German households‘ portfolio decisions and balance sheet dynamics from a monetary policy perspective

ISI RSC – IFC session on Financial accounts, 22 March 2017

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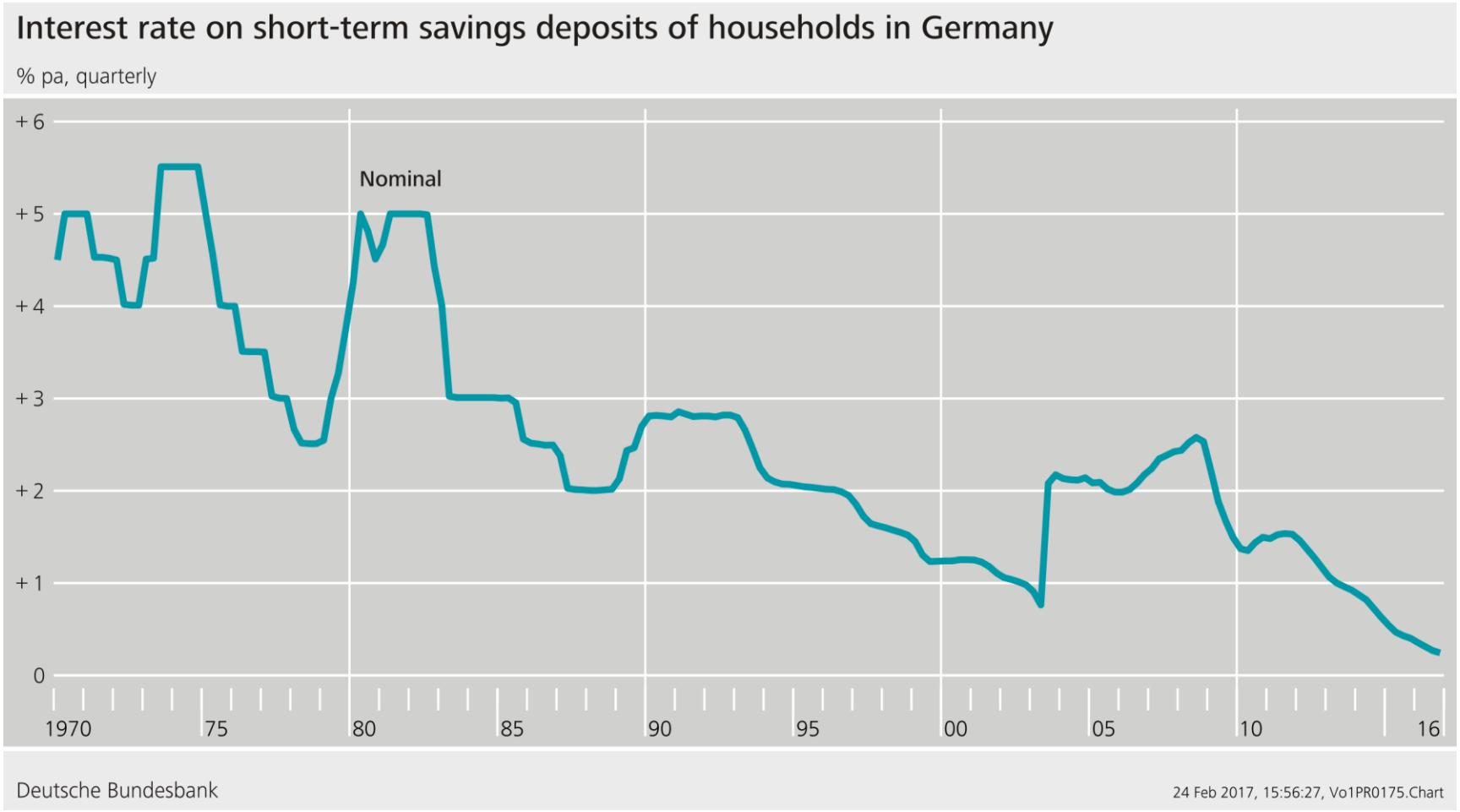
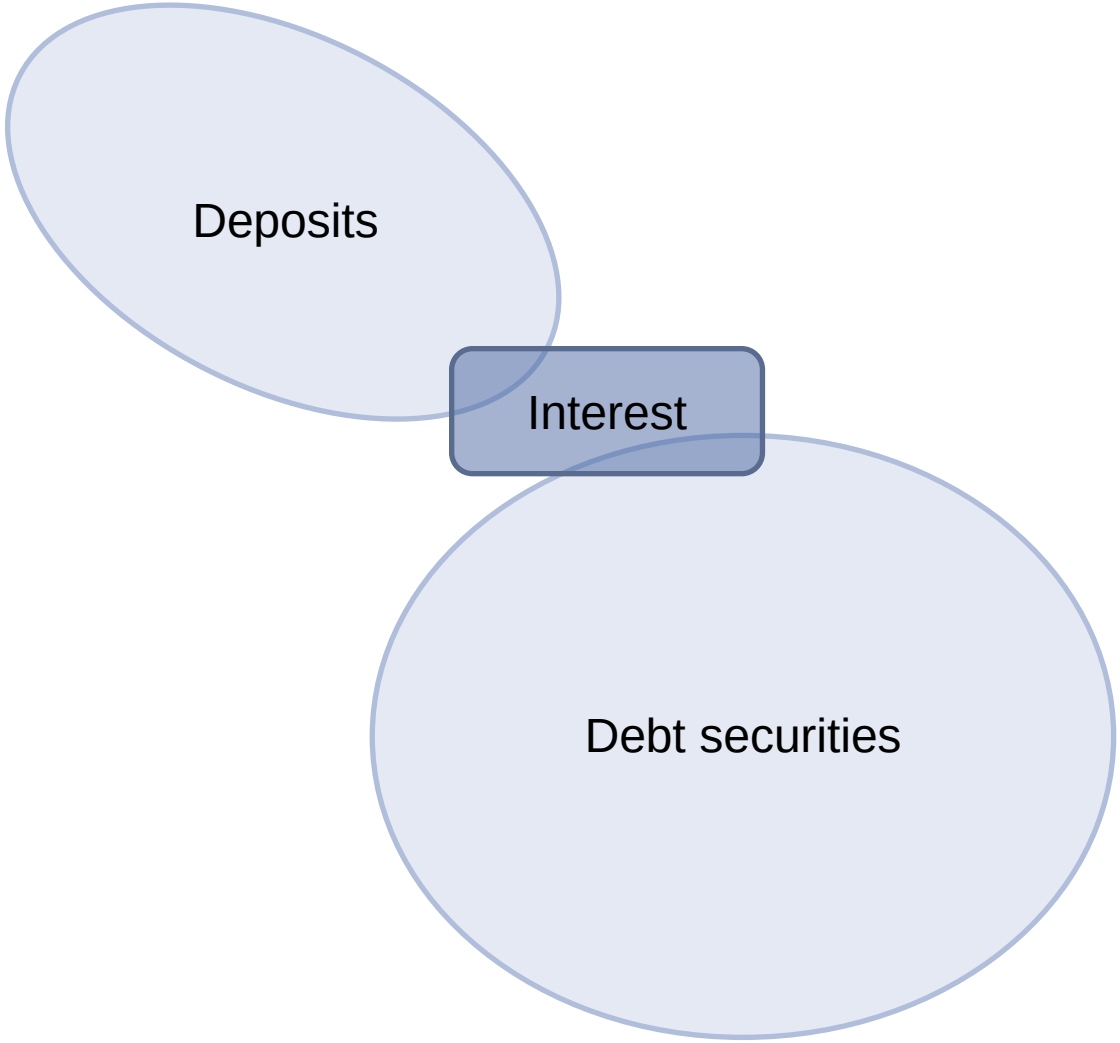
Content

