AN ALTERNATIVE APPROACH TO PENSION FINANCE

THE CASE OF REVERSE MORTGAGES

Introduction

- Viability of pension arrangements increasingly under pressure
  - Ageing of society (*long term*)
  - Credit crisis (*short term*)
- Three pillars (World Bank, 1994)
  - Government funding ⬇
  - Employment based ⬇
  - Private savings ⬆

The potential role of housing equity

- Private pension plans
- Personal savings

  and

- Housing equity:
  - Examples ‣ UK (€159,000) or Italy (€139,000)
  - 80-90 percent of households' wealth portfolio
  - Share of housing increased last two years

- **Question:** *How can households exploit this wealth?*

Usage of house equity

- Live costs free
- Moving down-market
  (*Leaving housing equity intact*)
- Remortgaging
  (*Increases equity, lowers income net of interest payments*)

- Alternative: Reverse mortgages

Basic modeling

Sensitivity analysis (the impact of house price appreciation, duration and interest rates)

House price risks and the impact of inflation

Home equity mortgage

- Under this heading a diverse range of products/concepts are referred to:
  I. a 'lump sum'
  II. a credit line
  III. monthly payments for a fixed period of time *or*
  IV. a life-annuity
- The latter two options are normally referred to as reverse mortgages; here, in this paper we employ the fixed-period alternative (III.).

Basic model

$$MCF = \left[\frac{r}{(1+r)^{l-a} - 1} \right] \left(HP_0 (1+hp)^{l-a} - M_0 \right) ltv$$

- Initial housing equity (HP_0-M_0)
- The approved duration period (l-a)
- The expected house price appreciation (hp)
- Interest rates (r)
- Loan to value (ltv)

Sensitivity analysis

Base scenario

(HP-M) = €200k

L-a = 20y

hp = 4%

r = 5%

ltv = 50%

(See Table 1)

		LTV = 40%	LTV = 80%
Base scenario Maximum loan Monthly cash inflow		 €118,875 €441	 €237,751 €883
Longer duration (*l-a = 30y*)		€325	€650
Higher expected house price appreciation (*hp = 6%*)		€646	€1,293
Higher interest rates (*r = 7%*)		€356	€712

And what about the risks

House price

- Simple house price model (random walk)
  - High drift rate ✓
  - High volatility ☒
- Depending on agreed loan to value ratio

Inflation

- Net cash inflows being eroded by inflation
- Compensation, *i.e.* constant real cash inflows imply lower initial cash inflow

