

Investment in Austria – Stylized Facts

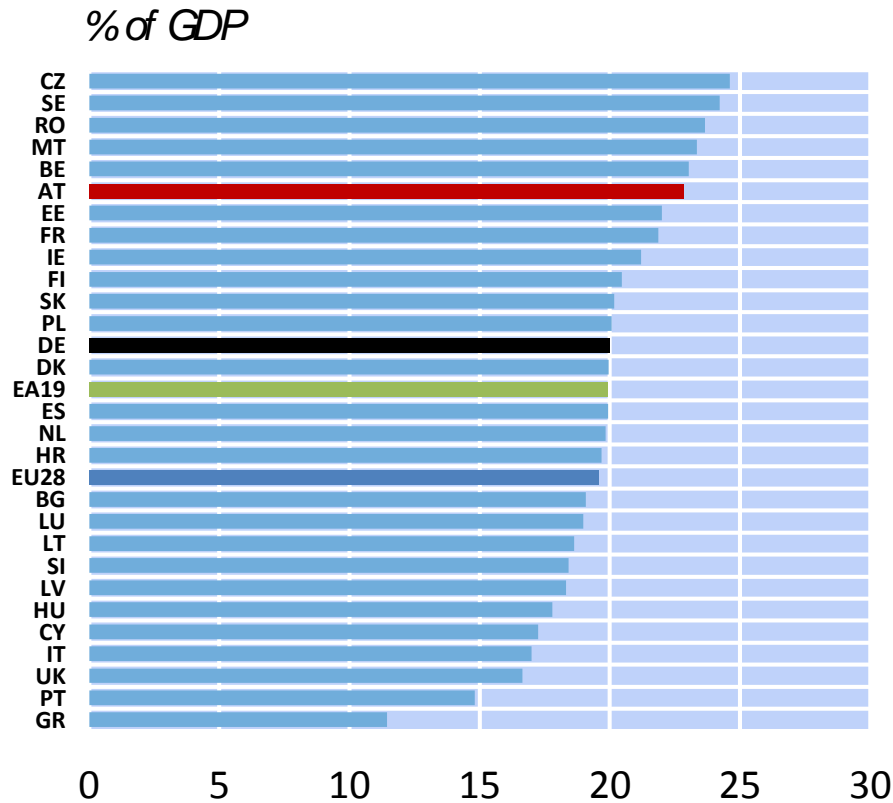
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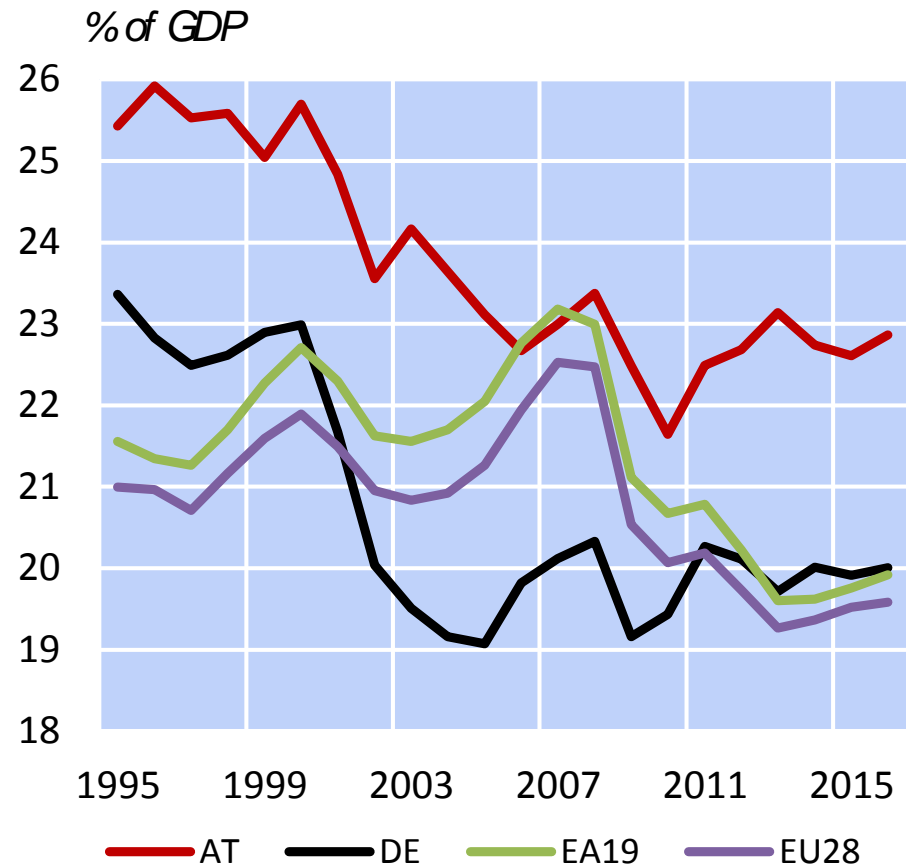
Austria has one of the highest investment shares in the EU

