

COUNTRY REPORT BELGIUM

CONTENTS

New Research.....	2
New Mortality Table.....	2
Country Background	3
Population.....	3
Demographics.....	3
Population Mortality Tables	4
Population Mortality Improvements	6
Protection Insurance.....	7
Market Background.....	7
Mortality Tables.....	7
Mortality Improvements.....	7
Retail Longevity Protection.....	8
Market Background.....	8
Mortality Tables.....	8
Mortality Improvements.....	8
Relevant Organisations	9
Details on Government Statistics department	9
Details on Insurance Sector.....	9
Actuarial Society of the Country	9
Insurance Regulator.....	9
Appendices.....	11

NEW RESEARCH

NEW MORTALITY TABLE

In 2000, the Royal Belgian Society of Actuaries¹ created a first working group on mortality to describe the evolution in Belgian mortality. The working group published her results in 2002², being the first prospective mortality tables for the Belgian population. Data used in this study were collected by the Belgian National Institute of Statistics (NIS, now Directorate General Statistics and Economic Information DGSEI).

In 2010, the Federal Planning Bureau³ published a study of 2009 on prospective mortality quotients per sex and age⁴. It also contains a method to project unisex mortality quotients. This study was an update of an earlier study published in 2004. *An update is available since 3 month, but will not be published on the website.*

In 2013, the Institute of Actuaries in Belgium created a new working group on mortality tables. The aim is to provide for insurance companies, institutions for occupational pension provision and the authorities with new standard tables which can serve several goals (IAS 19, application of social and labor laws, usufruct,...)

¹ The RBSA was transformed into the Institute of Actuaries in Belgium (IA|BE) in 2009.

² RBSA, Belgian mortality tables for the past and the next century.

³ See end of document

⁴ FPB, Quotients de mortalité prospectifs par sexe et unisexes (Working paper 18-09).

http://www.plan.be/publications/publication_det.php?lang=nl&TM=46&IS=63&KeyPub=901.

Consulted August 27, 2013.

COUNTRY BACKGROUND

POPULATION

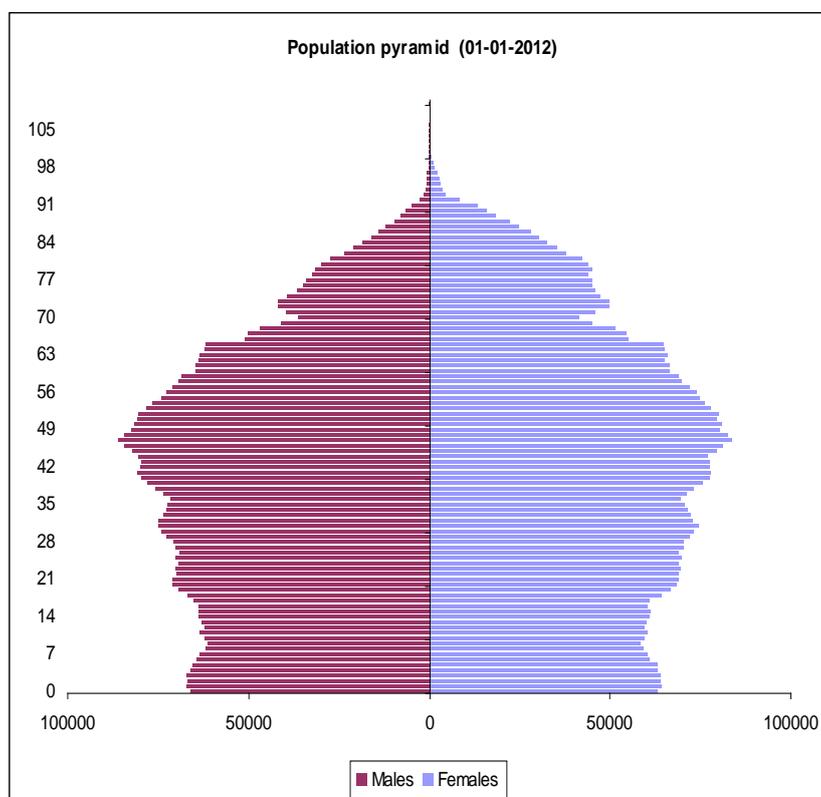
DEMOGRAPHICS

Current population of Belgium is estimated at 11.09 million⁵ as per January 1st, 2012.