1. Introduction
2. Real total returns
3. Real returns and portfolio decisions
4. Balance sheets and spending decisions
5. Conclusions

1. Introduction



2. Real total returns
Simplified concept



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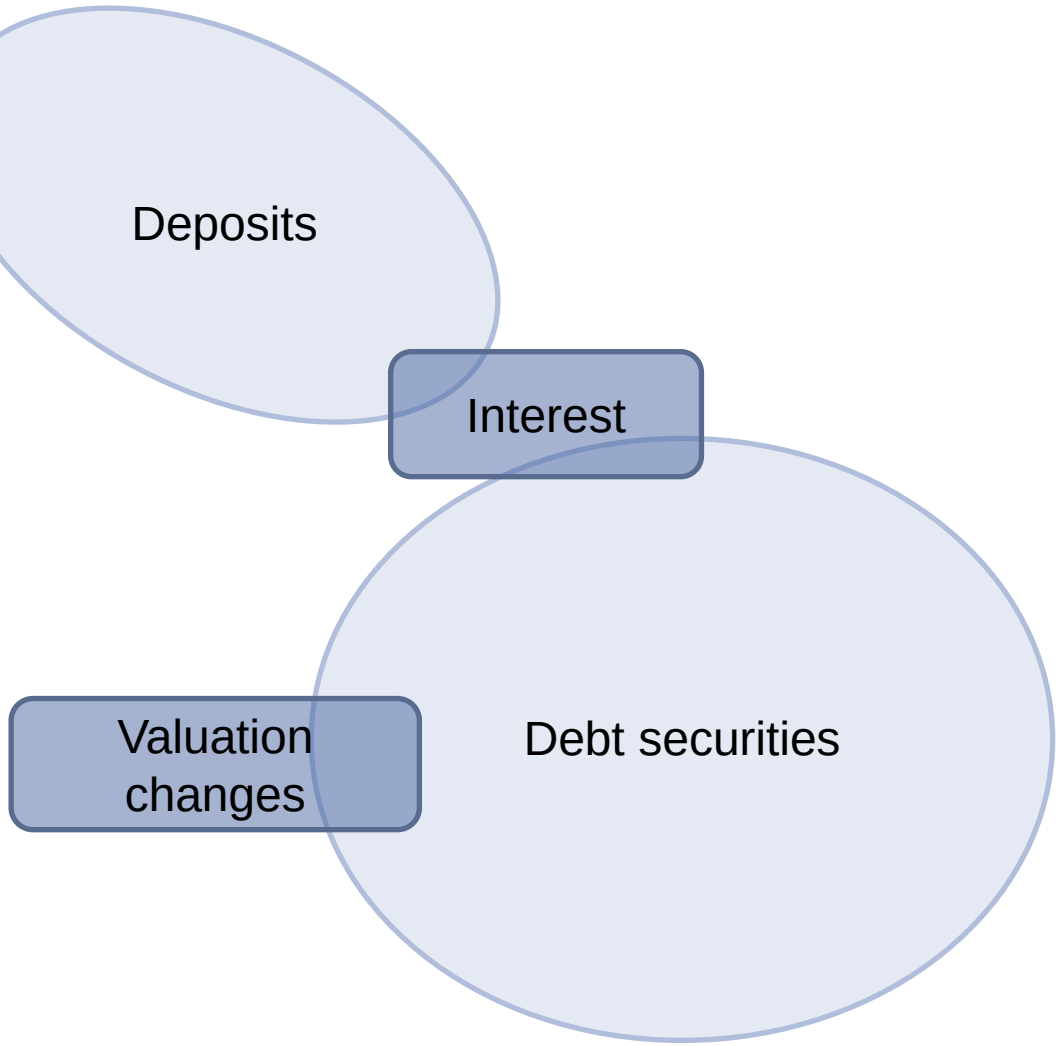

