

Results of the 2013 Comprehensive Revision of the National Income and Product Accounts

Bureau of Economic Analysis

July 31, 2013

Comprehensive Revision

- Occurs about every five years (this is the 14th)
- Incorporates the results of the 5-year economic census and the benchmark input-output accounts
- Updates the reference year for prices, quantities (2009)
- Major changes in concepts, methods, and tables
- The entire time span (1929 to present) is open for revisions

Changes in Definitions and Presentations

- Major conceptual changes:
 - Capitalize research & development (R&D)
 - Capitalize entertainment, literary, and artistic originals
 - Expanded capitalization of ownership transfer costs of residential housing
 - Accrual treatment of defined benefit pension plans
- Major table changes:
 - Intellectual property products
 - New pension tables

Major Statistical Changes

- Benchmark input-output accounts for 2007
- Improved measures of implicit services of commercial banks
- State & local government defined-contribution pension plans
- Adjustment to proprietors' income for corporate partners
- Regulated investment companies distributions
- Mortgage interest paid for housing

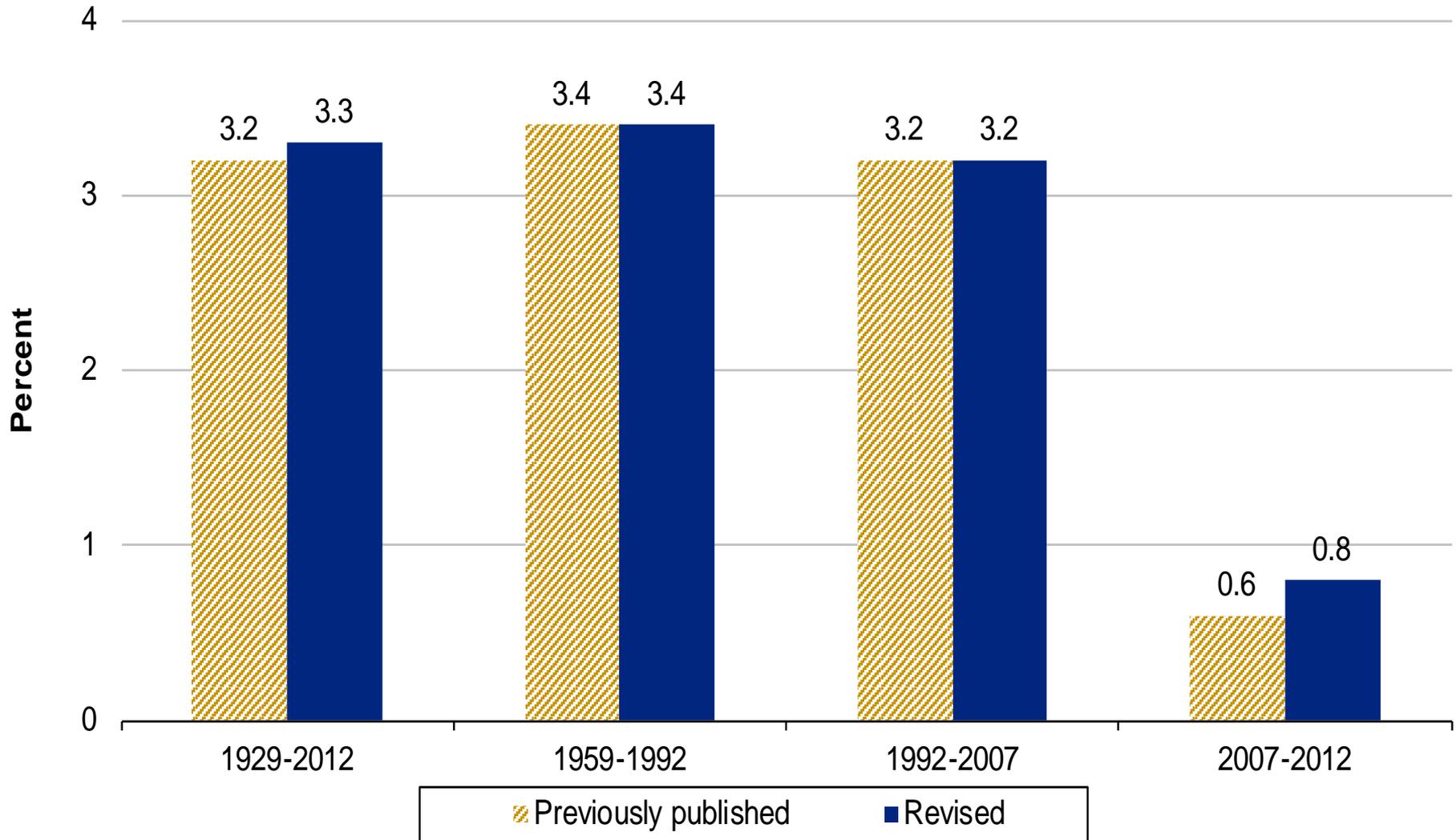
Reasons for Changes

- Changes in the economic environment
 - Growing importance of intellectual property products in business, productivity
- Financial crisis and recession
 - Exposed vulnerabilities in pension promises
 - Data gaps in financial services
- Updated international guidelines
 - *System of National Accounts 2008*
 - Maintain comparability of GDP across countries, while allowing accounts to remain up to date

New and Revised Source Data

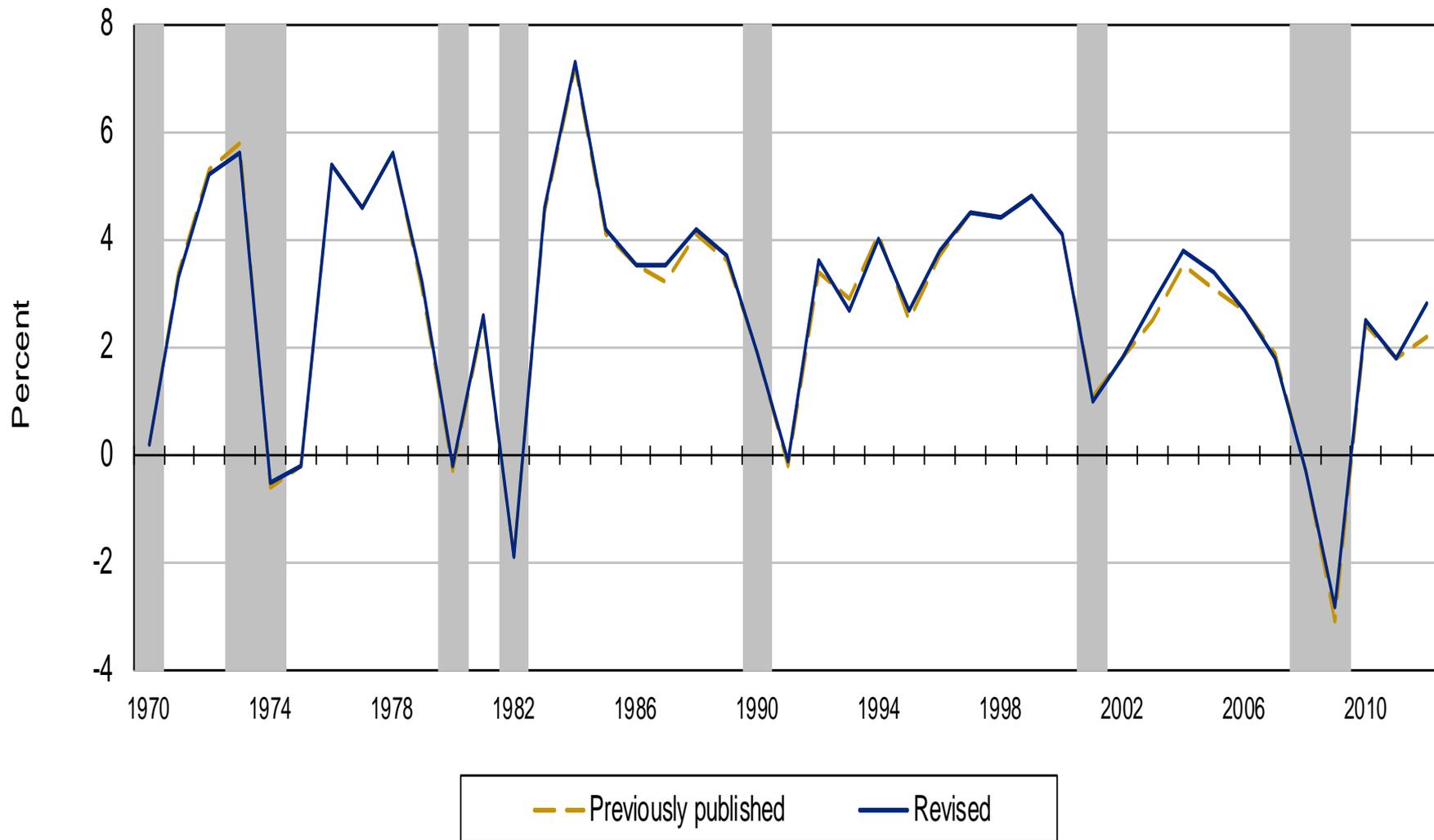
- **Census Bureau surveys:**
 - Annual survey of manufactures
 - Annual retail trade survey
 - Annual wholesale trade survey
 - Services annual survey
 - Construction spending (value put in place)
 - Government finances
- **Bureau of Labor Statistics:**
 - Wage and salary data
- **Internal Revenue Service:**
 - Tax returns for corporations and for sole proprietorships and partnerships
- **Office of Management and Budget:**
 - Federal government budget data
- **BEA:**
 - International transactions accounts

Average annual rates of change of real GDP



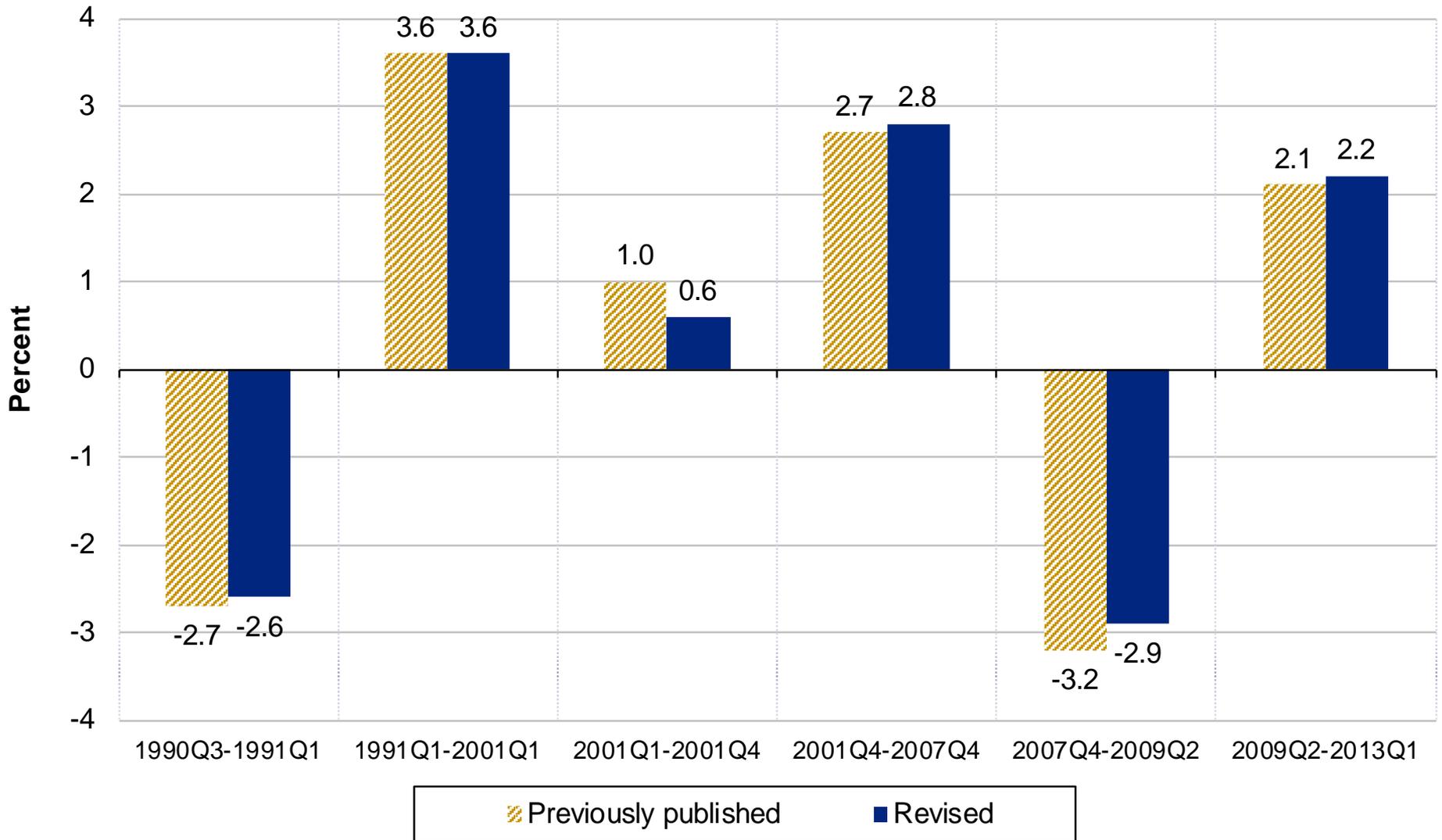
Real gross domestic product

[Percent change from preceding period]

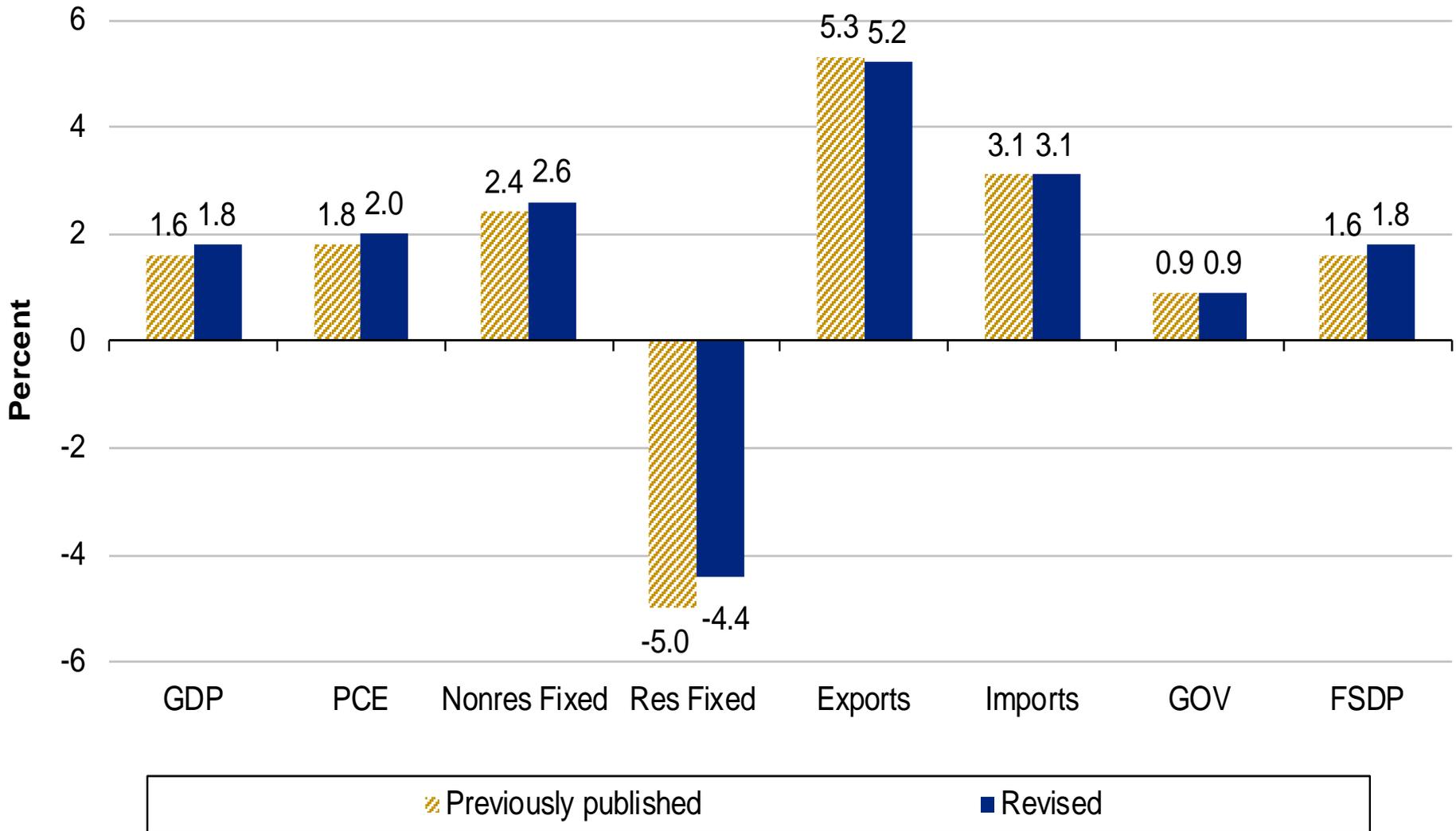


Revisions to recent recessions and expansions

[percent change, annual rate]

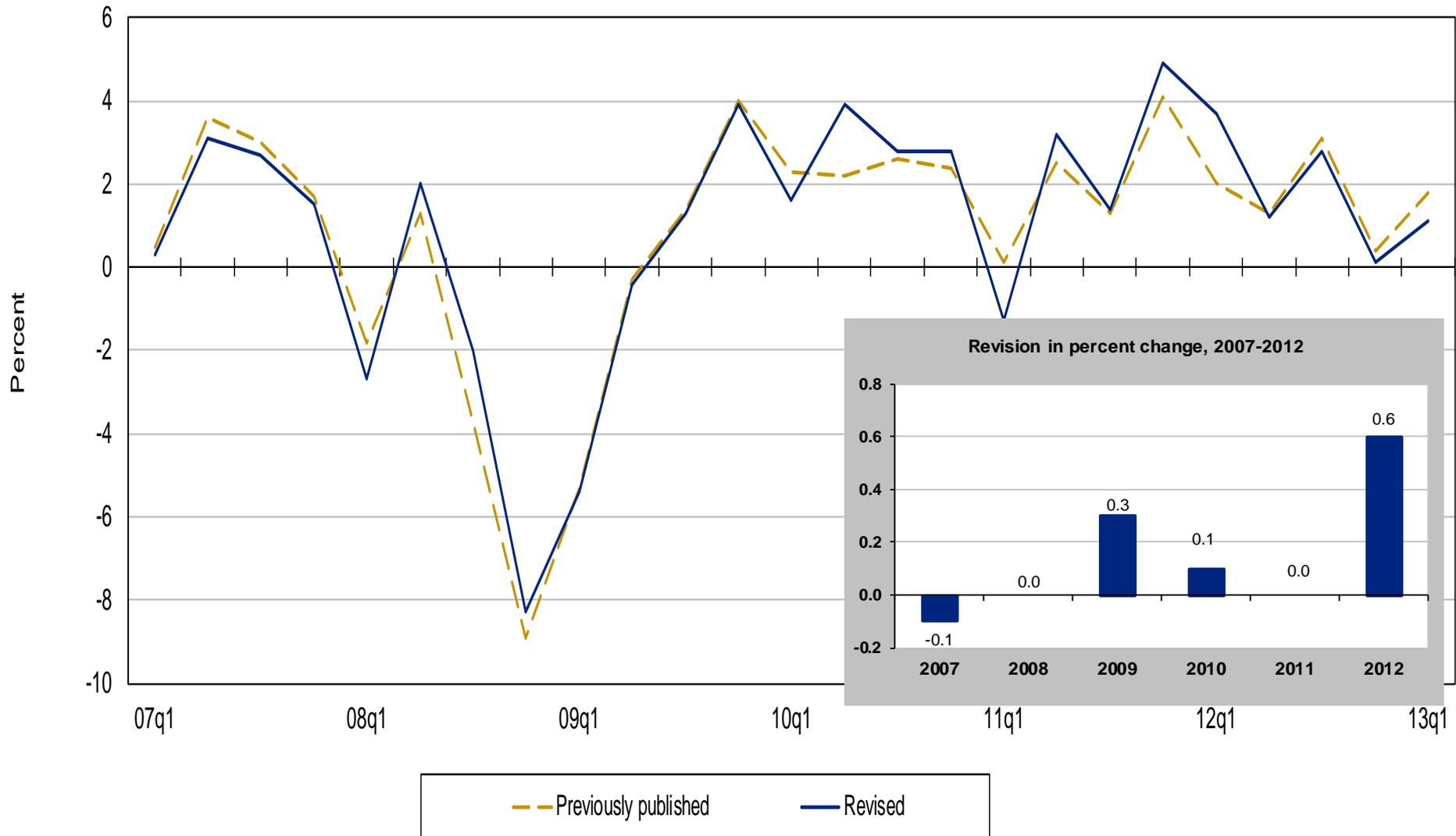


Average annual rates of change of real GDP and its major components, 2002 to 2012



