3.1 *	(10)	54.8 *	(5)	4.1	(12)	73%	(10)	5.4	(21)	13% *	(8)	7	EL
ES	3.6	(7)	54.0	(6)	2.4	(24)	75%	(16)	6.3	(13)	37%	(22)	17	ES
FR	3.7	(5)	43.0	(17)	3.4	(17)	75%	(16)	5.2	(24)	37%	(22)	18	FR
HR	2.5 *	(17)	32.4 *	(27)	3.5	(15)	77%	(18)	8.4	(1)	59%	(27)	19	HR
IT	3.1 *	(12)	40.8 *	(20)	2.8	(22)	79%	(22)	6.7	(6)	29%	(18)	23	IT
CY	2.0	(25)	67.0	(1)	3.3	(18)	91%	(27)	5.7	(18)	17%	(9)	24	CY
LV	1.9	(27)	52.0	(7)	3.6	(14)	70%	(4)	6.3	(12)	28%	(16)	14	LV
LT	2.4	(19)	48.0	(13)	5.3	(3)	73%	(10)	6.7	(8)	8%	(5)	3	LT
LU	2.0	(26)	37.0	(24)	4.2	(10)	72%	(9)	7.6	(2)	30%	(19)	12	LU
HU	2.1	(23)	43.0	(17)	4.2	(11)	71%	(6)	5.8	(17)	6%	(4)	13	HU
MT	2.4 *	(20)	38.0 *	(22)	2.5	(23)	82%	(24)	6.2	(14)	34%	(20)	27	MT
NL	3.7	(4)	39.0	(21)	3.1	(19)	49%	(1)	5.6	(19)	52%	(25)	4	NL
AT	3.6	(6)	46.0	(15)	5.4	(1)	86%	(26)	6.6	(9)	17%	(9)	6	AT
PL	2.1	(24)	46.0	(15)	4.3	(8)	77%	(18)	5.0	(26)	21%	(12)	22	PL
PT	3.2	(8)	50.0	(11)	2.8	(21)	74%	(14)	6.7	(6)	36%	(21)	15	PT
RO	2.3	(22)	51.0	(8)	4.6	(6)	73%	(10)	6.2	(14)	22%	(13)	9	RO
SI	3.1	(11)	50.0	(11)	3.7	(13)	69%	(3)	5.4	(21)	12%	(7)	8	SI
SK	1.9	(28)	34.0	(25)	4.5	(7)	66%	(2)	6.6	(9)	29% *	(17)	11	SK
FI	2.8	(15)	43.0	(17)	1.8	(28)	74%	(14)	5.4	(21)	23%	(14)	25	FI
SE	4.1	(2)	55.0	(4)	2.0	(27)	78%	(20)	4.6	(27)	8%	(5)	20	SE
UK	3.7 *	(3)	37.7 *	(23)	2.4	(24)	84%	(25)	6.6	(9)	53%	(26)	26	UK
EU	3.3		41.8		3.5		77%		6.3		29%			EU
Avg. EU	2.9		46.2		3.6		75%		6.1		26%			Avg. EU

Source: Commission services, based on Eurostat and OECD health data.

Notes: * Imputed values;

** For BG, LT, LU, MT, RO acute care LOS was estimated, by using the overall LOS (i.e. incl. non-acute care) and scaling down by the EU average ratio of acute care LOS to overall LOS;

Values in brackets refer to the country ranking position in terms of hospital indicators from high (1) to low (27). Note that higher ranking in terms of hospital expenditure means a higher expenditure, a higher ranking in terms of acute care beds per 1000 population stands for higher number of beds per 1000 population, a higher ranking in terms of occupancy rates means a lower occupancy rate, a higher ranking in terms of average length of stay means a higher average length of stay and a higher ranking in terms of the percentage of day case discharges in total discharged stands for a lower percentage of day case discharges in all discharges. The last column gives the country ranking in terms of the composite indicator. This is a combination of all the indicators and is calculated using principal components analysis. A higher ranking means a combination of higher expenditure and lower activity indicators. All countries above the median (the threshold) in the index of hospital care are flagged in purple. See Annex 8 for the methodology used.

