

Investment since 2011: trends & conjectures

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Introduction

- Understanding and forecasting investment spending is important
 - Short term: **business cycle**
 - Long term: **productivity** & structural change
 - Policy design: industrial policy, **incentives**
- But faces important analytical problems
 - Macro **models** over simplify
 - **Unrealistic** assumptions
 - Investment is very **heterogenous**
 - **Data** is limited and inadequate
 - Empirical **confusion** (identification problems)

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Investment: national income identity

- **Gross Fixed Capital Formation - GFCF = I**
(Gayrisafi sabit sermaye oluşumu)
 - $I = \text{Depreciation} + \text{Net Investment} = DP + NI$
 - $I = \text{Public/infrast.} + \text{Residential} + \text{Corporate}$
 $= PI + RI + CI$
 - $I = \text{Tradables} + \text{Non-tradables} = IT + IN$
- **Corporate investment = CI**
 - $CI = CI \text{ tradable} + CI \text{ nontradable} = CIT + CIN$
 - $CI = \text{Depreciation } CI + \text{Net } CI = DCI + NCI$
 - $CIT = \text{Depr. } CIT + \text{Net } CIT = DCIT + NCIT$
 - $CIN = \text{Depr. } CIN + \text{Net } CIN = DCIN + NCIN$

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Corporate investment: firm level

- **Investment** decision: type and location
 - Investment **type**:
 - Replacement/Depreciation
 - Cost reduction (given capacity)
 - Capacity increase (given cost)
 - Investment **location**:
 - Domestic – regional
 - Abroad – global, EU
- **Finance** decision: use of resources
 - **Internal**: from net cash before investment
 - Depreciation + Undist.profit – Debt repayment
 - **External**: through financial sector
 - Stock + LC debt + FX debt

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Determinants of CI (1)

- Economic conditions (narrow sense)
- **Demand** conditions (capacity)
 - Nontradables: **Domestic** demand
 - Tradables: **External** & domestic demand
- **Competition** conditions (cost)
 - Nontradables: **Domestic** market competition
 - Tradables: **External** & domestic competition
- **Financial** conditions
 - **Depreciation** + Undist. Profit – Debt repayment
 - External financial conditions (LC & FX)
- **Externalities**
 - Infrastructure, **incentives**, labour market

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Determinants of CI (2)

- Economic framework and **political** conditions (stability & uncertainty)
- Macro **policy** framework
 - Fiscal policy: budget, public debt dynamics
 - Monetary policy: inflation, interest & **exchange rate**
- Economic **fundamentals**
 - Property rights, judiciary independence
 - **Governance**, level playing field
 - Global integration (EU-Customs Union)
- **Political environment**
 - Polarisation, conflict
 - Global/regional **foreign policy** developments

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Data: TÜİK national accounts

- **Expenditures** – current prices & **chain** volume indexes
 - GFCF = Produced non-financial assets + Other assets
 - GFCF = Construction + Mach. Equip. + Other assets
- **Incomes** – current prices
 - **Gross operating surplus** = GDP – taxes/subsidies + compensation of employees
 - **Consumption** on fixed capital
 - **Net operating surplus** = gross operating surplus – consumption on fixed capital
 - **Net investment** = GFCF – Consumption on fixed capital (not published by TÜİK)

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Data (other)

- TÜİK other
 - **Industrial** production: capital goods
 - **Foreign trade**: capital goods trade
- TCMB
 - **Investment Tendency Survey** – Manufacturing
 - **Balance of Payments**: Foreign direct investment (inward & outward)

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Choice of period

- Why 2011-2016 period?
- **New** national income series (2009)
 - New definition for investment: other assets
 - Discontinuities with pre-2009
- **Global** financial crisis (2009-10)
 - Hard landing in 2009; **loose** macro policies
 - Remarkable recovery in 2010
 - Loose policies extended to **2011**
- **Policy shift**: rebalancing demand (11H2)
 - Search for a **soft landing**
 - Tight fiscal policy + **heterodox** monetary policy