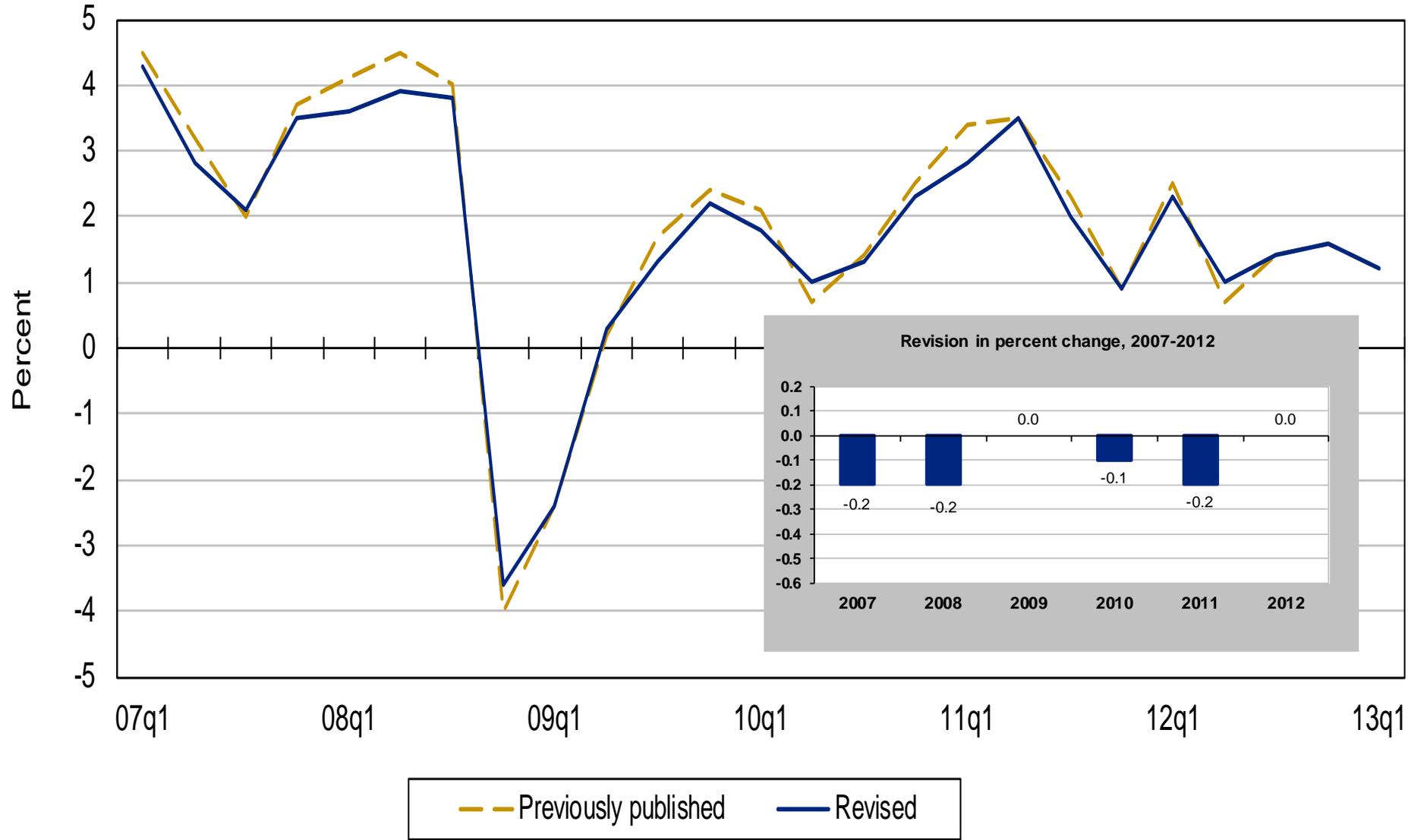
Real gross domestic product

[Percent change from preceding period, SAAR]



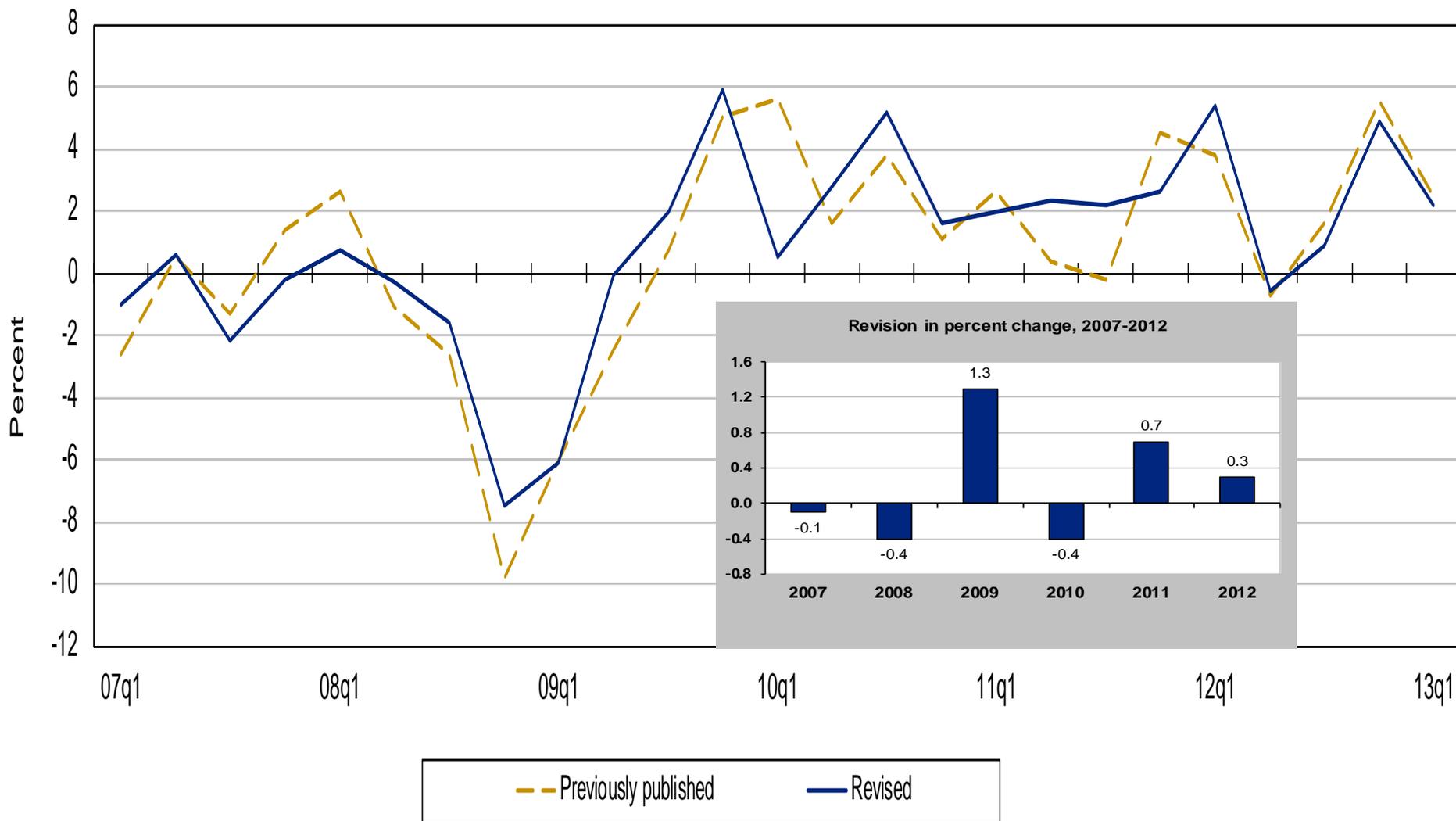
Price index for gross domestic purchases

[Percent change from preceding period, SAAR]



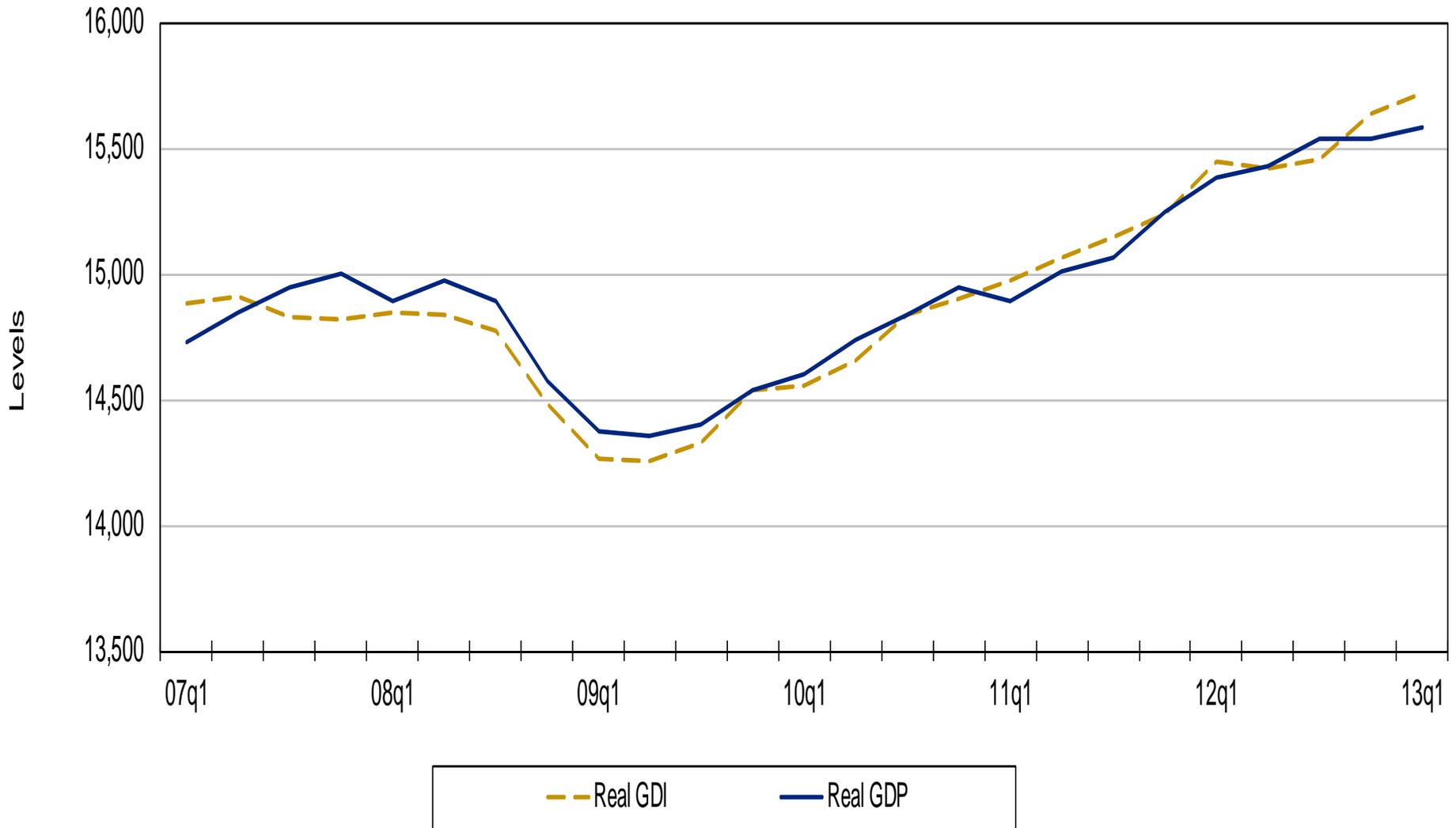
Real gross domestic income

[Percent change from preceding period, SAAR]

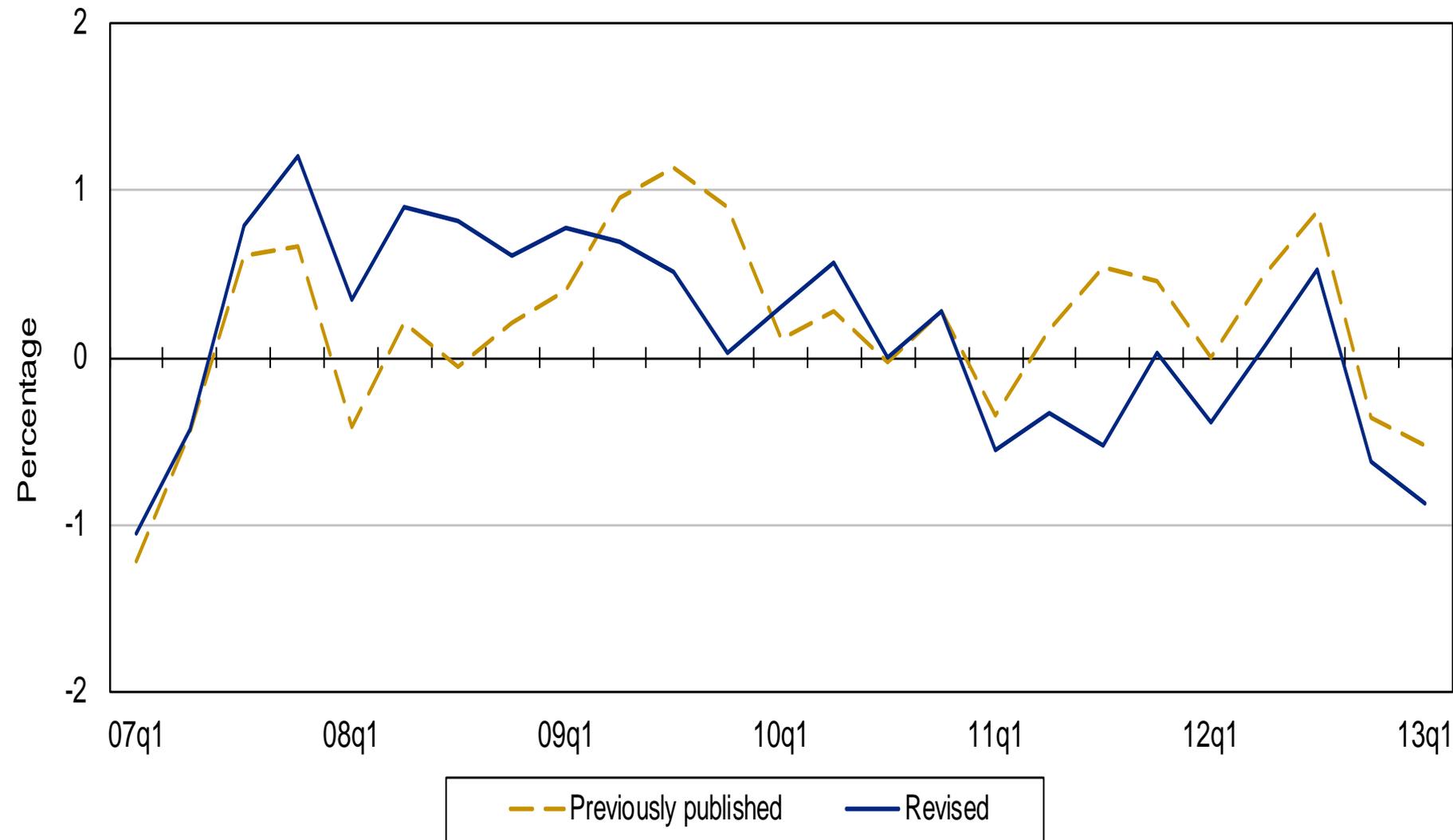


Real GDI and Real GDP

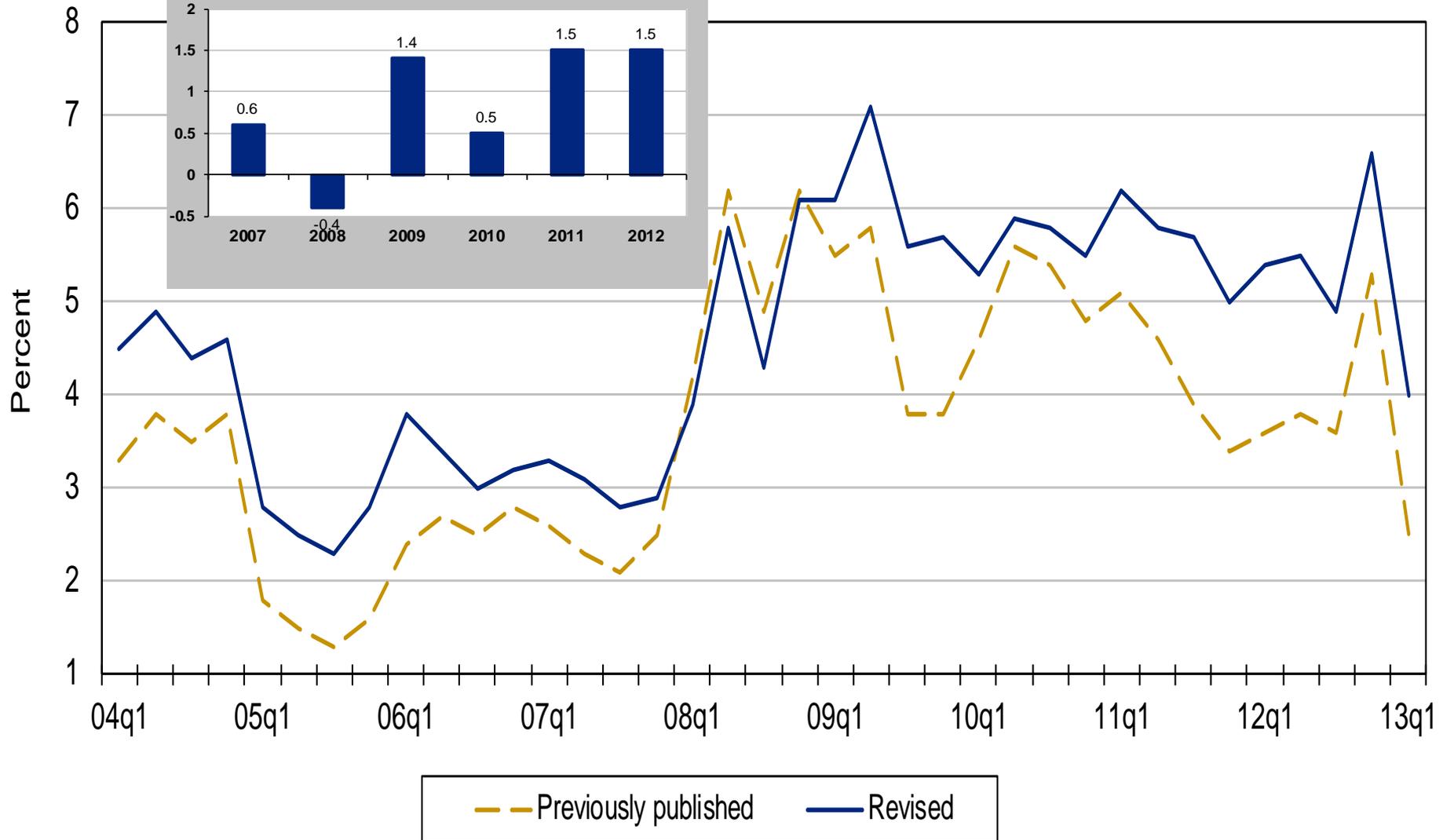
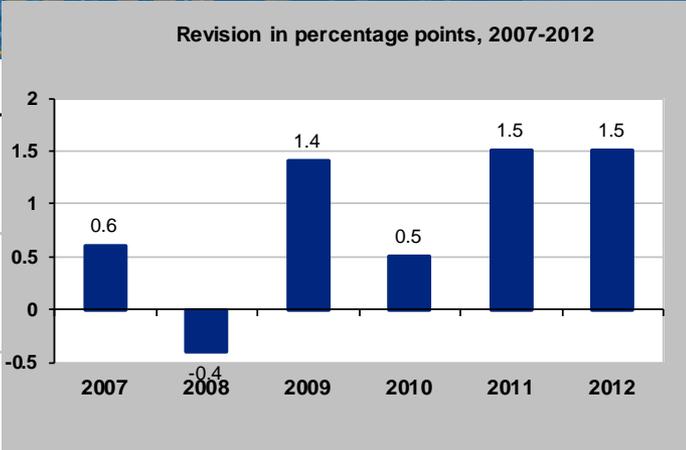
[Billions of chained (2009) dollars]



