



# Monitoring Long-Term Care

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**LONG TERM CARE...  
SHORT TERM CHALLENGES?**



# 1 – CONTEXT

## Financing long-term care is sure to be one of our biggest challenges for the decades to come in a complex demographic, socio-economic and political context

### 1 Growing ageing among the world's populations

*The share of the population aged 80 and over is expected to rise **from 4% in 2010 to 10% in 2050** in OECD countries. Emerging countries will also be rapidly affected. Globally, the number of 80+ is expected to triple by 2050 (ONU)*

### 2 Frailty of public insurance schemes

*Total public spending on LTC accounted for 1.7% of GDP in the OECD in 2013: OECD expects this could double or more by 2060, with striking differences across countries*

### 3 A financial burden for individuals

*Average cost of a nursing home in France: around €37,000 p.a.  
Average cost of a private room in a nursing home in the US: \$100k p.a (up to \$160k p.a)  
> These costs can exceed the average pension*

### 4 A familial burden

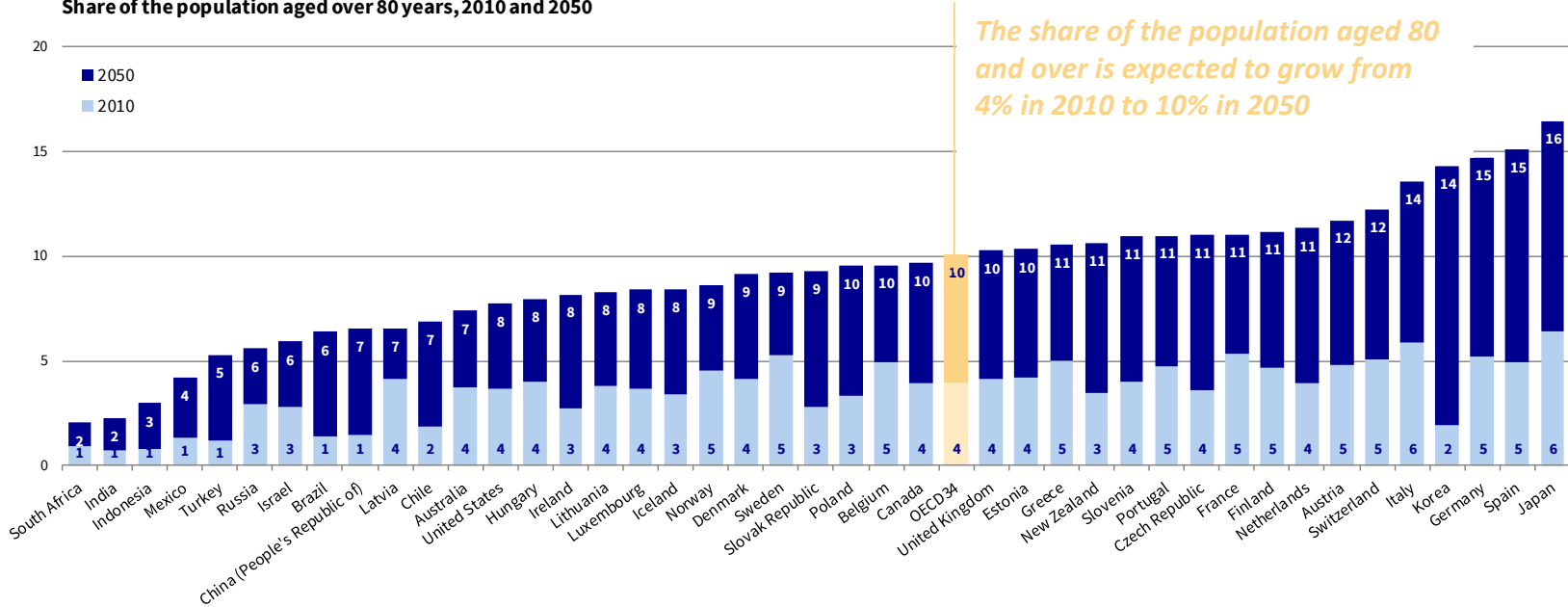
*Around 15% of people aged 50 and over provided care for a dependent relative in 2013, more than 60% of these caregivers are women*