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External conditions

- Rebalancing with **headwinds**
- **Global economy**: not so favourable
 - Recession in EU (2012+)
 - Big fluctuation in energy prices
 - Nervous global markets (FED tightening)
- **Politics**: problems in Turkey
 - Impact mainly on **last two** years (2015-16)
 - Elections and referendum
 - **15 July** military coup d'etat
 - Crisis with Russia: **tourism** and exports
 - Terrorist acts in Turkey: **tourism**
 - Tension with **EU**: confidence, outward FDI

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Outline

- **First: growth** performance
 - Real change in investment spending
 - Comparing with real GDP growth
- **Alternative: shares in GDP**
 - Share of investment in GDH
 - Shares of components in GDP
 - Shares of gross & net investment
- **Searching correlations**
 - Investment and domestic savings
 - Investment and domestic demand/external deficit
 - Investment and real exchange rate
- **Composition** of investment

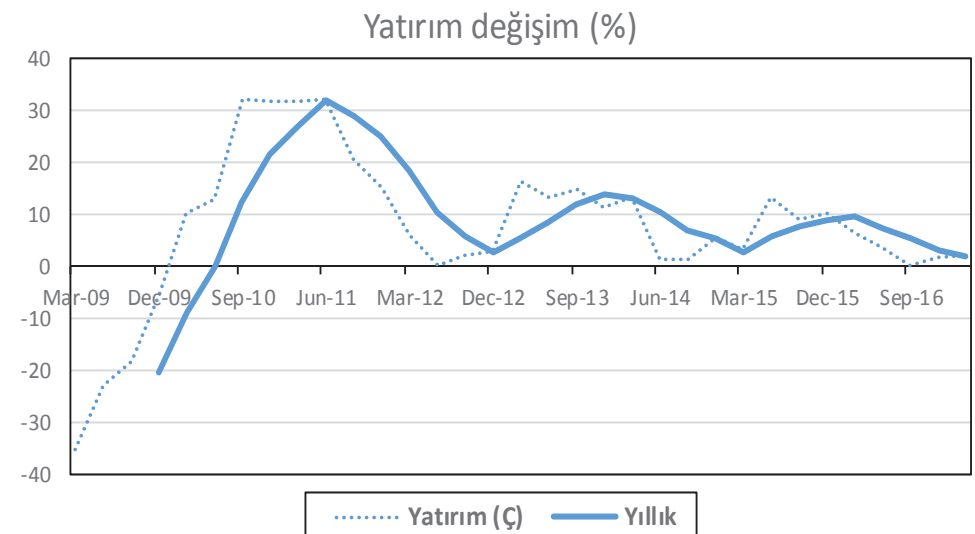
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Investment: real change 2009+

Chained volume index (%)



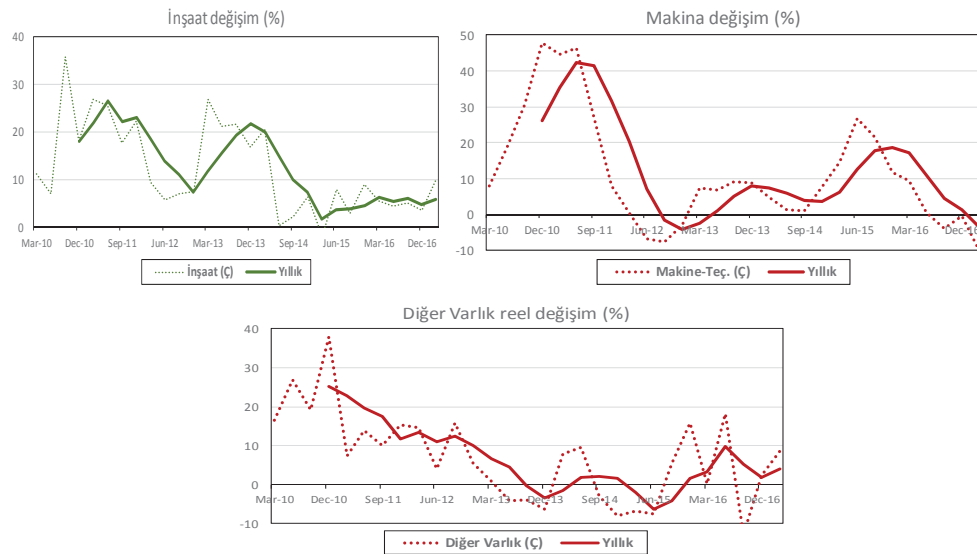
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Components: real change 2010+

