MORTGAGE MARKETS

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DEAMS
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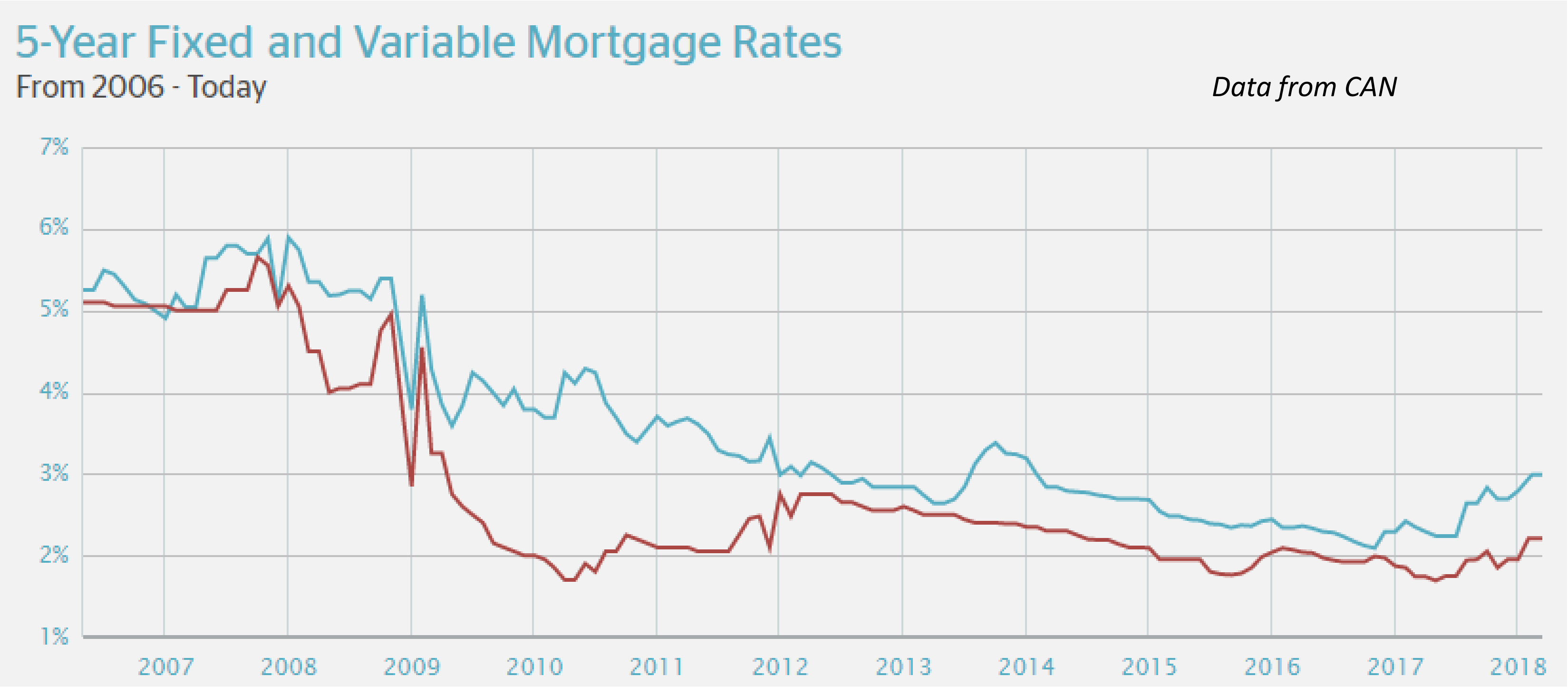
AGENDA

- Purpose and features of mortgages
- Types of mortgages
- Secondary mortgage markets and their role in 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



PURPOSE AND FEATURES

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

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

PURPOSE AND FEATURES

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** (extremely risky for lenders)
- **multiple mortgages** on same collateral are possible
- **reverse annuity (RAM)**