Investment share (2016¹⁾)



Source: Eurostat. 1) FI, IE, LU, PL: 2015

Investment share over time

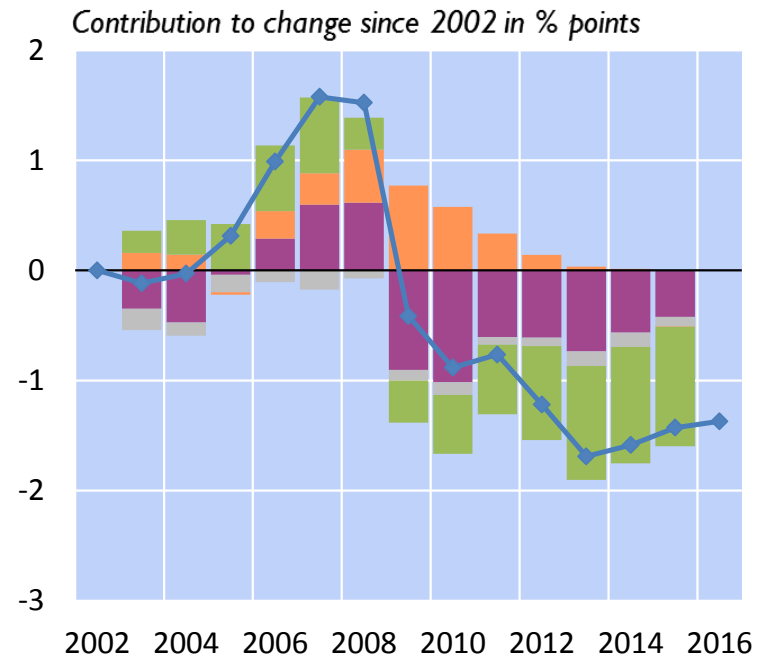
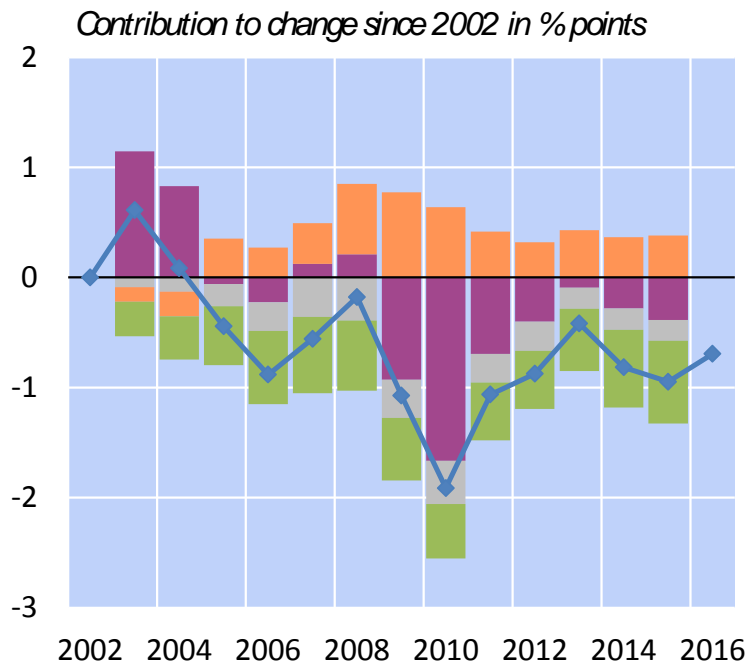