Chained volume index (%)



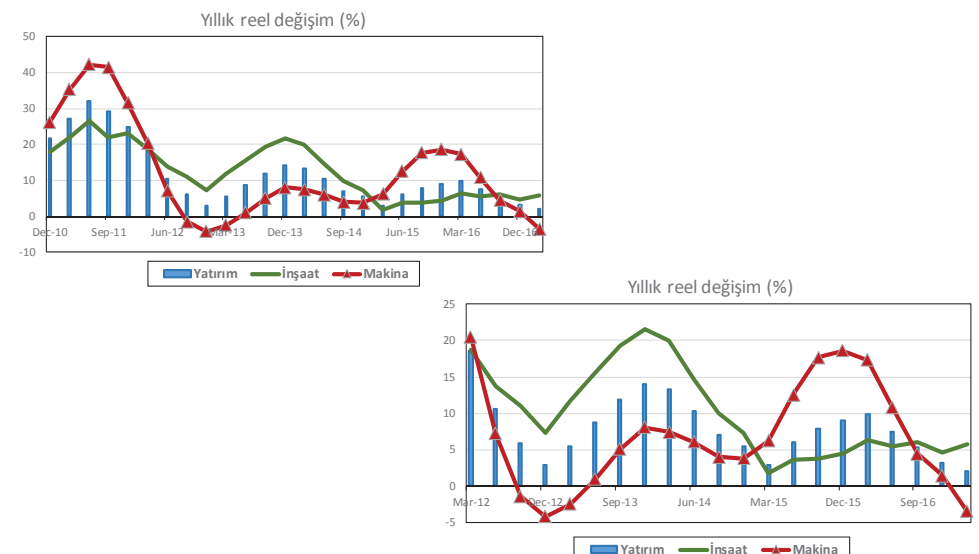
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Const. & mach. real change 2010+

Chained volume index (annual average %)



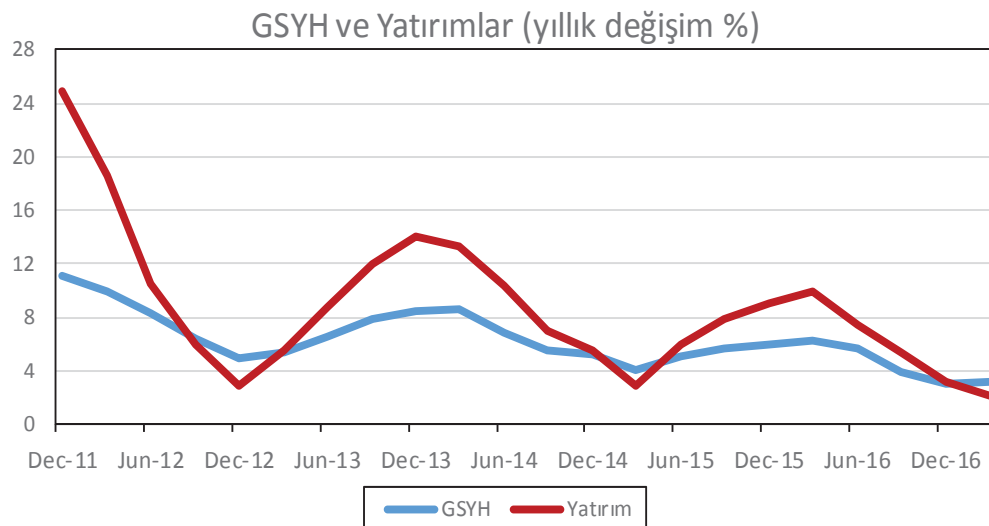
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GDP & invest. real change 2011+

Chained volume index (annual average %)