Statistical discrepancy as % of GDP



Personal saving as a percentage of DPI



Research and Development

- Expenditures on R&D have the characteristics of fixed assets and should be treated as investment:
 - Ownership rights, long-lasting, used in production
- Previous treatment:
 - Business R&D expenditures were classified as intermediate inputs
 - R&D expenditures of nonprofit institutions and governments were included in consumption expenditures
- New treatment:
 - R&D expenditures by businesses, NPISH, and governments are counted as fixed investment
 - Depreciation of R&D added to consumption of fixed capital (CFC)

Impact of Capitalizing R&D

- Total R&D investment for 2012: \$417.7 billion
 - 2.6% of (revised) GDP
 - Business R&D: \$248.7 billion
 - Formerly treated as intermediate spending
 - Government & nonprofit R&D: \$169.0 billion
 - Reclassified from consumption to investment

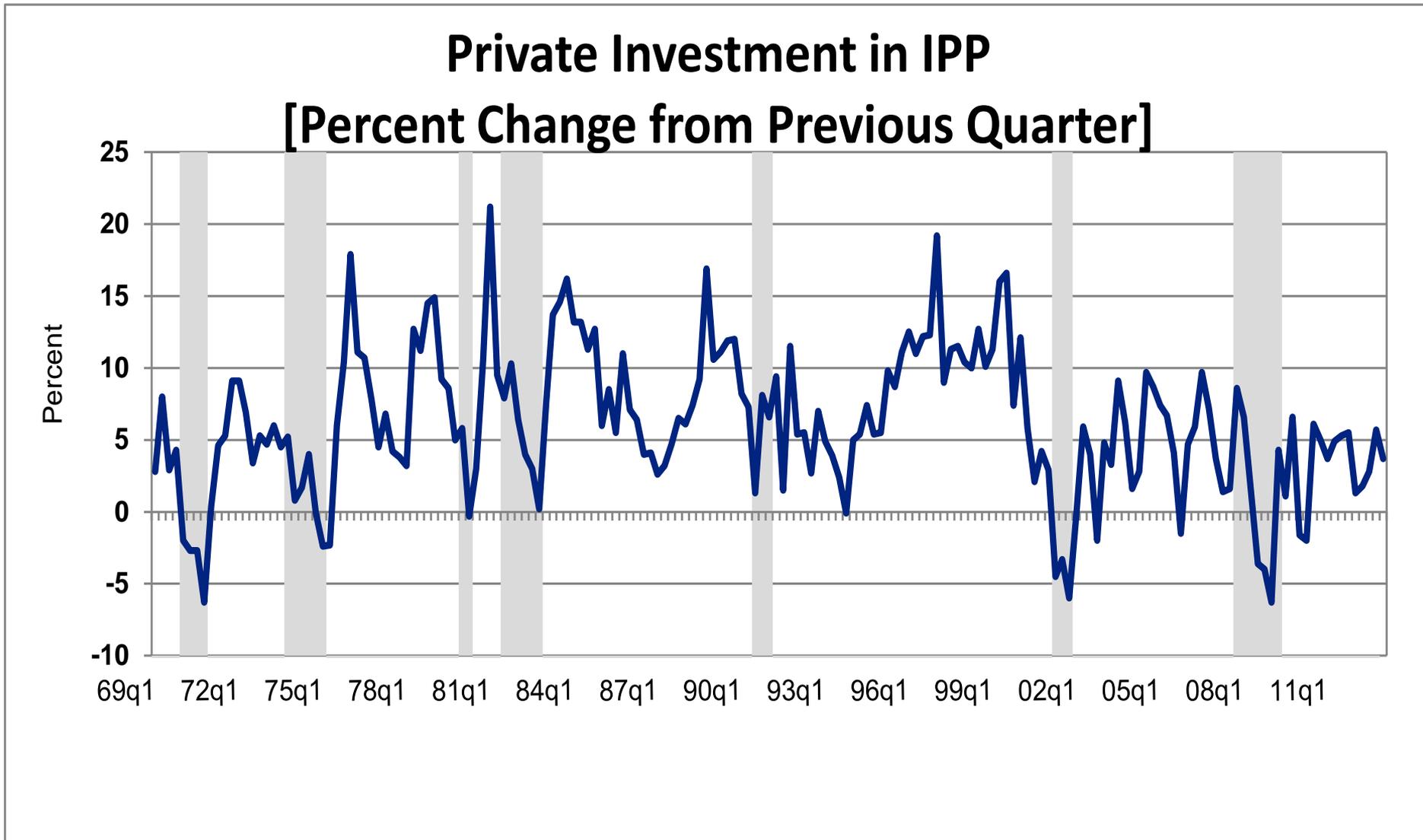
- Impact on GDP revision for 2012: \$396.7 billion
 - 2.5% of (previously published) GDP
 - Business investment added to GDP: \$248.7 billion
 - Government & nonprofit—add CFC for R&D: \$148.0 billion

Entertainment, Literary, and Artistic Originals

- Original films, sound recordings, manuscripts, etc., that can be used for the production and sale of copies
- Estimates for several types, including:
 - Motion pictures
 - Long-lasting television programs
 - Books
 - Music compositions and recordings
 - Miscellaneous artwork
- Treatment as fixed investment similar to R&D, except entirely in private sector

Real private intellectual property products

[Percent change from preceding period, SAAR]

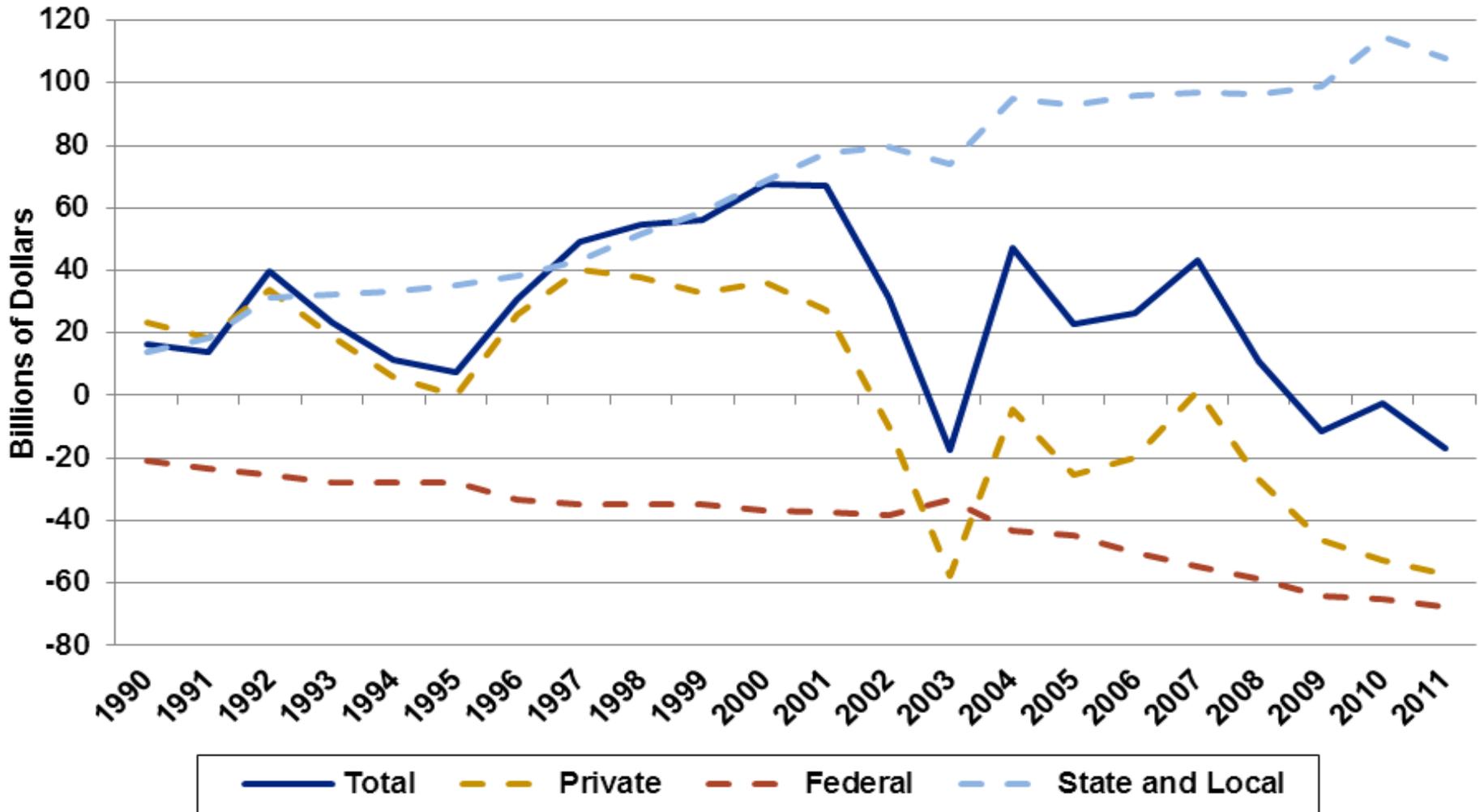


Accrual-Based Measures of Pensions

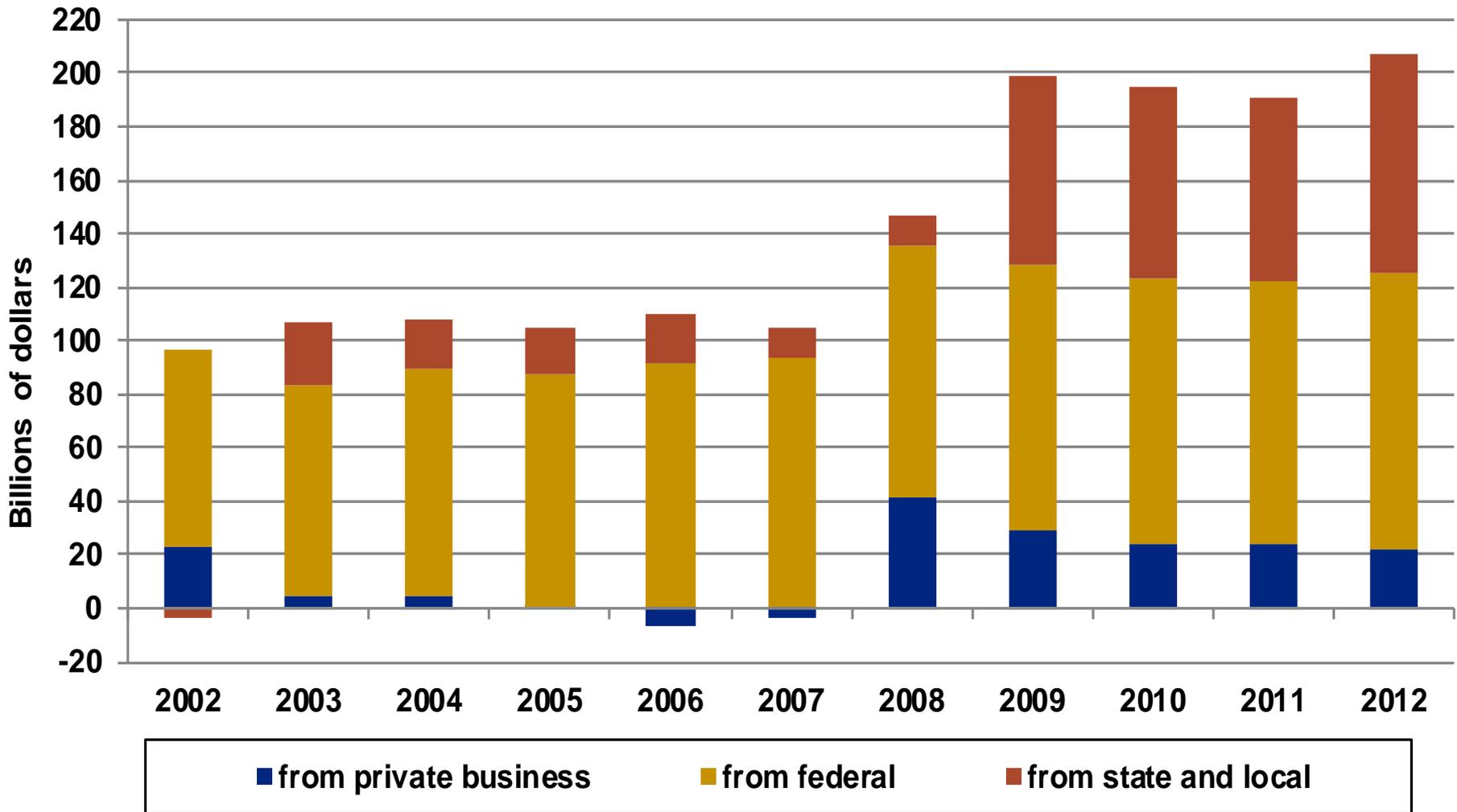
- New measures for defined-benefit (DB) plans
- Accrual-based accounting
 - Matches income earned with related production
 - Recognizes employer liabilities for promised pension benefits
 - Replaces cash-based accounting
- Compensation of employees
 - Deferred compensation
 - Benefits accrued on services rendered in current period
- Interest
 - Benefits accrued on services rendered in past periods
 - Includes interest on unfunded actuarial liabilities

Composition of revisions to compensation

[Revision in level]