Investment dynamics in Austria dominated by nonfinancial corporations

Contributions of sectors to change in investment share since 2002

Austria

European Union



- Households
- Financial corporations
- ◆ Total economy
- Government
- Nonfinancial corporations

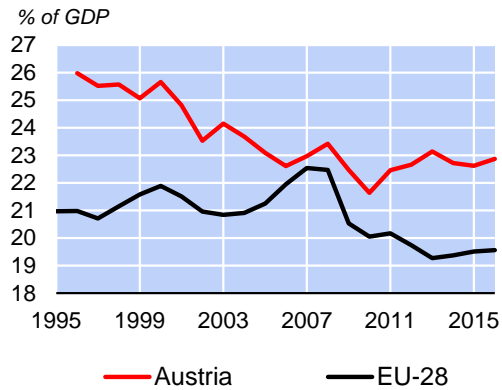
- Households
- Financial corporations
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Source: Eurostat.

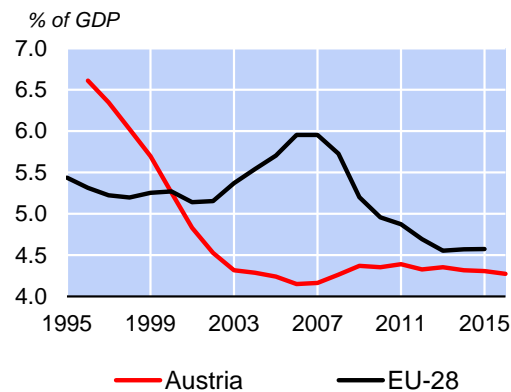
Structure of investment in Austria more favorable to growth than in the EU

