Deams
Dipartimento di
Scienze Economiche, Aziendali,
Matematiche e Statistiche "Bruno de Finetti"

A7. MORTGAGE MARKET

FINANCIAL MARKETS AND INSTITUTIONS

A.A. 2022/23

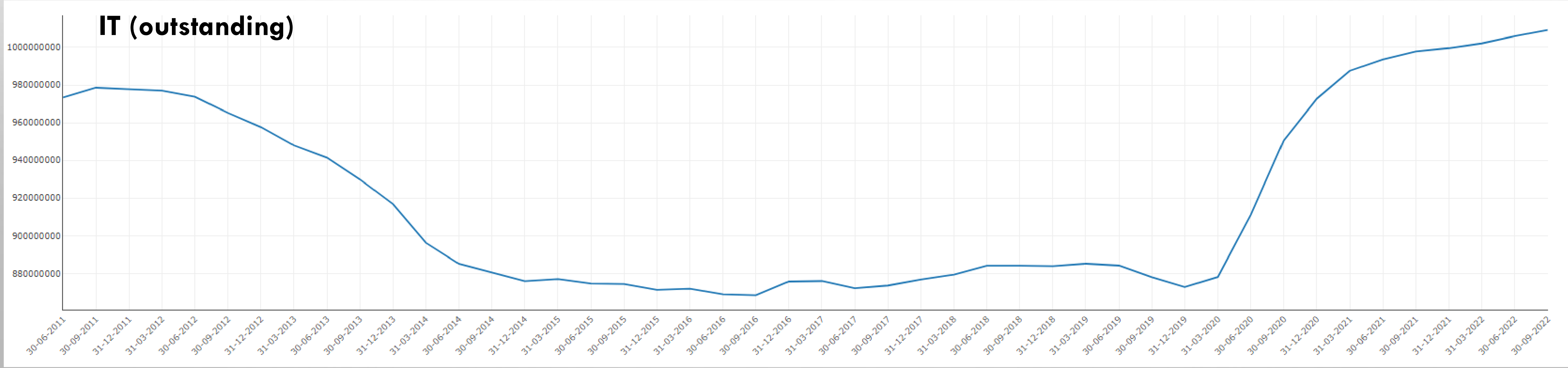
PROF. ALBERTO DREASSI – ADREASSI@UNITS.IT

ARGOMENTI

- WHY DO MORTGAGE LOANS EXIST?
- HOW DO THEY WORK?
- HOW DIFFERENT ARE THEY?
- SECONDARY MARKETS AND THE FINANCIAL CRISES

PURPOSE AND FEATURES

- **Long-term** loan **secured** by **real estate**
- Both **residential** and **commercial/industrial**
- Repayment with periodic payments of C and I (**amortisation**)
- IR fixed, variable, or a combination
- Estimated global size (Allied Market Research): 11.5 TRN USD (2021)



PRICING

$$i\% = \text{Market} + \text{Spread}$$

Variable: EURIBOR, EONIA …
Fixed: EURIRS

Lender:

- Strategy and competition
- Funding
- Existing portfolio
- Expectations

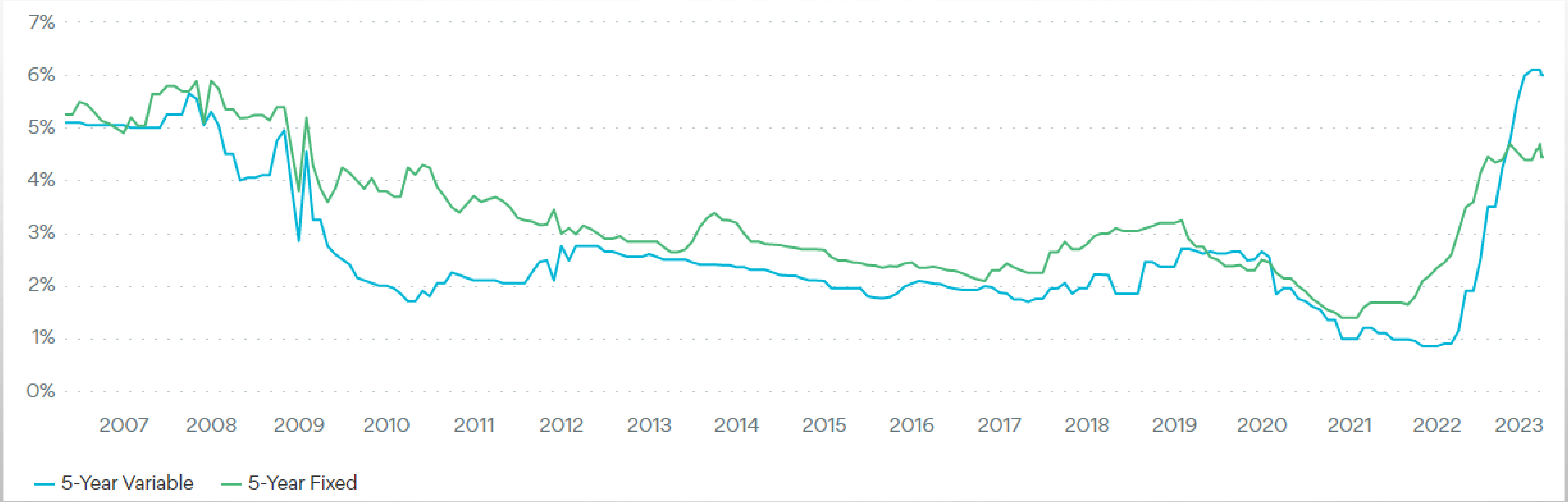
Borrower:

- Creditworthiness, net worth and income
- Outstanding debt
- Past behavior and credit scores

Operation:

- Duration, rate and amortization plan, purpose
- Down payments (f.i. 80/20) and loan-to value
- Collateral, insurance

PRICING


7%
6%
5%
4%
3%
2%
1%
0%
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
5-Year Variable
5-Year Fixed

VARIANTS

Many variations:

- can be **guaranteed by public agencies** (f.i. veterans, young couples, …)
- IR: adjustable rate – ARM, with caps/floors, also in combination (f.i. fixed installment, variable rate)
- **increasing installments**, such growing equity (GEM, designed to allow early repayment) – risky if offered aggressively
- **decreasing optional installments** (very risky for lenders)
- **multiple mortgages** on same collateral are possible
- **reverse annuity (RAM)**

SECONDARY MARKET

- Mortgages are **illiquid** for lenders
- Partially also for borrowers (but: laws and regulation)
- Illiquidity threatens lenders:
    - IR risk (A/L mismatch, reinvestment of future flows)
    - default risk / market risk of collateral
    - loan servicing is expensive (administrative costs)

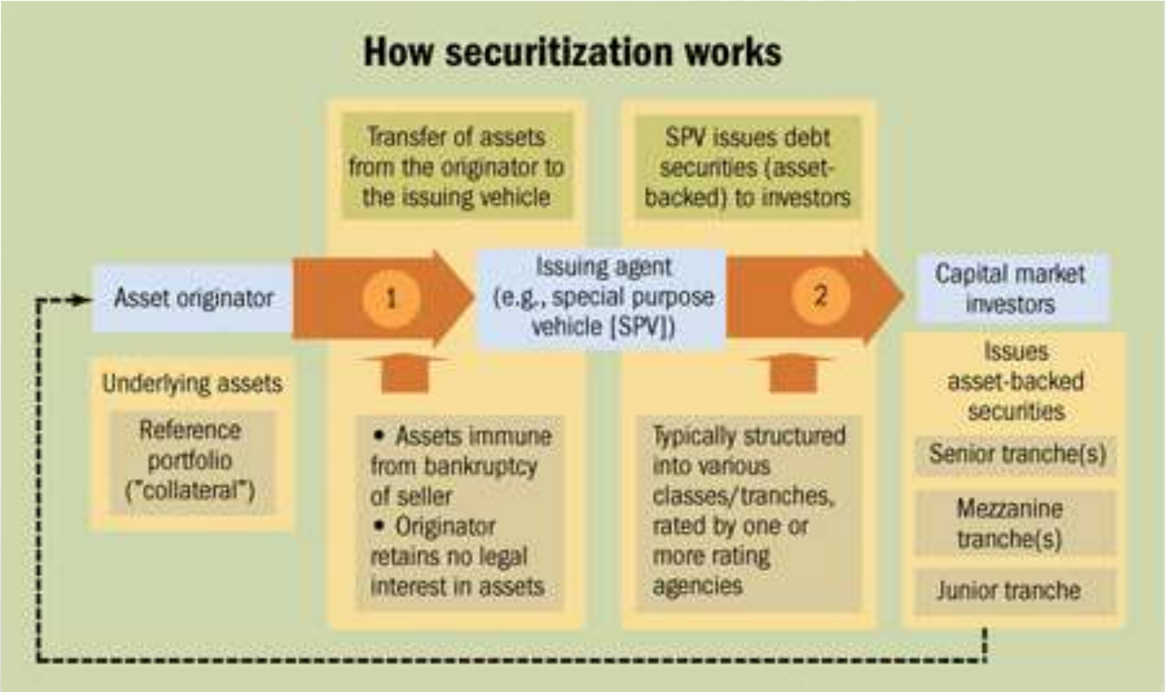
Secondary markets can be useful, but are difficult:

- Initially, **ceding loans** to other investors (but costly and time consuming)
- Then, funded by (and transferred to) **public repurchase programs** (in bulk, with asymmetric information issues)
- More recently, trough **securitization**