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Some observations

- What do we observe in five years?
- Investment rises faster than GDP
 - Except: 12Q4 ve 15Q1
 - 16Q4 same: 15 July military coup
 - 17Q1: GDP rises faster than investment
- Sub cycles **diverge**
 - 13Q1-15Q1 cycle: **construction** faster
 - 15Q2-16Q2 cycle: **mach & equip** faster
- Is there a **weakness** in investment?
 - No definite trend
 - 2015: better quality (mach.)
 - 16H2: slowdown **politics** based

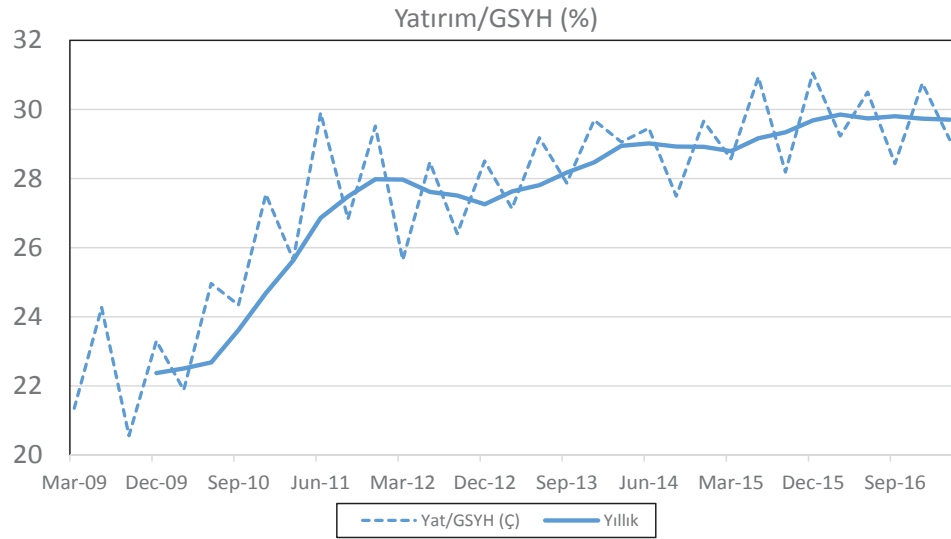
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Investment: share in GDP+

Current prices (%)

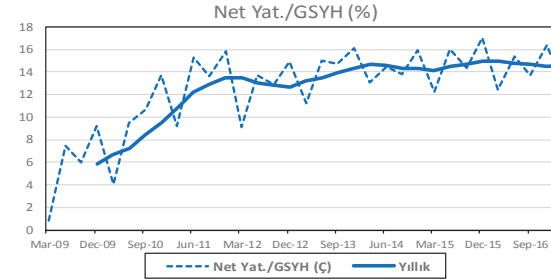


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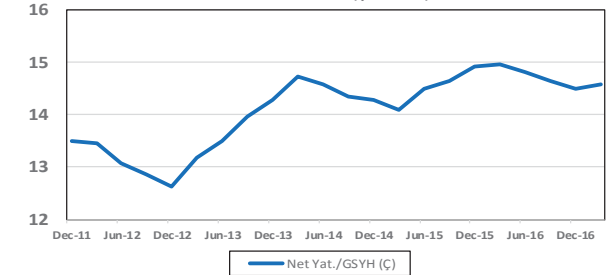
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Net investment 2009+



Net Yat./GSYH (yıllık %)