Table A.9.3: Indicators of ambulatory care, 2011 or most recent

	Ambulatory care																					
	Public expenditure on ambulatory care as % GDP			Public expenditure on ambulatory care as % of public CHE			Number of general practitioners per 100 000 inhabitants			Share of general practitioners in all physicians			Ratio of nurses to physicians			Ratio of outpatient to inpatient contacts			Ambulatory care index		
BE	2.5		(27)	31.2		(27)	111.0		(25)	24%		(21)	5.3		(28)	26.5		(11)	28		BE
BG	0.7		(3)	19.5		(10)	66.5		(12)	10%		(5)	1.3		(2)	39.9		(21)	5		BG
CZ	1.6		(19)	26.5		(21)	70.0		(14)	11%		(6)	2.4		(15)	58.5		(27)	20		CZ
DK	2.3		(23)	25.4		(18)	73.3		(17)	20%		(19)	4.5		(26)	40.6		(22)	24		DK
DE	2.5		(28)	29.8		(25)	66.0		(11)	27%		(23)	3.0		(20)	41.2		(23)	26		DE
EE	0.9		(5)	20.3		(12)	74.0		(18)	16%		(15)	2.0		(9)	28.1		(14)	9		EE
IE	2.2	*	(22)	30.6	*	(26)	75.0		(19)	18%		(18)	4.7		(27)	11.9		(1)	23		IE
EL	1.1	*	(7)	16.0	*	(4)	30.0		(2)	4%		(1)	0.5		(1)	25.1		(10)	1		EL
ES	1.3		(12)	19.1		(8)	77.0		(21)	14%		(13)	1.4		(3)	46.5		(25)	14		ES
FR	2.3		(26)	26.3		(19)	156.0		(27)	32%		(27)	2.9		(18)	26.6		(12)	25		FR
HR	1.6	*	(20)	18.8	*	(7)	50.4		(7)	11%		(6)	2.0		(10)	41.5		(24)	12		HR
IT	1.5	*	(15)	18.4	*	(6)	76.0		(20)	15%		(14)	1.6		(4)	32.7		(18)	11		IT
CY	0.3		(1)	10.9		(1)	41.3		(4)	9%		(3)	1.6		(5)	29.1		(16)	2		CY
LV	0.8		(4)	21.8		(14)	58.6		(9)	11%		(6)	1.7		(7)	24.5		(9)	4		LV
LT	1.1		(9)	22.4		(15)	69.7		(13)	12%		(9)	1.9		(8)	29.0		(15)	10		LT
LU	1.6		(17)	27.9		(24)	82.0		(22)	17%		(16)	4.2		(25)	31.4		(17)	22		LU
HU	1.0		(6)	19.3		(9)	33.5		(3)	9%		(3)	2.2		(11)	58.2		(26)	7		HU
MT	1.1	*	(8)	23.6	*	(16)	71.2		(15)	29%		(26)	2.2		(13)	15.4		(2)	13		MT
NL	1.4		(14)	14.3		(3)	73.0		(16)	27%		(23)	3.0		(19)	27.3		(13)	16		NL
AT	1.6		(18)	19.9		(11)	157.6		(28)	25%		(22)	1.6		(6)	20.7		(8)	18		AT
PL	1.2		(10)	26.4		(20)	20.0		(1)	12%		(9)	2.7		(16)	33.5		(19)	8		PL
PT	1.7		(21)	27.2		(22)	51.0		(8)	34%		(28)	3.9	*	(24)	17.3		(4)	21		PT
RO	0.6		(2)	13.5		(2)	84.9		(24)	22%		(20)	2.3		(14)	16.3		(3)	3		RO
SI	1.3		(13)	20.9		(13)	45.0		(6)	12%		(9)	3.3		(22)	34.5		(20)	15		SI
SK	1.5		(16)	27.7		(23)	41.4		(5)	7%		(2)	2.2		(12)	64.6		(28)	17		SK
FI	2.3		(23)	34.7		(28)	112.7		(26)	27%		(23)	3.7		(23)	18.2		(6)	27		FI
SE	1.2		(11)	16.8		(5)	63.0		(10)	13%		(12)	2.9		(17)	18.1		(5)	6		SE
UK	2.3	*	(25)	25.2	*	(17)	82.0		(22)	17%		(16)	3.2		(21)	18.3		(7)	19		UK
EU	2.0			25.1			80.3			23%			2.5			31.9					EU
Avg. EU	1.5			22.7			71.9			17%			2.7			31.3					Avg. EU
included in composit	Yes			Yes			Yes			Yes			Yes			Yes					

Source: Commission services, based on Eurostat and OECD health data.