### 5 Low-rates environment

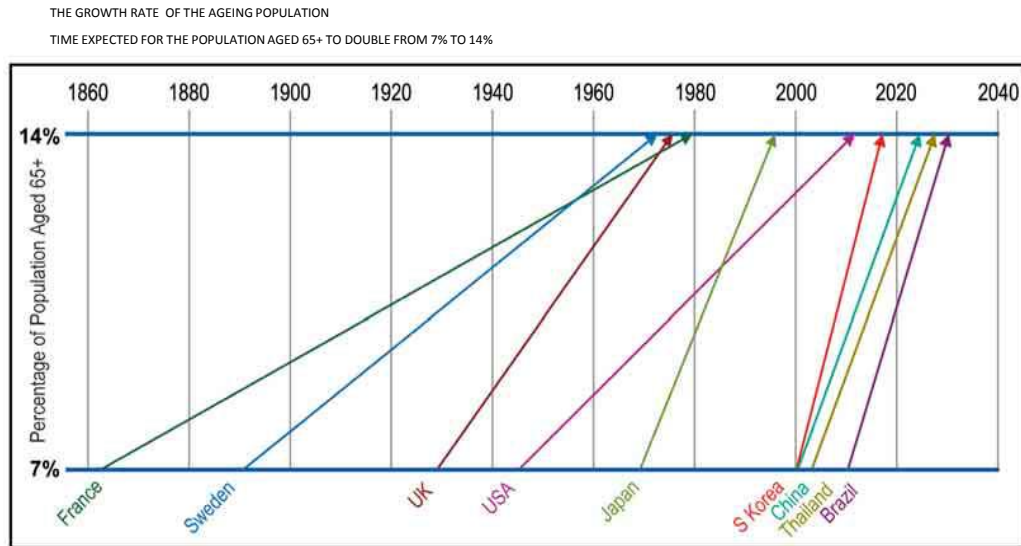
*- An additional challenge for products' profitability*

# 1. Growing ageing among the world's populations

Share of the population aged over 80 years, 2010 and 2050



# 1. Growing ageing among the world's populations



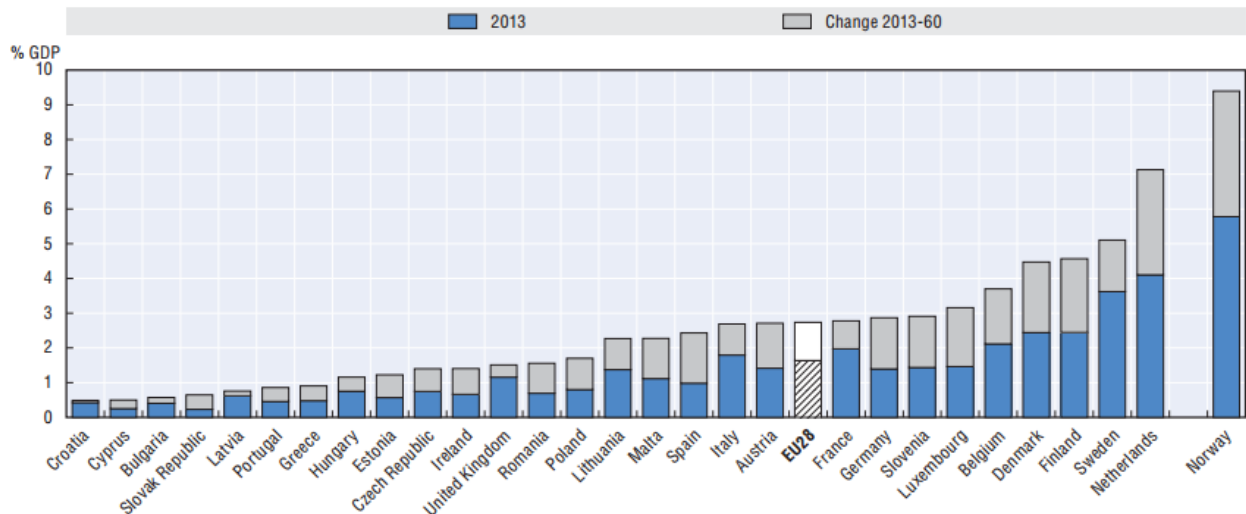
Source: WHO Global Health and Aging 2011, from Kinsella and He 2008 & US Census Bureau 2009.

## 2. Frailty of public schemes

In 2013 ... and in 2060

8.18. Public spending on long-term care as a percentage of GDP, 2013 to 2060

Baseline scenario



Note: The EU28 total is weighted by GDP.