Secondary Mortgage Markets

- Mortgages are **illiquid** for lenders
- Partially also for borrowers (but: laws and regulation)
- Illiquidity threatens lenders:
    - IR risk (A/L mismatch, but also 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**

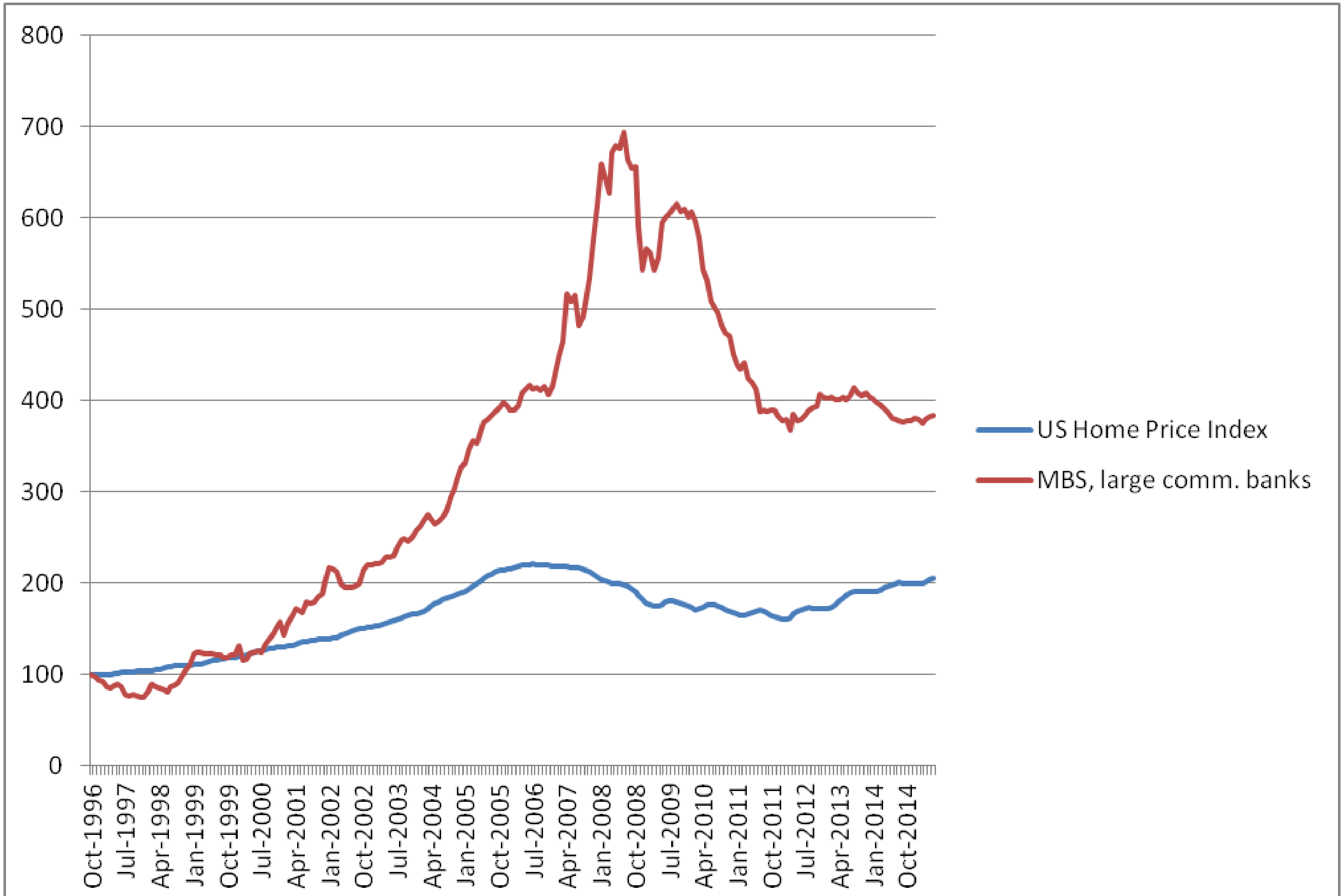
SECONDARY MORTGAGE MARKETS

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
- Process:
  - Creation of a **pool** of mortgages, serving as **collateral**
  - Acquisition is funded through **new securities** whose return and reimbursement depends on cashflows from the original pool
  - **Risks are transferred** to investors
  - Securities could be **tranched** to imply greater or lower **risks of default** (CDOs, collateralised debt obligations) or different **maturities** (CMOs, collateralised mortgage obligations): hence, +/– IR
  - Allows **liquidity** to originator but also **diversification** to investors