Notes: * Imputed values.

Values in brackets refer to the country ranking position in terms of ambulatory care indicators from high (1) to low (27). Note that a higher ranking in terms of ambulatory expenditure means a lower expenditure; a higher ranking in terms of the number of GPs per 100 000 inhabitants stands for lower number of GPs per 100 000 inhabitants; a higher ranking in terms of the ratio of GPs to all physicians means a lower ratio; a higher ranking in terms of the ratio of nurses to physicians means a lower ratio; and a higher ranking in terms of the ratio of outpatient to inpatient contacts means a lower ratio. The last column gives the country ranking in terms of the composite indicator. This is a combination of all the indicators and is calculated using principal components analysis. A higher ranking means a combination of lower expenditure on ambulatory care and lower ambulatory care activity indicators. All countries above the median (the threshold) in the index of ambulatory care are flagged in purple. See Annex 8 for the methodology used.

Table A.9.4: Indicators of spending on outpatient pharmaceuticals, 2011 or most recent

	Public outpatient pharmaceutical expenditure as % GDP		Public outpatient pharmaceutical as % of public current health expenditure		Public as % of total expenditure on pharmaceuticals		Public outpatient pharmaceutical expenditure in per capita PPS		Generic market shares in volume		Generic market shares in value		Pharmaceutical spending index	
BE	1.0	(8)	13.1	(17)	64%	(11)	326	(5)	28%	(2)	13%	(2)	7	BE
BG	0.4	(25)	11.9	(19)	18%	(27)	57	(27)	43% *	(9)	25% *	(19)	25	BG
CZ	0.9	(12)	15.2	(10)	63%	(12)	200	(16)	45%	(13)	30%	(23)	14	CZ
DK	0.4	(26)	4.1	(27)	49%	(19)	113	(23)	52%	(19)	15%	(6)	27	DK
DE	1.2	(5)	14.4	(12)	76%	(6)	371	(2)	70%	(25)	18%	(11)	4	DE
EE	0.6	(21)	13.4	(16)	48%	(21)	125	(22)	48% *	(16)	22% *	(14)	20	EE
IE	1.2	(4)	21.4	(4)	78%	(5)	358	(3)	33%	(4)	13%	(2)	2	IE
EL	1.9	(1)	32.3	(1)	89%	(2)	421	(1)	38%	(7)	16%	(8)	1	EL
ES	1.1	(7)	17.0	(6)	71%	(7)	281	(10)	32%	(3)	13%	(2)	5	ES
FR	1.2	(6)	14.3	(13)	68%	(9)	337	(4)	42%	(8)	18%	(11)	6	FR
HR	-		-		-		-		-		-		-	HR
IT	0.7	(20)	9.4	(24)	46%	(22)	166	(19)	34%	(5)	13%	(2)	22	IT
CY	0.3	(27)	10.0	(22)	24%	(26)	75	(26)	43% *	(12)	22% *	(13)	26	CY
LV	0.6	(23)	14.7	(11)	35%	(25)	93	(25)	79%	(27)	38%	(25)	24	LV
LT	0.8	(17)	14.2	(14)	39%	(24)	126	(20)	52% *	(20)	22% *	(15)	21	LT
LU	0.5	(24)	9.7	(23)	82%	(3)	325	(6)	54% *	(22)	23% *	(17)	11	LU
HU	1.3	(3)	25.9	(3)	49%	(20)	232	(12)	43%	(10)	28%	(20)	9	HU
MT	1.0	(10)	16.8	(7)	61%	(13)	208	(15)	51% *	(18)	24% *	(18)	12	MT
NL	0.9	(14)	9.2	(25)	78%	(4)	294	(7)	57%	(23)	15%	(6)	13	NL
AT	0.9	(15)	10.8	(20)	68%	(10)	287	(8)	27%	(1)	16%	(8)	10	AT
PL	0.6	(22)	13.4	(15)	39%	(23)	108	(24)	50%	(17)	40%	(26)	23	PL
PT	1.0	(9)	15.9	(8)	55%	(18)	200	(17)	37%	(6)	28%	(20)	15	PT
RO	0.8	(16)	18.7	(5)	56%	(15)	125	(21)	70%	(25)	40%	(26)	17	RO
SI	1.0	(11)	15.4	(9)	56%	(17)	232	(13)	53%	(21)	31%	(24)	16	SI
SK	1.5	(2)	27.0	(2)	69%	(8)	285	(9)	45%	(13)	28%	(20)	3	SK
FI	0.7	(18)	10.3	(21)	56%	(16)	199	(18)	43%	(10)	17%	(10)	18	FI
SE	0.7	(18)	9.1	(26)	58%	(14)	219	(14)	48%	(15)	12%	(1)	19	SE
UK	0.9	(13)	12.4	(18)	90%	(1)	280	(11)	60%	(24)	23%	(16)	8	UK
EU	1.0		13.5		69%		283		43%		18%			EU
Avg. EU	0.9		14.8		59%		224		47%		22%			Avg. EU

