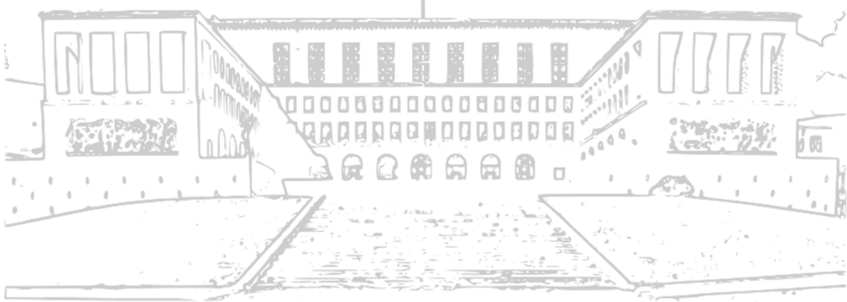
FINANCIAL MARKETS AND INSTITUTIONS

INSURERS AND PENSION FUNDS

A.Y. 2017/2018
Prof. Alberto Dreassi – adreassi@units.it



DEAMS
University of Trieste

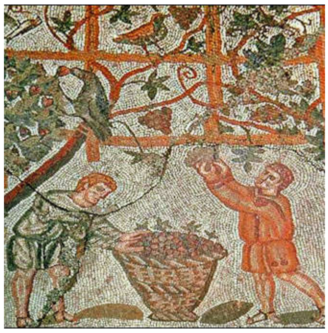
AGENDA

- Why insurance? How does it work?
- Types of insurers and insurance products
- Why pensions? How do PF work?
- Types of pensions and funds
- The Italian pension system (briefly)

WHY INSURANCE?

Future «unknown» events with adverse financial consequences (even total ruin)





First solution: **mutuality** – the individual uncertain risk is transformed in a share in the uncertain collective risk… advantages?

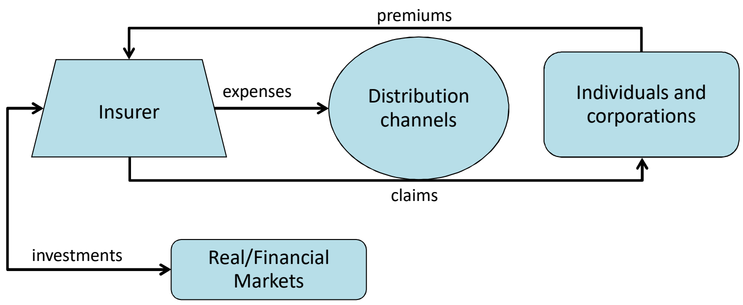
3

HOW INSURANCE WORKS

- Is it possible to provide even less uncertainty? Yes, through experience and data
- Result: "modern" **insurance**:
    - Individual risk turns into an up-front certain cost (**premium**), as the combination of event expected frequency/severity and safety margins
    - If/when the event occurs (**risk**) the consequences are indemnified (**claim**)
    - If timing/magnitude of claims are predicted correctly, producing **profits**
- Usual issues emerge…
    - **Adverse selection** of "bad" risks
    - **Moral hazard**: incentive to misbehaviour
    - **Conflicts of interests**
- … together with the typical solutions
    - **screening**, **pricing** techniques (actuarial sciences)
    - **principle-based contracts** (restrictive "covenants")
    - **utmost good faith**
    - **fraud prevention**, **self-insurance** and **risk-sharing**

4

How insurance works



Income statement

+ Premiums
- Claims
- Expenses
+/- Provisioning
+ Inv. returns

Profit/loss

Balance sheet

Assets	*Equity*
Investments - Stocks - Bonds - Funds - …	*Liabilities* Provisions on policies