Components of total investment

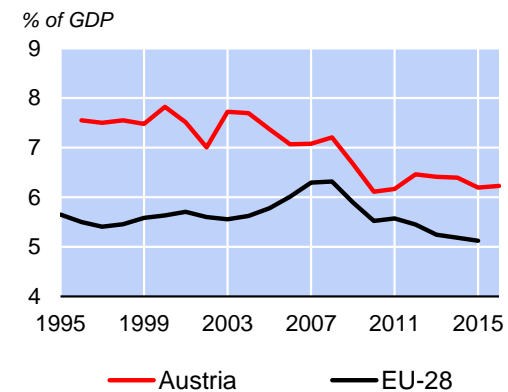
Total investment



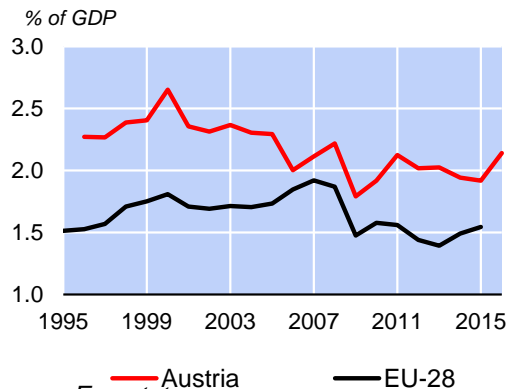
Dwellings



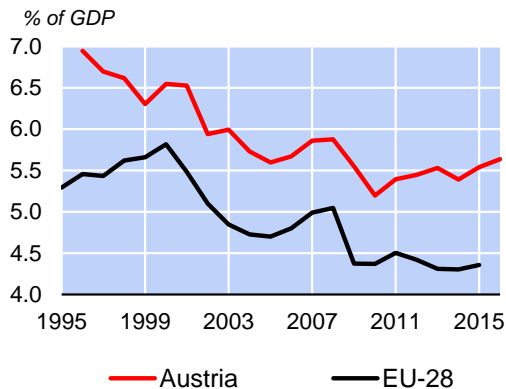
Other buildings and structures



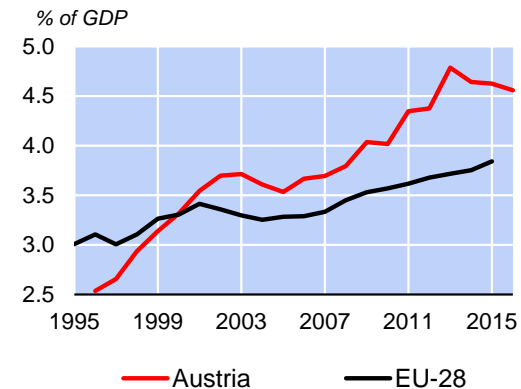
Transport equipment



Other equipment



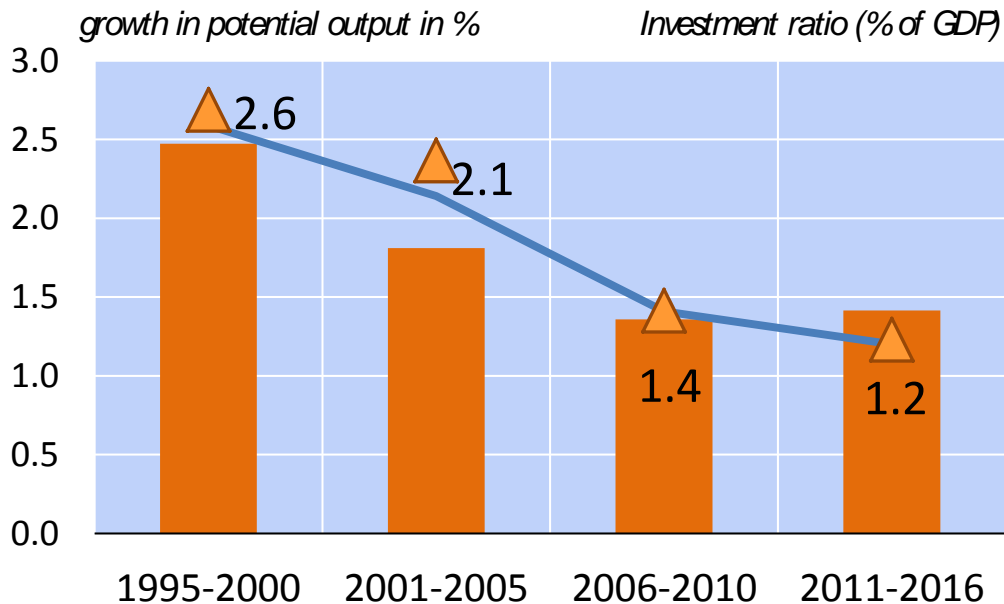
Intellectual property



Source: Eurostat.