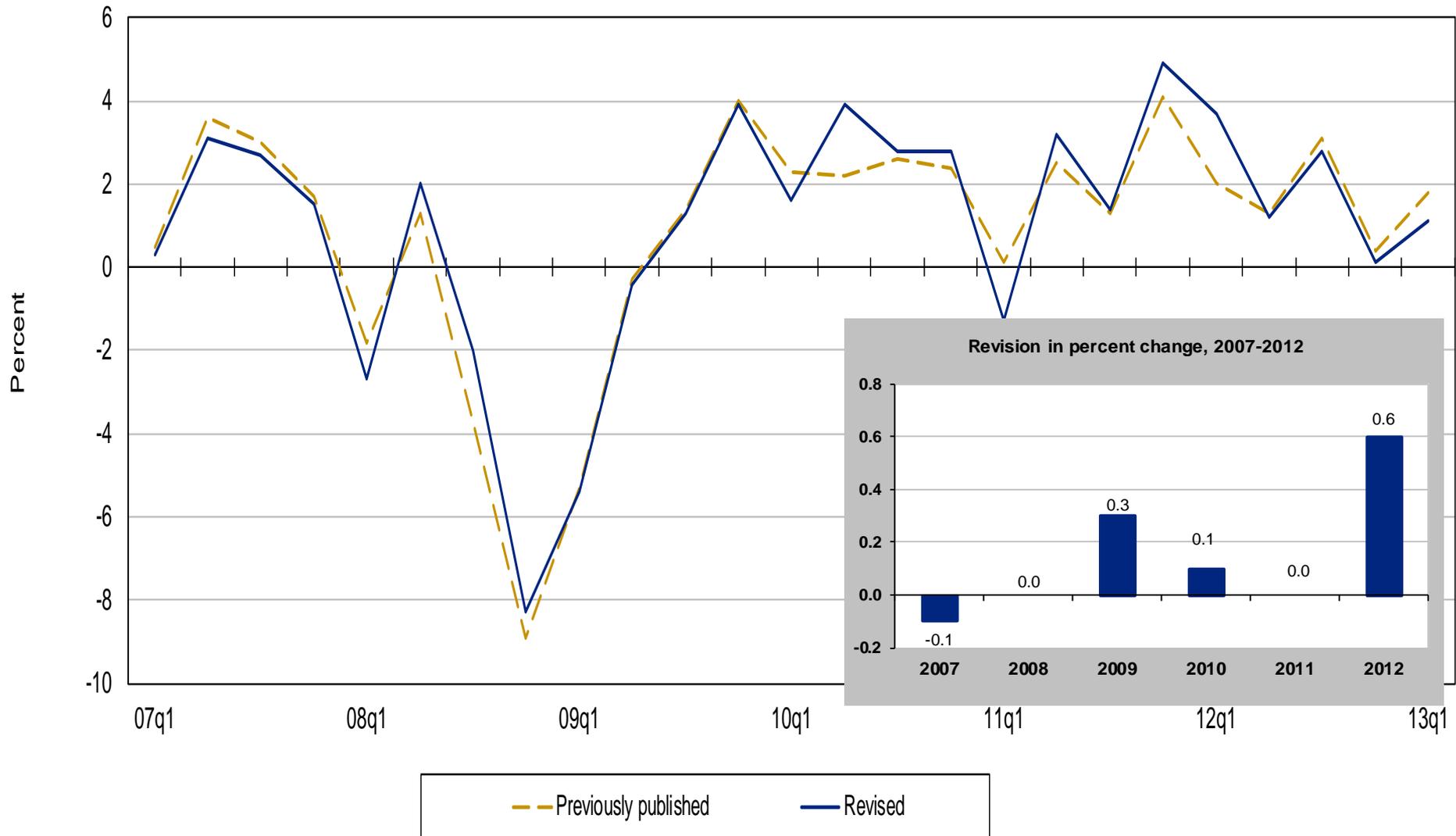


Accrued interest for unfunded actuarial liabilities

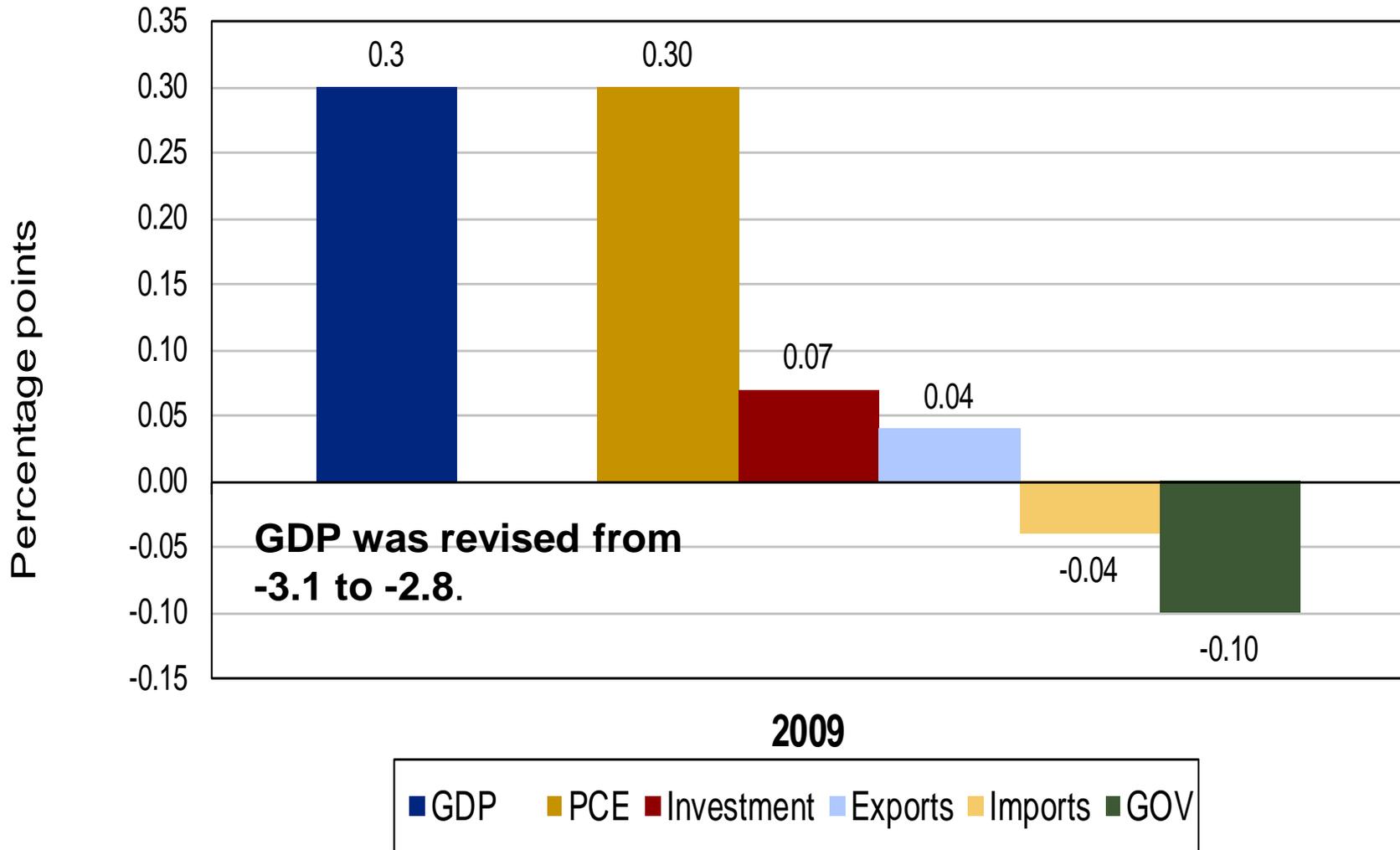


Real gross domestic product

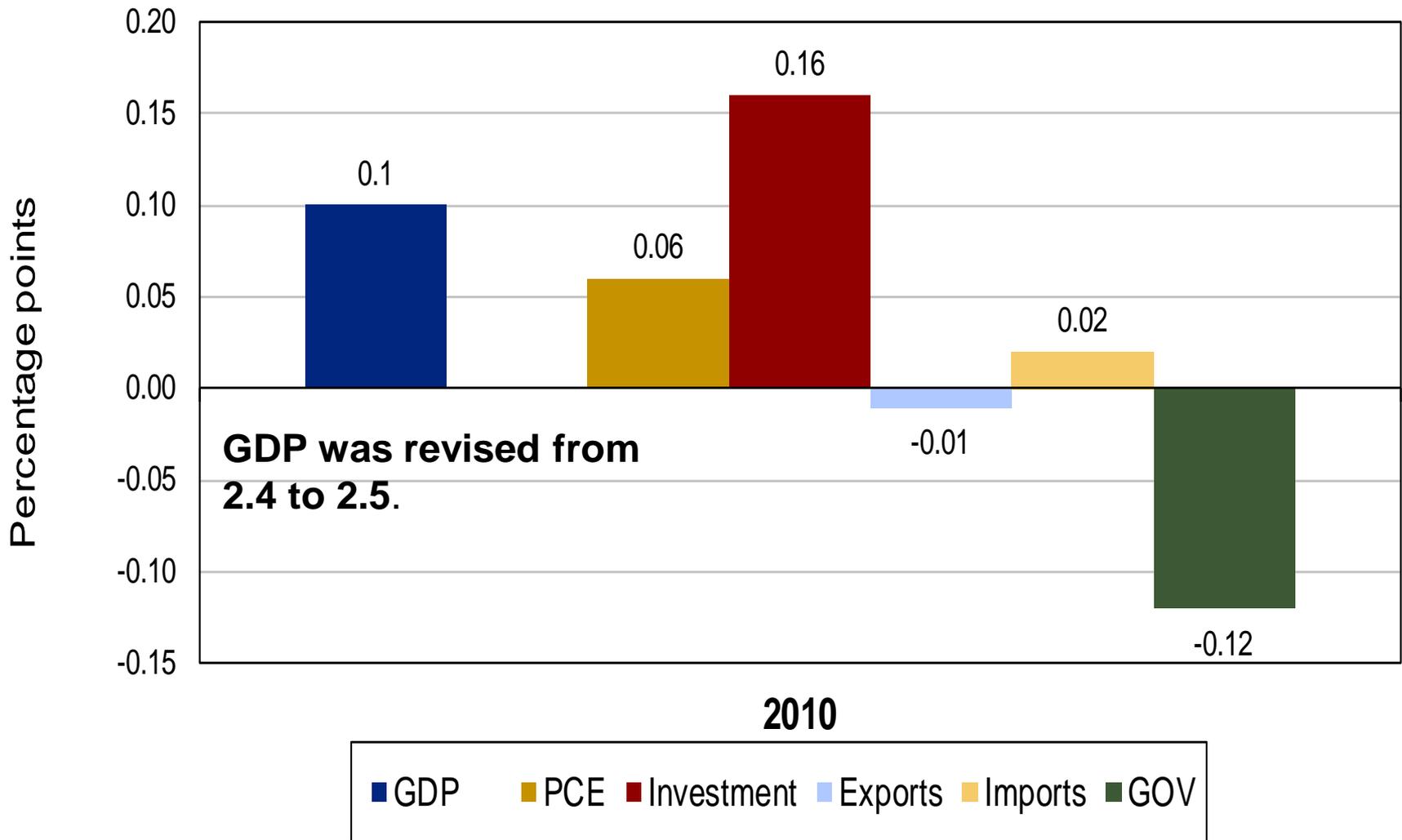
[Percent change from preceding period, SAAR]



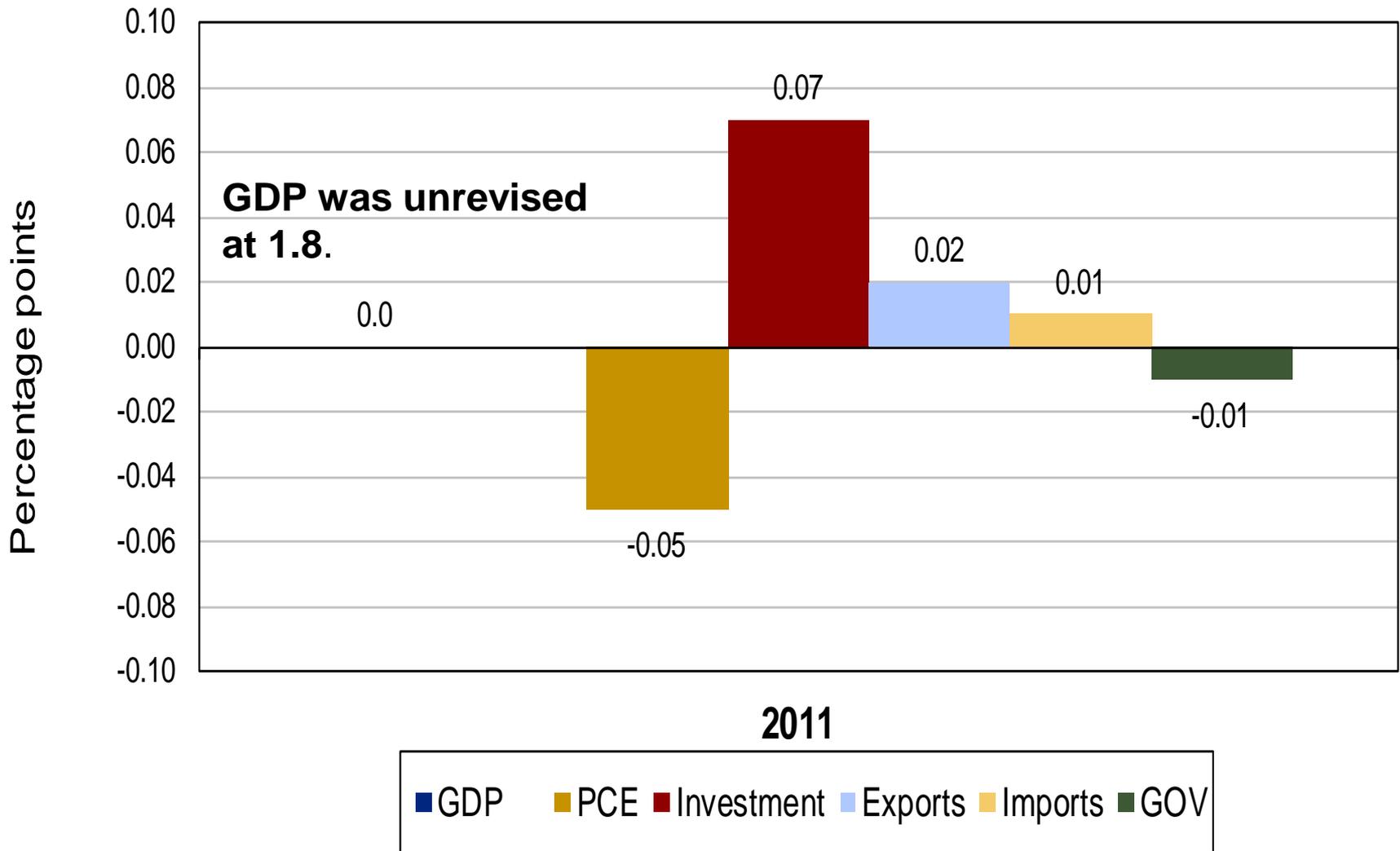
Revisions to percent change in real GDP and to contributions to percent change - 2009



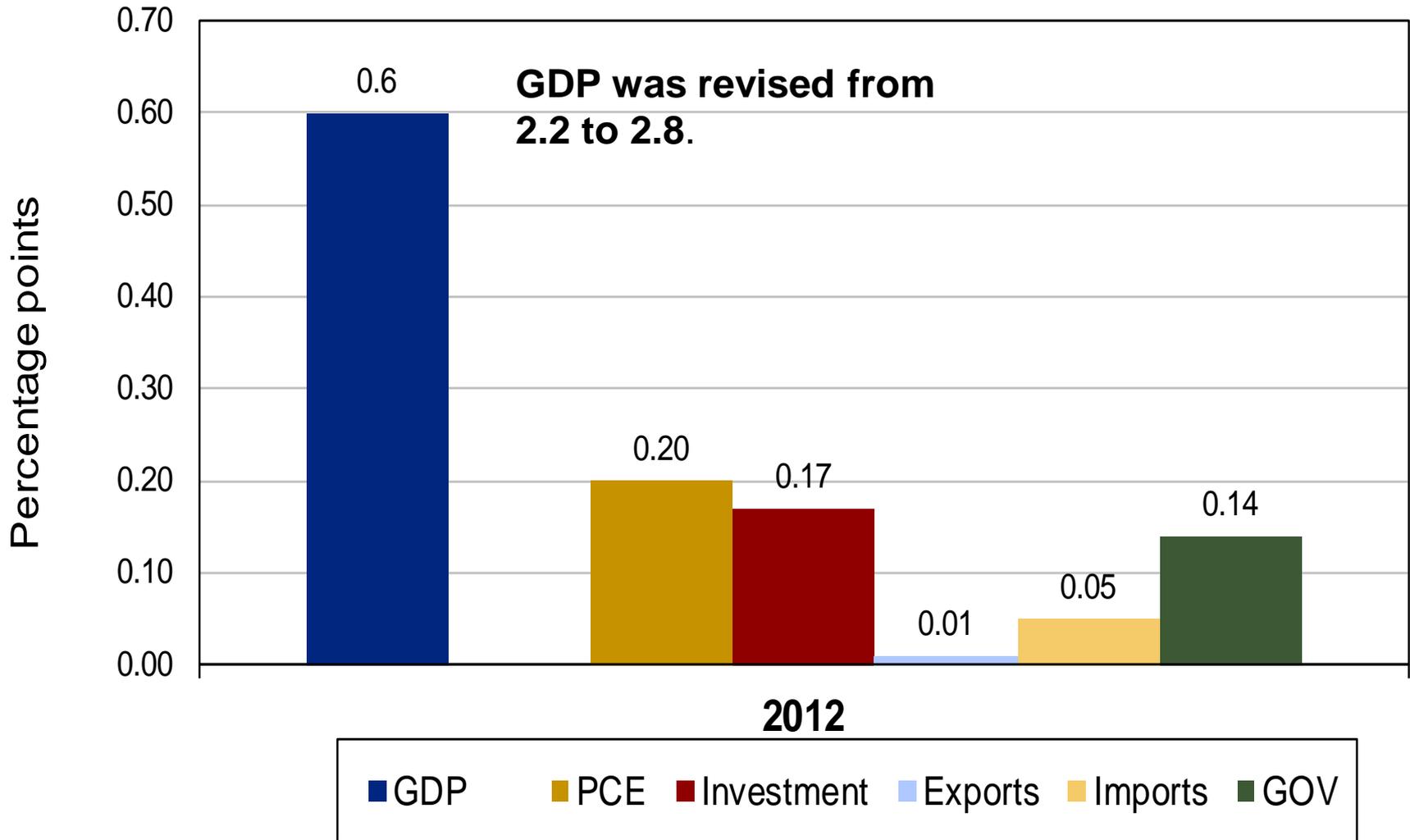
Revisions to percent change in real GDP and to contributions to percent change - 2010



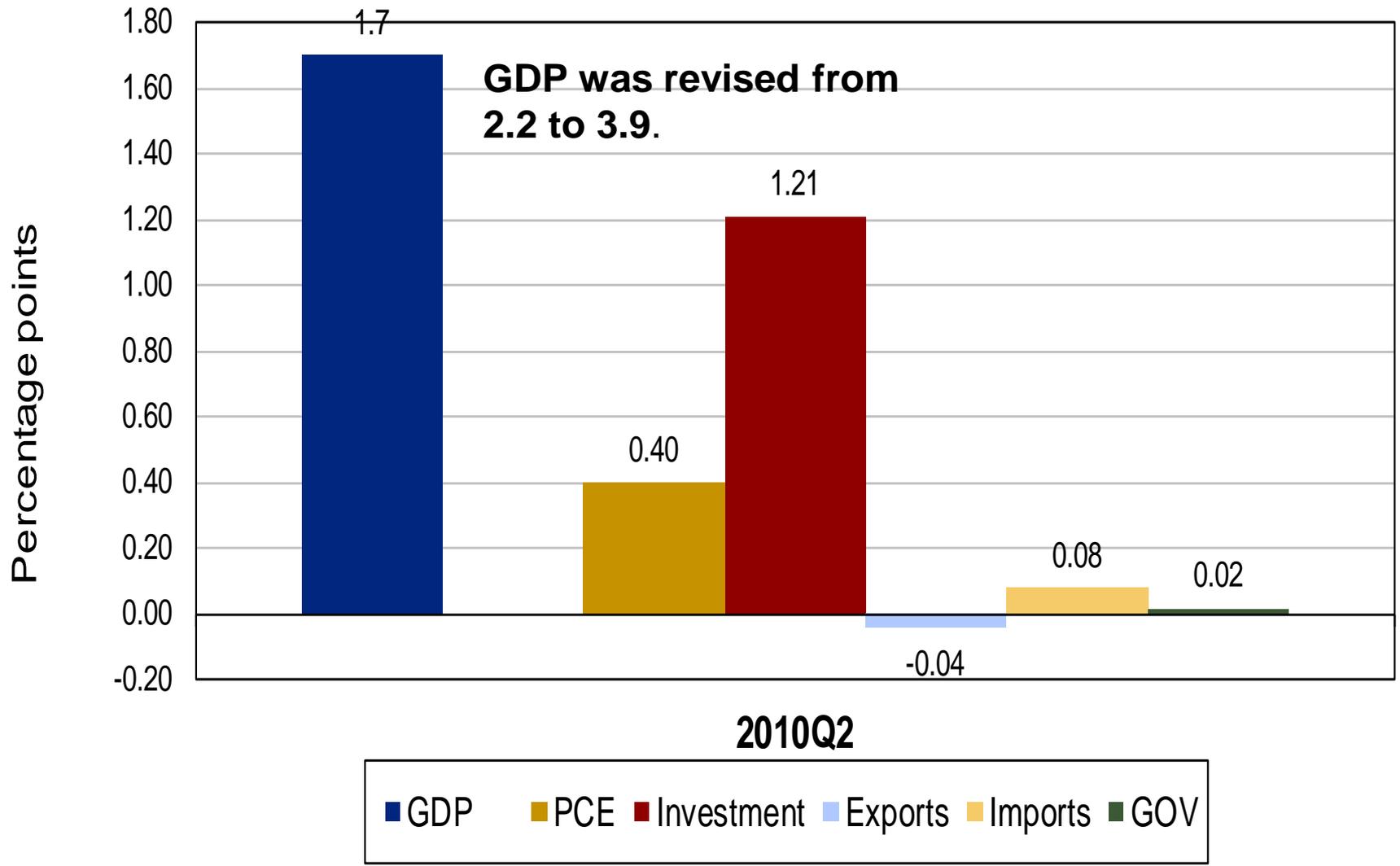
Revisions to percent change in real GDP and to contributions to percent change - 2011