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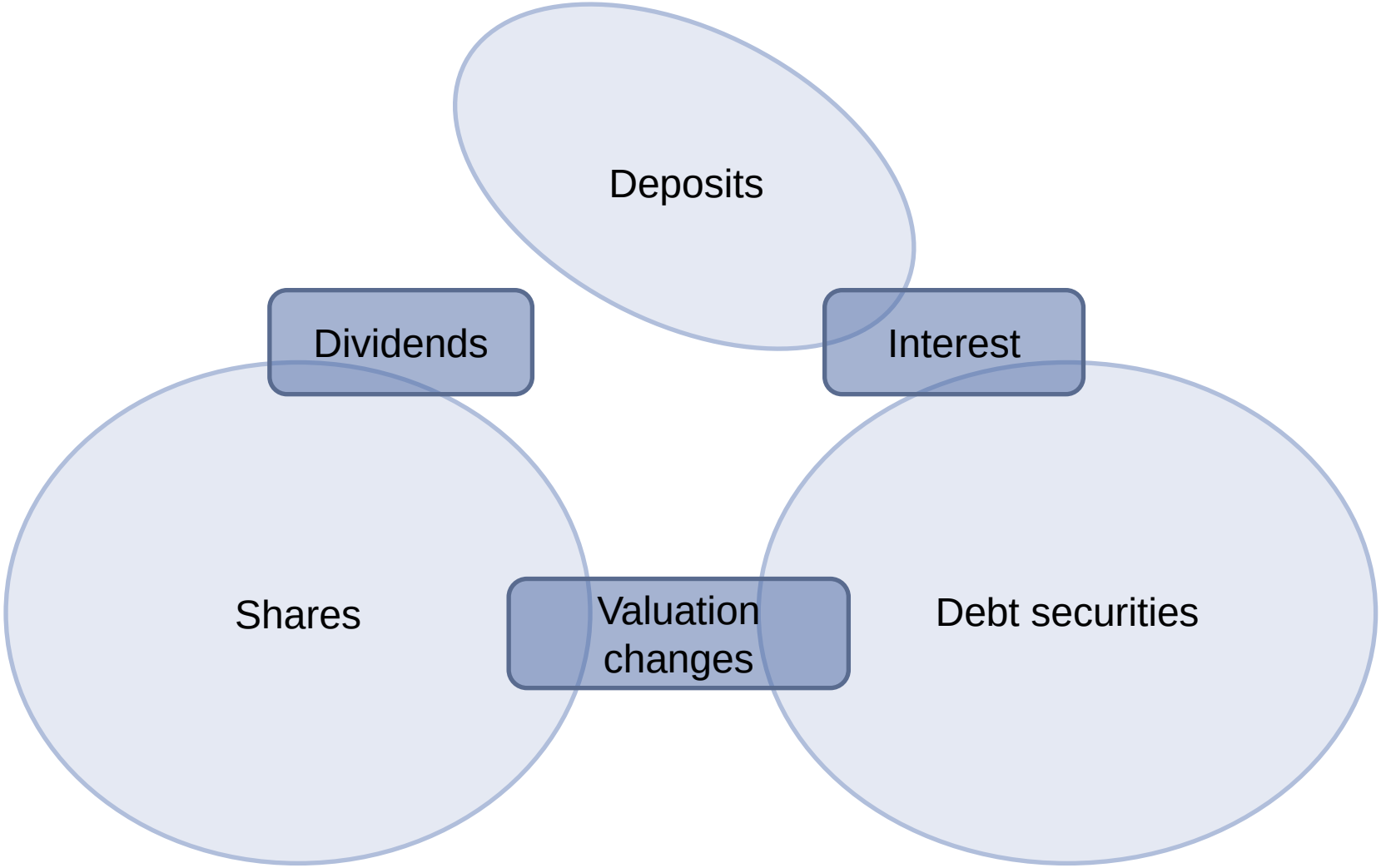