SECONDARY MARKET & SECURITIZATION

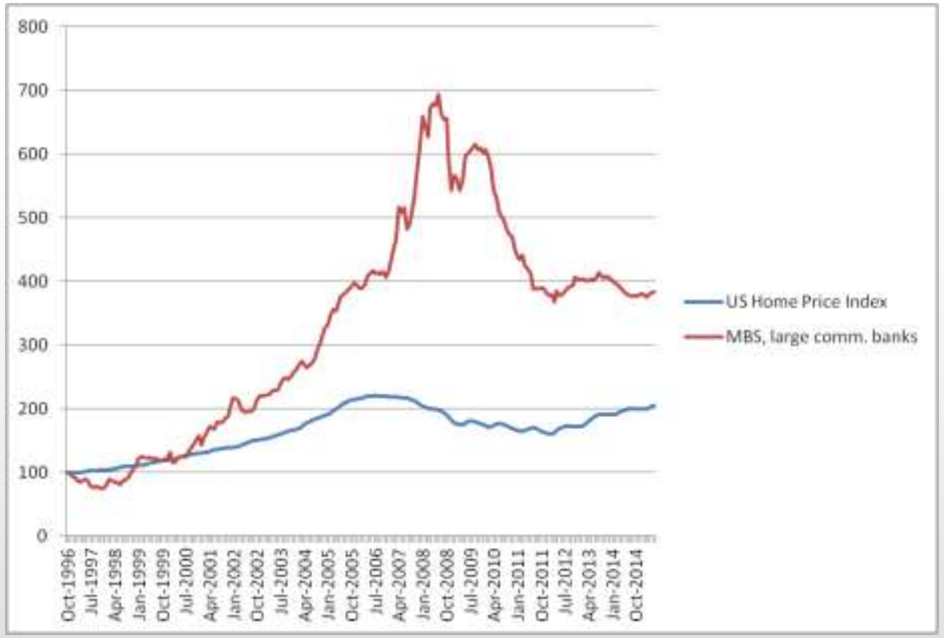
Securitisation:

- Securities backed by assets (mortgages, **MBS**) to fund new acquisitions
- Useful for a number of small-size loans, unstandardised, with different maturities and other economic features, towards borrowers with different credit scores, costly to service, uncertain in default rates
- Allows **liquidity** to originator, **diversification** to investors
- Dangers: distance between risk-bearer and risk-assessment and complexity/pricing