Source: Commission services, based on Eurostat and OECD health data.

Notes: * Imputed values; Values in brackets refer to the country ranking position in terms of ambulatory care indicators from high (1) to low (27). Note that higher ranking in terms of expenditure means a higher expenditure; a higher ranking in terms of the market share of generics in volume means a lower market share of generics; and a higher ranking in terms of the market share of generics in value means a lower market share of generics in value. The last column gives the country ranking in terms of the composite indicator. This is a combination of all the indicators expect for the indicator on the market share in value and is calculated using principal components analysis. A higher ranking means a combination of higher expenditure, higher price level and lower share of generics in volume. All countries above the median (the threshold) in the index pharmaceutical spending are flagged in purple. See Annex 8 for the methodology used.

Table A.9.5: Indicators of public expenditure on administration and insurance, 2011 or most recent

	As % of GDP		As % of public CHE		Index of administrative spending	
BE	0.4	(1)	5.7	(2)	1	BE
BG	0.1	(26)	1.9	(22)	24	BG
CZ	0.2	(9)	3.7	(7)	8	CZ
DK	0.1	(20)	1.3	(26)	25	DK
DE	0.4	(2)	5.3	(3)	2	DE
EE	0.1	(16)	2.8	(14)	16	EE
IE	0.2	(12)	2.8	(13)	12	IE
EL	0.2	(12)	2.6	(16)	15	EL
ES	0.1	(14)	2.1	(21)	17	ES
FR	0.4	(3)	4.6	(5)	4	FR
HR	-		-		-	HR
IT	0.1	(27)	0.8	(27)	27	IT
CY	0.2	(7)	7.9	(1)	3	CY
LV	0.1	(16)	3.4	(10)	11	LV
LT	0.1	(14)	2.9	(12)	14	LT
LU	0.1	(25)	1.4	(25)	26	LU
HU	0.1	(22)	2.1	(19)	22	HU
MT	0.2 *	(10)	3.4 *	(9)	10	MT
NL	0.3	(4)	3.7	(6)	5	NL
AT	0.2	(7)	3.1	(11)	9	AT
PL	0.1	(22)	2.3	(17)	19	PL
PT	0.1	(20)	1.7	(24)	23	PT
RO	0.1	(22)	2.3	(18)	20	RO
SI	0.2	(11)	2.6	(15)	13	SI
SK	0.3	(6)	4.8	(4)	6	SK
FI	0.1	(16)	2.1	(20)	18	FI
SE	0.1	(16)	1.8	(23)	21	SE
UK	0.3 *	(5)	3.5 *	(8)	7	UK
EU	0.3		3.4			EU
Avg. EU	0.2		3.1			Avg. EU

Source: Commission services, based on Eurostat and OECD health data.