Source: EC and EPC (2015).

### 3. A financial burden for individuals

Long-Term Care costs can **substantially affect individual assets**.



The cost of severe loss of autonomy in France is around EUR 35,000 per year.



In 2012, the average cost for a private room in a nursing home in the US was around \$90,000 per year. This figure was significantly higher in some states.

**These costs can be higher for people suffering from Alzheimer's disease.**

## 4. A family burden

### The importance of informal care

**70% to 90%**



**Between 70% and 90% of people providing care for older people are family members.**

**2/3**



**About two-thirds of informal caregivers are women.**

**5 hours 30**



**Informal care represents about 5 hours 30 min per day**



# 5. Low-rates environment

FRANCE GOVERNMENT BOND 10Y



## 2 - The LTC Risk evolution observed over the past decade

### The population's ageing still brings out controversial long-term care questions

→ **A compression of morbidity? Stability? Or worsening?**

- *Uncertainty on the magnitude of mortality improvements for the general population, for autonomous, and dependents*
- *Uncertainty on the evolution of the LTC incidence with the evolution of mortality*

### Recent publications related to cognitive dependency (dementia) conclude in a delay in the occurrence of dependency

→ 2013: CFAS II /Carol Jagger (Lancet)

- *“This study provides further evidence that a cohort effect exists in the prevalence of dementia. Later-born populations have a **lower risk of prevalent dementia** than those born earlier in the past century.”*

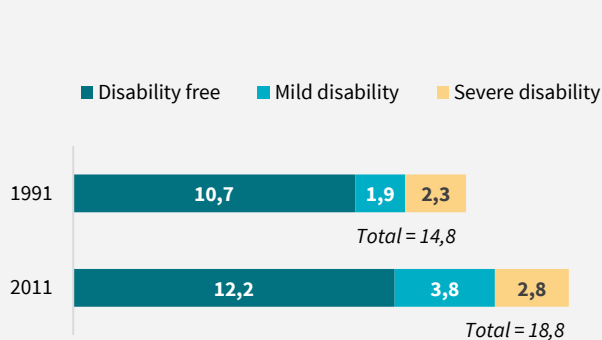
→ 2016, the New England Journal of Medicine, Incidence of Dementia over Three Decades in the Framingham Heart Study Framingham

- *“The **incidence of dementia has declined over the course of three decades**. The factors contributing to this decline have not been completely identified”*

# How life expectancy evolves at age 65

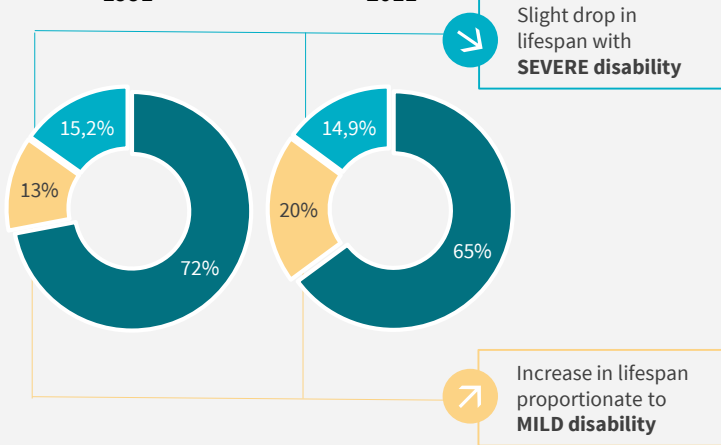
Carol JAGGER's New England's study in 1991 and 2011 in England