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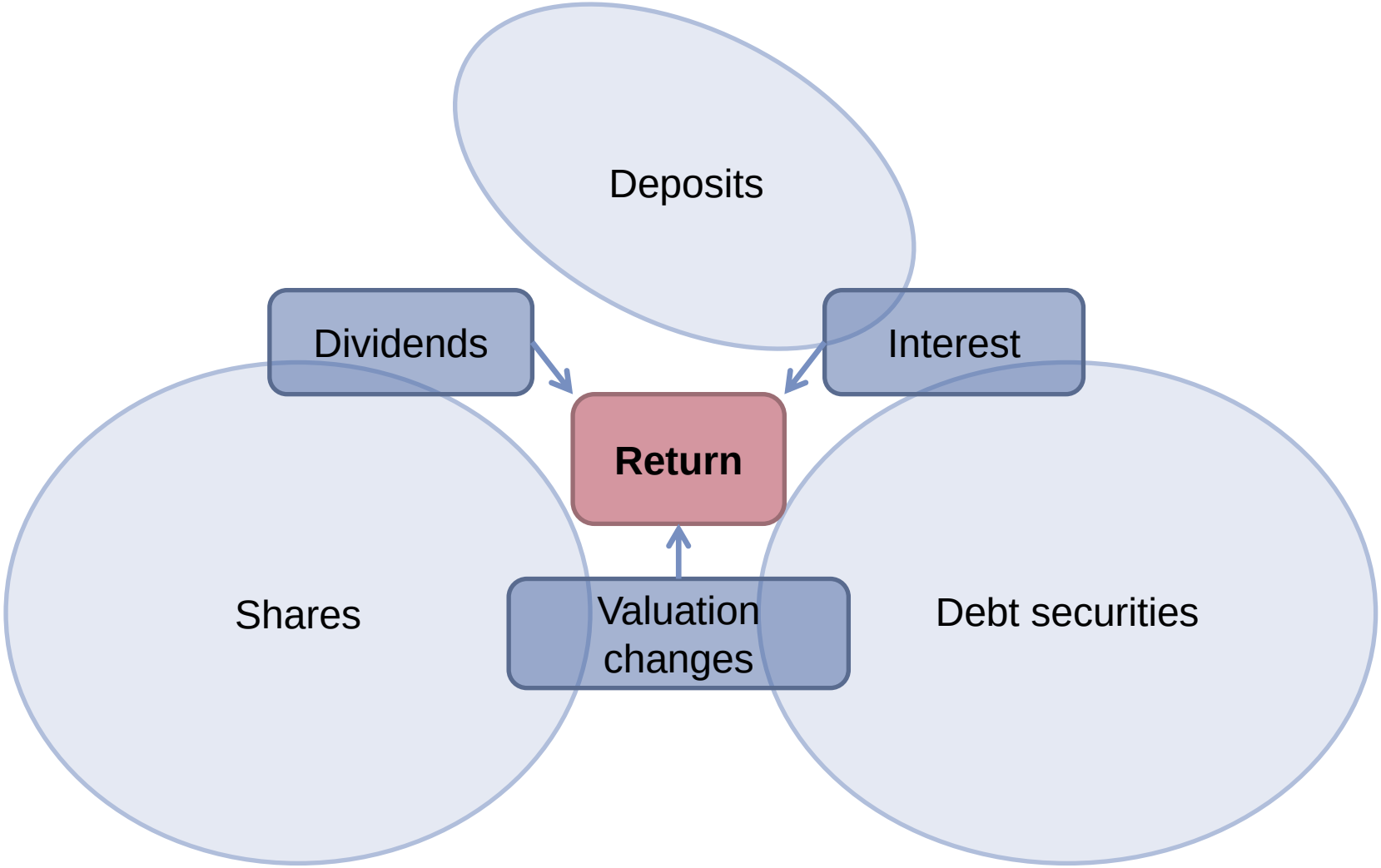
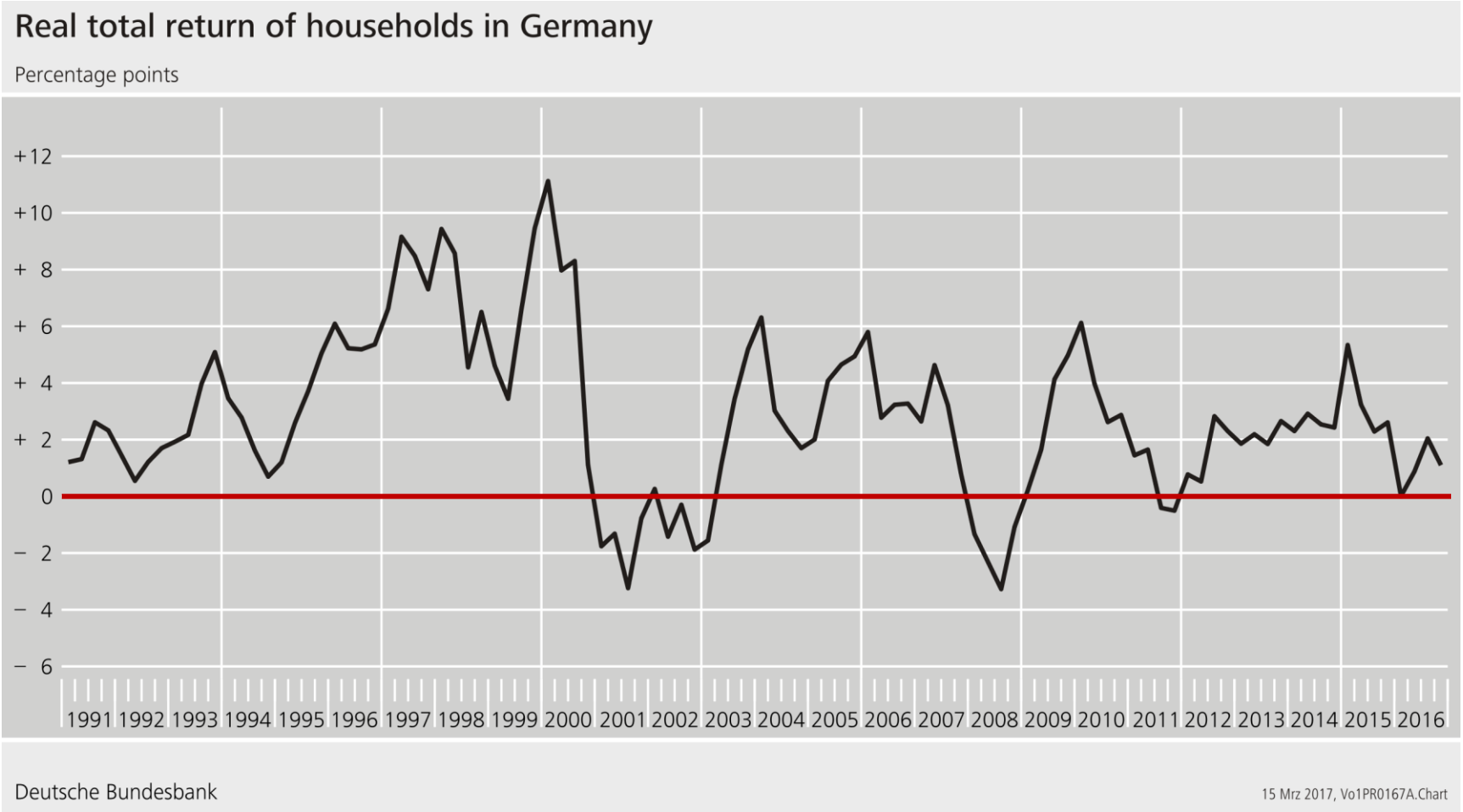
Simplified concept