Decline of the investment share explained by lower long term growth prospects

Potential output and investment share



■ Investment share
 — Potential output
▲ Steady-state investment share

Source: Own calculations, OeNB

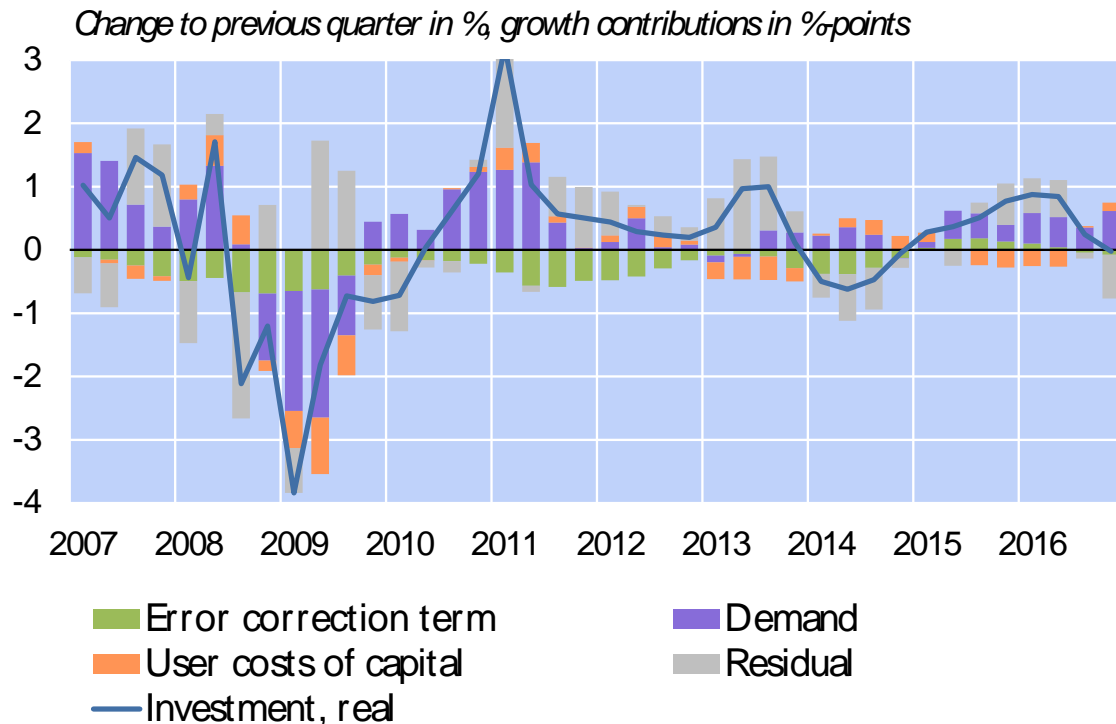
- In a simple capital accumulation framework the investment share (I/Y) is determined by the capital ratio (K/Y), the depreciation rate (δ) and the GDP growth rate (g):

$$\frac{I}{Y} = (\delta + g) \frac{K}{Y}$$

- Given a capital to GDP ratio of 3.8, a decline of the trend steady state GDP growth rate by of 1 pp causes the steady state investment share to decline by 3.8 percentage points
- The drop in the investment share by 3 pp is in line with growth prospects → no specific investment gap