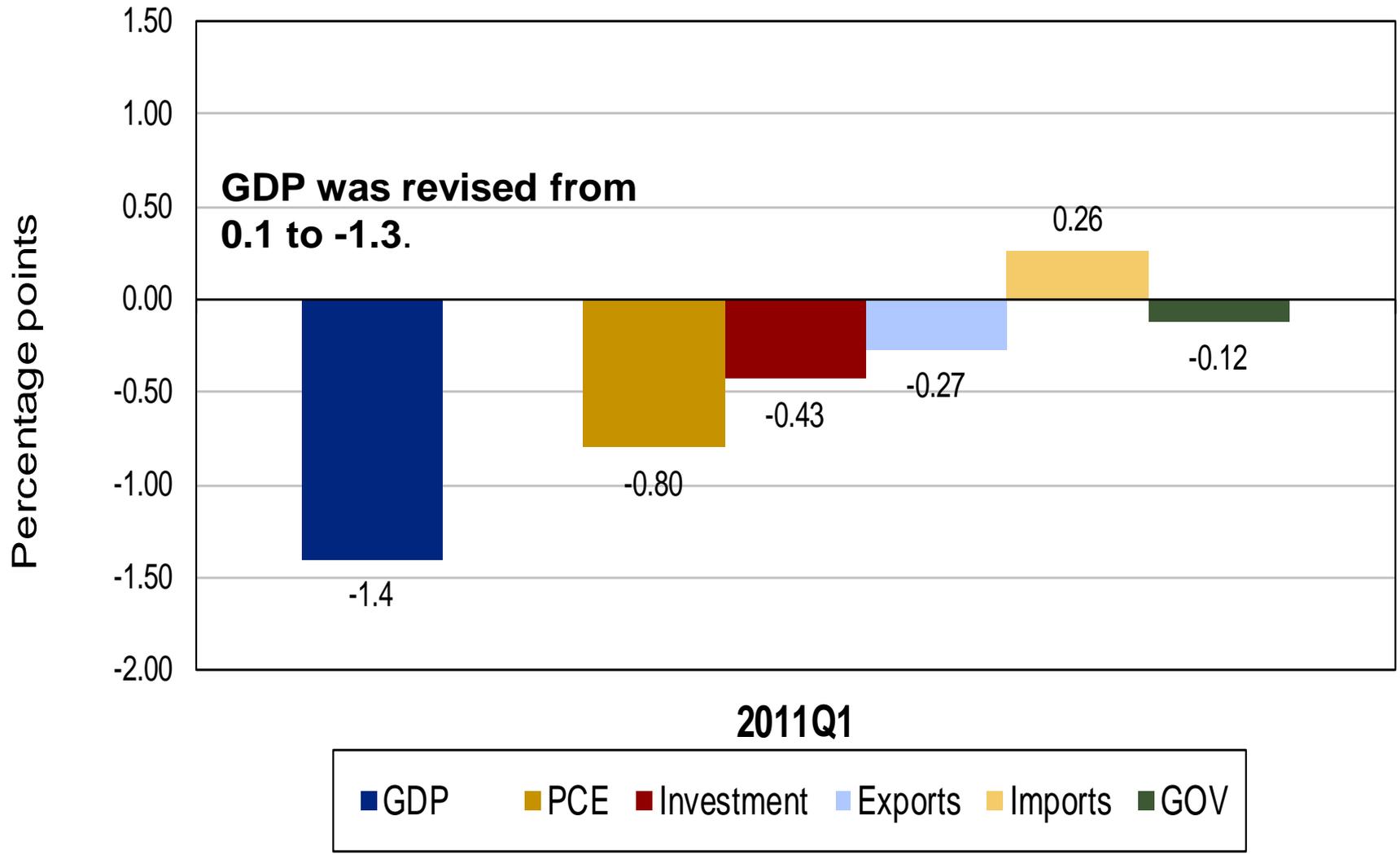
Revisions to percent change in real GDP and to contributions to percent change - 2012



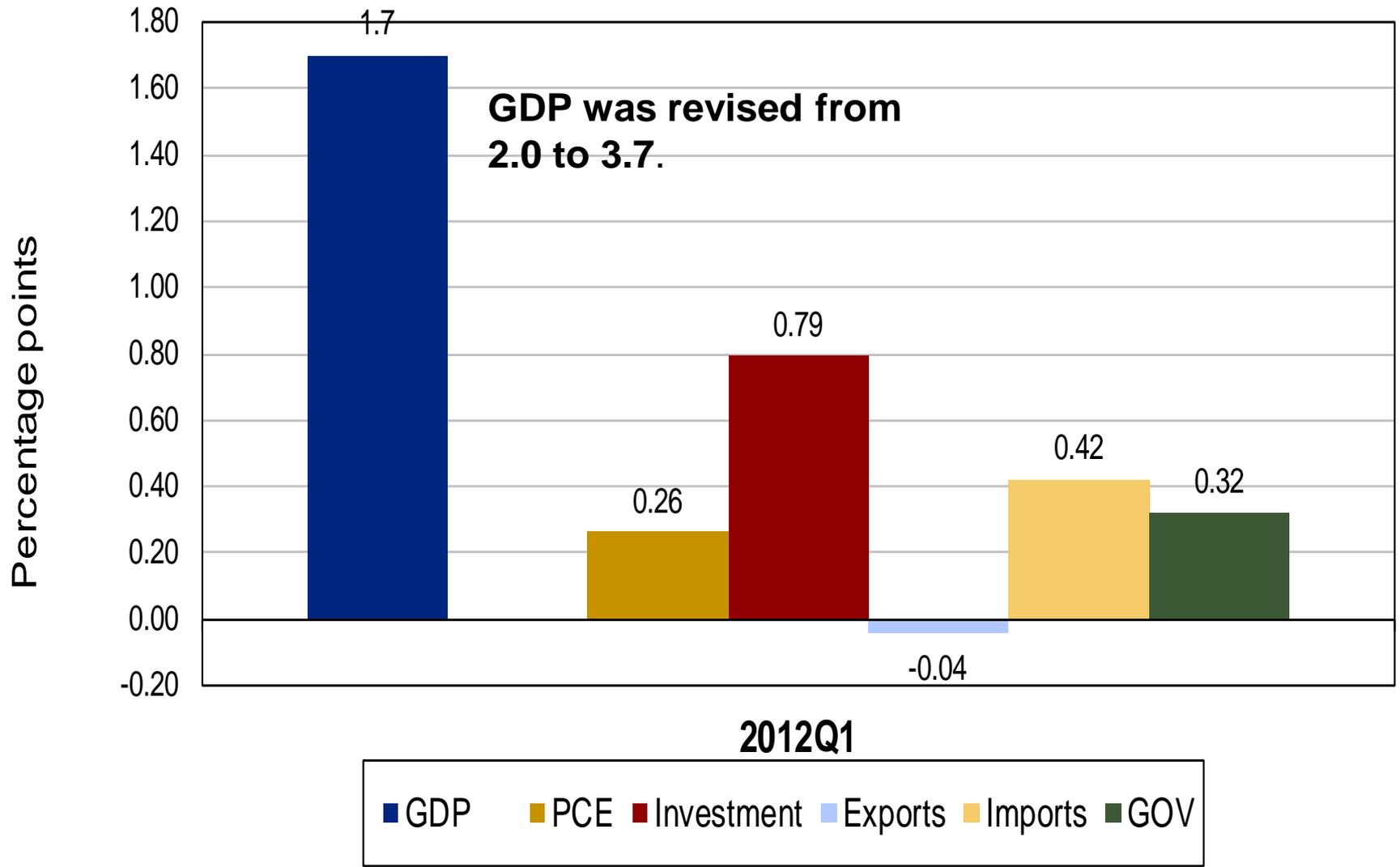
Revisions to percent change in real GDP and to contributions to percent change – 2010Q2



Revisions to percent change in real GDP and to contributions to percent change – 2011Q1

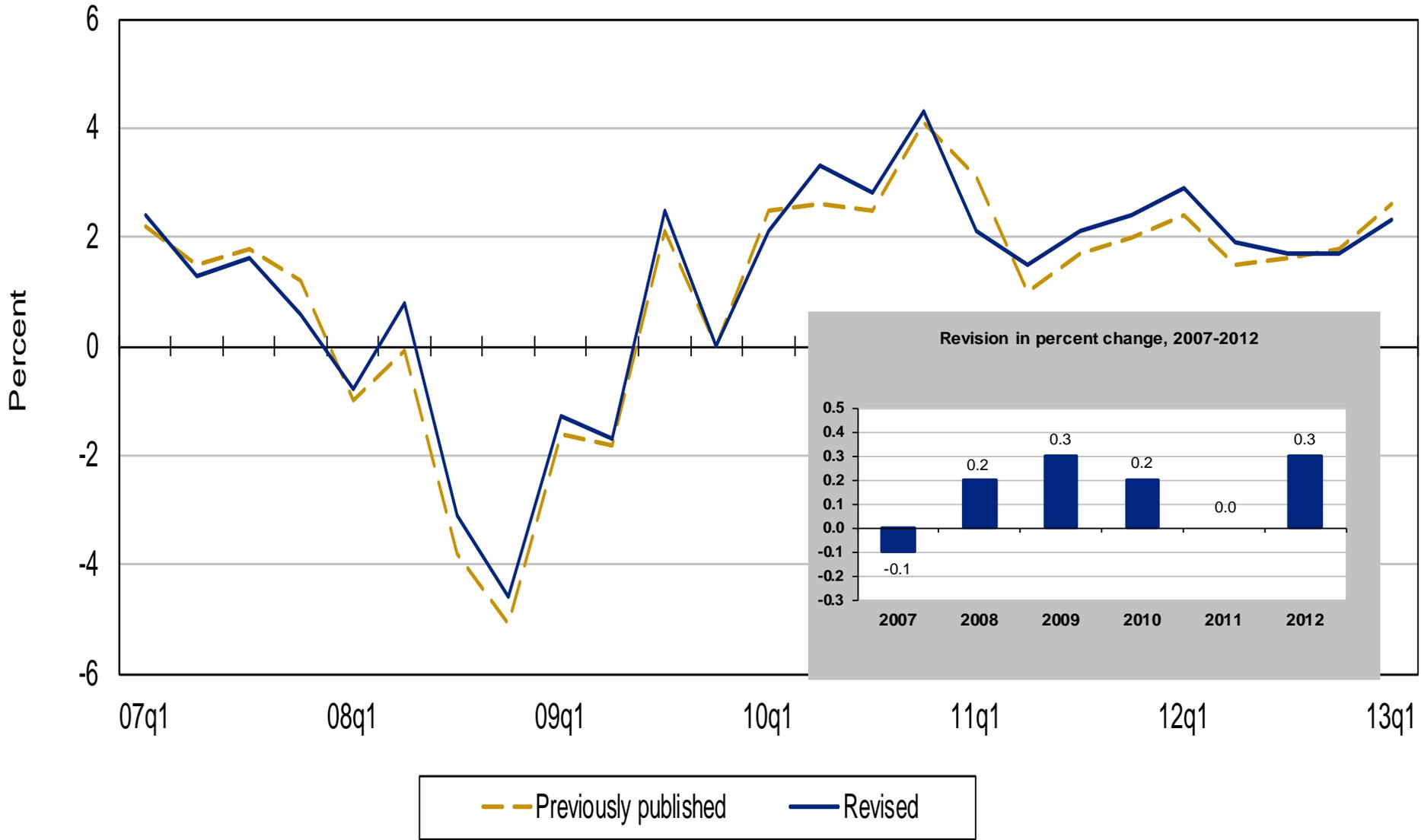


Revisions to percent change in real GDP and to contributions to percent change – 2012Q1



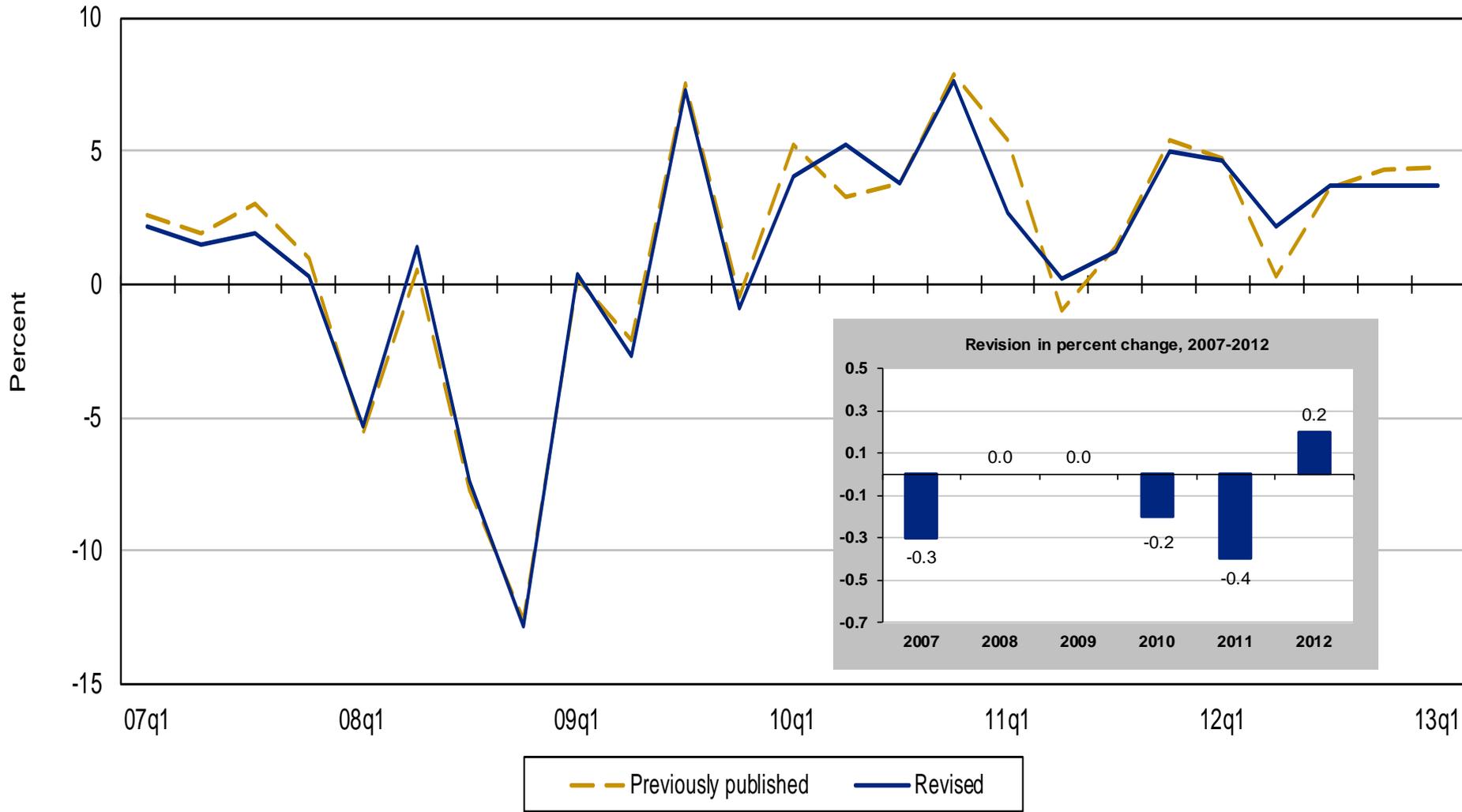
Real personal consumption expenditures

[Percent change from preceding period, SAAR]



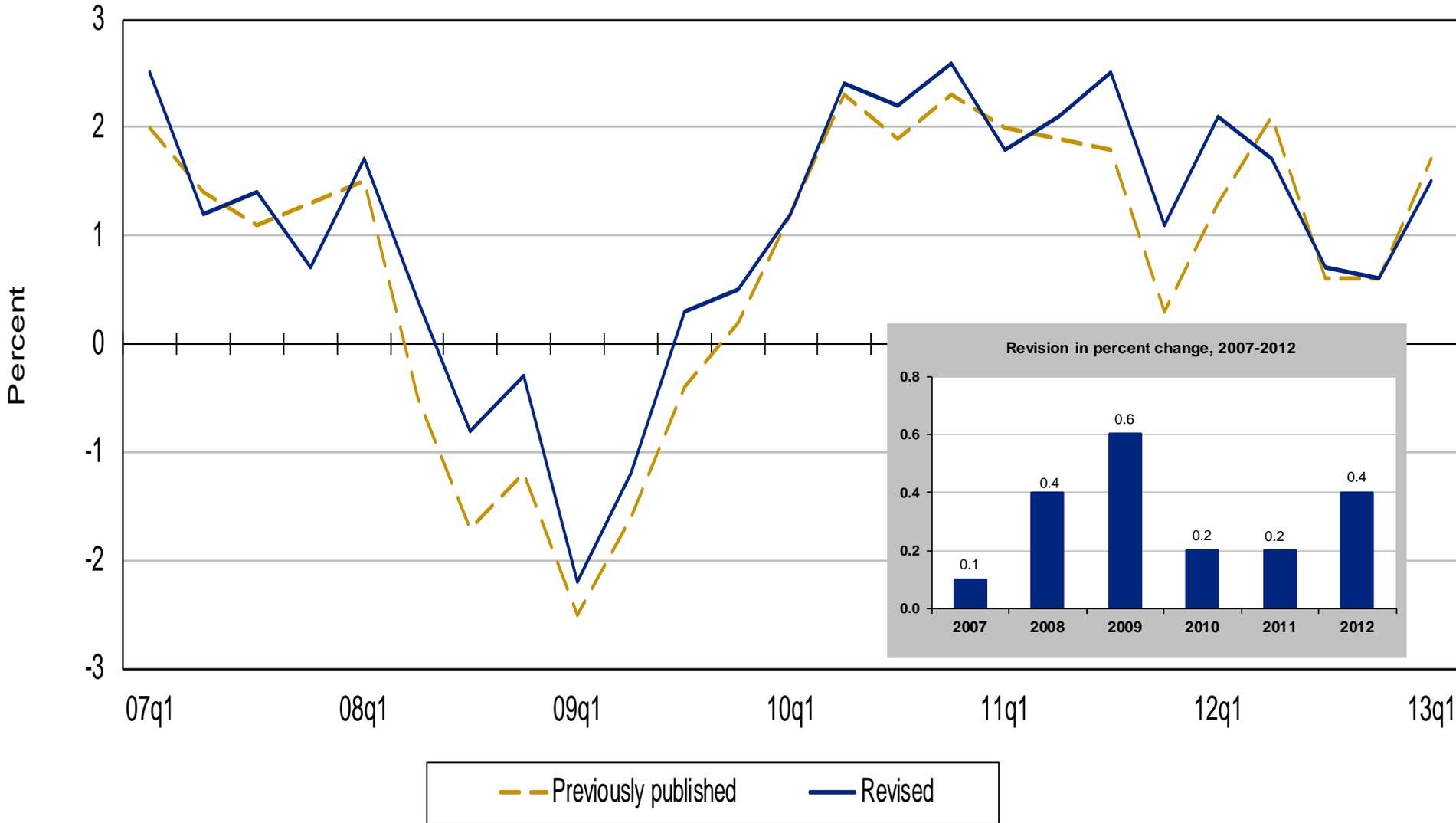
Real PCE for goods

[Percent change from preceding period, SAAR]