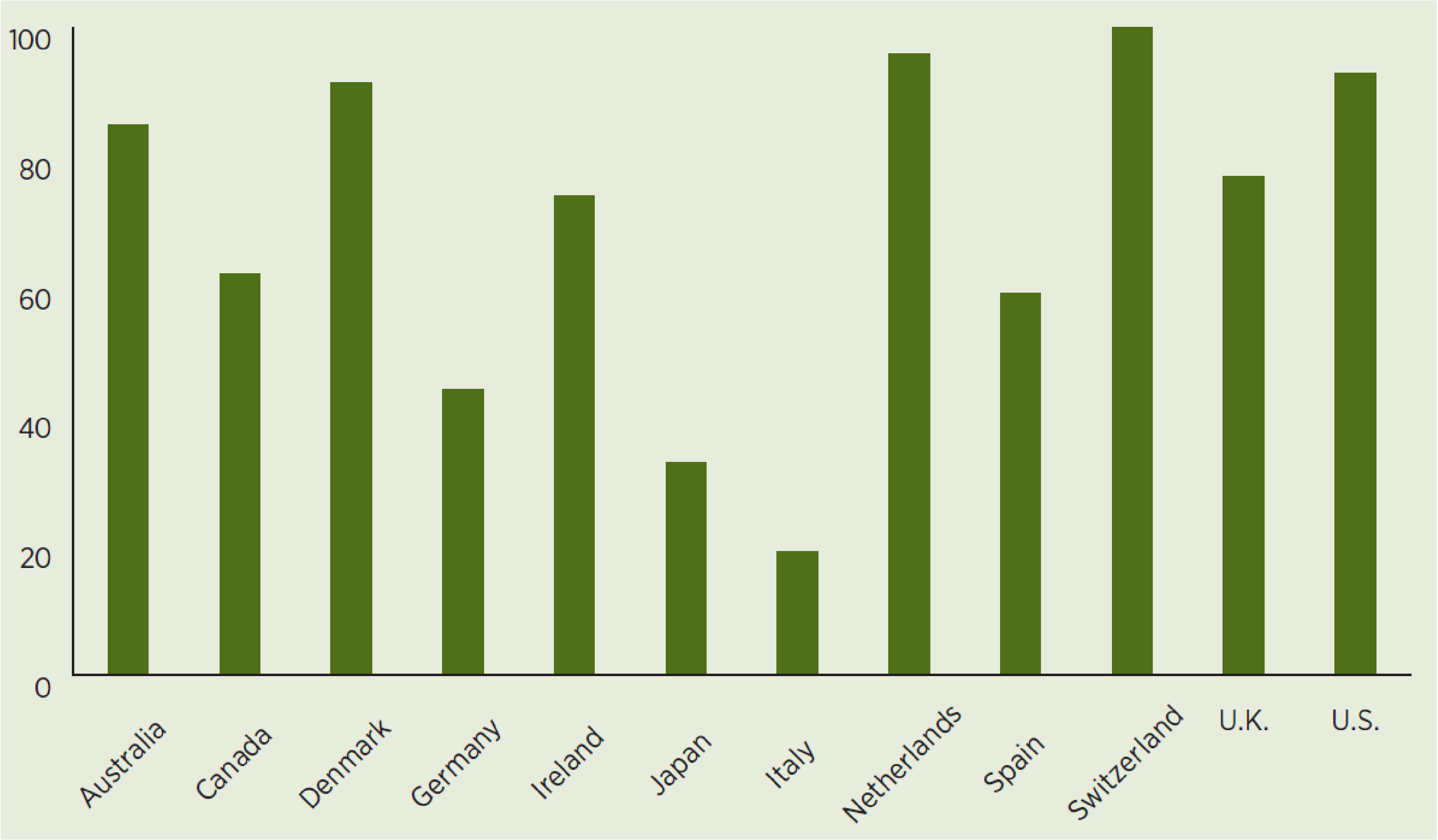
EXAMPLES

Is there a relationship between house prices and secondary mortgage markets?