Notes: * Imputed values. Values in brackets refer to the country ranking position in terms of expenditure on administration and insurance from high (1) to low (27). Note that higher ranking in terms of expenditure means a higher expenditure. The last column gives the country ranking in terms of the composite indicator. This is the combination of all the indicators and is calculated using principal components analysis. A higher ranking means a higher expenditure. All countries above the median (the threshold) in the index of administrative spending are flagged in purple. See Annex 8 for the methodology.

Table A.9.6: Indicators of health status, 2011 or most recent

	Life expectancy at 1 for females		Life expectancy at 1 for males		Amenable mortality rates		Infant mortality rate per 1 000 life births		Health status index	
BE	82.4	(16)	77.1	(15)	120.8	(25)	3.3	(20)	20	BE
BG	77.4	(1)	70.4	(4)	323.1	(6)	7.8	(2)	3	BG
CZ	80.3	(8)	74.0	(10)	273.3	(9)	2.6	(24)	10	CZ
DK	81.2	(11)	77.0	(14)	141.1	(21)	3.4	(16)	12	DK
DE	82.5	(18)	77.7	(17)	148.1	(18)	3.4	(16)	16	DE
EE	80.5	(10)	70.3	(3)	296.8	(8)	3.6	(11)	8	EE
IE	82.1	(12)	77.6	(16)	162.9	(13)	3.5	(13)	13	IE
EL	82.3	(13)	77.8	(19)	154.1	(16)	3.4	(16)	15	EL
ES	84.6	(27)	78.6	(24)	109.8	(26)	3.5	(13)	27	ES
FR	85.0	(28)	78.0	(21)	85.7	(28)	3.5	(13)	28	FR
HR	79.7	(7)	73.3	(9)	317.5	(7)	4.7	(7)	7	HR
IT	84.5	(26)	79.4	(28)	127.4	(22)	3.2	(21)	26	IT
CY	82.3	(13)	78.6	(24)	121.7	(23)	3.1	(23)	21	CY
LV	78.2	(4)	68.1	(2)	424.6	(2)	6.3	(3)	1	LV
LT	78.6	(5)	67.4	(1)	456.9	(1)	3.9	(10)	4	LT
LU	82.8	(21)	77.9	(20)	121.4	(24)	2.5	(26)	25	LU
HU	78.1	(3)	70.6	(5)	352.8	(5)	4.9	(6)	5	HU
MT	82.5	(18)	78.1	(22)	182.5	(12)	6.3	(3)	11	MT
NL	82.4	(16)	78.7	(26)	109.5	(27)	3.6	(11)	23	NL
AT	83.1	(24)	77.7	(17)	156.7	(15)	3.2	(21)	19	AT
PL	80.4	(9)	72.0	(8)	193.0	(10)	4.6	(8)	9	PL
PT	83.2	(25)	76.9	(13)	148.1	(18)	3.4	(16)	18	PT
RO	77.8	(2)	70.8	(6)	386.8	(4)	9.0	(1)	2	RO
SI	82.5	(18)	76.1	(11)	161.8	(14)	1.6	(28)	22	SI
SK	79.2	(6)	71.7	(7)	393.3	(3)	5.8	(5)	6	SK
FI	83.0	(22)	76.5	(12)	188.4	(11)	2.4	(27)	17	FI
SE	83.0	(22)	79.1	(27)	143.8	(20)	2.6	(24)	24	SE
UK	82.3	(13)	78.5	(23)	149.9	(17)	4.2	(9)	14	UK
EU	82.5		76.7		157.5		4.0			EU
Avg. EU	81.5		75.4		212.6		4.0			Avg. EU

Source: Commission services based on Eurostat data.

Notes: Values in brackets refer to the country ranking position in terms of health status from high (1) to low (27). Note that higher ranking in terms of life expectancy means a lower life expectancy and a worse health status and a higher ranking in terms of amenable mortality and infant mortality means higher mortality and a worse health status. The last column gives the country ranking in terms of the composite indicator. This composite indictor is a combination of the life expectancy and mortality indicators and is calculated using principal components analysis. A higher ranking (highest ranking equals 1) means a combination of lower life expectancy and higher mortality. All countries above the median (the threshold) in the index of health status are flagged in purple. See Annex 8 for the methodology used.