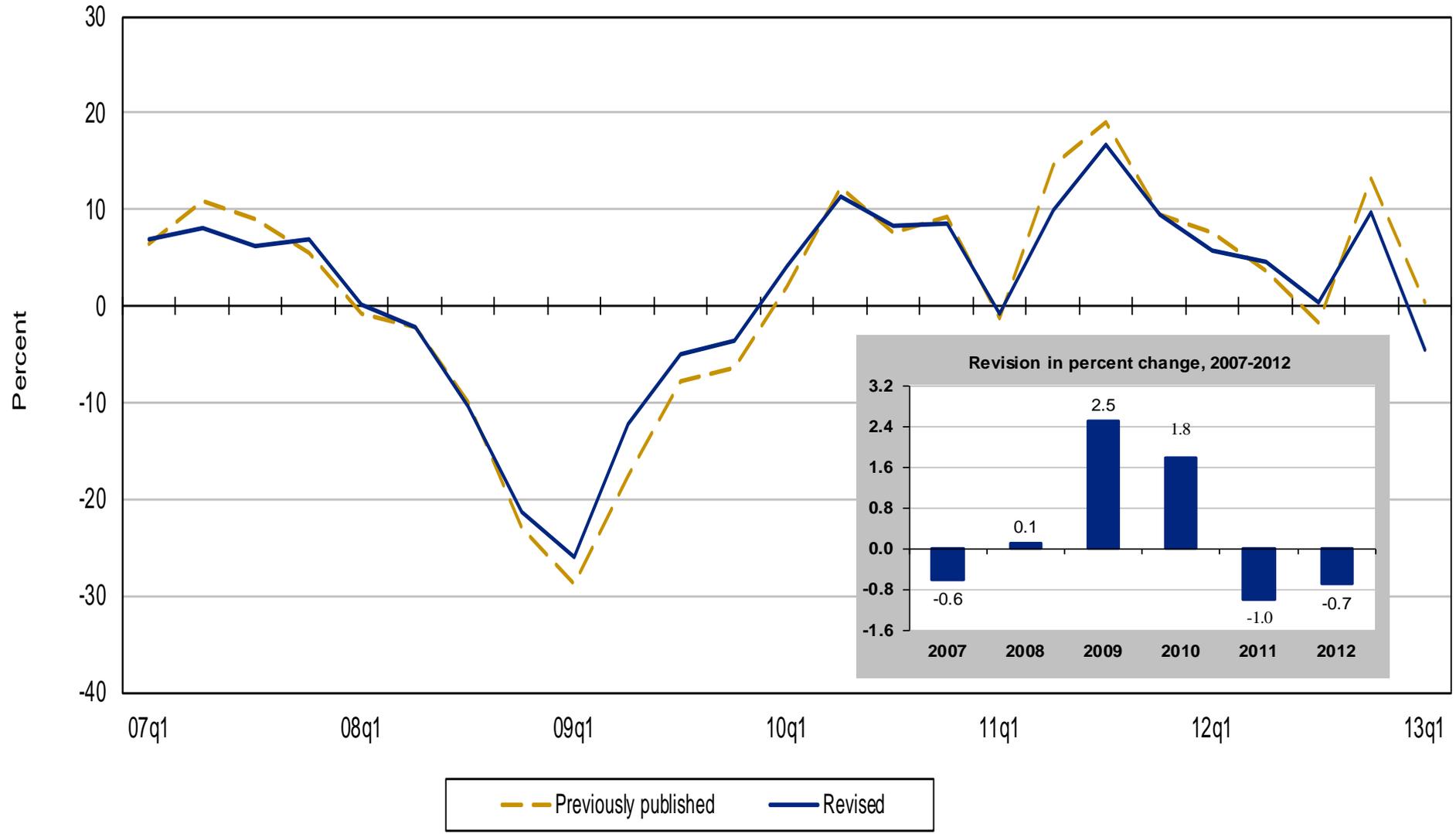
Real PCE for services

[Percent change from preceding period, SAAR]



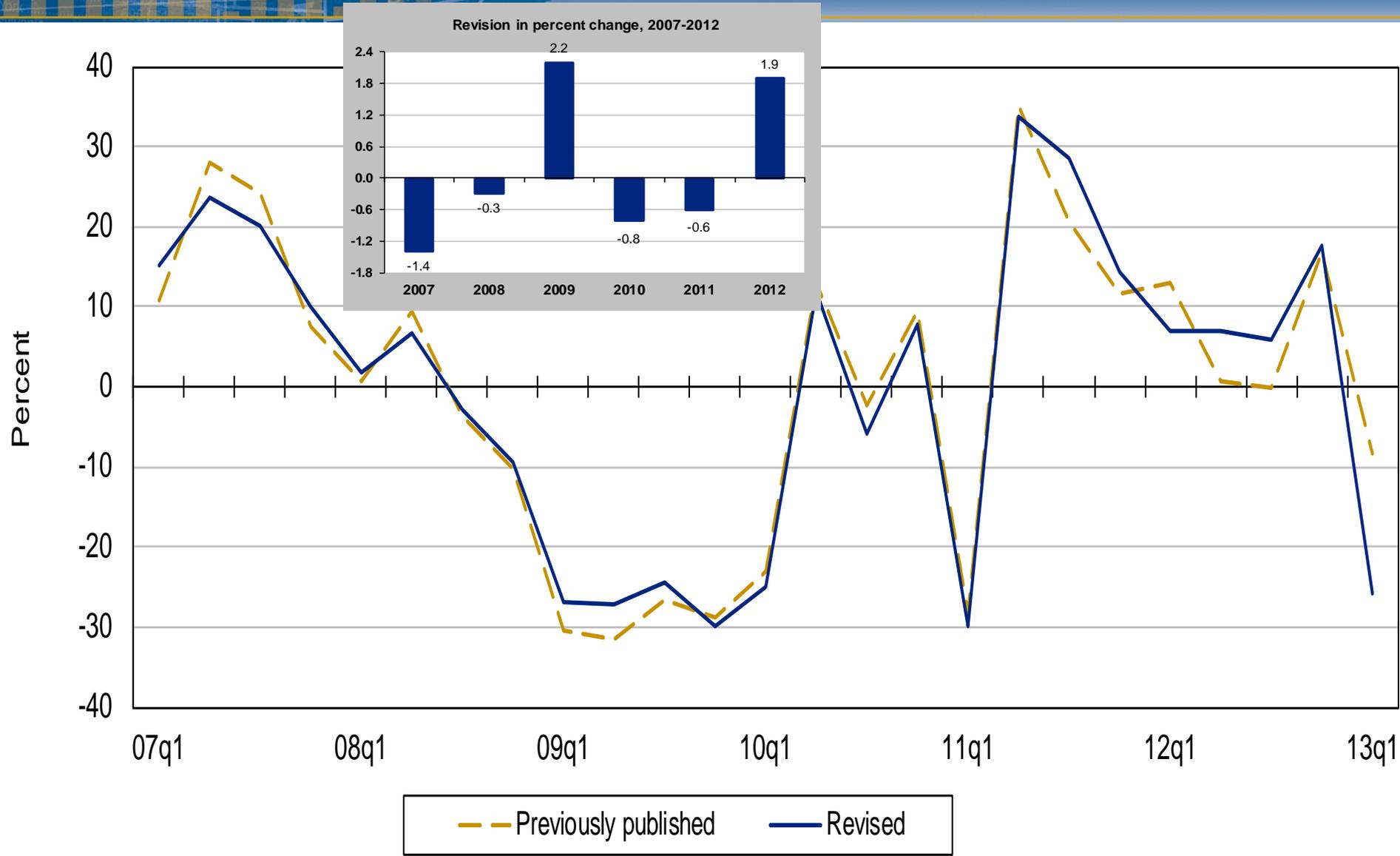
Real nonresidential fixed investment

[Percent change from preceding period, SAAR]



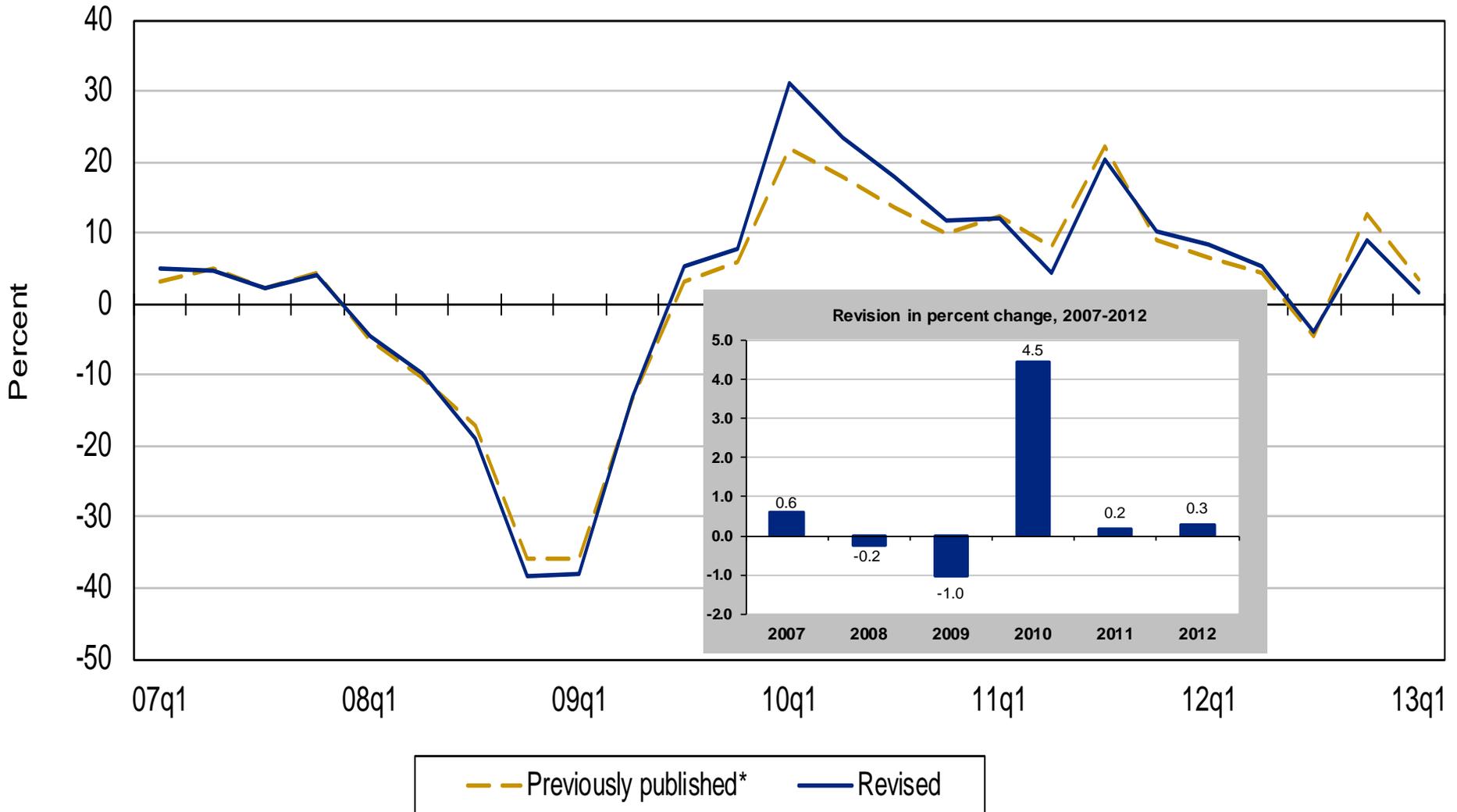
Real nonresidential structures

[Percent change from preceding period, SAAR]



Real nonresidential equipment

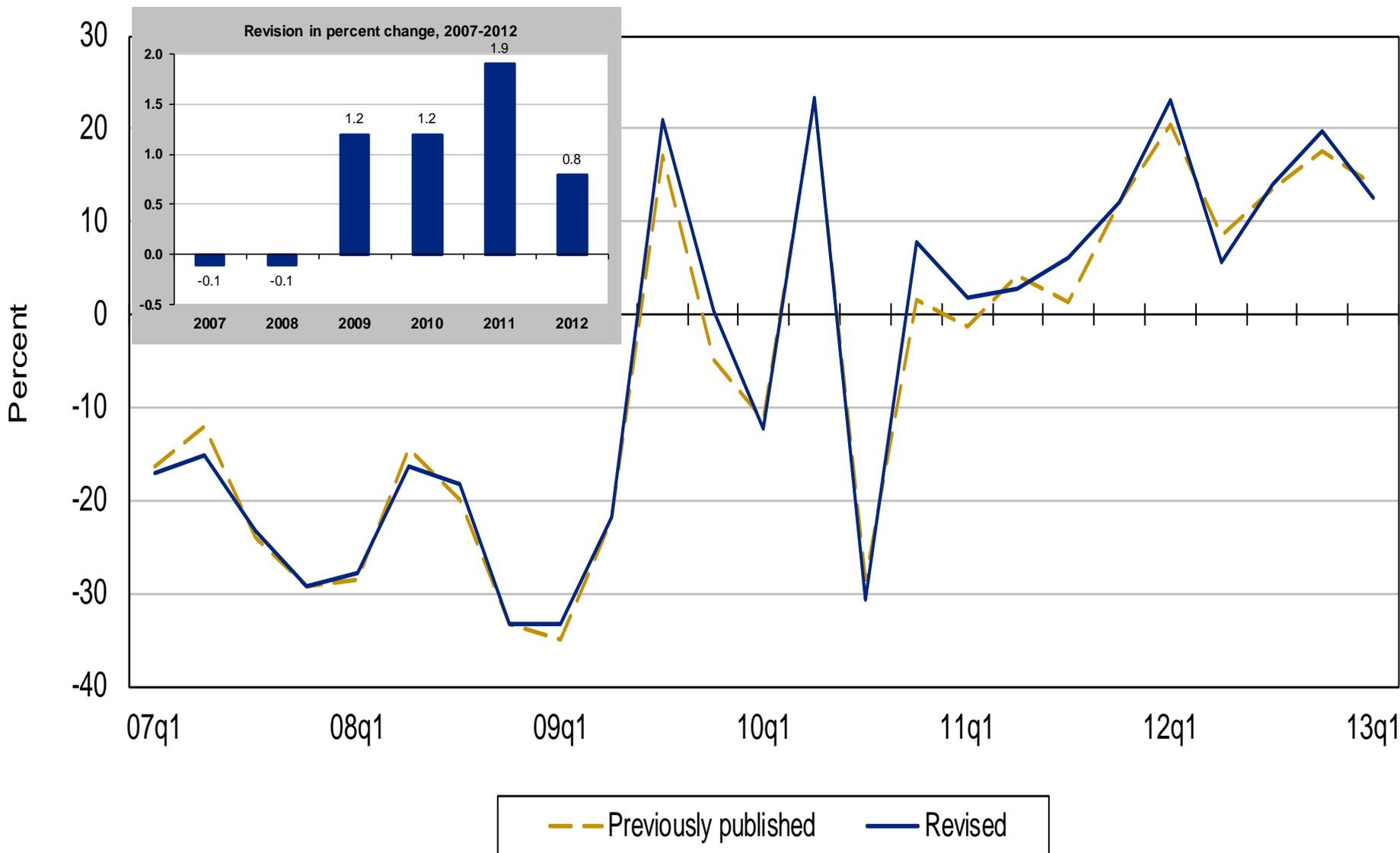
[Percent change from preceding period, SAAR]



*Values are unpublished calculations.

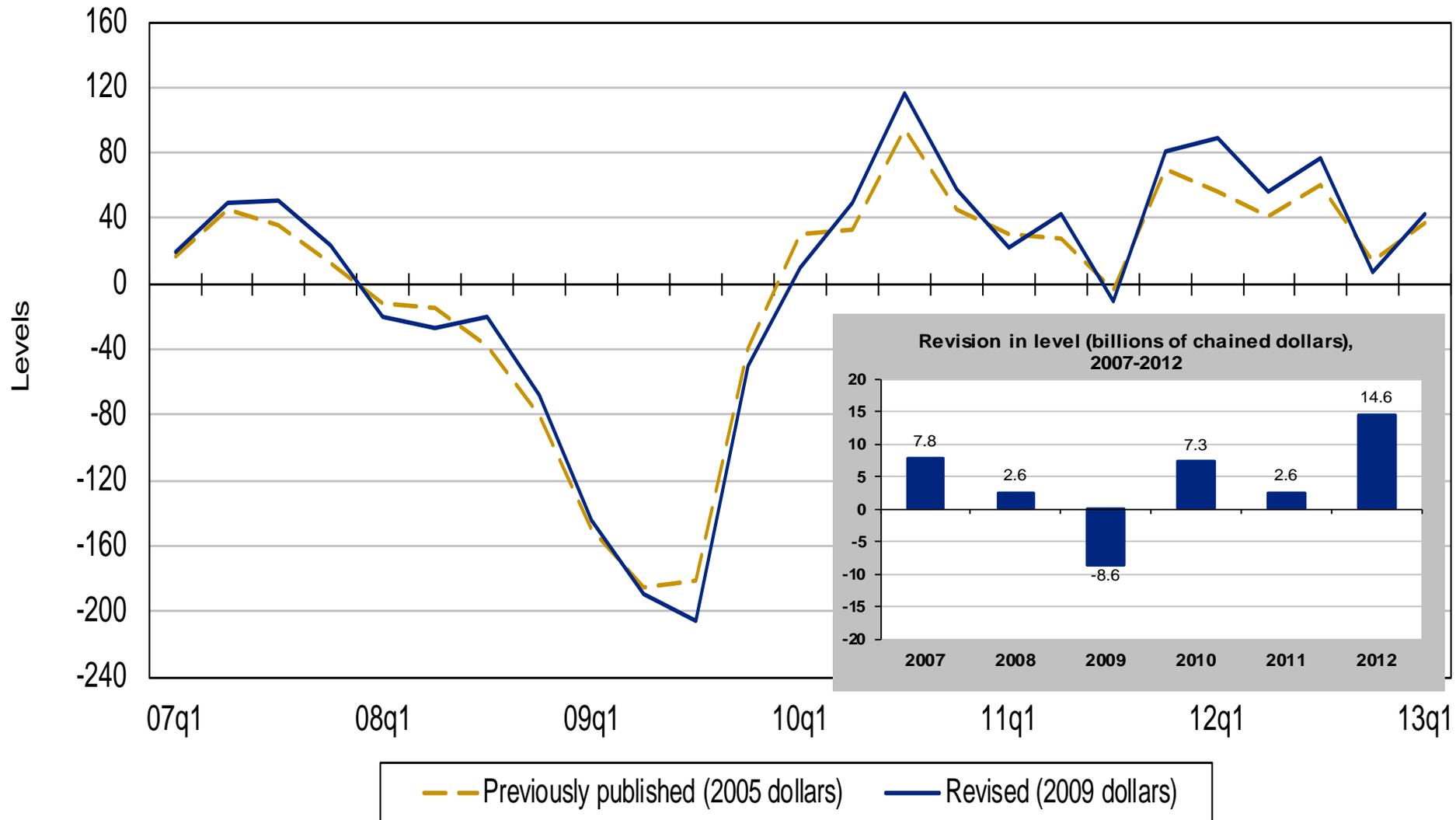
Real residential fixed investment

[Percent change from preceding period, SAAR]