Dynamics of investment can be explained by traditional determinants

Growth contributions to total investment

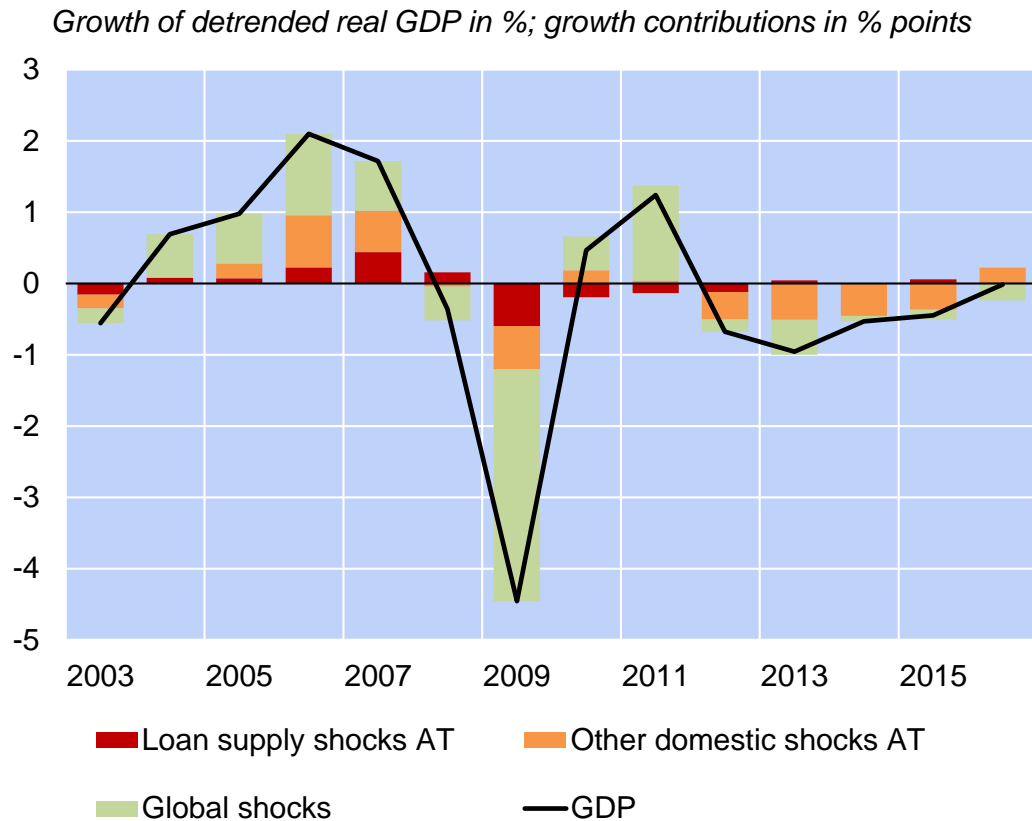


Type of model

- Investment equation of OeNB's macroeconomic model is used to explain investment
- Investment activity mainly determined by traditional factors with demand as the main driver
- Results hold for different specifications
- Decline of growth perspectives reflected in negative contribution of error correction term
- Measures of uncertainty typically not significant

No evidence of significant effects of negative loan supply shocks in recent years

Shock decomposition of Austrian GDP growth



Source: Own calculations.

Type of model

- Structural Bayesian Vector autoregressive model allows to identify loan supply shocks

Model variables

- Real GDP, inflation, loan volume and spread between interest rates of corporate loans and EURIBOR; growth of export markets and variable for price competitiveness

Identification of shocks

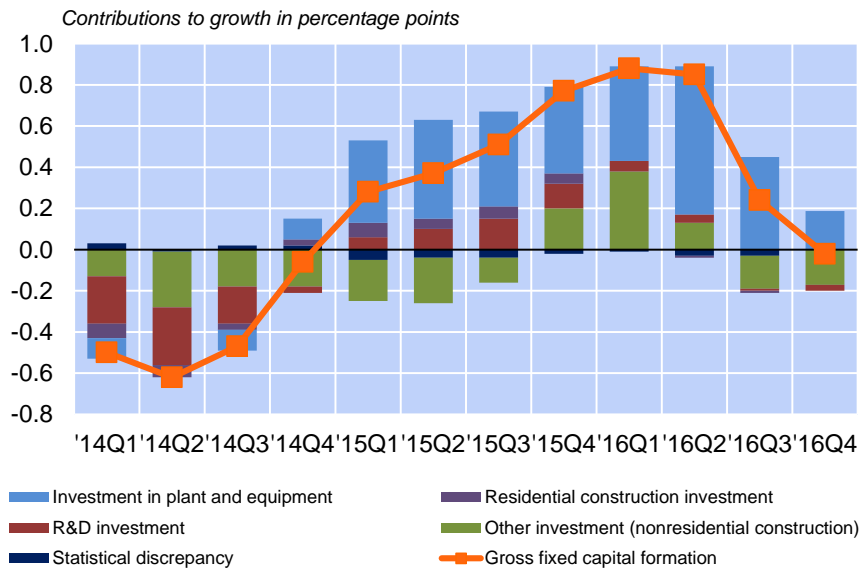
- Negative comovement between loans and spreads
- Positive comovement of loans with GDP and prices

Results

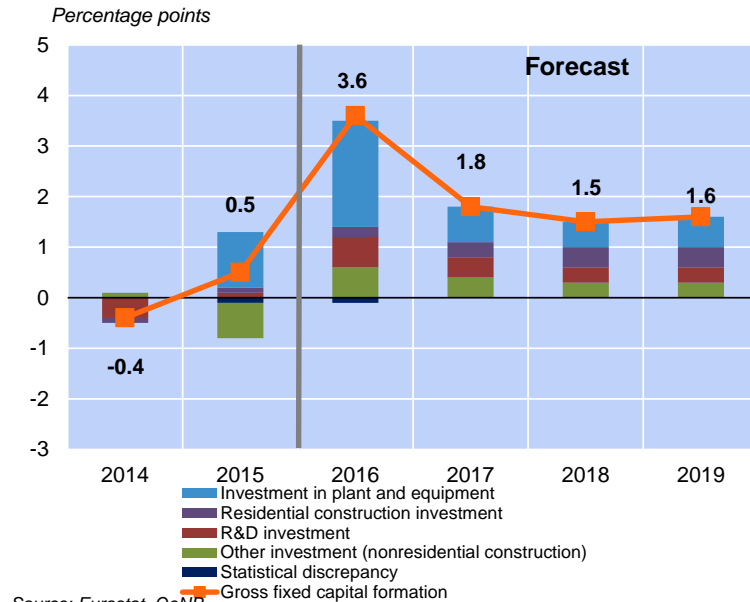
- Effect of loan supply shock is almost negligible