2. Real total returns
Results



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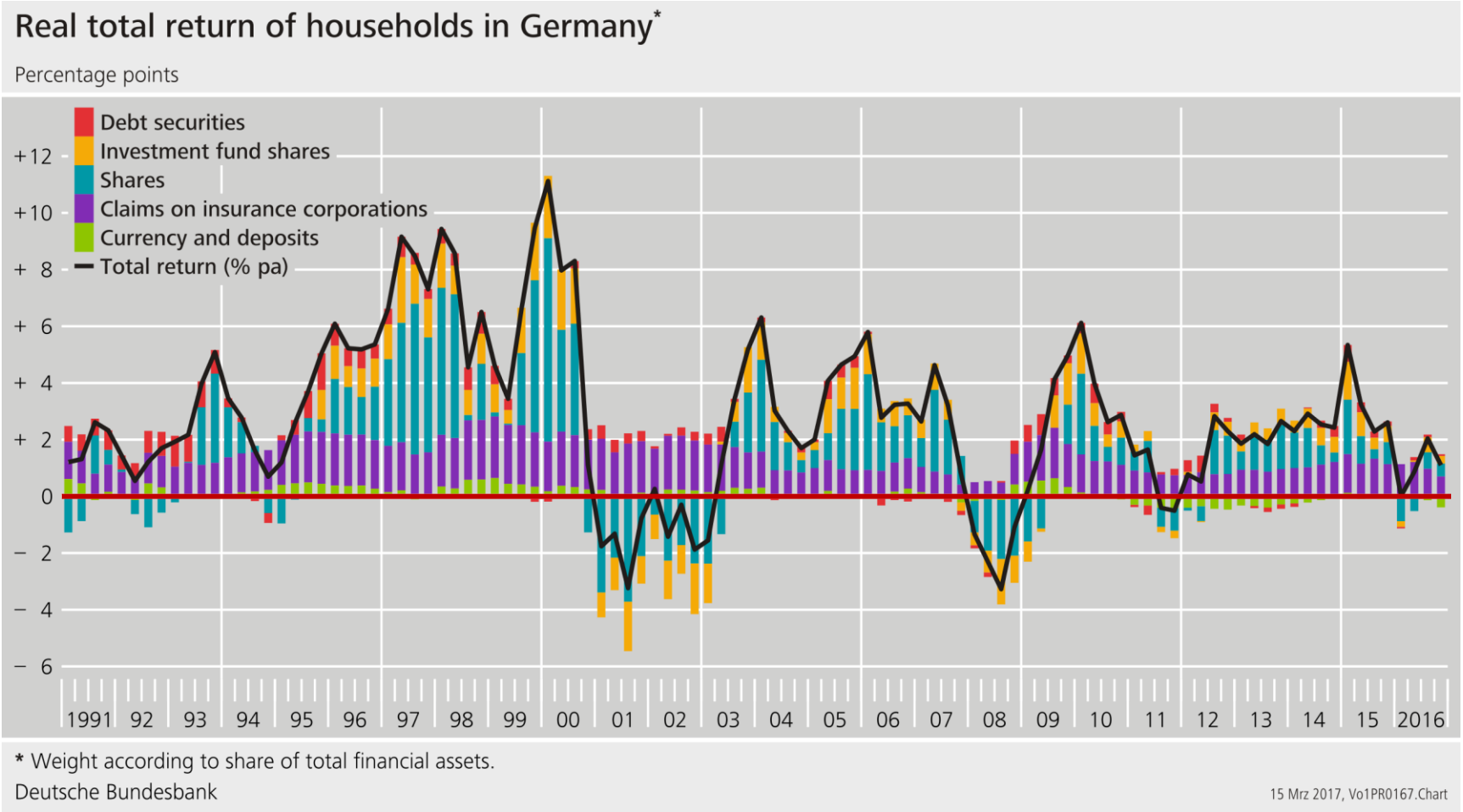


3. Real returns and portfolio decisions
The literature

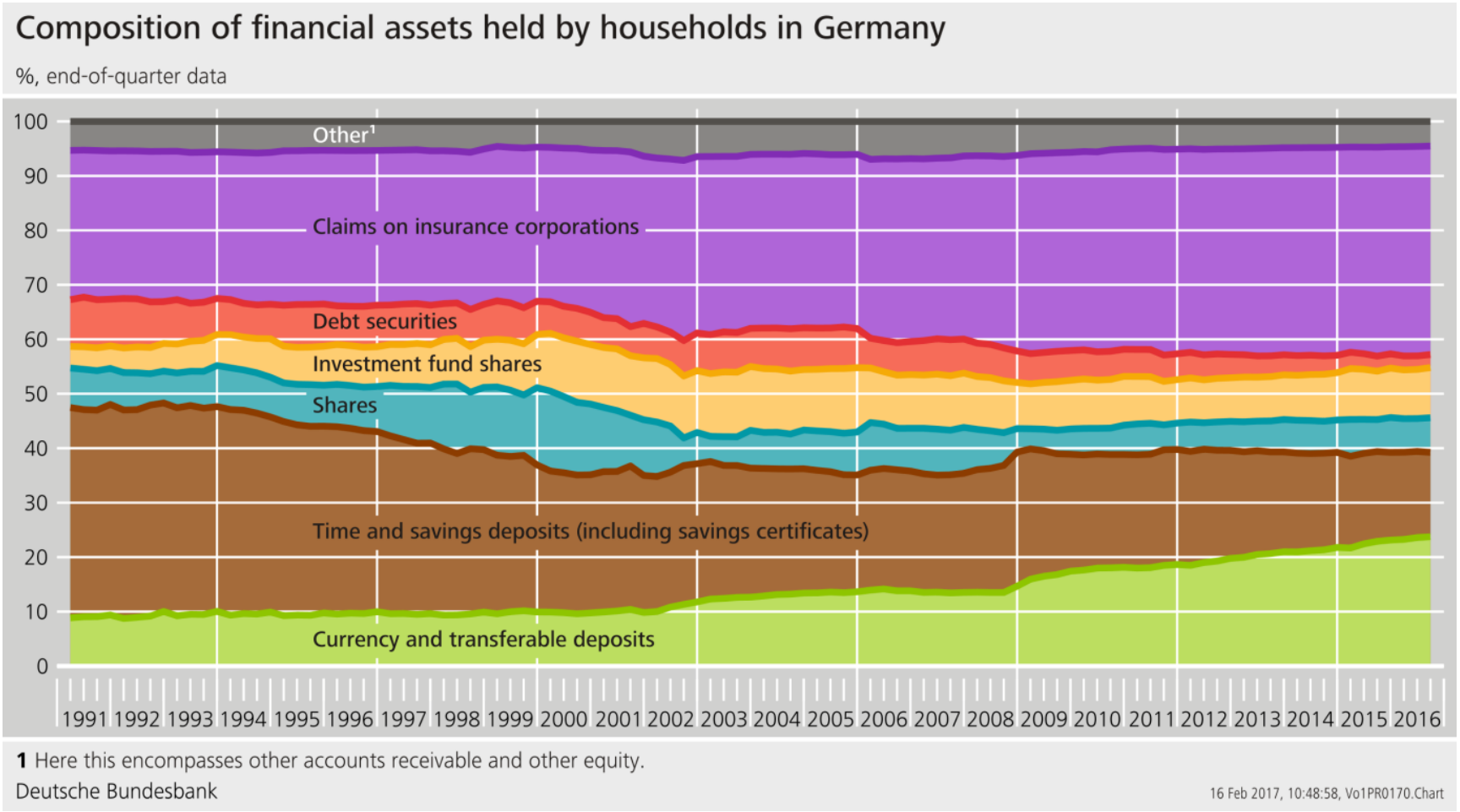
Simple model intuition: Restore the optimal portfolio structure with regard to risk and return.