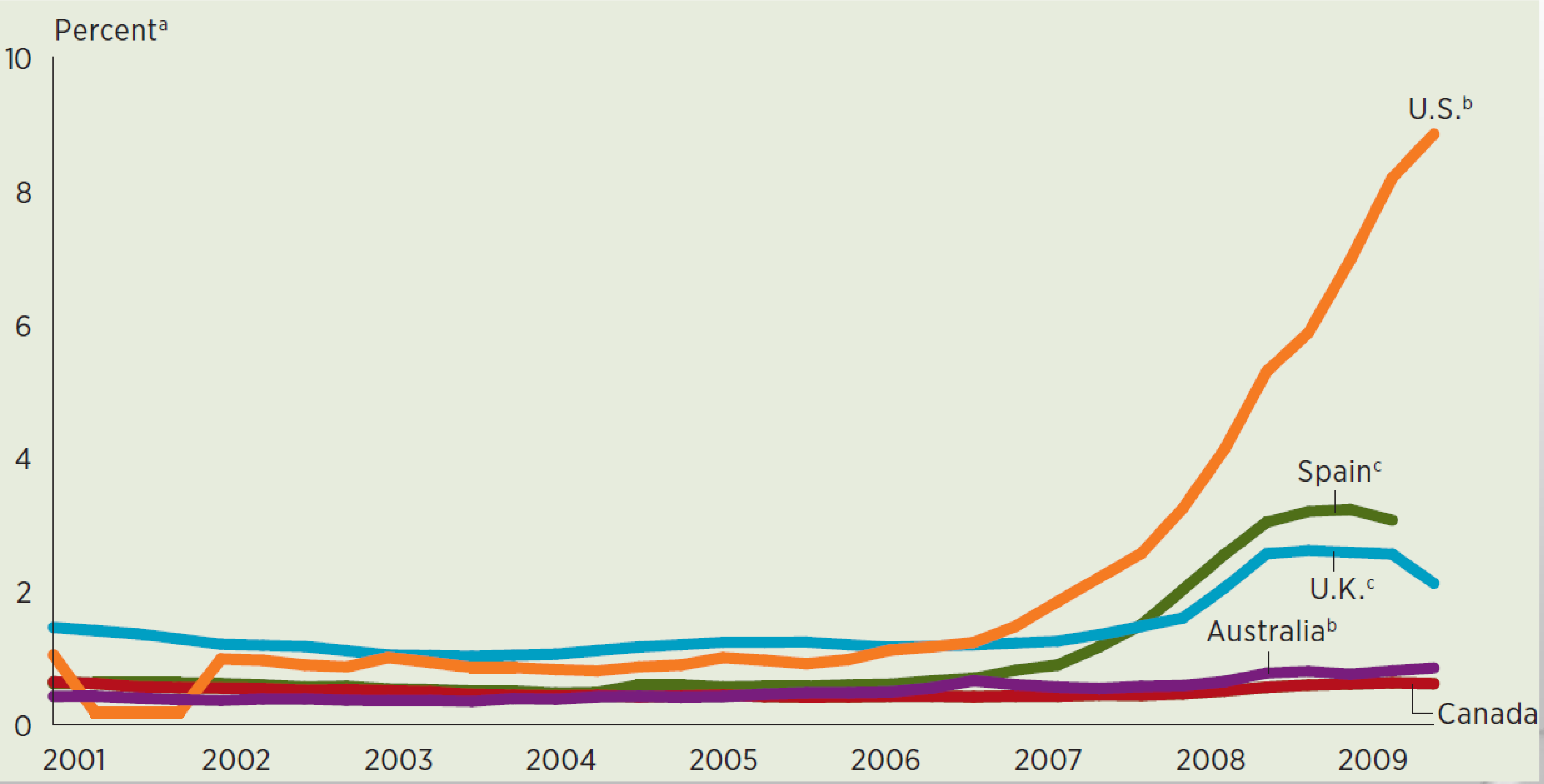
EXAMPLES

1. SECONDARY MARKET AND REAL ESTATE



EXAMPLES

2. DELINQUENCY RATES