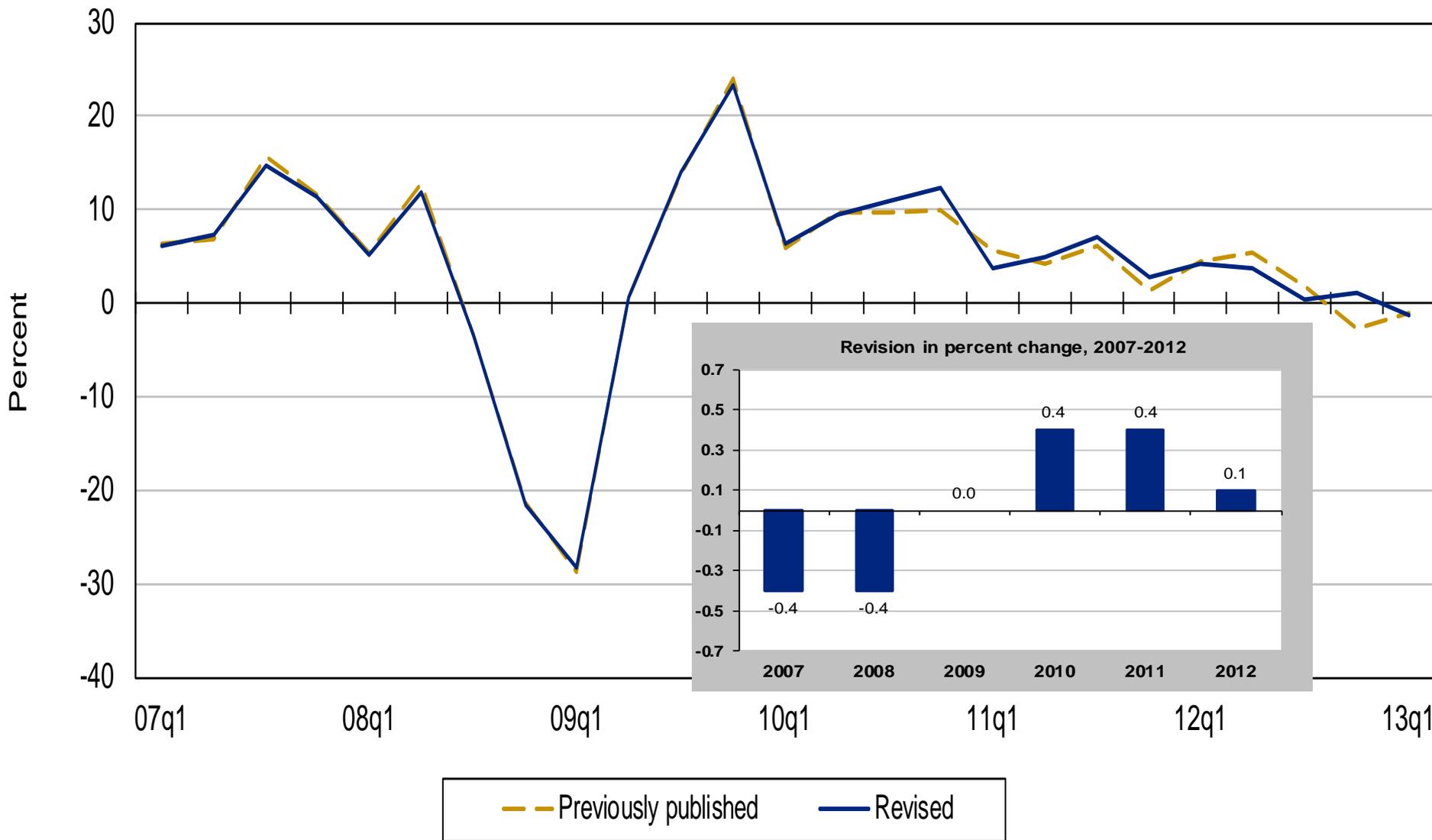
Change in real private inventories

[Billions of chained dollars, SAAR]



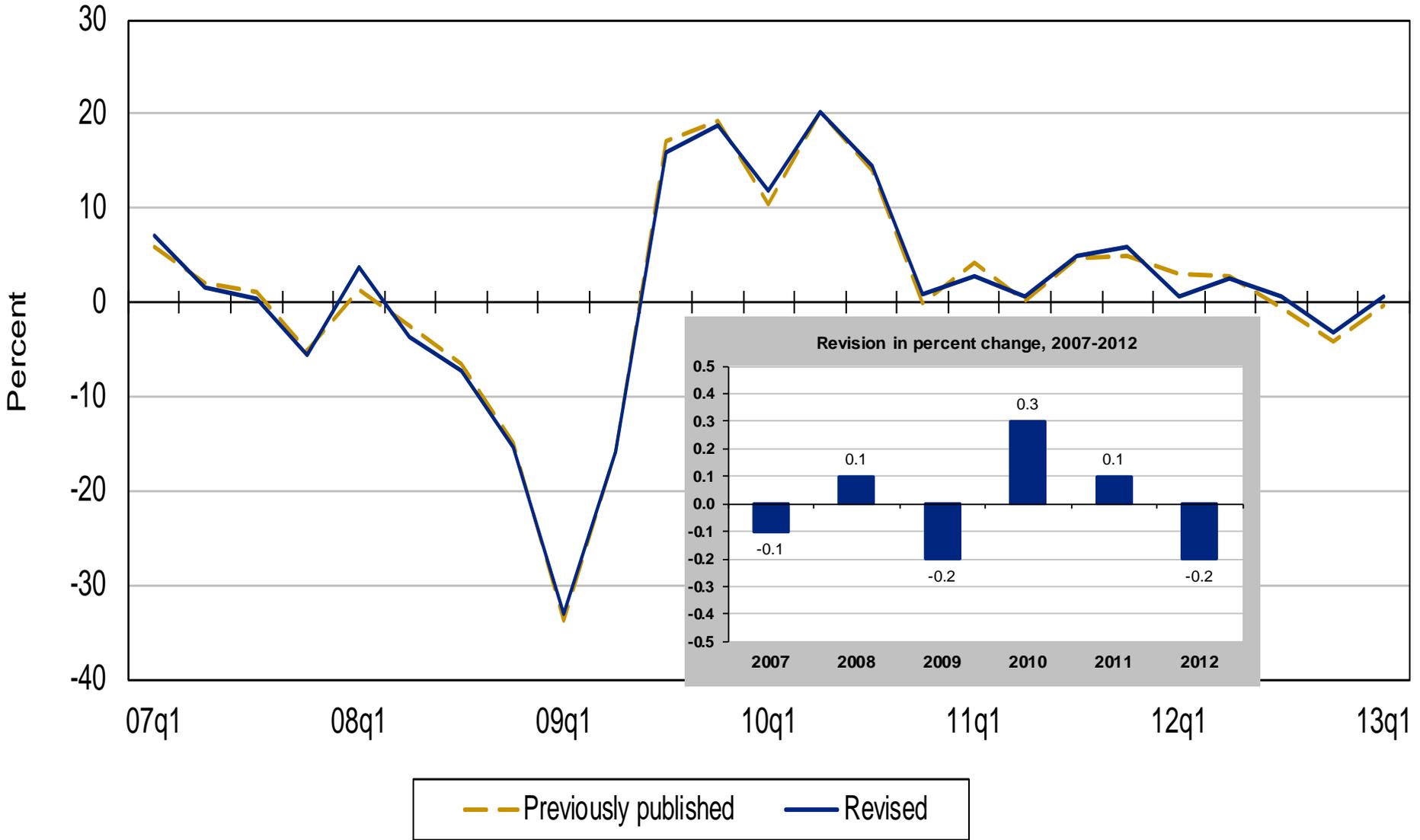
Real exports of goods and services

[Percent change from preceding period, SAAR]



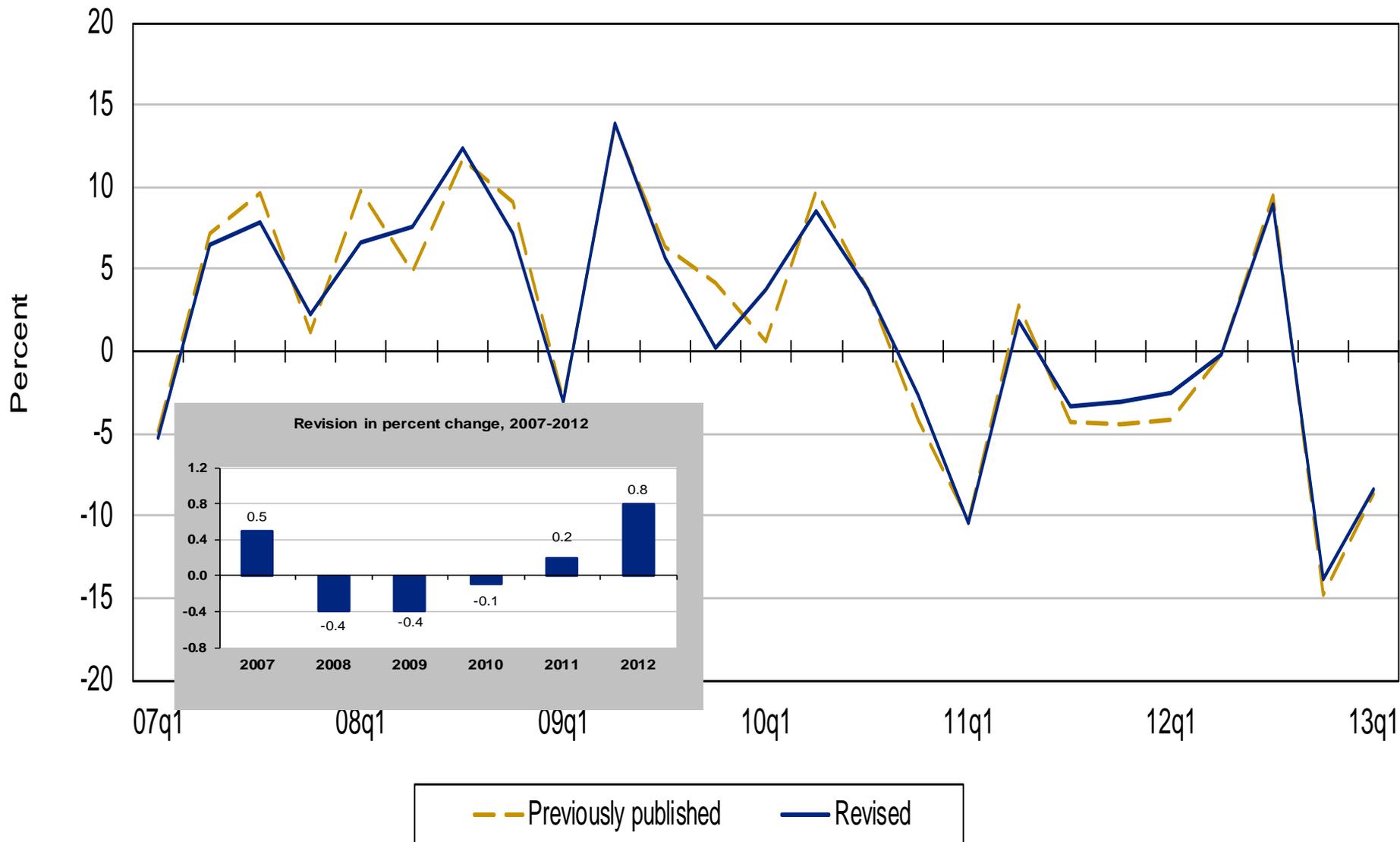
Real imports of goods and services

[Percent change from preceding period, SAAR]



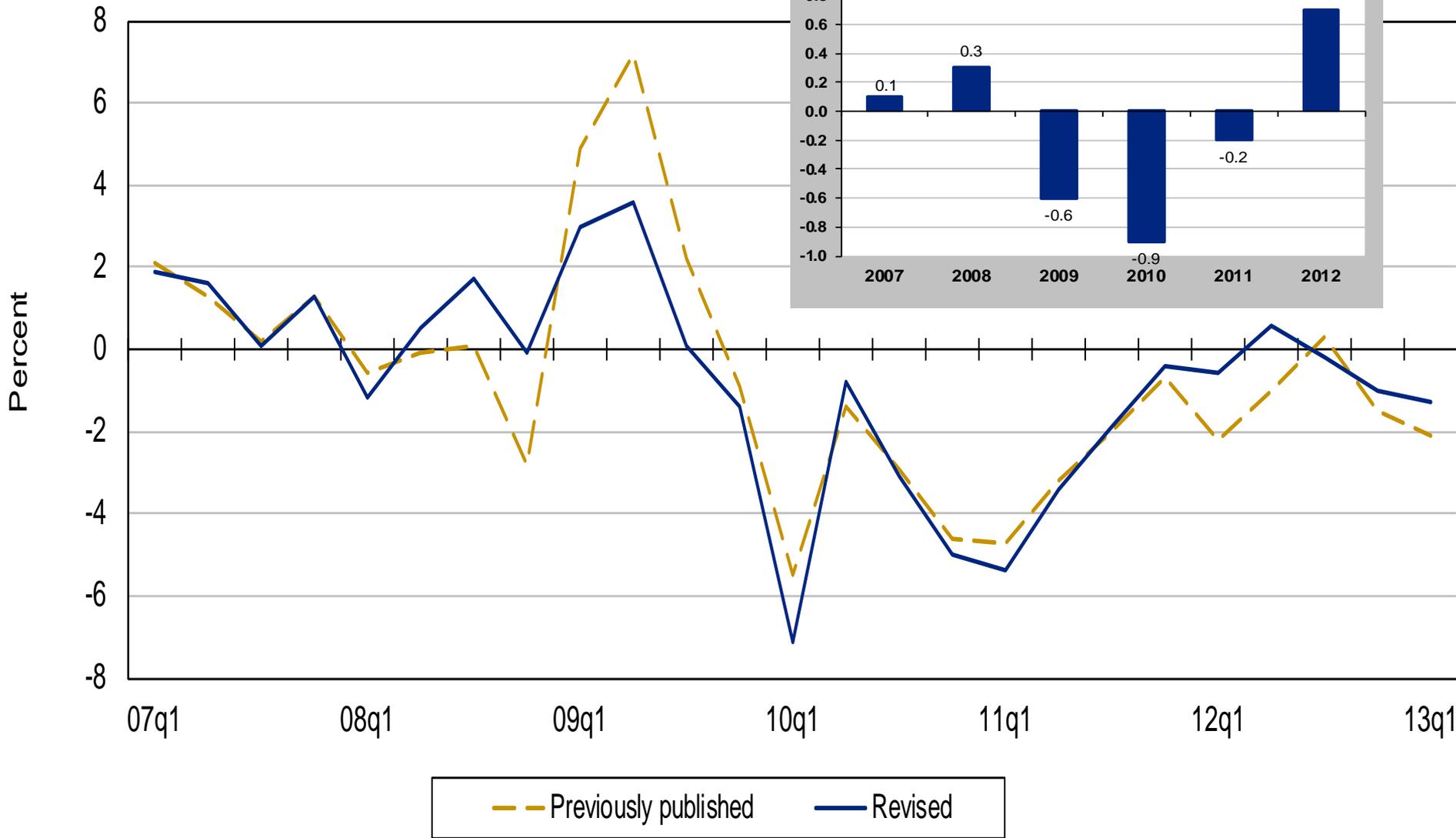
Real federal government spending

[Percent change from preceding period, SAAR]



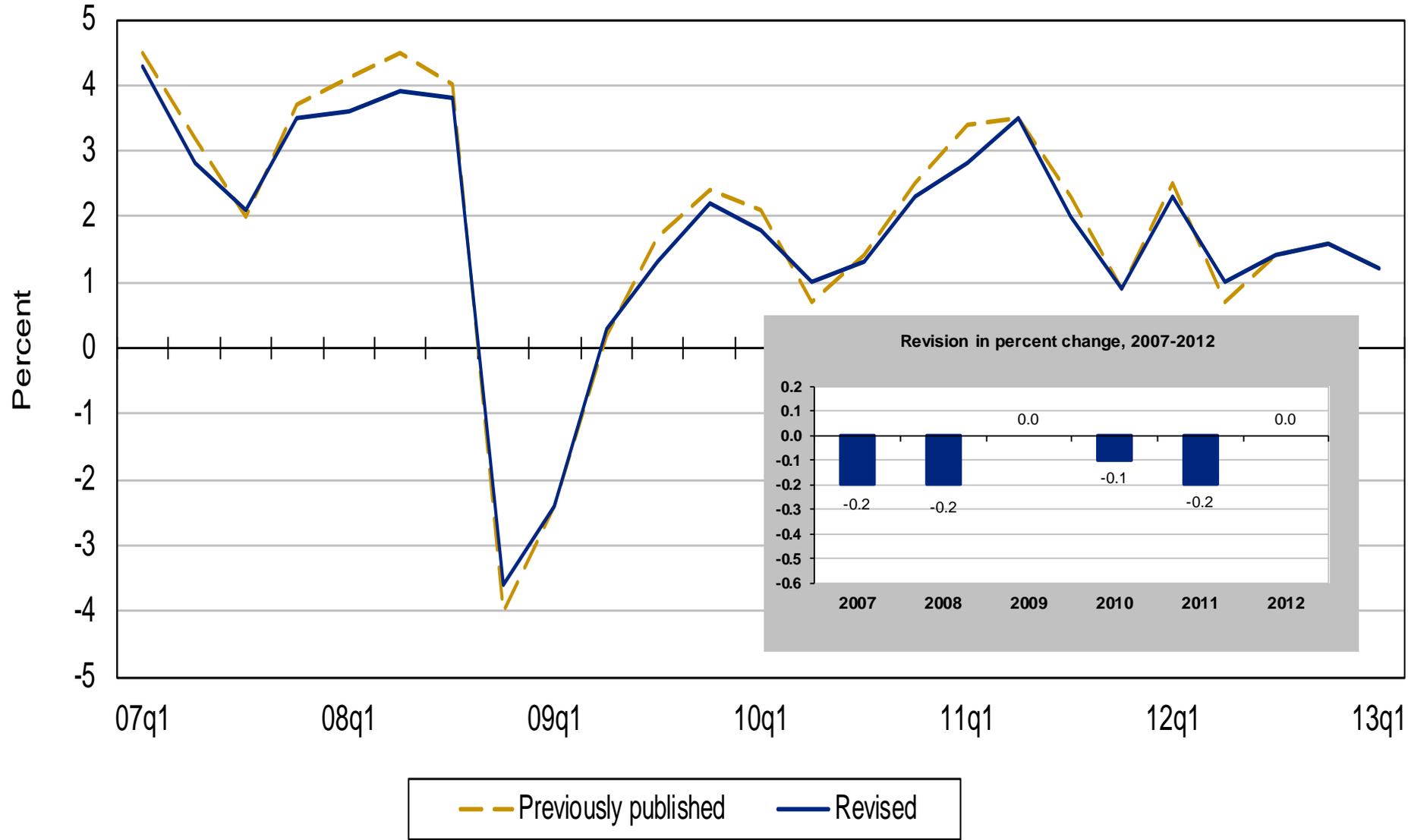
Real state and local government spending

[Percent change from preceding period, SAAR]