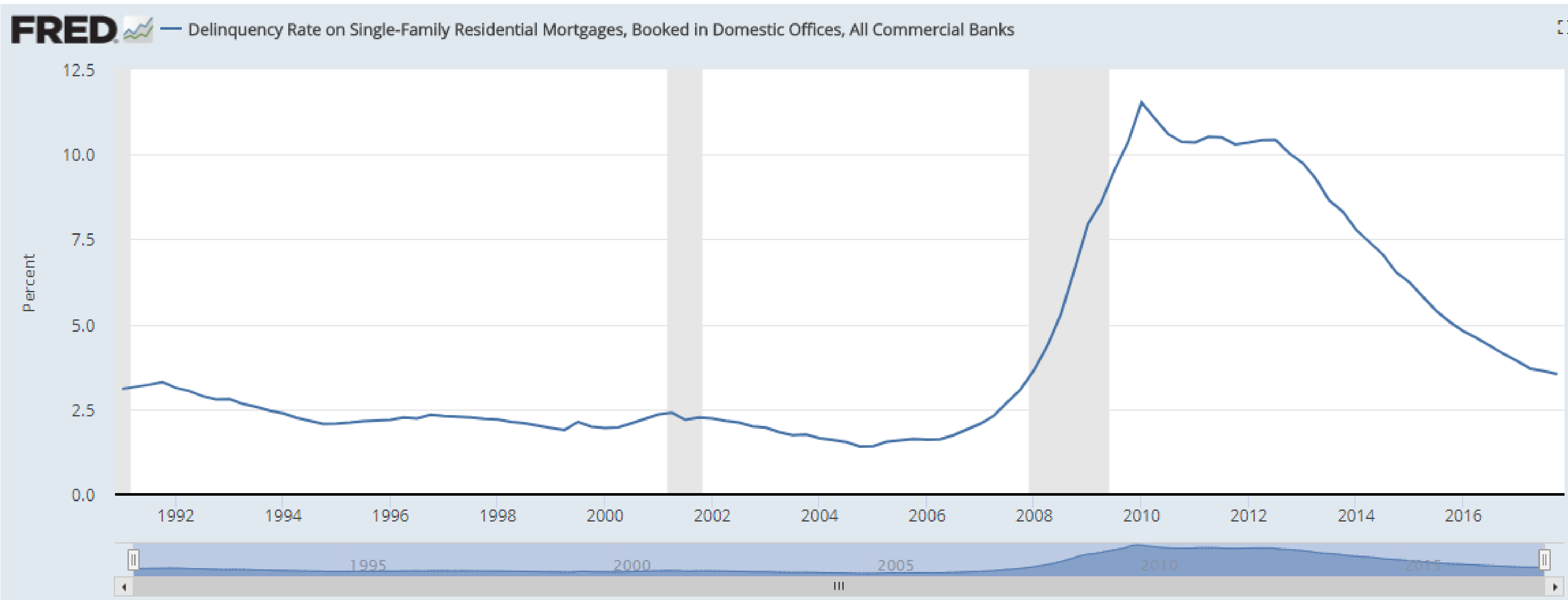
Examples

Country differences, mortgage debt outstanding / GDP (2008)