Evidence: Returns are not a major determinant of portfolio decisions.

More relevant factors:

- Demographic structure
- Income and wealth
- Risk attitude, preferences
- Uncertainty about future developments
- Personal experience

3. Real returns and portfolio decisions



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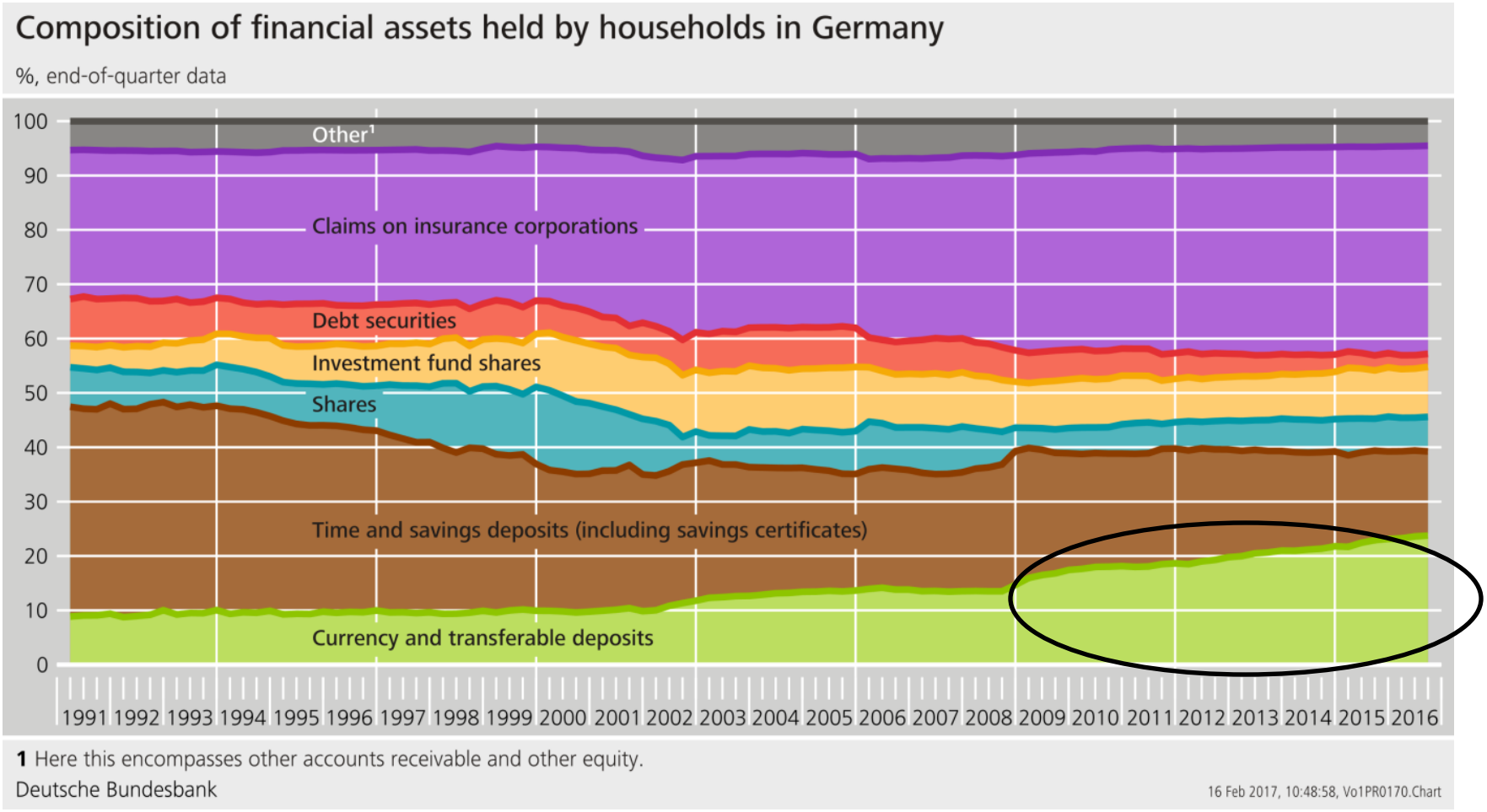