A more detailed representation of the Belgium population is given below:

	0-17y	18-64y	> 65y	All ages	
Male	1,157,127	3,475,219	819,434	5,451,780	49.1%
Female	1,104,594	3,432,976	1,105,500	5,643,070	50.9%
Total	2,261,721	6,908,195	1,924,934	11,094,850	
	20.4%	62.3%	17.3%		

The population pyramid on January 1st, 2012 for the Belgian population:



⁵ Eurostat, <http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/database>. Consulted: August 27, 2012.

Life expectancy for the Belgian population is represented in following table⁶:

	1991	2001	2011
Life expectancy at birth - men	73.3	75.4	78.2
Life expectancy at birth - women	80.0	81.7	83.4

	1991	2001	2011
Life expectancy at 65y - men	14.8	16.2	18.1
Life expectancy at 65y - women	19.1	20.2	21.6

POPULATION MORTALITY TABLES

Belgian population

The Directorate General Statistics and Economic Information (DGSEI) publishes annually the Belgian population data, per sex and age. Data can be found on the site from Eurostat⁷.

In the publications of the NIS, and later the DGSEI, certain methodological concepts were changed over time, making the data not fully comparable through time. C. Jaumain and C. Vandeschrick created an Excel file and a note with the methodology to transform data to a uniform basis. The note and the Excel file can be consulted on the website of the IA|BE.⁸

Mortality tables used by insurance undertakings

Belgian law imposes mortality tables serving as a minimum for the tariff and provisions of the life insurance undertakings. The Makeham formula and the parameters to be used⁹ are published in a Royal Decree¹⁰. A distinction has been made according to the main risk driver (resulting in insurance products type 'death' and insurance products type 'survival') and sex of the insured.

	Men	Women	Unisex
Type 'death'	MK	FK	XK
Type 'survival'	MR	FR	XR
Annuities	MR	FR	XR

XK and XR tables are for each age the normal average of respectively MK-FK and MR-FR.

The obligation of unisex mortality tables does not apply to contracts where (i) there is a link to the professional activity and (ii) the benefits of the contract are complementary to social security

⁶ DGSEI, Perspective de la population, http://statbel.fgov.be/fr/modules/publications/statistiques/population/downloads/indicateurs_demographique_2012-2060.jsp. Consulted: August 27, 2012.

⁷ Eurostat, <http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/database>. Consulted August 27, 2013.

⁸ <http://www.iabe.be/fr/actualites/update-tables-de-mortalite-prof-em-christian-jaumain-christian-vandeschrick-ucl>. Consulted August 27, 2013.

⁹ See appendices.

¹⁰ Arrêté royal relatif à l'activité d'assurance sur la vie (November 14, 2003). Published November 15, 2003. http://www.nbb.be/pub/cp/domains/vo/wg/vo_wg.htm?l=fr. Consulted August 27, 2013.

schemes. Hence, occupational pension plans are exempted from the application of unisex mortality tables.

The majority of insurance undertakings do not yet use prospective mortality tables for annuity products. They tend to use the classical life tables type 'Survival', described in the Royal Decree, with a correction (reduction) for the age of the insured, which can go up to 5 or 7 years.

Insurance undertakings can opt to derive from legal obligations and to offer tariffs that are lower than the tariffs based on the legal minima. They can do this by defining an experience mortality table based on statistics on total Belgian population, Belgian insurance population, own insurance portfolio or specific for one client.

In order to be eligible to this option, certain conditions (e.g. maximum period of 3 years) should be fulfilled. This option has also some consequences for the insured (no profit sharing in this period).