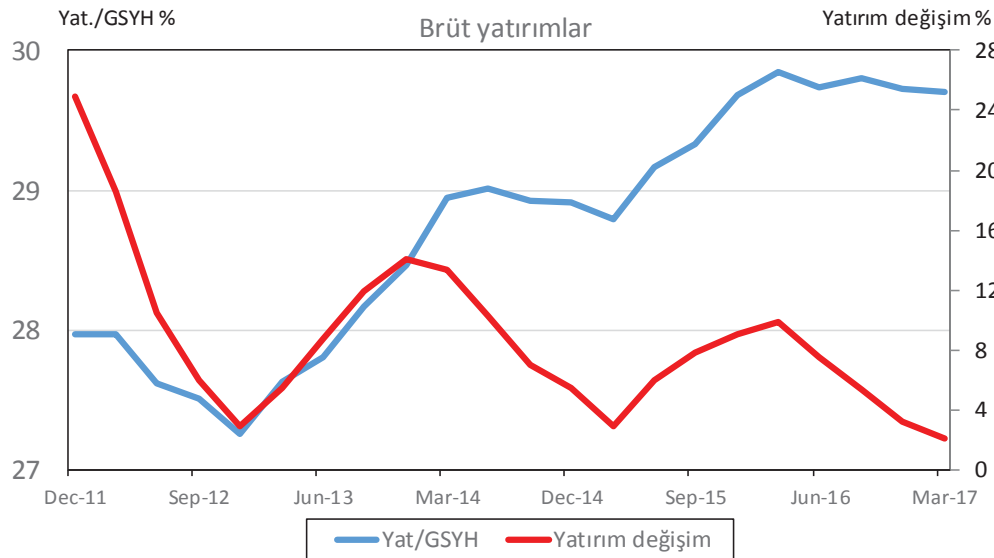


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Investment: share & growth 2011+

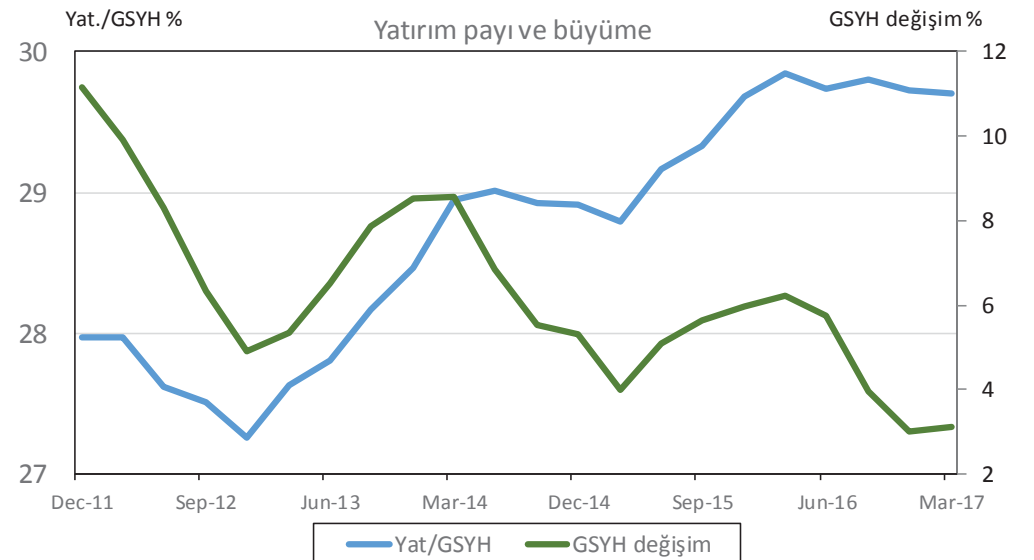


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Investment share & GDP growth 2011+



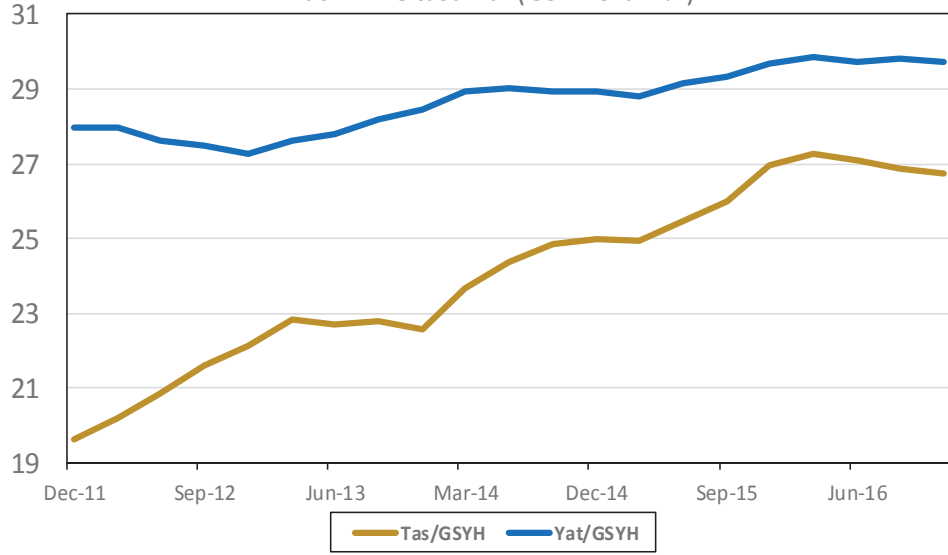
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Saving & investment 2011+