## LIFE EXPECTANCY IN TERMS OF DISABILITY IN DAILY LIVING ACTIVITIES ACCORDING TO CFAS' DATA STUDY



1991

2011



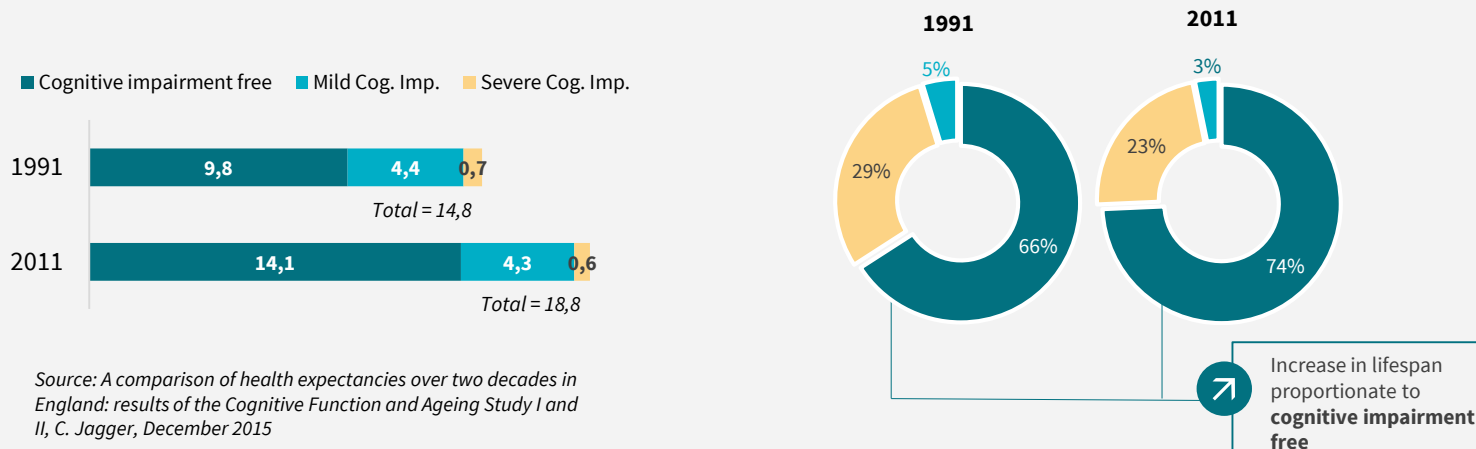
Source: A comparison of health expectancies over two decades in England: results of the Cognitive Function and Ageing Study I and II, C. Jagger, December 2015

- A 4-year gain in 20 years: healthy for 1.5 years, with a mild disability 2.9 years, and in severe disability for 0.5 years
- Light disability increased proportionately and mainly at the expense of autonomy

# Evolution of life expectancy at age 65

## Carol JAGGER's study in 1991 and 2011 in England

### LIFE EXPECTANCY IN TERMS OF COGNITIVE IMPAIRMENTS ACCORDING TO CFAS' DATA STUDY



- 4-years gain in 20 years: 1.5 years' healthy, 2.9 in mild disability, and 0.5 years in severe disability
- Proportion of light disability increased mainly at the expense of autonomy

### 3 - Understanding present risks to anticipate future trends

**We count on our historical expertise and on insights from the scientific community to define our best estimation of risks: detecting deviations early makes it possible to avoid accumulation**

#### Monitor our in-house experience

A prerequisite: **use of a multi-state model** to explicitly capture all biometric risks  
An **annual monitoring** of incidence and longevity risks to early detect any risk deviation  
A **strong governance** within the AXA Group dedicated to LTC  
> But several decades needed to confirm initial pricing assumptions (products purchased between ages 45 and 60)

#### Monitor non biometric risks

- **Financial risks**
- **Lapses**
- **Anti-selection**: medical underwriting and waiting periods
- **Medical inflation** and anticipation of **technical progress** for reimbursement products

#### Benchmark to external data

Main difficulty: the **heterogeneity of LTC definitions**  
> How to compare or extrapolate data from one system to another (differences between private and public benefits, differences from one country to another)?

#### Epidemiologic studies

Compression, stability or extension of the morbidity period?  
> This actually **differs between cognitive and physical LTC**: a relative compression (reduction) of cognitive impairment but a dynamical equilibrium of disability, with an increase of “low disability” and a decrease of “severe disability”

#### Medical progress

**Prevention and educational programs: proved results from multi-domain programs.** But how to empower people and how long will these effects last?  
**Cognitive Impairments:** still a lot to do in preventing, diagnosing early and curing these pathologies. Despite a large number of programs, this remains a challenge  
**Assisted technologies**

#### Public policies' strategies

**Example of Northern Europe vs Southern Europe:** Northern Europe favors senior citizens' autonomy. They result in better ranking in terms of healthy life expectancy compared to Southern Europe where dependency occurs earlier.  
**Example of iatrogenic dependency** in French hospitals (B. Vellas)

# Conferences and Papers available

→ Please visit the following links!

- [AXA International Research Conference on Long-term Care \(2016\)](#)
- [Publications of the researchers of the AXA Research Fund](#)
- [AXA Paper dedicated to long-term care \(2012\)](#)