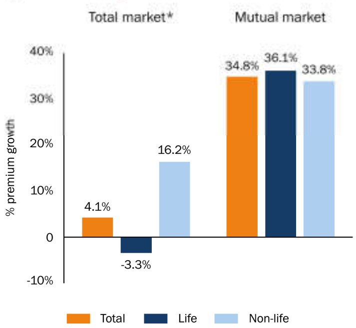
5

Insurance products and companies

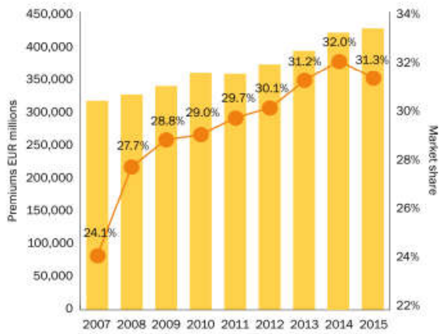
Two main types of insurers:

- Stock companies
- Mutuals:
  - Owned by policyholders
  - Profits as refunds or discounts

European premium growth (2007-2015)



European mutual premiums and market share

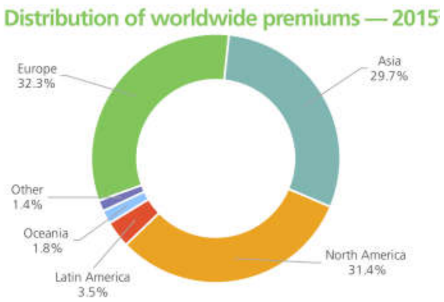


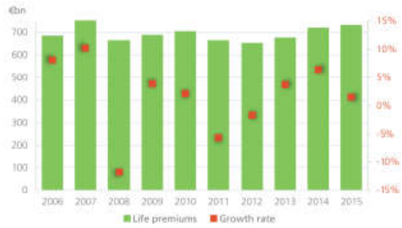
6

Insurance products and companies

Two main lines of business for the retail business (but classifications vary):

- **Life** insurance (including pensions and usually also long-term health)
- **Non-life** insurance (property/casualty or general, including usually also accidents and short-term health)





However, **marine** and **non-marine** matters historically and still today

7

Insurance products and companies

Life insurance:

- Protecting from **death**, **superannuation** and/or **illness**
- Offering mainly term/whole life, annuities and products with greater **financial features**
- **Long-term investors**

Non-life insurance:

- Protecting **assets** owned (wealth) and/or third-party **liability** (f.i. TPML)
- **Events are recurring** and **difficult to estimate**
- Offering mainly property insurance, liability insurance but also credit insurance, protection from lawsuit's costs and assistance

8

Insurance products and companies

Reinsurance: insurance bought by insurers

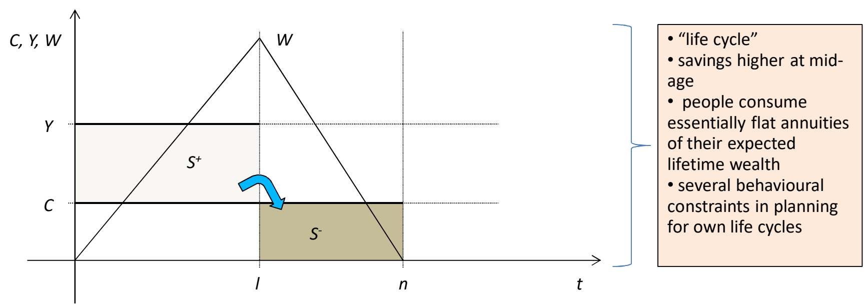
- Sharing/spreading of risk
- Complex B2B contracts and treaties
- Legal obligation remains within ceding company

- Several purposes:
    - Capacity and protection from catastrophes
    - Expertise and entry/exit from markets
    - Loss stabilisation

9

Why pensions

Income and consumption are not stable across time and are influenced by several demographic and financial uncertainties



- Need for income after retirement as well as protection from several of these uncertainties (health, inflation, …)
- Due to long cumulation phases, (funded) pension funds are the largest institutional investors

10

PENSIONS PRODUCTS AND FUNDS

Two main regimes:

- **Defined-benefit** (DB):
  - participants know in advance the level of the future benefit
  - contributions may be changed accordingly
  - risky for sponsors and participants

- **Defined-contribution** (DC):
  - participants know in advance the level of contributions
  - benefit will depend on cumulated contributions
  - several financial and demographic risks passed on participants