ANNEX 10 –DETAILED INFORMATION ON THE CARE NEEDS INDEX RELATED TO LONG-TERM CARE

Table A.10.1: Potential need for care services

	Expected years in sickness or disability over life time*				Expected years in sickness or disability from age 65 onwards*				People having a long-standing illness or health problem, in % of pop.				Self-perceived severe limitations in daily activities, in % of pop.**				Care needs index***	
	Women		Men		Women		Men		Women		Men		Women		Men			
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
BE	19.7	(15)	14.5	(13)	11.3	(18)	8.1	(16)	27.4	(22)	24.8	(21)	8.4	(15)	8.4	(6)	21	BE
BG	11.9	(28)	8.6	(27)	7.6	(26)	5.4	(26)	20.4	(28)	15.6	(28)	4.4	(28)	3.7	(27)	28	BG
CZ	17.5	(21)	12.6	(22)	10.5	(21)	7.2	(22)	32.6	(17)	28	(16)	6.4	(23)	5.5	(20)	22	CZ
DK	22.5	(10)	14.2	(14)	7.1	(27)	4.9	(27)	32.7	(16)	25.7	(19)	8.3	(16)	6.9	(16)	26	DK
DE	24.5	(5)	20.5	(2)	13.9	(8)	11.5	(1)	37.7	(10)	35.8	(4)	10.3	(5)	9.6	(2)	2	DE
EE	23.4	(8)	17	(6)	14.3	(5)	9.1	(11)	47.5	(2)	41.2	(2)	9.4	(10)	7.4	(12)	1	EE
IE	14.6	(25)	12.5	(23)	9	(25)	7.0	(23)	26.9	(23)	25.6	(20)	4.9	(26)	4.9	(24)	24	IE
EL	16.2	(24)	12.1	(24)	12.8	(13)	9.4	(9)	25.3	(24)	21.1	(25)	9.2	(12)	8.0	(9)	16	EL
ES	19.6	(16)	14.1	(15)	13.6	(10)	9.0	(12)	25.3	(24)	21.3	(24)	5.4	(25)	4.2	(26)	18	ES
FR	22.1	(11)	16	(10)	13.9	(7)	9.6	(8)	38.4	(6)	34.2	(5)	9.9	(8)	8.6	(5)	7	FR
HR	18.2	(18)	13.7	(17)	11.2	(20)	7.3	(21)	38.4	(6)	36.7	(3)	7.7	(19)	7.8	(11)	13	HR
IT	22.6	(9)	16.7	(9)	15.6	(1)	10.7	(3)	28.7	(21)	24.3	(22)	10	(6)	7.4	(12)	10	IT
CY	21.7	(13)	16.9	(7)	14.5	(4)	10.0	(6)	32.5	(18)	31	(11)	10	(6)	8.7	(3)	8	CY
LV	22.1	(12)	14.9	(12)	13.7	(9)	8.6	(14)	39.5	(3)	30.7	(12)	7.6	(20)	5.2	(23)	11	LV
LT	17.2	(22)	11	(25)	12.5	(15)	7.9	(17)	31.4	(19)	22.9	(23)	8.5	(14)	6.5	(18)	19	LT
LU	16.5	(23)	12.7	(21)	9.8	(23)	6.3	(24)	22.2	(27)	19.4	(26)	6.4	(23)	5.5	(20)	25	LU
HU	19.6	(17)	13.6	(18)	12.3	(16)	8.3	(15)	39.1	(4)	31.6	(9)	9.2	(12)	6.7	(17)	12	HU
MT	12.3	(27)	8.3	(28)	9.9	(22)	5.8	(25)	31.3	(20)	27.7	(17)	4.6	(27)	3.2	(28)	23	MT
NL	24.1	(6)	15.4	(11)	11.3	(19)	7.7	(19)	38	(9)	29.7	(14)	6.9	(22)	5.3	(22)	15	NL
AT	23.5	(7)	18.5	(5)	13.4	(11)	9.8	(7)	35	(15)	32.3	(8)	10.4	(4)	8.2	(8)	9	AT
PL	17.8	(20)	13.5	(20)	11.6	(17)	7.8	(18)	36.4	(12)	31.1	(10)	7.6	(20)	7.0	(15)	14	PL
PT	25.3	(4)	16.9	(8)	15.4	(3)	10.2	(5)	38.7	(5)	30.3	(13)	10.5	(3)	7.9	(10)	5	PT
RO	21.1	(14)	13.5	(19)	12.8	(13)	9.0	(12)	24.5	(26)	16.8	(27)	9.8	(9)	6.5	(18)	20	RO
SI	29.5	(1)	22.8	(1)	14.2	(6)	10.7	(4)	38.4	(6)	33.8	(7)	13.2	(1)	12.8	(1)	4	SI
SK	27.5	(2)	20.2	(3)	15.5	(2)	11.0	(2)	35.5	(13)	27.1	(18)	11.8	(2)	8.4	(6)	6	SK
FI	25.5	(3)	19.6	(4)	13.1	(12)	9.3	(10)	48.7	(1)	41.5	(1)	8.1	(17)	7.2	(14)	3	FI
SE	13.6	(26)	8.8	(26)	6.1	(28)	4.6	(28)	35.4	(14)	29.3	(15)	7.8	(18)	4.8	(25)	27	SE
UK	17.9	(19)	13.9	(16)	9.3	(24)	7.5	(20)	37.6	(11)	34.2	(5)	9.4	(10)	8.7	(3)	17	UK
EU avg.	20.9		15.6		12.7		9.1		34.0		29.6		8.9		7.5			EU avg.
EU med.	20.4		14.2		12.7		8.5		35.2		29.5		8.5		7.1			EU med.