Yatırım ve tasarruf (GSYH oranı %)



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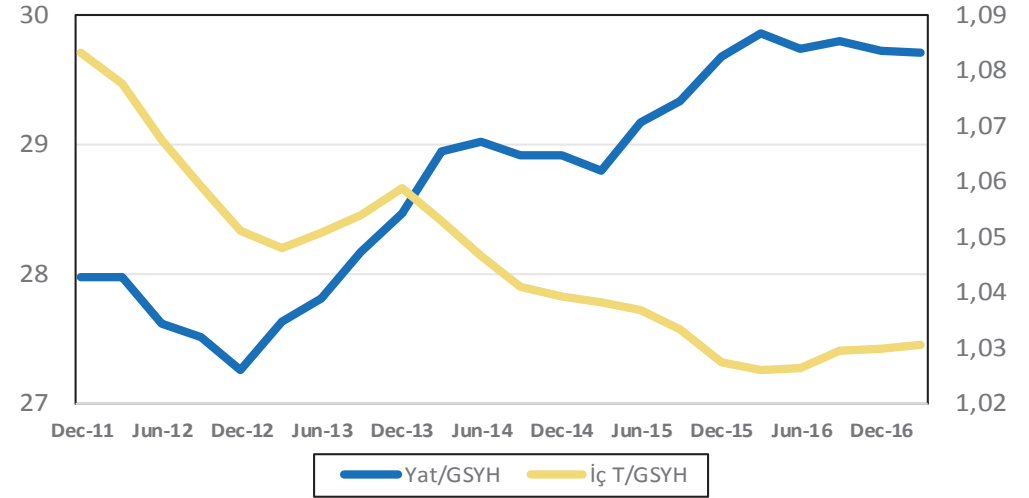
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Domestic demand and investment 2011+

Yat/GSYH %

İç T/GSYH



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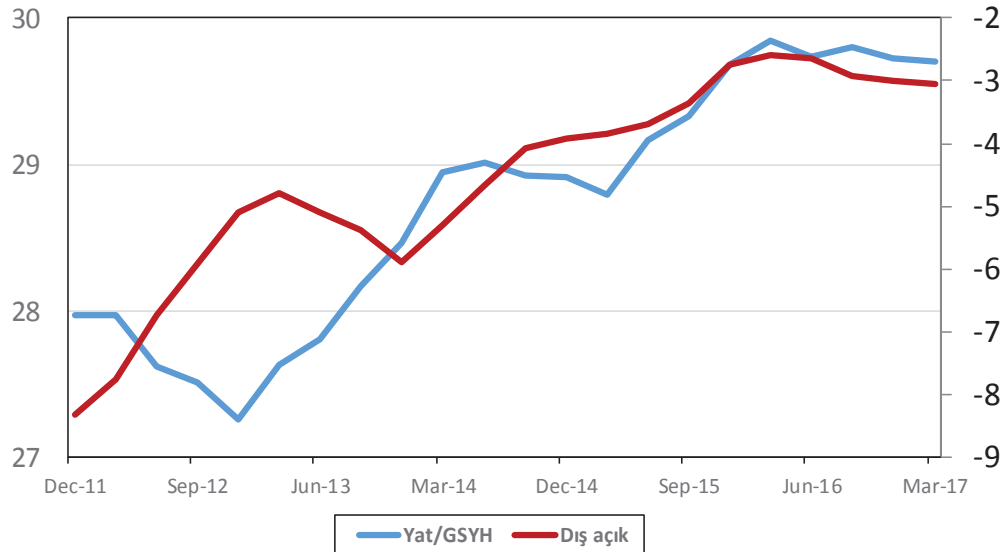
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External deficit & investment 2011+