OeNB's December 2016 Economic Outlook: Equipment investment cycle peaked in 2016

Quarterly investment growth



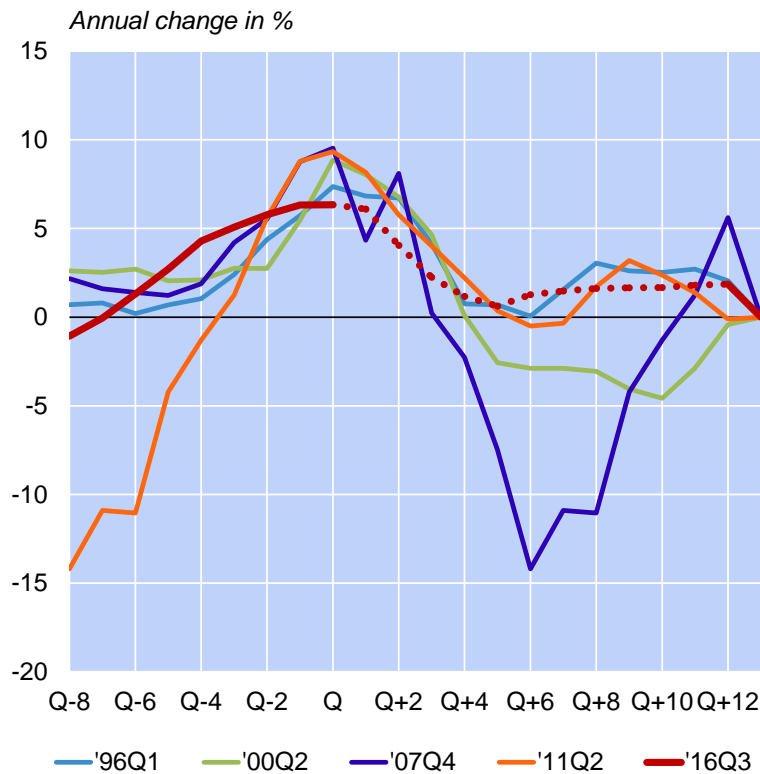
Contributions to investment growth



- Robust industrial output and improved prospects had a positive impact on Austrian companies' willingness to invest in 2015 and 2016.
- Equipment Investment activity is expected to slacken from early 2017 onward.
- Construction investment is expected to accelerate slightly in coming years.
- Investment stimulus package from October 2016 expected to boost investment in 2017 (0.3pp) and 2018 (0.1pp) and to dampen investment in 2019 (-0.2pp)

Equipment investment cycles in Austria: Is this time different?

Growth of equipment investment in Austria for different cycles



Quelle: WIFO, OeNB.

Characteristics of equipment investment cycles in Austria

	'96Q1	'00Q2	'07Q4	'11Q2	'16Q3
Average cycle length 1)	8	13	6	7	9
Cumulated growth in % 2)	9.3	11.2	9.1	10.3	12.2

1) Number of quarters with annual growth rates above 2% (=average 95-16)

2) Cumulated growth between 8 quarters before and 4 quarters after the peak

- The **duration** of the current investment cycle is similar to previous cycles
- The **magnitude** is on the upper range of previous cycles
- **Composition** of current cycle similar to 2011: Transport and ICT equipment as main drivers

Summary and Conclusions

Facts

- Austria has one of the highest investment shares in the European Union
- Structure of investment in Austria more favorable to growth than in the EU

Determinants

- Dynamics of investment can be explained by demand and growth prospects
- No evidence of significant effects of negative loan supply shocks in recent years

Prospects

- Equipment investment cycle peaked in 2016

Open questions

- Efficiency of investment given low GDP growth during the last years?
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