Source: Commission services based on Eurostat data.

Notes: Values in brackets refer to the country ranking position in terms of health status from high (1) to low (28). Note that a higher ranking in terms of the indicators (expected years in sickness or disability over life time/from age 65 onwards; people having a long-standing illness or health problem; self-perceived severe limitations in daily activities) imply more years spent in a not-so-good health status. The last column gives the country ranking in terms of the composite indicator. This composite indicator is a combination of 6 indicators (expected years in sickness or disability from age 65 onwards; people having a long-standing illness or health problem; self-perceived severe limitations in daily activities; each indicator for men and women) and is calculated using principal components analysis. A higher ranking (highest ranking equals 1) means a combination of more life years spent in sickness or disability, more people with a long-standing illness and more people with limitations in daily activities. All Member States above the median (the threshold) in the index are flagged in grey.

* Estimated as the difference between life expectancy at birth/at age 65 and healthy life years at birth/at age 65.

** Self-perceived severe limitations in daily activities at least during the past 6 months.

*** This composite index excludes the indicator of expected years in sickness of disability over life time. Sensitivity analysis has shown that including this indicator in the composite index does not change the ranking of the Member States.

ANNEX 11 – DEFINITION OF INDIVIDUAL INDICATORS IN LONG-TERM CARE

Definition of individual indicators in long-term care			
Indicator	**#**	**Composition**	**Definition**
Total public expenditure on long-term care (LTC) as a % of GDP	1		Total public expenditure on LTC can be broadly defined as the spending by the general government and social security funds on the various components of LTC provision: institutional care, home care and cash benefits. The spending on the various components is calculated on the basis of System of Health Account (SHA) using data available at Eurostat and OECD for categories HC3.1 and HC3.2 for institutional nursing care and category HC3.3 for nursing care at home, plus data available on HC.R.6.1.(or HCR.6 if this is not available) for social services of LTC. These categories make up in-kind LTC spending. Cash benefits for LTC are calculated using data from ESSPROS for cash benefits from some sub-categories of disability and old-age functions. In case SHA data are not available, ESSPROS data is used for proxying the full spending of both in-kind and cash the institutional and/or home care components for the respective Member States. Data refer to 2011 or the latest year available. Spending is then divided by the GDP of the respective year to calculate the ratio. More details on the computation of total public spending on LTC can be found in the 2012 Ageing Report. Additional spending indicators can include total public spending on LTC as a % of total government expenditure (based on the COFOG database) and total public spending on LTC per capita in purchasing power standards.
Increase in long term care spending until 2060 in pp i.e. Projected increase in public spending on LTC in pp. of GDP over 2010-2060**	2		Projected increase in public expenditure on long-term care over 2011 - 2060 based on the "AWG reference scenario" as in the Ageing Report 2012. The "AWG reference scenario" projects the impact of changes in the population structure (ageing population) and a moderately positive evolution of the health (non-disability) status (i.e. a postponement of disability rates). More information can be found in the 2012 Ageing Report.
Care needs index	3	Individual indicators	