Yat/GSYH %

Yatırım ve dış açık (GSYH'ye oran %)

Dış Denge/GSYH %



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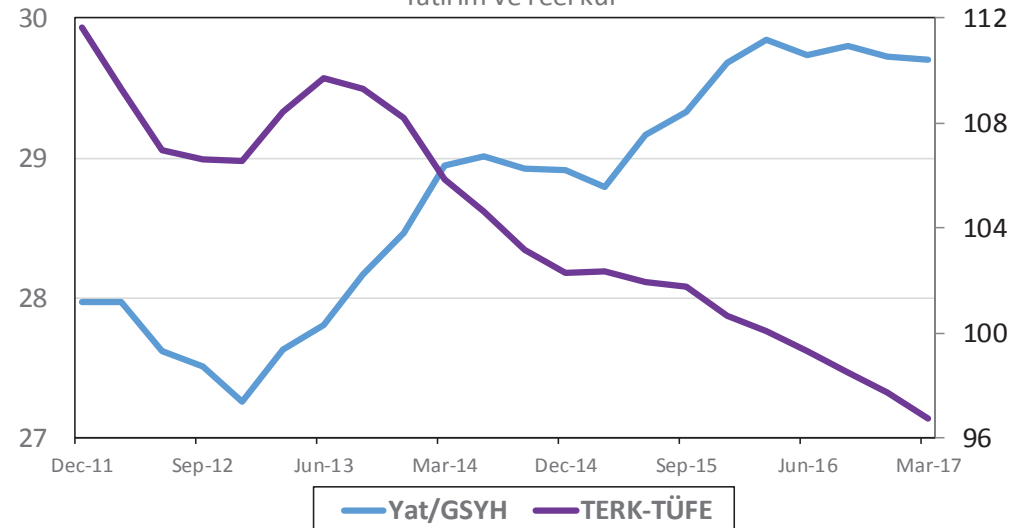
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Real exchange rate & investment 2011+

Yat./GSYH %

Yatırım ve reel kur

TERK-TÜFE

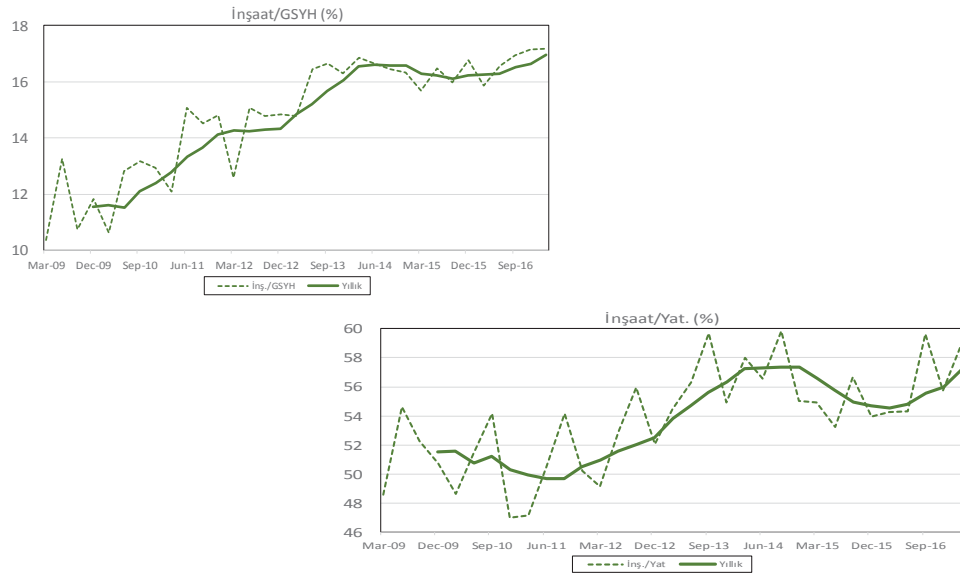


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Construction: share in GDP and investment