Public funds are often unfunded (**PAYG**), **many provide defined benefits** and plans are usually **mandatory**

Private funds are funded, mostly DC (but not only) and often **voluntary**

11

THE ITALIAN PENSION SYSTEM (BRIEFLY)

Long series of reforms, after emergence of «difficulties» since late 1980s:

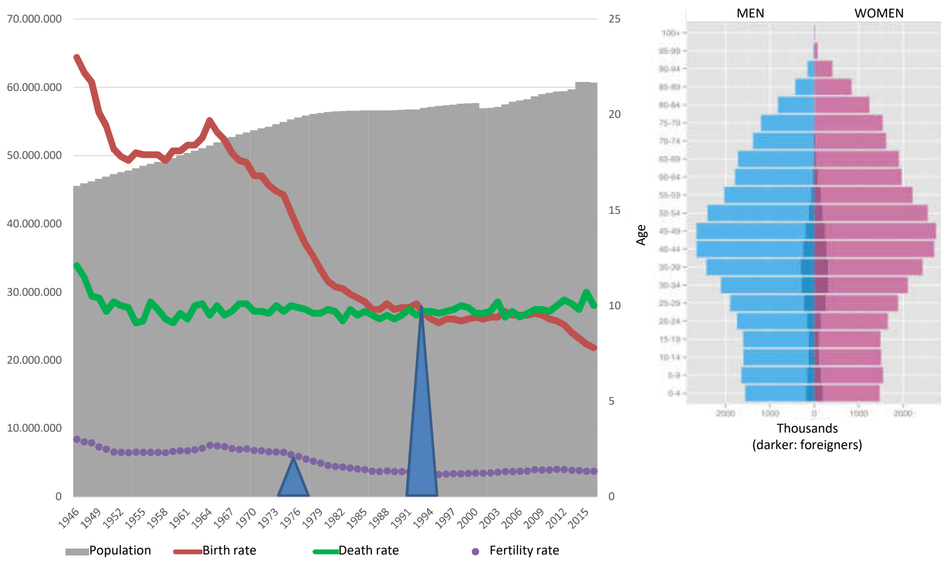
- **PAYG**
- entirely **contribution-based** (after a long retribution-base, with transition phases)
- Progressively **aligning requirements** between genders, public/private sector, employees and self-employed (not between generations)
- Progressively **removing «full» early retirement**: old-age benefits can be obtained in advance (with penalties on conversion rates)

- **Retirement age** linked to life expectancy (67+, but effective age is much lower)
- Contributions **compounded as nominal average GDP growth**
- **Replacement rates vary** between 50-80%: huge impact of salary/careers/age

12

The Italian Pension System (briefly)

Why?



13

Examples

1. The European insurance market (from InsuranceEurope/CEA, year 2013):

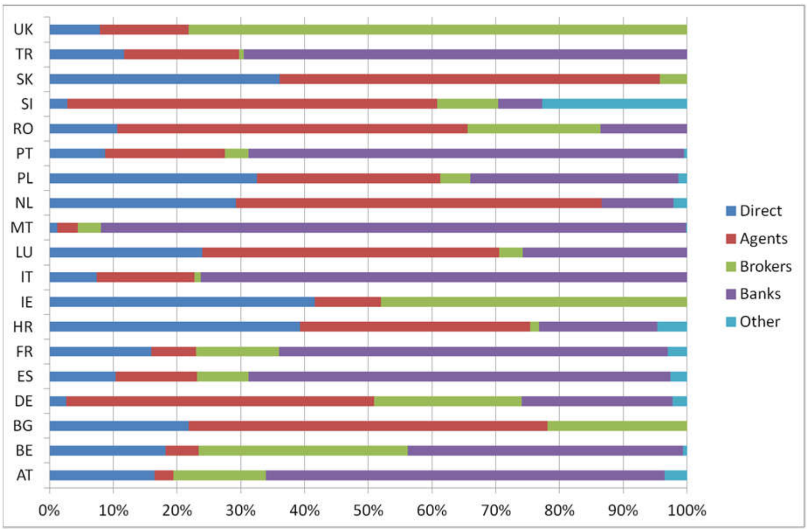
a. What is the global share of insurance markets that Europe holds?
b. How many premiums are collected in the life and non-life sector?
c. How much money do Europeans spend in insurance? And as a share of GDP?
d. How many insurers are there in Europe?
e. How much do European insurers invest? What about asset allocation?