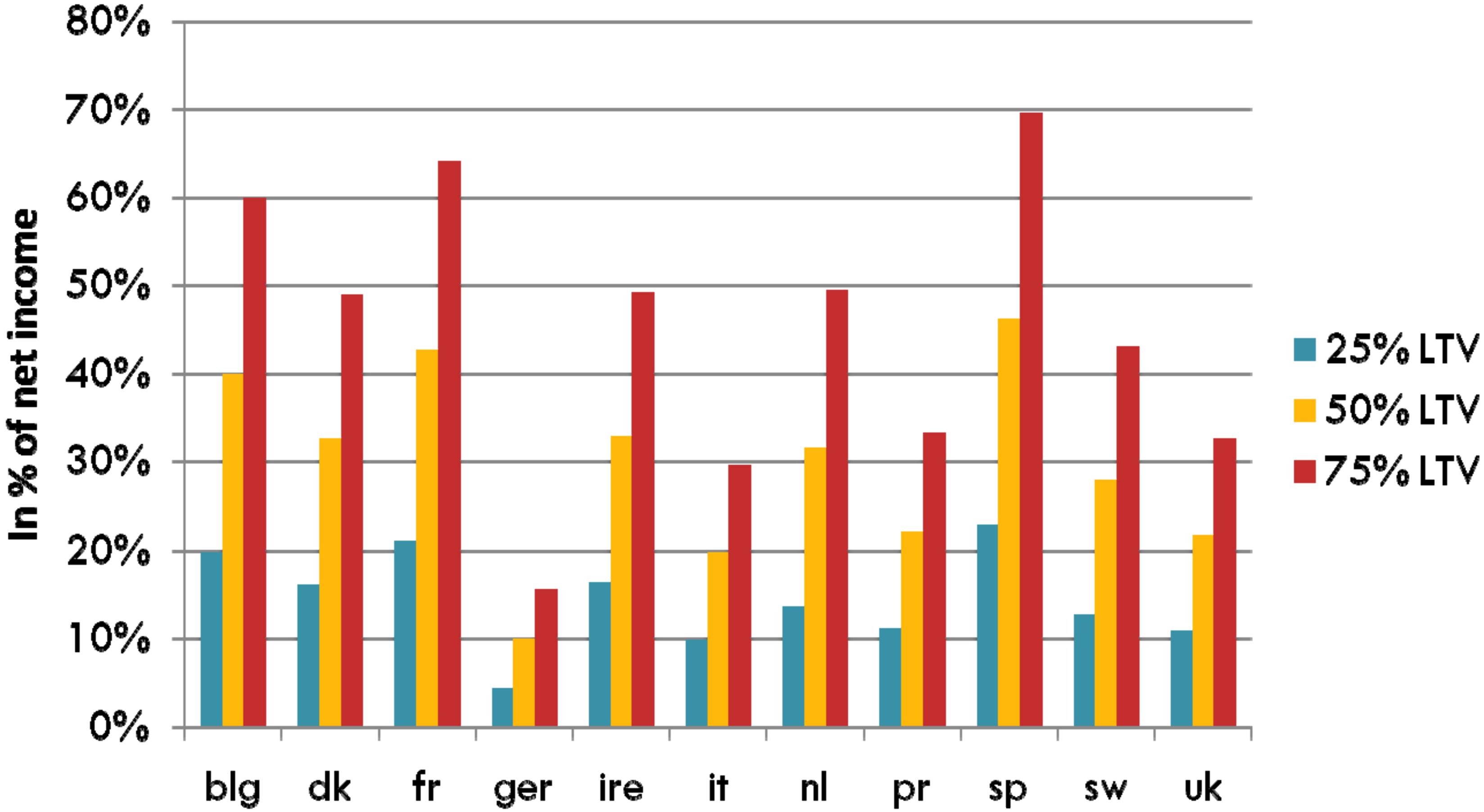
Taking an European perspective

Empirical results: the ratio between potential cash inflows and net household income