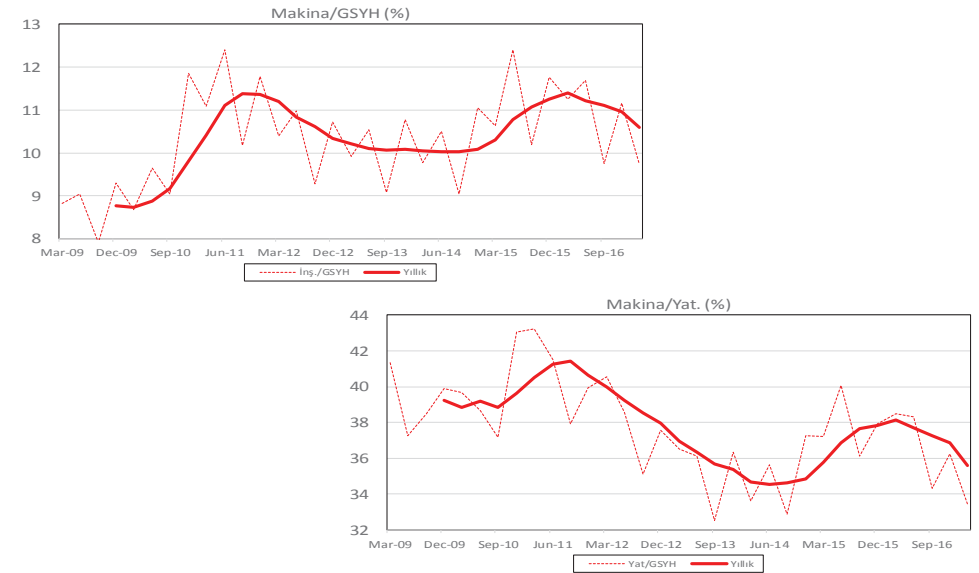


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Mach.equip: share in GDP & investment



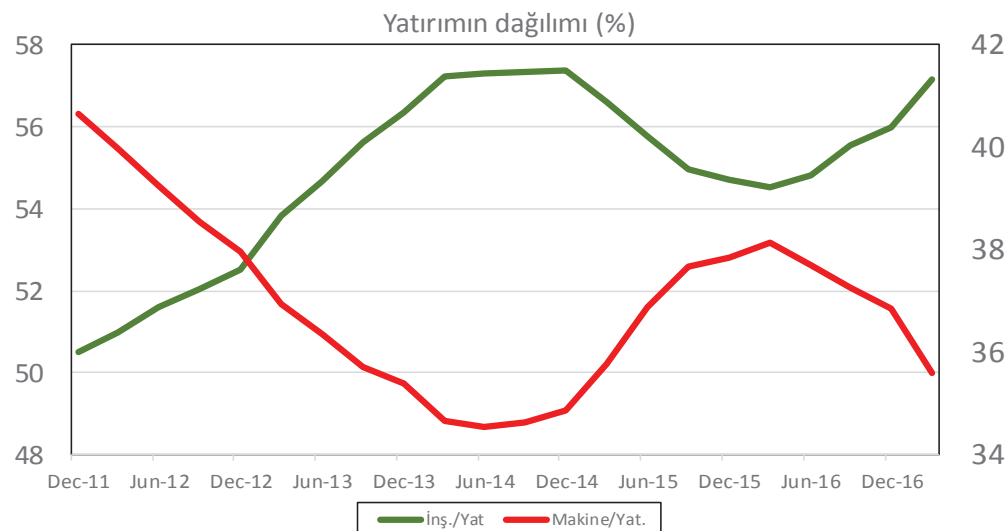
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Shares in investment 2011+

Current prices, average annual (%)



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Concluding

- Shares in GDP: impact of rebalancing visible
- **Positive** trends
 - Shares of investment and **saving** increases
 - **CAD** lower / domestic demand less imbalanced
- **Negative** trends
 - 13Q1-15Q1 cycle **construction** led
 - After 16Q2 share of construction rises **again**
- **Conundrum**
 - Rising investment & saving shares
 - Growth-investment relation after **14Q1**
- Investment & the **exchange rate**
 - Does TL depreciation increase investment?

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