EXAMPLES

3. COURTS AND GUARANTEES

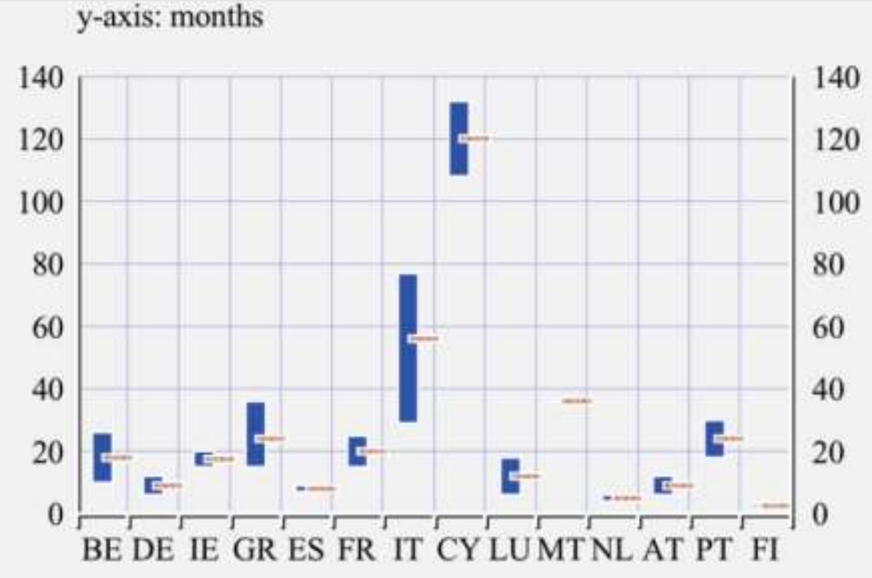
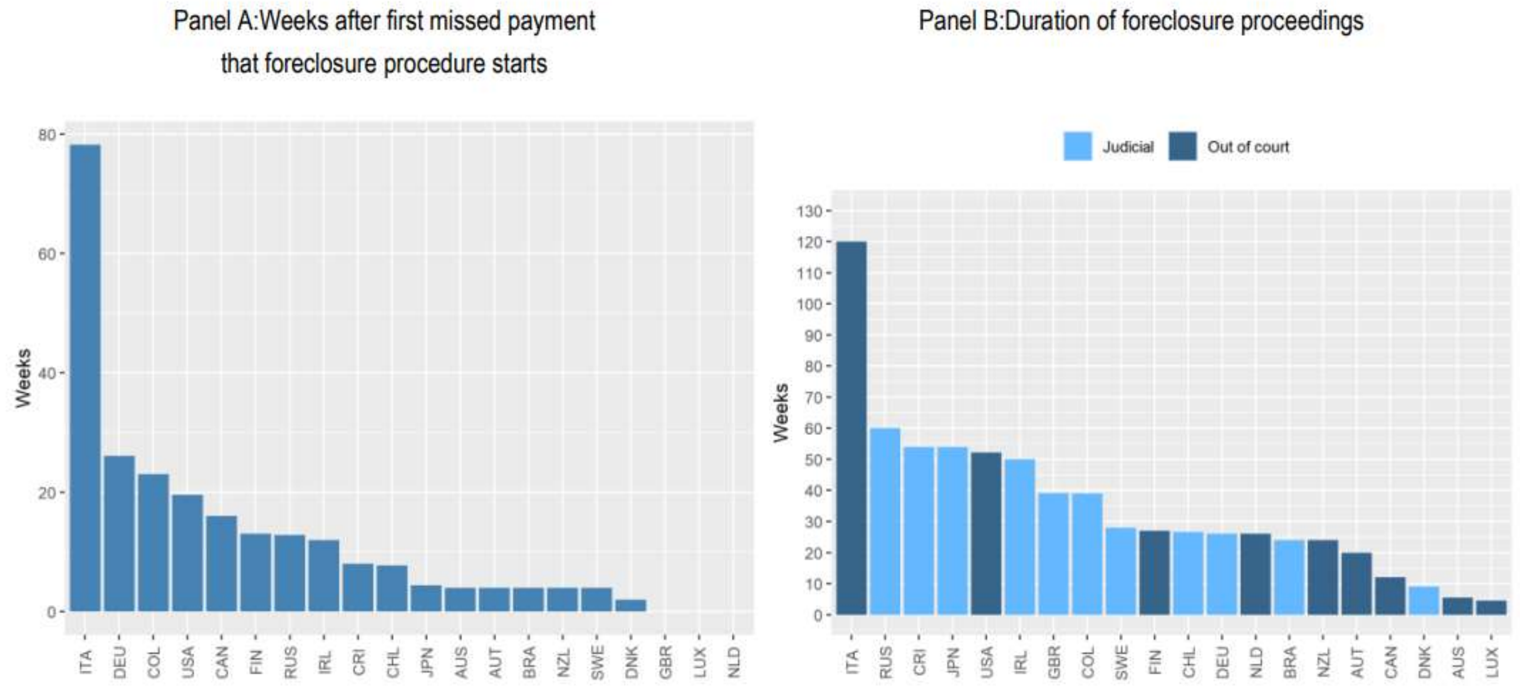