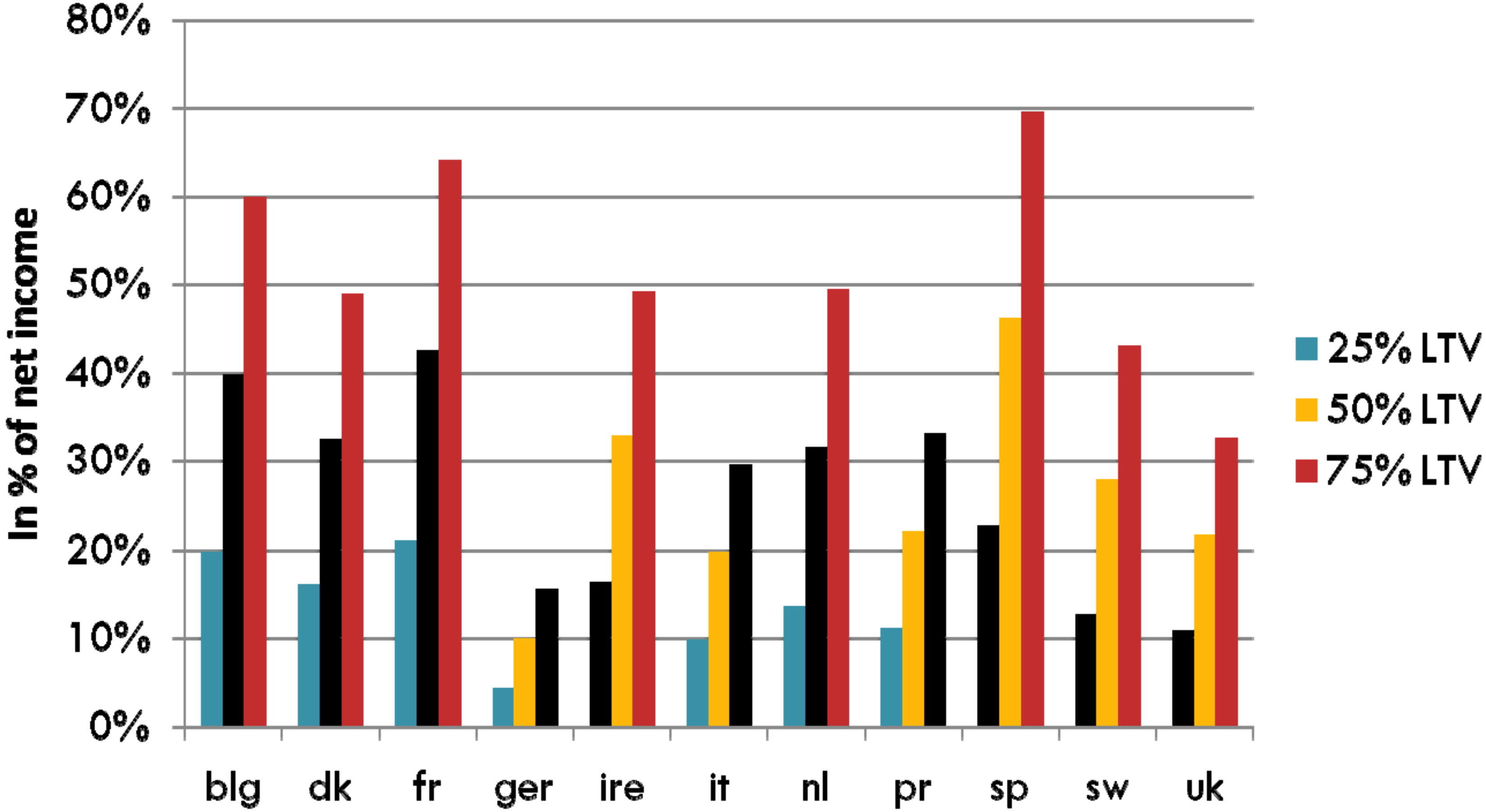
Approach

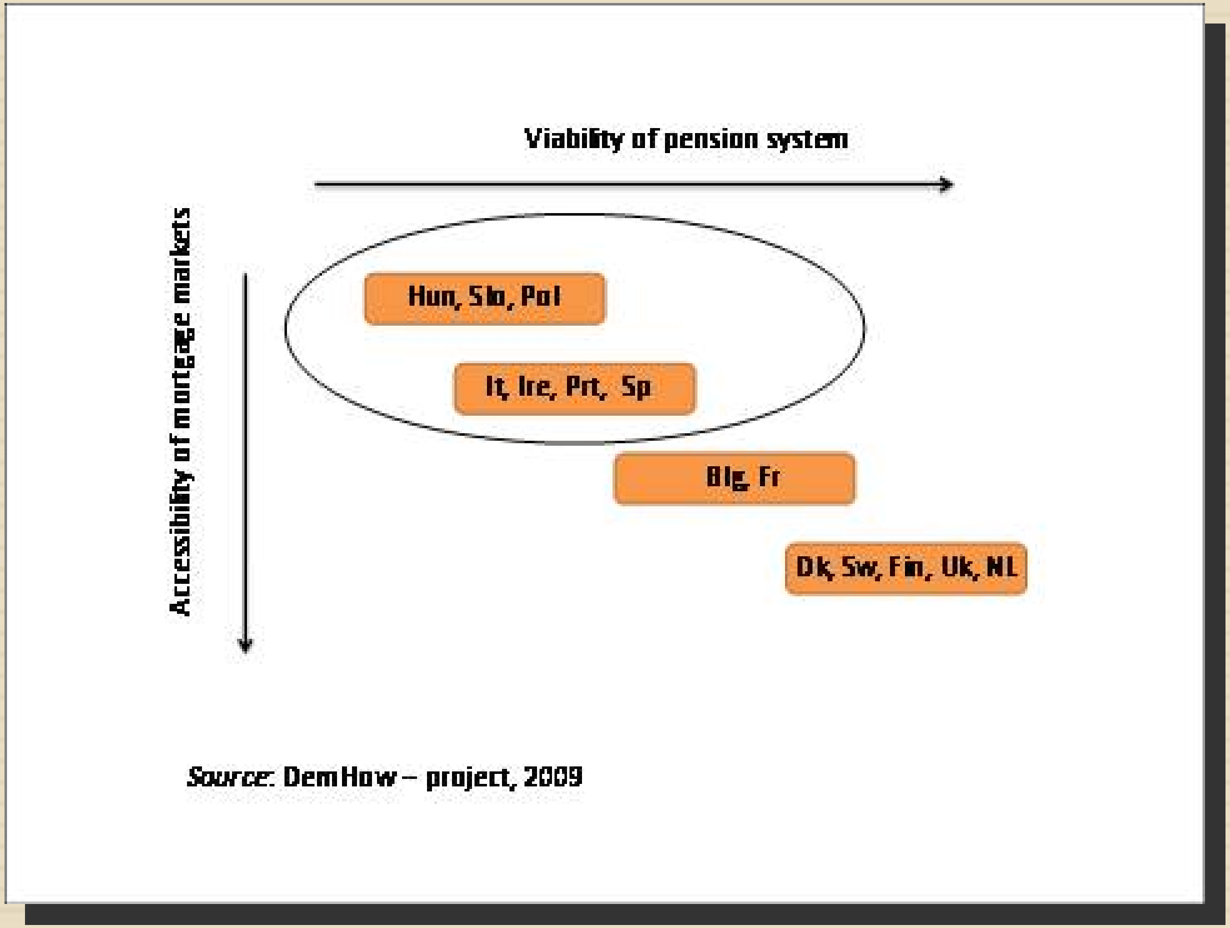
- Calculate the potential of reverse mortgages in percentage of net income
  - Paradigmatic case representing the average buyer in a country
  - Age cohort 60 - 65 years
  - Retirement age, life expectancy, house price appreciation (volatility), mortgage interest rate
  - House prices and outstanding mortgages
- See Table 3 for the different numbers