Although the possibility exists for insurance undertakings to temporarily derive from the legal minimal mortality tables, there are always minima that cannot be passed. These minima are referred to as the survival and death probabilities that can be derived from the statistics on insured population and number of deaths in a period of 5 years. These statistics are published by the National Bank of Belgium.¹¹

Legal minimal mortality tables are also applied for provisioning for insurance contracts covering disability insurance. These legal minimal mortality tables can be found in a Royal Decree¹² containing the Makeham formula and the parameters to be used¹³. Distinction is made on base of sex, status (insured, surviving partner, ascendants) and degree of permanent incapacity.

	Men	Women
Used for permanent incapacity >=16%, surviving partners and ascendants	ED1(M)	ED1(F)
All other cases	ED2(M)	ED2(F)

¹¹ Statistiques concernant le nombre des personnes assurées et le nombre de décès constatés sur cinq années. <http://www.nbb.be/doc/cp/fr/vo/stat/pdf/verzekerden-overledenen.xls>. Consulted August 27, 2013.

¹² Arrêté royal du 22 février 1991 portant règlement général relatif au contrôle des entreprises d'assurances. Published April 11, 1991. http://www.nbb.be/pub/cp/domains/vo/wg/vo_wg.htm?l=fr. Consulted August 27, 2013.

¹³ See appendices

POPULATION MORTALITY IMPROVEMENTS

Following table clearly shows an increase in life expectancy at birth, both for men and women. Over a time span of 20 years, life expectancy for newborn men increased by 5 years and by 3.5 years for newborn women.

The difference in growth between men and women is translated in the reduced gap in life expectancy. Where in 1991 women had an expectancy at birth to live 7 years longer than men, this difference is reduced to 5 years in 2011.

	1991	2001	2011
Life expectancy at birth - men	73.3	75.4	78.2
Life expectancy at birth - women	80.0	81.7	83.4
Difference	6.7	6.3	5.2

PROTECTION INSURANCE

MARKET BACKGROUND

Products available in Belgium are:

- Death coverage: lump sum payment in case of death
- Life coverage: lump sum payment or annuities in case of life
- Disability insurance
- Health insurance
- Workers compensation

MORTALITY TABLES

Legal minimal mortality tables for tariffs and provisioning are given below. A brief description of these tables is to be found earlier in the document.

Death coverage: XK-MK-XK

Life coverage MR-FR-XR

Disability insurance (provisioning): ED1(M), ED1(F), ED2(M), ED2(F)

As described above, insurance undertakings can opt to derive from these minima for a period of maximal 3 years. Minima that cannot be passed are survival or mortality probabilities derived from statistics on insured persons and number of deaths published by the National Bank of Belgium

MORTALITY IMPROVEMENTS

There is no national study available on the mortality improvement specific for life insurance protection.

RETAIL LONGEVITY PROTECTION

MARKET BACKGROUND

Annuity products are available by Belgian insurance undertakings, but are hardly subscribed to.

The market of pension savings can be divided into two types: Individual Savings and Occupational Pension Plans. For neither of the two types exists an obligation to subscribe to annuity products.

The employer subscribing an occupational pension plan for his employees has the choice between a plan providing for a retirement capital and a plan providing for annuities.

In case the employer chooses the occupational pension plan providing for a retirement capital, an obligation for the pension institution (insurer or pension fund) exists to offer the possibility to convert lump sum plans into annuities.

The offered annuity should at least equal an annuity resulting from the conversion based on the tariff explained in social and labor law¹⁴ (prospective mortality table¹⁵ built by the occupational pensions supervisor FSMA and an interest rate of 3,25%). Possible additional financing is to the responsibility of the employer at the moment of pensioning.

MORTALITY TABLES

Legal minimal mortality tables for tariffs and provisioning are given. A brief description of these tables is to be found earlier in the document.

Legal minima: MR-FR-XR.

In absence of general prospective mortality tables, it is widely spread amongst insurance undertakings to include in the tariff an age correction (reduction) which can go up to 5 or 8 years.

Attempts to construct prospective mortality tables have not yet led to finalized tables.