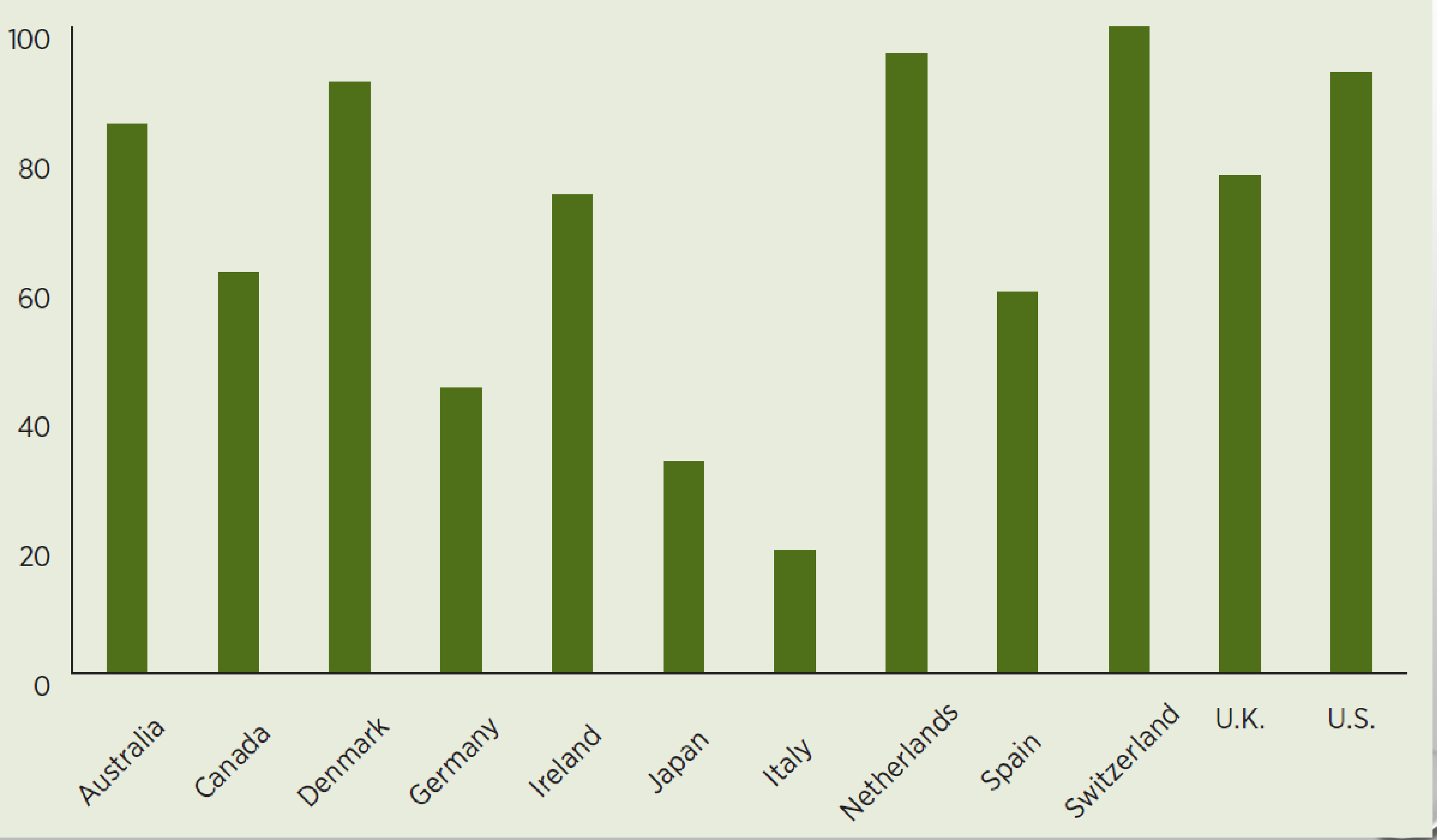
Figure 13. Foreclosure proceedings' characteristics across jurisdictions