The potential of reverse mortgages



The potential of reverse mortgages





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Preliminary conclusion

The potential, the need, may be higher in countries with a less developed mortgage markets and *vice versa*!

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Discussion

The impact of governments' encouragement, financial institutions' willingness and households' behaviour

The route forward

- *Why is this potential not exploited?*, or better phrased: *What is the future outlook?*
- Depending on behaviour of main actors:
  - Governments
  - Financial institutions
  - Households

Governments

- Their interest: fiscal pressures
  - Ageing of society (*long term and <u>macro</u>*)
  - Credit crisis (*short term*)
- Their ideas: re-balancing responsibility away from the State
  - From pillar I to II/III
- They are faced with difficult transition trajectories
- Usage of home equity may be a way out

Financial institutions

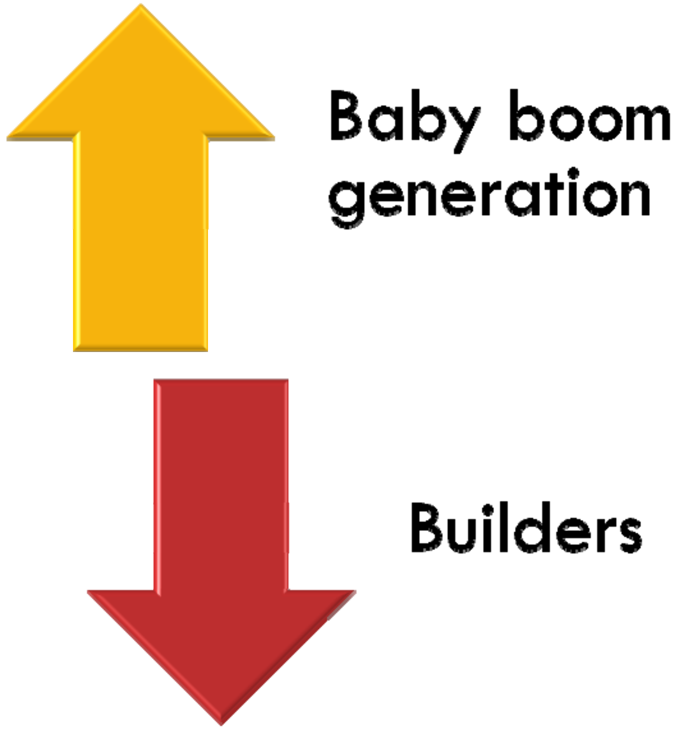
- Home equity withdrawal in Europe was on the rise, at a very slow rate (*European Mortgage Federation*)
  - Going down-market is dominant channel!
- Credit crisis may lead to a standstill in mortgage innovation
  - Potential of reverse mortgage is considered very high; however, timing is critical, not to spoil the market!

Households

History

- Many households across Europe seems to ne reluctant to use housing equity
  - Living cost free
  - Bequest motive

Cross cohort shifts in attitudes



Conclusions

- *Overall conclusion*: outlook seems bright!
- However, it is up to us to research the risks of such an arrangement, for individuals, financial institutions and Society (*ex-ante* **not** *ex-post*)
- *Precondition*: uphold innovative capacity of financial institutions

- Otherwise we all end up "*asset rich - case poor*"