MORTALITY IMPROVEMENTS

There is no national study available on the mortality improvement in annuity / pension market. Due to the fact that there is no legal obligation to underwrite annuity products or to convert lump sum payments into annuities, the market for annuities is underdeveloped. There is no sufficient statistical data to build on.

¹⁴ Arrêté royal du 9 mars 2005 portant approbation du règlement de la Commission Bancaire, Financière et des Assurances fixant les tables de mortalité pour la conversion de capital en rente. Published April 21, 2005.

(http://www.fsma.be/fr/Supervision/pensions/ap/apwn/Article/wgapwn/~-/media/files/wgapwn/FR/ap/wn/rd_09-03-2005.pdf). Consulted August 27, 2013.

¹⁵ Currently MR/FR with an age correction of 5 years.

RELEVANT ORGANISATIONS

DETAILS ON GOVERNMENT STATISTICS DEPARTMENT

Federal Planning Bureau - Bureau Fédéral du Plan - Federaal Planbureau (<http://www.plan.be>)

The Federal Planning Bureau (FPB) is a public agency. The FPB makes studies and projections on economic, social and environmental policy issues and on their integration within the context of sustainable development.

Directorate General Statistics and Economic Information (DGSEI) - Direction Générale Statistique et Information Economique (DGSIE) - Algemene Directie Statistiek en Economische Informatie (ADSEI) (<http://statbel.fgov.be/>)

The Directorate General Statistics and Economic Information (DGSEI) is in charge of the national (official) statistics in Belgium. The DGSEI is also responsible for the production of European statistics.

DETAILS ON INSURANCE SECTOR

Assuralia (www.assuralia.be)

Assuralia is the professional organization representing almost all of the insurance undertakings, both Belgian and foreign, operating in the Belgian market.

ACTUARIAL SOCIETY OF THE COUNTRY

Institute of Actuaries in Belgium (IA|BE) (www.iabe.be)

This institute represents the actuaries in Belgium.

INSURANCE REGULATOR

Since 2010, supervision of the financial sector has been changed in Belgium and divided between two bodies (Twin peaks-model): the National Bank of Belgium (NBB) and the Financial Services and Markets Authority (FSMA).

The NBB is responsible for the prudential supervision of financial institutions and control of those financial institutions representing a systemic risk.

National Bank of Belgium – Banque National de Belgique – Nationale Bank van België (www.nbb.be)

The responsibilities of the FSMA can be summarized in six tasks: (i) Monitoring the provision of information by companies listed on the stock market, (ii) Product supervision, (iii) Supervision of compliance with rules of conduct by financial institutions, (iv) Supervision of financial service providers who are in direct contact with clients, (v) Financial education of savers and investors and (vi) Supervision whether occupational pensions (both employees and self-employed persons) comply with the social legislation and labor laws relating to occupational pensions.

Financial Services and Markets Authority - Autorité des Services et Marchés Financiers -
Autoriteit voor Financiële Diensten en Markten (www.fsma.be)

APPENDICES

Appendix 1 : Makeham formula and parameters for the legal minimal mortality tables in life insurance.

	MR	FR	MK	FK
k	1000266,63	1000048,56	1000450,59	1000097,39
s	0,999441703848	0,999669730966	0,999106875782	0,999257048061
g	0,999733441115	0,999951440172	0,999549614043	0,999902624311
c	1,101077536030	1,116792453830	1,103798111448	1,118239062025

Makeham Formula used: $l_x = k \cdot s^x \cdot g^{c^x}$

Appendix 2 : Makeham formula and parameters for the legal minimal mortality tables in disability insurance.

	ED1(M)	ED1(F)	ED2(M)	ED2(F)
s	0,999441703848	0,999669730966	0,999441703848	0,999669730966
g	0,999733441115	0,999951440172	0,999733441115	0,999951440172
c	1,102891252975	1,118472736561	1,103798111448	1,119312877926

Makeham Formula used: $l_x = k \cdot s^x \cdot g^{c^x}$ where $k = 10^6 / g$