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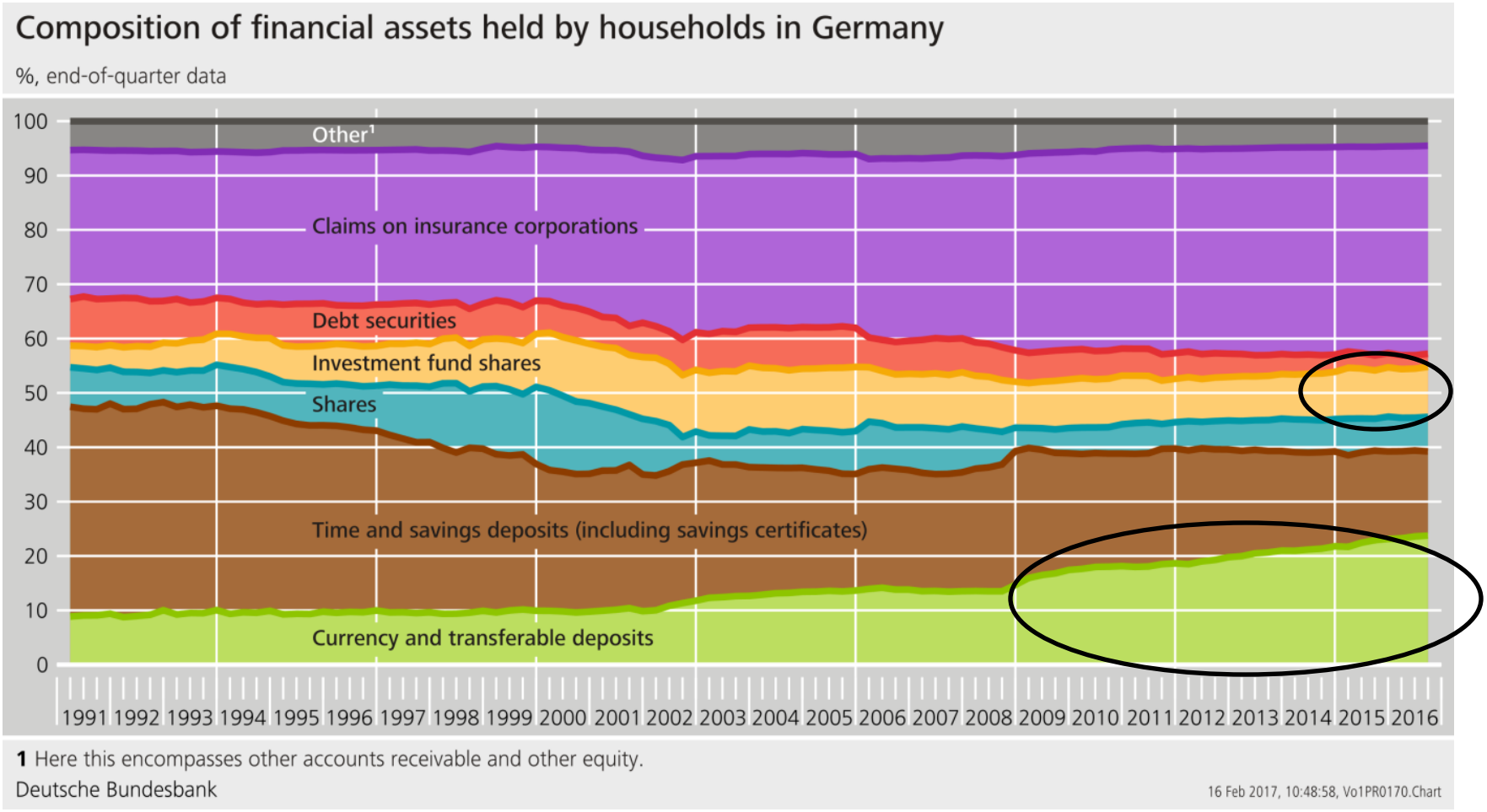
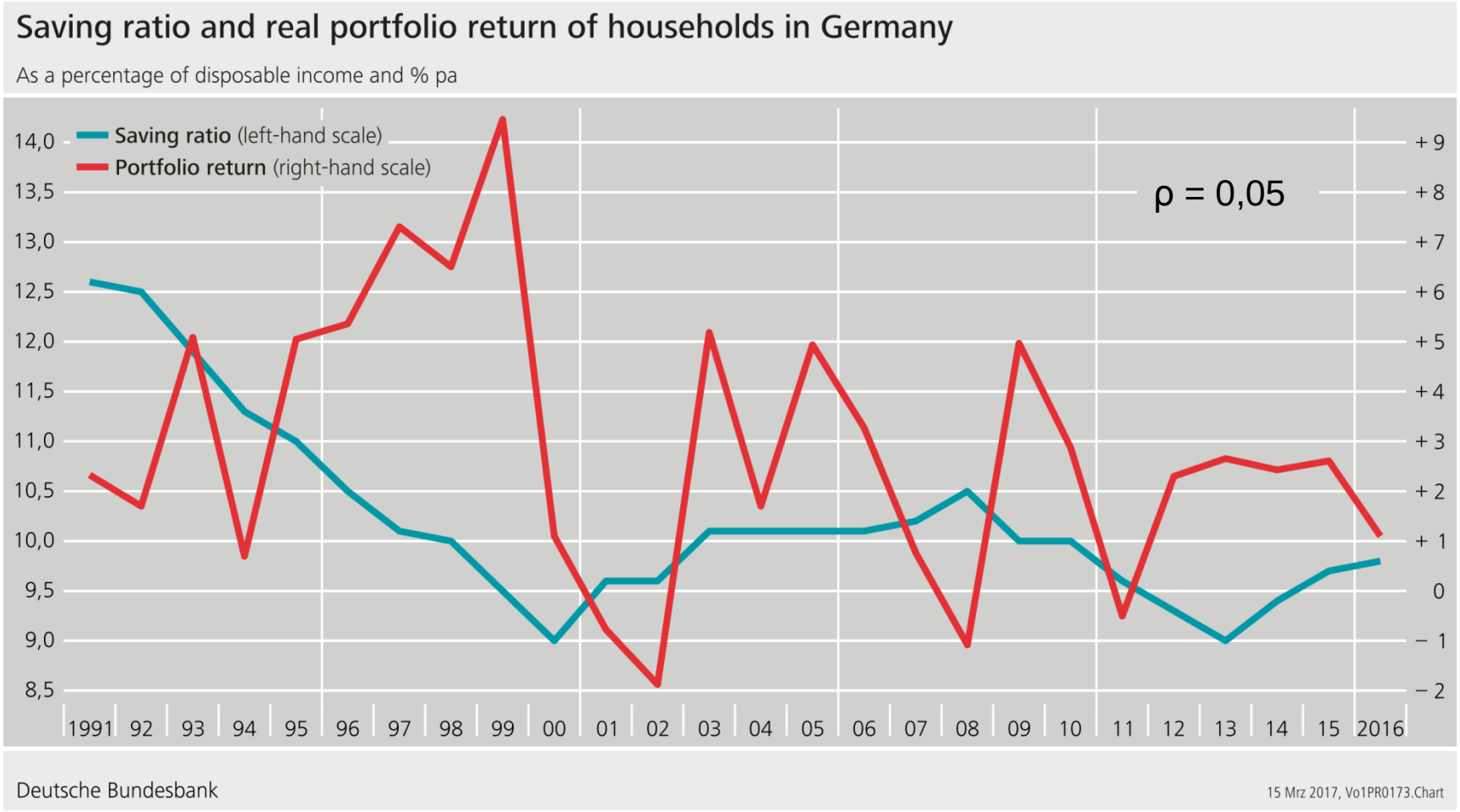