Note to Panel B: Typical duration of the foreclosure process for the most common procedure in the respective country (out of court or in court).
Source: OECD QUASH survey and various public sources.

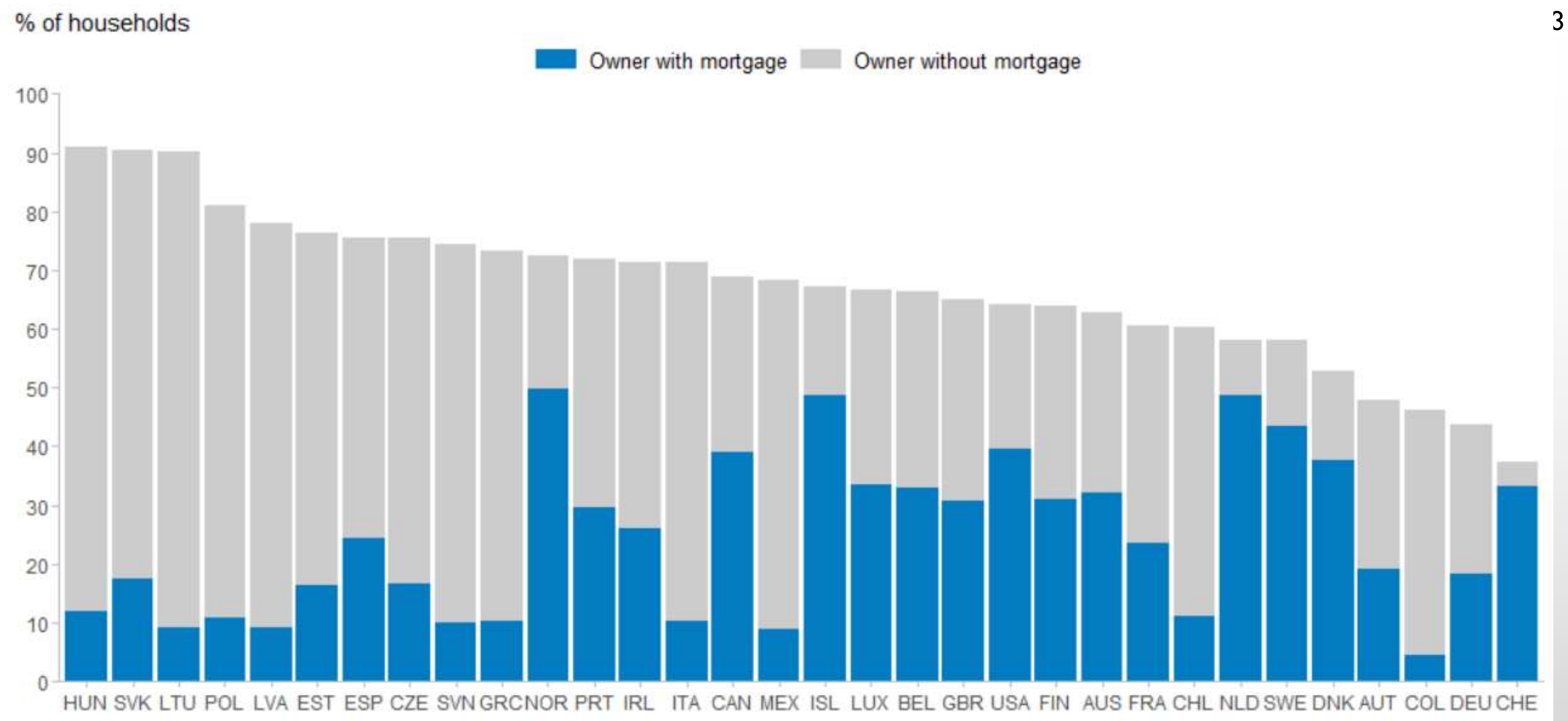
EXAMPLES

4. WEIGHT OF SEGMENT
(OUTSTANDING / GDP – 2008)

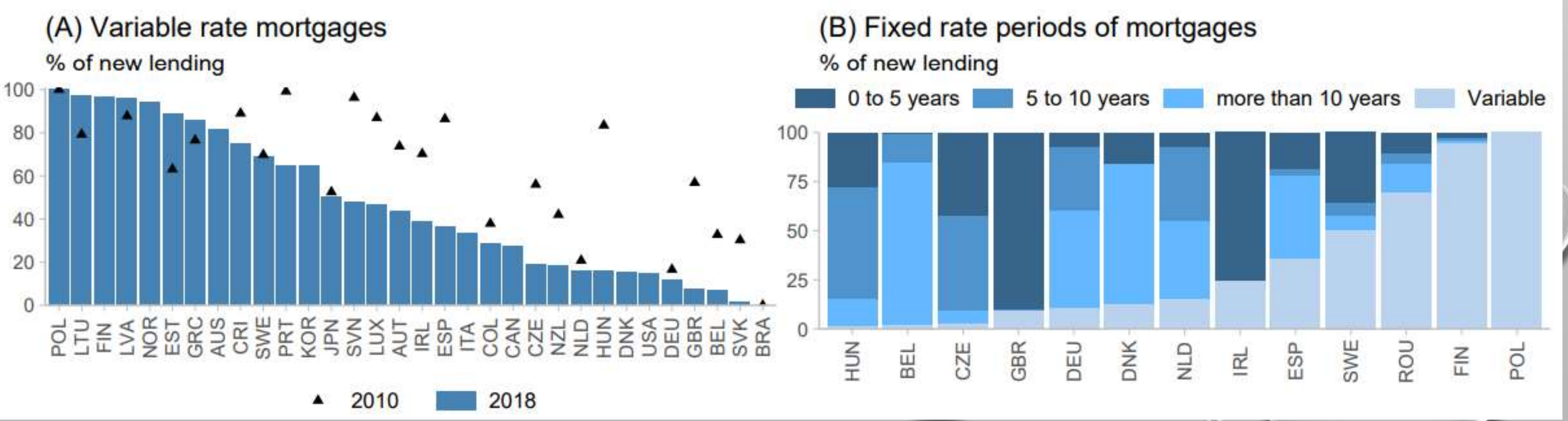


EXAMPLES

5. LEGACY



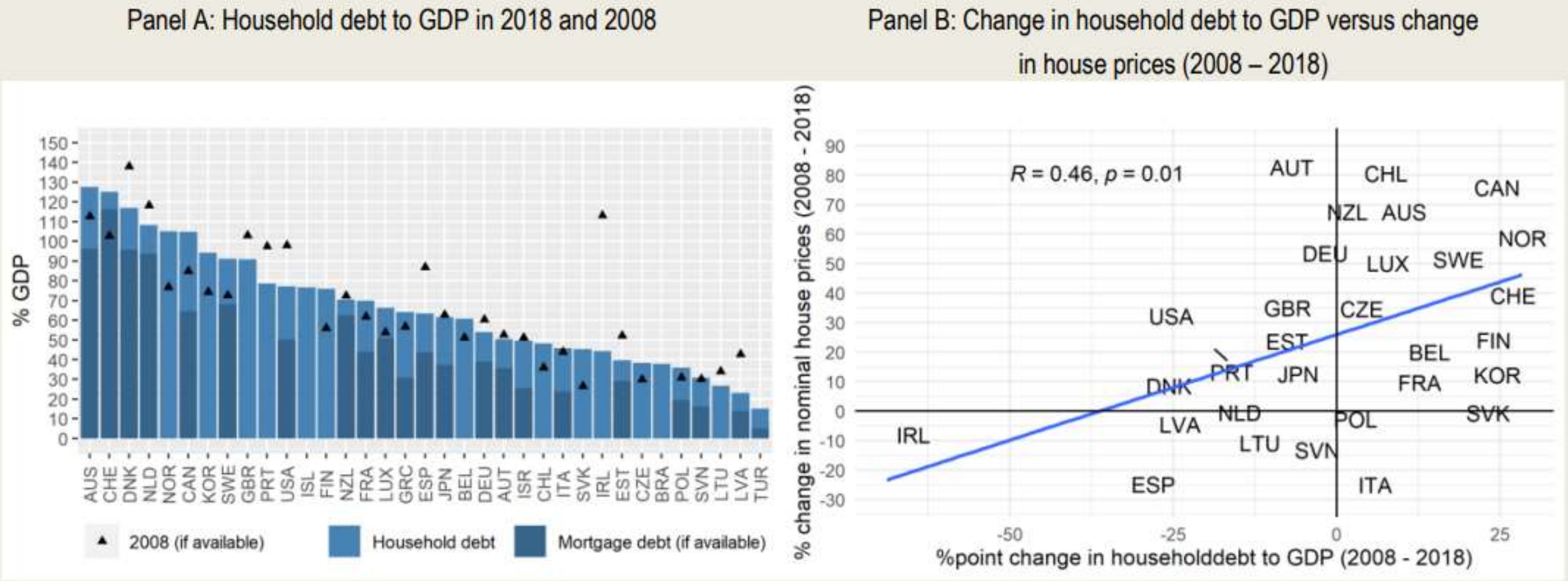
Note: 2019 or latest year available.
Source: OECD Affordable Housing Database.