	3a	Expected years in sickness or disability over life time*	This indicator is constructed as the difference between life expectancy and healthy life years (HLYs) at birth. The source of these figures is Eurostat. Healthy life years is a measure of disability-free life expectancy. It is calculated using mortality statistics and data on self-perceived disability. Mortality data comes from Eurostat's demographic database, while self-perceived disability data comes from a minimum European health module that is integrated within the survey on EU statistics on income and living conditions (EU-SILC). The EU-SILC question used is: "for at least the past six months, to what extent have you been limited because of a health problem in activities people usually do?"
	3b	Expected years in sickness or disability from age 65 onwards*	This indicator is constructed as the difference between life expectancy and healthy life years (HLYs) as in indicator 3a but at the age of 65+. The source of these figures is Eurostat.
	3c	People having a long-standing illness or health problem, in % of pop.	Data on self-perceived long-standing illness or health problem is based on data on the respective question used in the EU-SILC survey (see explanation on EU-SILC in 3a).
	3d	Self-perceived severe limitations in daily activities, in % of pop.**	Data on self -perceived long-standing illness or health problem is based on the respective EU-SILC question as in the explanation provided in indicator #3a. The data for this indicator refers to the auto-evaluation by respondents of the extent to which they feel **severely** limited in activities because of health problems for at least the last 6 months.
% of spending on institutional as part of formal in-kind spending	4		In-kind spending on LTC consists of spending on institutional and home care and excludes cash benefits for LTC. In-kind spending together with spending cash benefits make up total spending on LTC (see indicator #1). This indicator calculates public spending on institutional care a share of total public spending on in-kind spending i.e. institutional plus home care.
% of formal in-kind spending in total spending	5		In-kind spending on LTC consists of spending on institutional and home care and excludes cash benefits for LTC. In-kind spending together with spending cash benefits make up total spending on LTC (see indicator #1). This indicator calculates public spending on in-kind (institutional care plus home care) a share of total public spending on LTC.
% of population (aged 15+) receiving formal in-kind LTC and/or cash benefits	6		Member States provided the Commission with figures for the number of citizens (called beneficiaries or users of LTC) receiving formal in-kind LTC and/or cash benefits. Eurostat is the source for figures on the population in the relevant age group. The indicator is computed by dividing the number of beneficiaries / users of care by the population aged 15+.

% of dependents (aged 15+) receiving formal in-kind LTC and/or cash benefits	7		Member States provided the Commission with figures for the number of citizens (called beneficiaries or users of LTC) receiving formal in-kind LTC and/or cash benefits. The 2012 Ageing Report is the source for the data on the total number of dependents in the relevant age group. The number of dependents is calculated using the number of people reporting self-perceived **severe** limitations in daily activities for at least the last 6 months as defined by the indicator #3d. Indicator #7 calculates the share of those considered dependent that are receiving benefits in-kind or cash.
Unit costs in institutional care per recipient, as % of GDP per capita	8		Total public spending on institutional care (as part of the calculations for indicator #1) divided by the number of beneficiaries/ users of institutional LTC and then expressed as a % of GDP per capita (Eurostat). Public spending per user is divided by the respective GDP per capita as a way to adjust the indicator to each country's spending ability.
Ratio of unit cost per recipient in institutional to home care	9		This indicator is constructed dividing indicator #8 by a similar indicator that divides total spending on home care by the number of beneficiaries/ users of home care LTC and then expressed as a % of GDP per capita (Eurostat). The ratio provides a proxy of how much higher the cost of institutional care is vis-à-vis the cost of home care.
Eligibility: means tested criterion	10		This qualitative indicator is based on information found in MISSOC, the EU's Mutual Information System on Social Protection (MISSOC) and which provides detailed, comparable and regularly updated information about national social protection systems.
Eligibility: minimum dependency criterion	11		This qualitative indicator is based on information found in MISSOC.

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