4. Balance sheets and spending decisions



4. Balance sheets and spending decisions

Households‘ portfolio decisions are

- not only decision between different forms of investment…
- … but also between **saving vs. spending**.

Spending decision can depend on

- returns / monetary policy,
- intended consumption path,
- structure and development of balance sheet (incl. housing)…

4. Balance sheets and spending decisions

Generally: asset prices as part of **financial accelerator** and **wealth channel**.

- Strength of effects likely to be time-varying and country-specific.

Housing booms in the run-up to financial crisis:

- Increases in **house prices** were transmitted into economic activity via household spending, e.g. in US, IE, ES.

Situation in **Germany is different**:

- Credit market structure (home equity loans, lending standards, LTV-ratios)
- House prices↑ ⇨ saving↑ to honour down payments (Geiger et al. 2016)
- Low home-ownership ratio (44 %)

5. Conclusion

1. Low-interest rate environment? Real total returns matter!

2. Returns are not a major determinant of household portfolio decisions: demography, income, preferences are more important.

3. Direct transmission of monetary policy impulses on economic activity via households in Germany seems less effective.

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Background
Calculation

- **Deposits**: Bbk/MFI interest rate statistics; weighted according to time-varying portfolio share of individual asset class; including currency and distinction of maturities

- **Claims on insurance corporations and pension funds**: current return on life insurance policies as approximation

- **Debt securities**: German bond performance index REXP; performance indices for each issuing sector (using w-t-w information; indices from Merrill Lynch, J.P. Morgan, Citigroup, FTSE, Bbk calculations)

- **Shares**: Performance indices (Prime All Share sub-indices) for each issuing sector (using w-t-w information); NFC-shares as residual, accounting for sectors‘ market capitalisation

$$R_{Prime\ All\ Share,t-1,t} = \sum_{i=1}^{3} w_{i,t} R_{i,t-1,t} + w_{NFK,t} R_{NFK,t-1,t}$$

- **Investment fund shares**: monthly price data and balance sheet information at fund level from Bbk Investment fund statistics; aggregation to fund category level (weighted with fund assets) and sector level (weighted according to portfolio share)

$$r_{i,t-1,t} = \frac{P_{i,t}}{P^{*}_{i,t-1}} + \frac{Distribution_{i,t-1,t}}{FA_{i,t-1}} - 1 \text{ (for individual funds)}$$

Background
Calculation of return on shares

$$R_{Prime\ All\ Share,t-1,t} = \sum_{i=1}^{3} w_{i,t} R_{i,t-1,t} + w_{NFC,t} R_{NFC,t-1,t}$$

$$\mathrm{R_{i,t-1,t}} = \frac{\text{Total return index}_{\mathrm{i,t}}}{\text{Total return index}_{\mathrm{i,t-1}}} - 1$$

$$\mathrm{w_{i,t}} = \frac{\text{Market capitalisation}_{\mathrm{i,t}}}{\text{Market capitalisation}_{\text{Prime All Share,t}}}$$

Background
Calculation of return on investment fund shares

$$r_{i,t-1,t} = \frac{P_{i,t}}{P^*_{i,t-1}} + \frac{Distribution_{i,t-1,t}}{FA_{i,t-1}} - 1$$

$$R_{k,t-1,t} = \frac{\sum_{i=1}^{n} FA_{i,k,t} \cdot r_{i,t-1,t}}{\sum_{i=1}^{n} FA_{i,k,t}} \quad \forall\, i \in k$$

$$w_{k,\tau} = \frac{X_{k,\tau}}{\sum_{k=1}^{n} X_{k,\tau}}$$

$$R_{t-1,t} = \sum_{k=1}^{n} w_{k,\tau} R_{k,t-1,t} \quad \forall\ t \in \tau$$