a. 35%, followed by North America (30%), Asia (28%).
b. 1.117 bln €, 60% of which in the life sector
c. On average, 1.833€ (61% in life); ranging from 6k€ in CH or 4k€ in FI to 100 € in RO. On GDP insurance penetration is around 7.7%; ranging from 12% in NL to 1% in RO.
d. Around 5.400.
e. Around 8.5trn€ (82% in life). Asset allocation: bonds ~40%, equity ~30%, loans 10%, real estate <5%, deposits <5%.

14

EXAMPLES

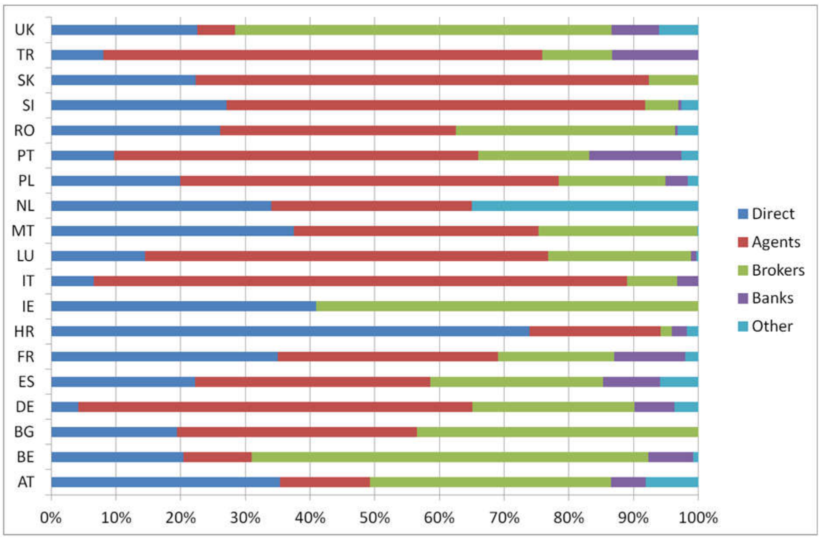
2. How do insurers distribute their products in the life sector?



15

EXAMPLES

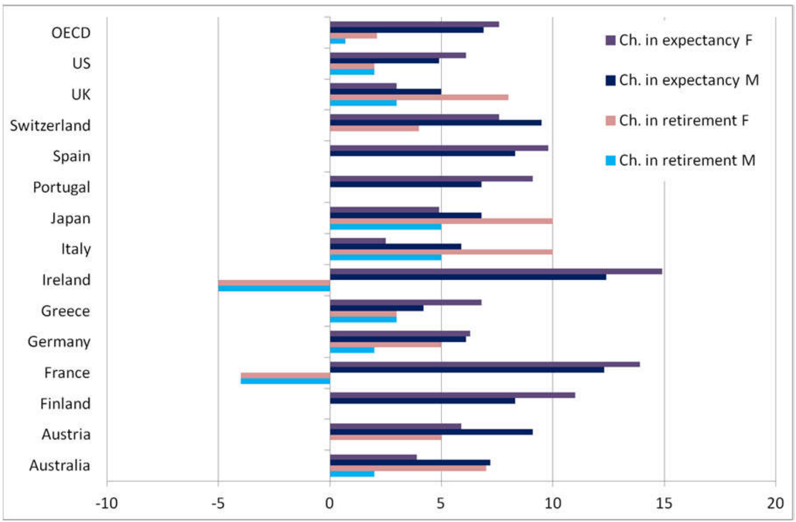
3. How do insurers distribute their products in the non-life sector?



16

EXAMPLES

4. Life expectancy and retirement age: 1960-2050 differences (OECD)



17