EXAMPLES

6. LEGACY (2)

Figure 9. Total household (including mortgage) debt to GDP

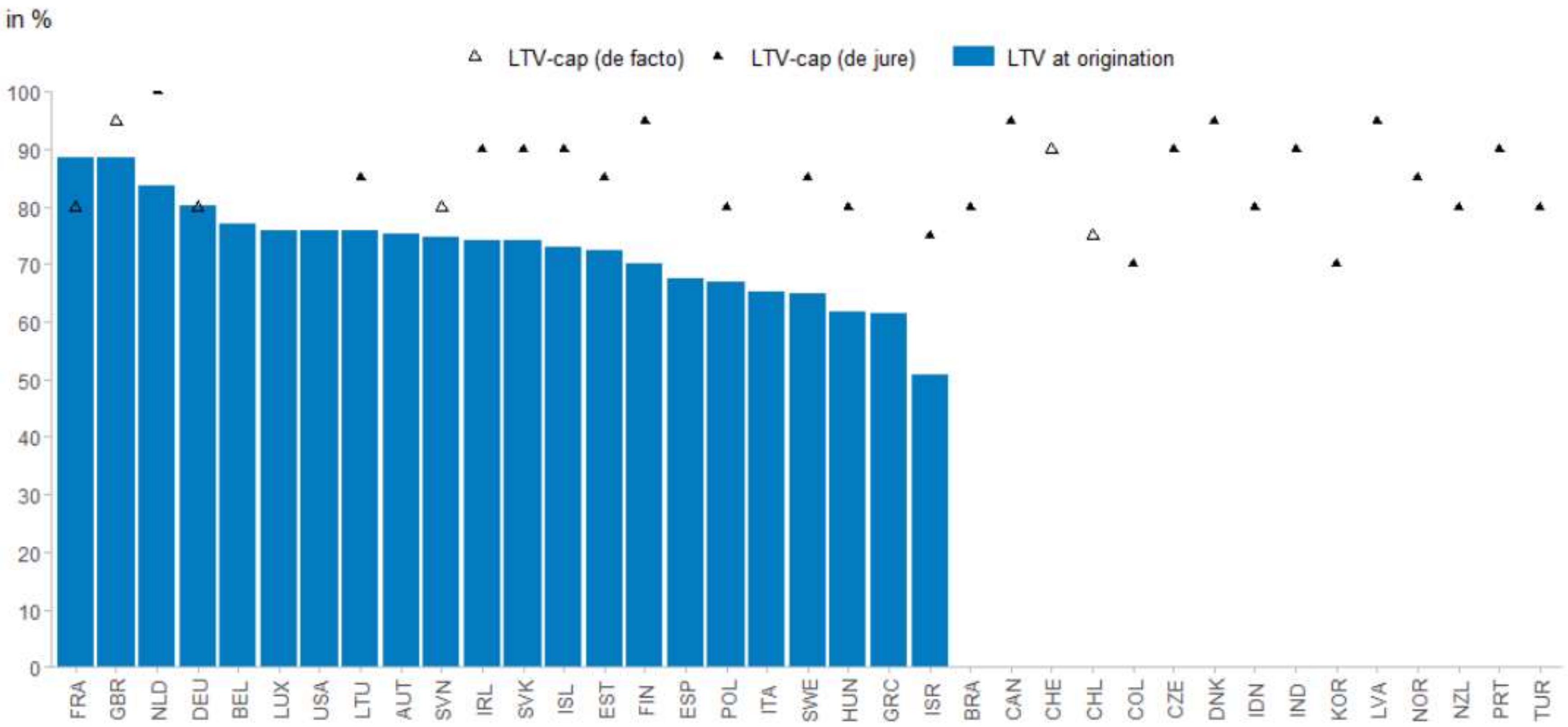


Source: OECD Household Accounts, doi:0.1787/na-data-en; OECD Housing Prices, doi:10.1787/63008438-en and EMF.

EXAMPLES

7. MARKET VS RULES

Figure 10. Loan-to-value at origination and loan-to-value caps



Note: De jure LTV-caps refer to official regulation of government institutions. The de facto caps are caps that follow from self-imposed constraints by financial institutions or recommendations from governments.

Source: ESRB (2021) Macroprudential database; OECD QUASH 2019 survey; IMF Macroprudential database; ECB (2020[30]); Bank of England.

EXAMPLES

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