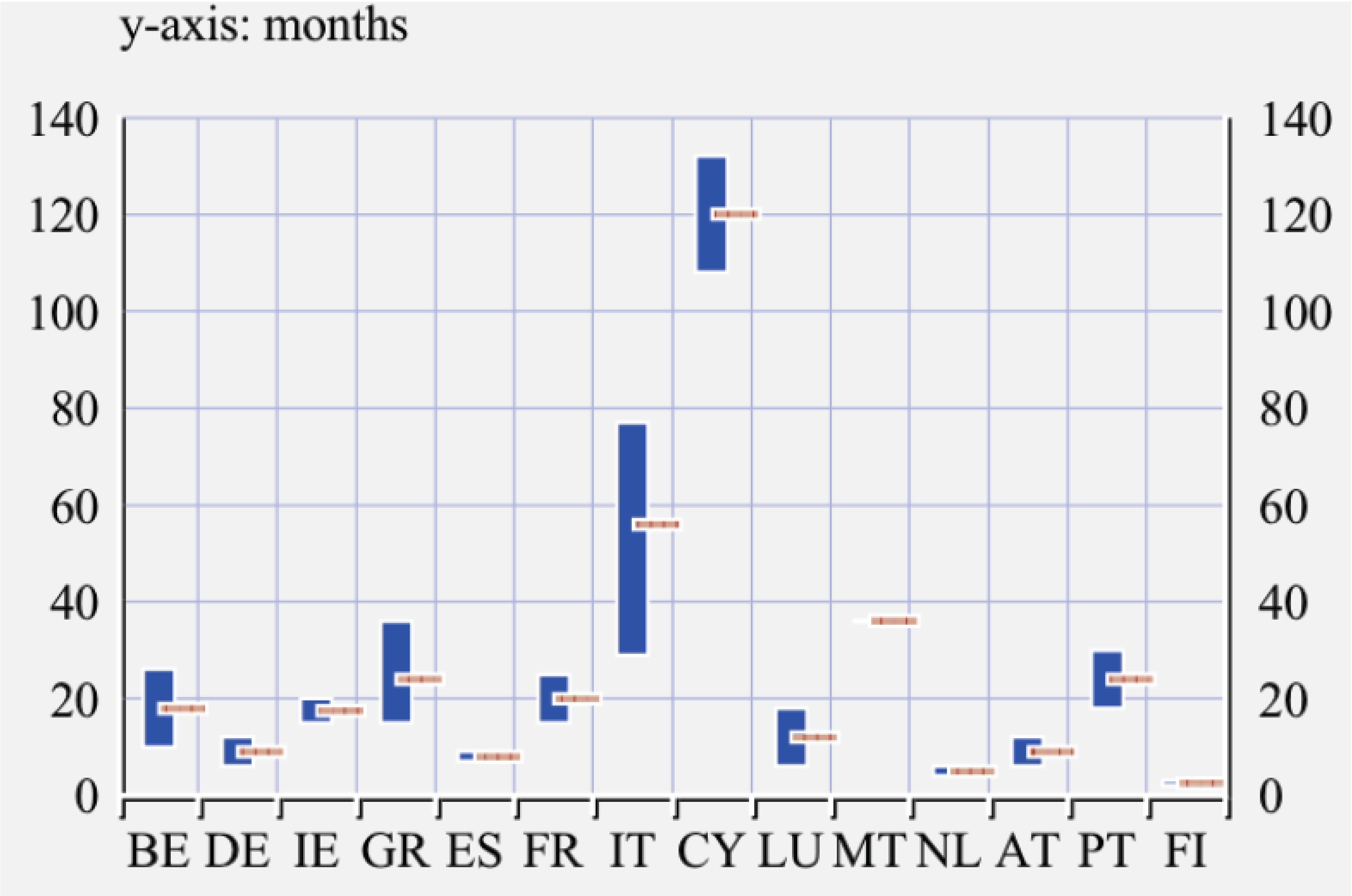
EXAMPLES

US delinquency rates



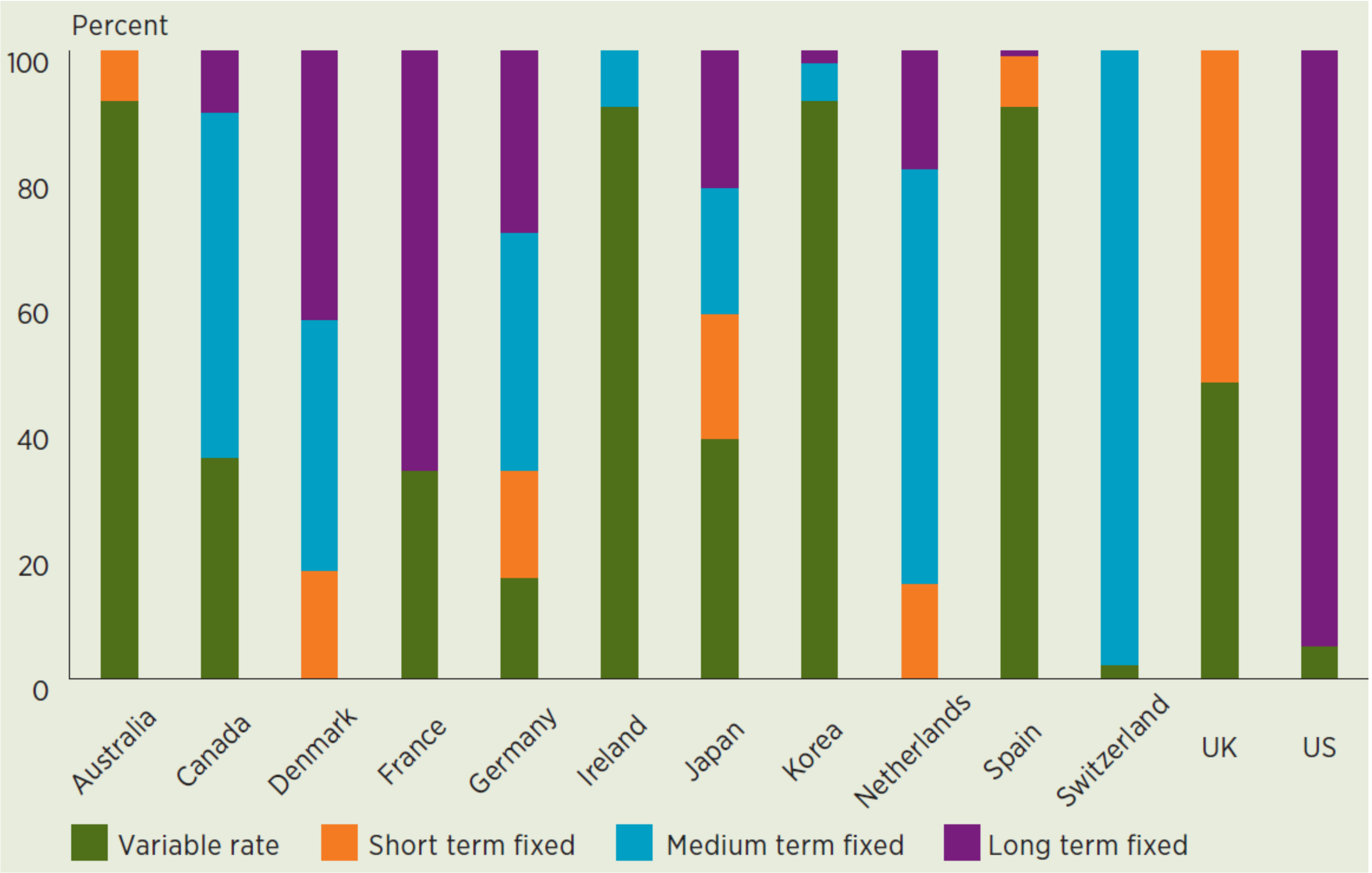
EXAMPLES

Country differences, duration of foreclosures



Examples

Country differences, mortgage debt by interest type



EXAMPLES

Country differences, mortgage debt by funding source