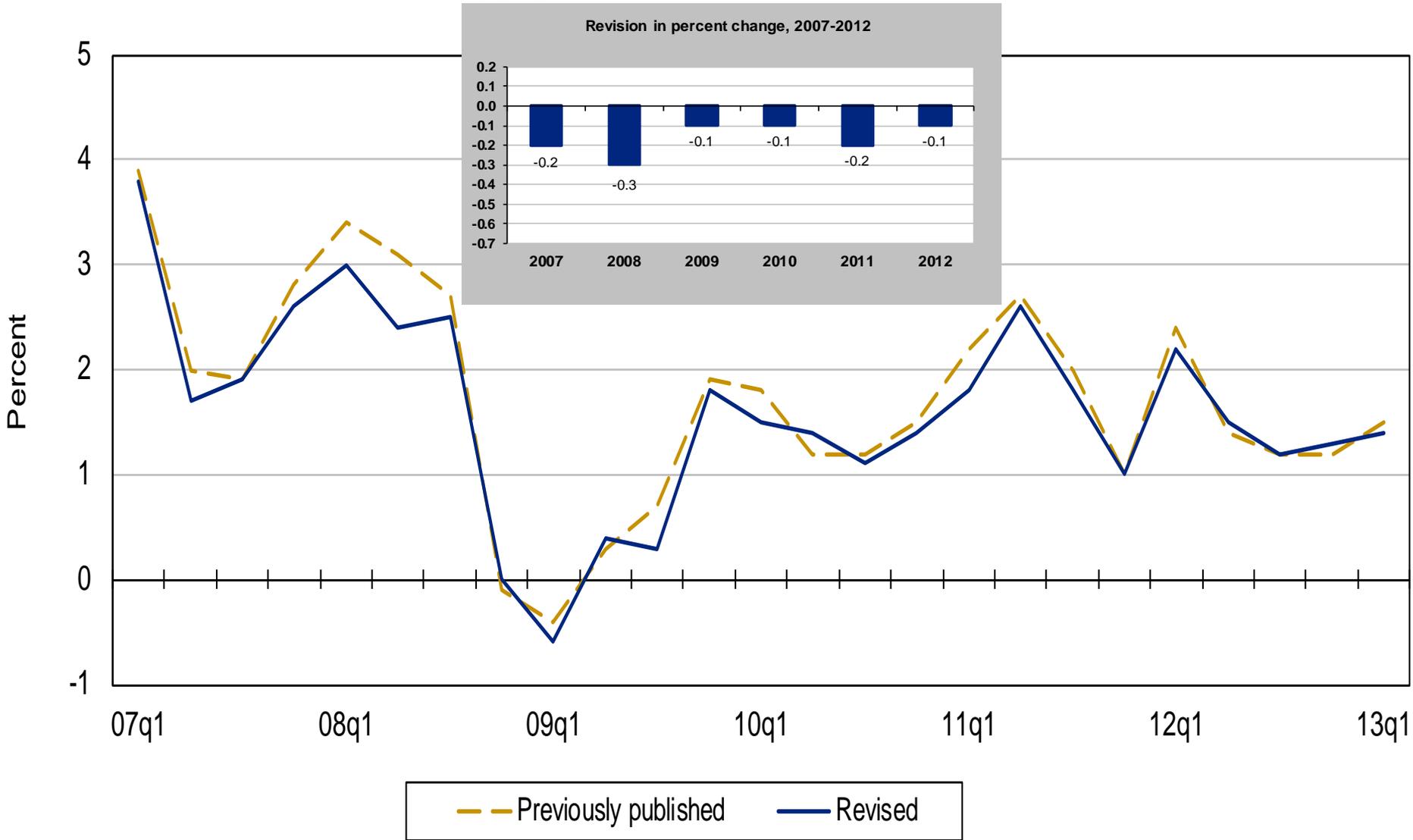
Price index for gross domestic purchases

[Percent change from preceding period, SAAR]



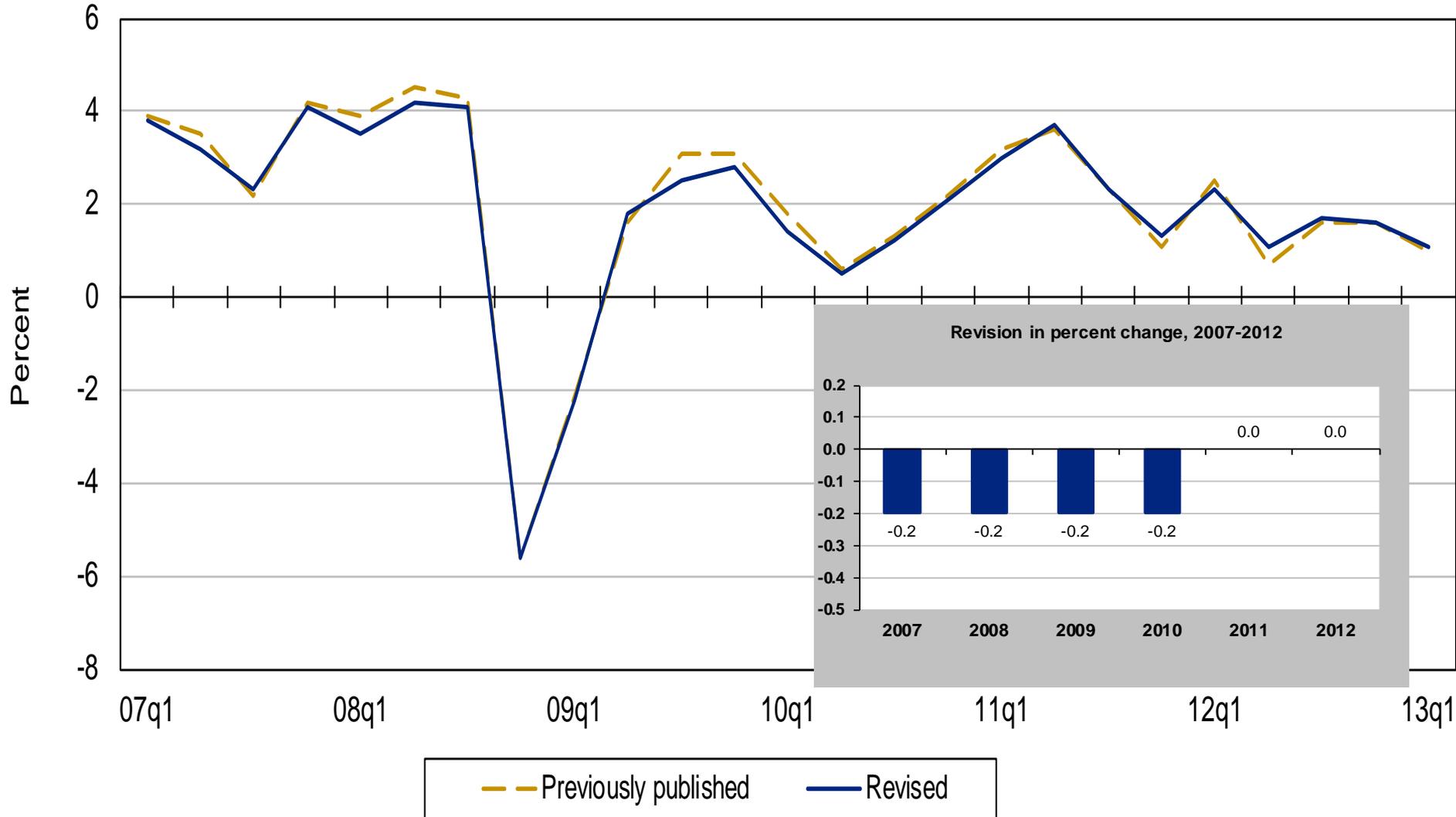
Price index for gross domestic purchases, excluding food and energy

[Percent change from preceding period, SAAR]



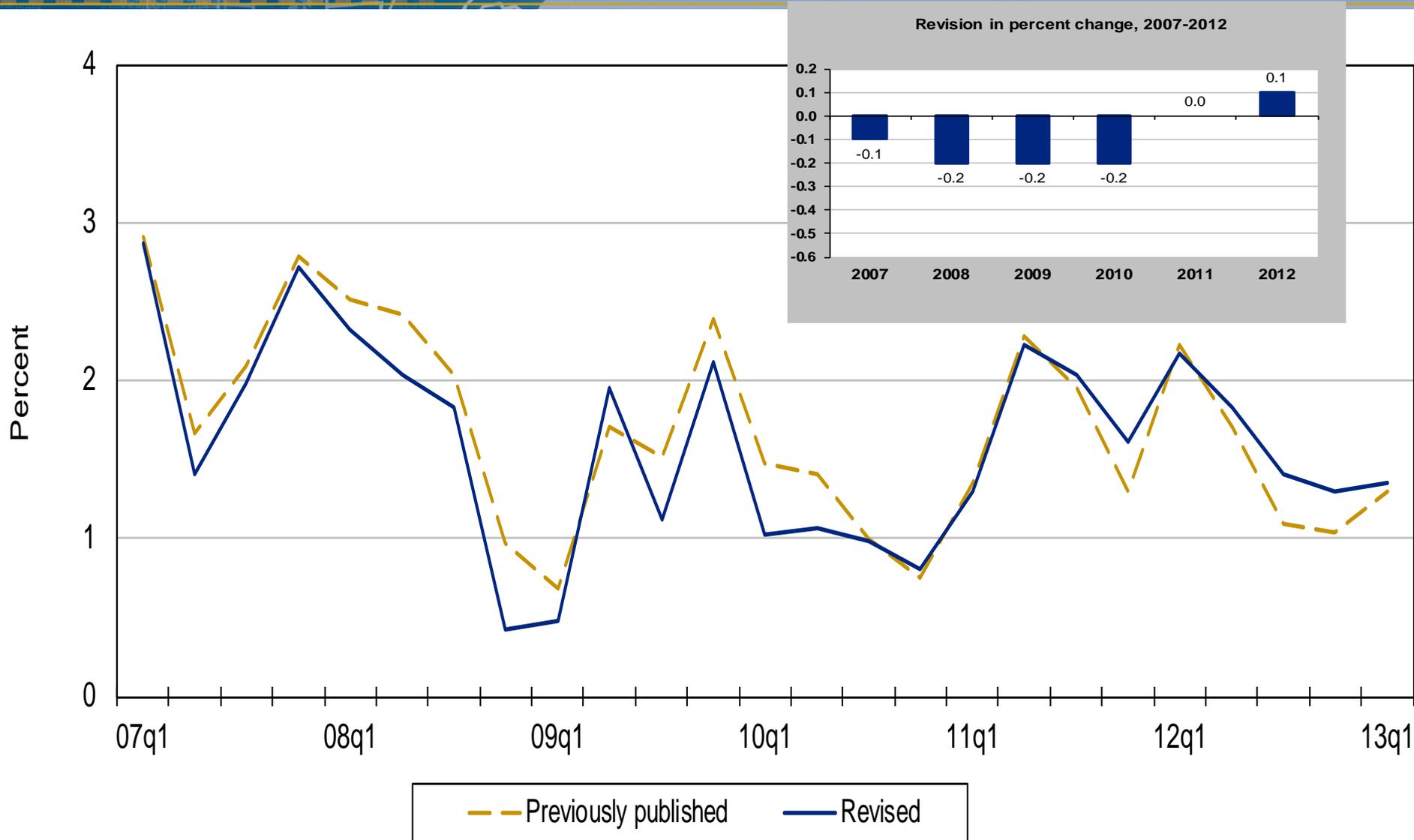
Price index for PCE

[Percent change from preceding period, SAAR]



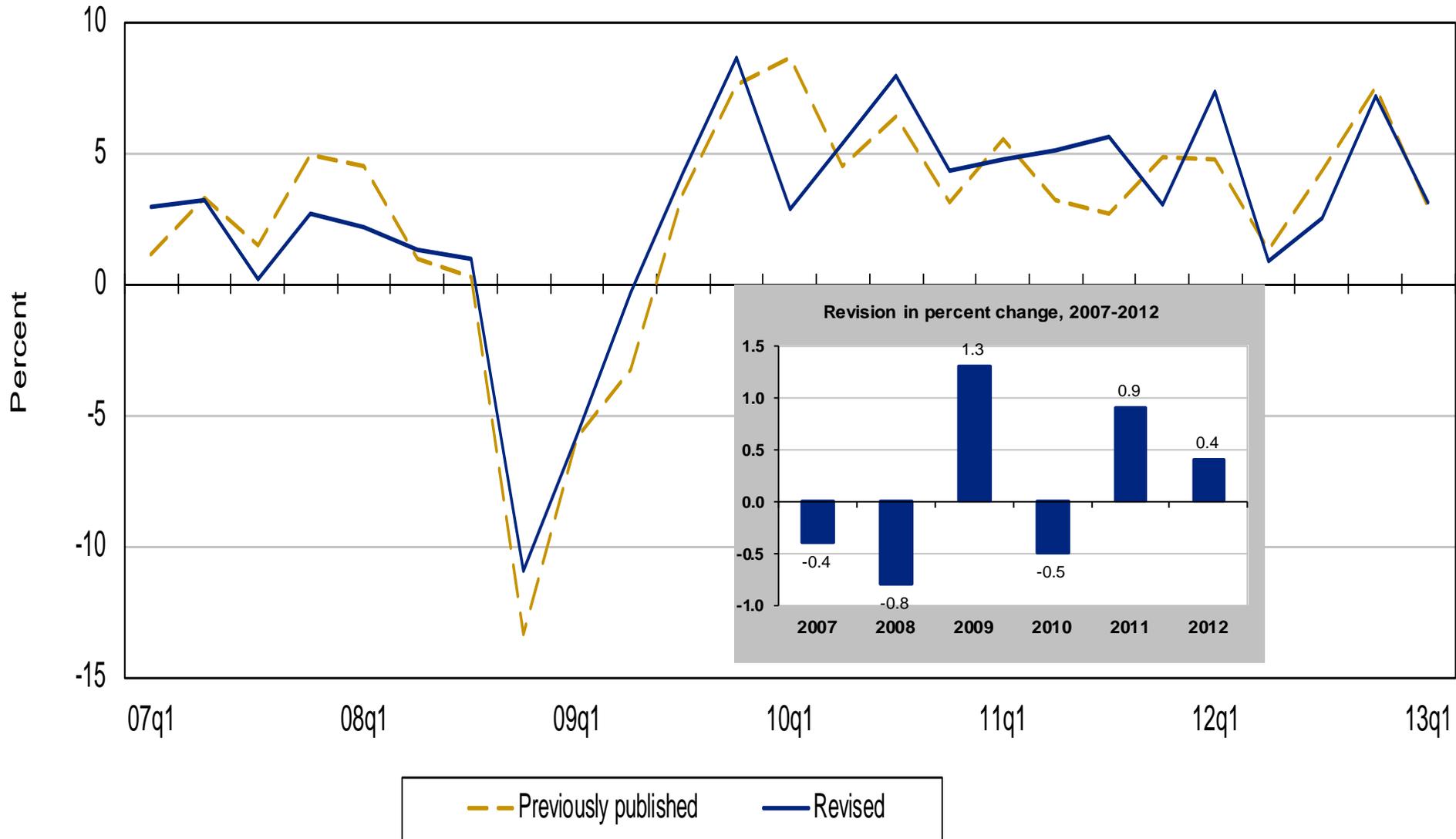
Price index for PCE, excluding food and energy

[Percent change from preceding period, SAAR]



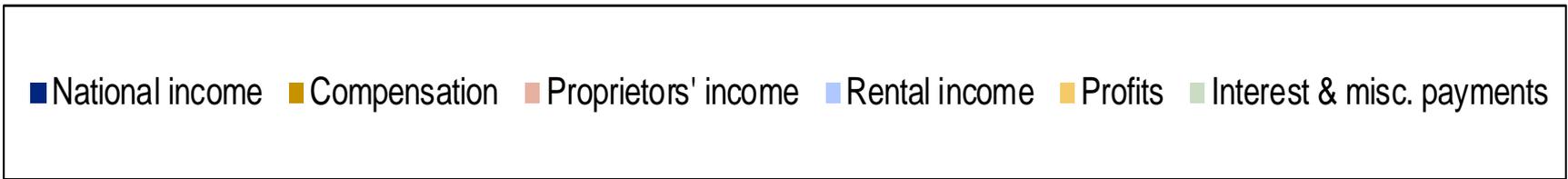
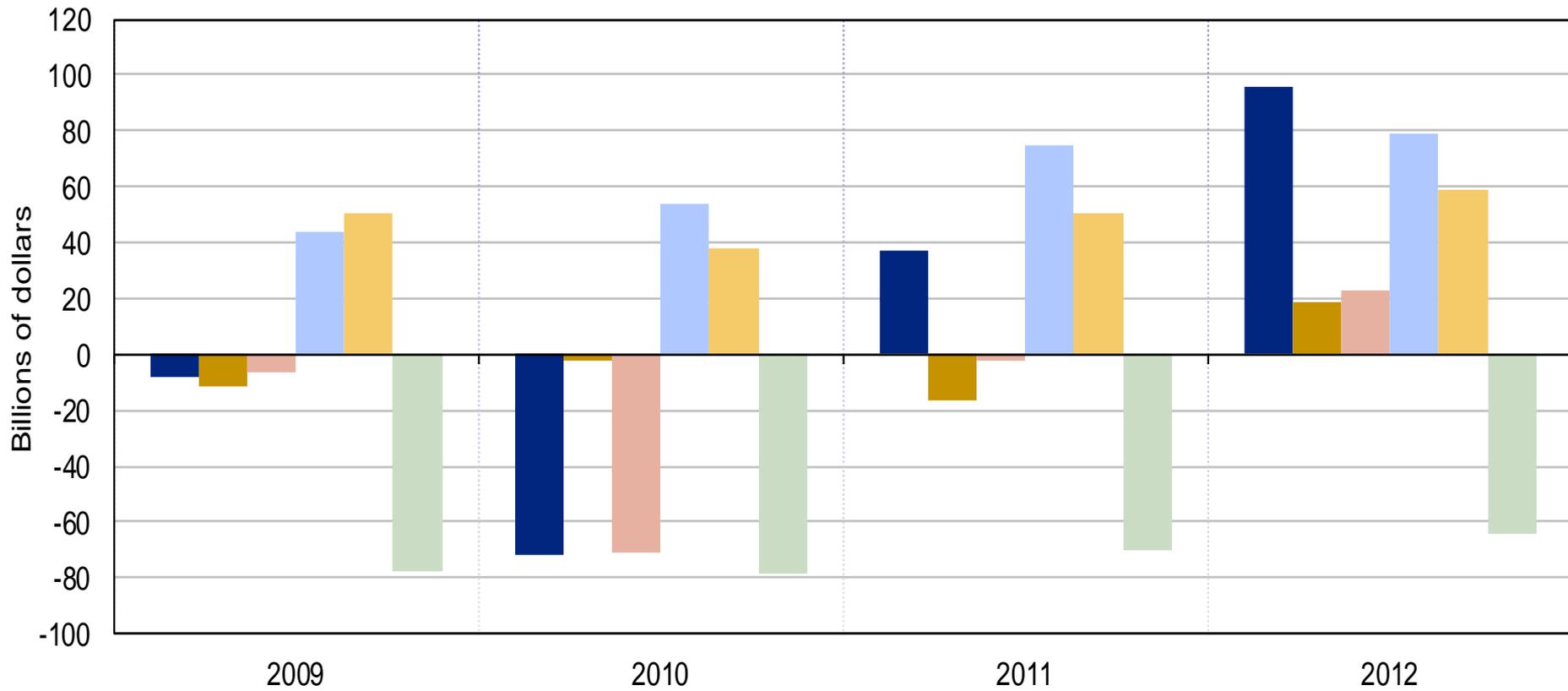
National income

[Percent change from preceding period, SAAR]



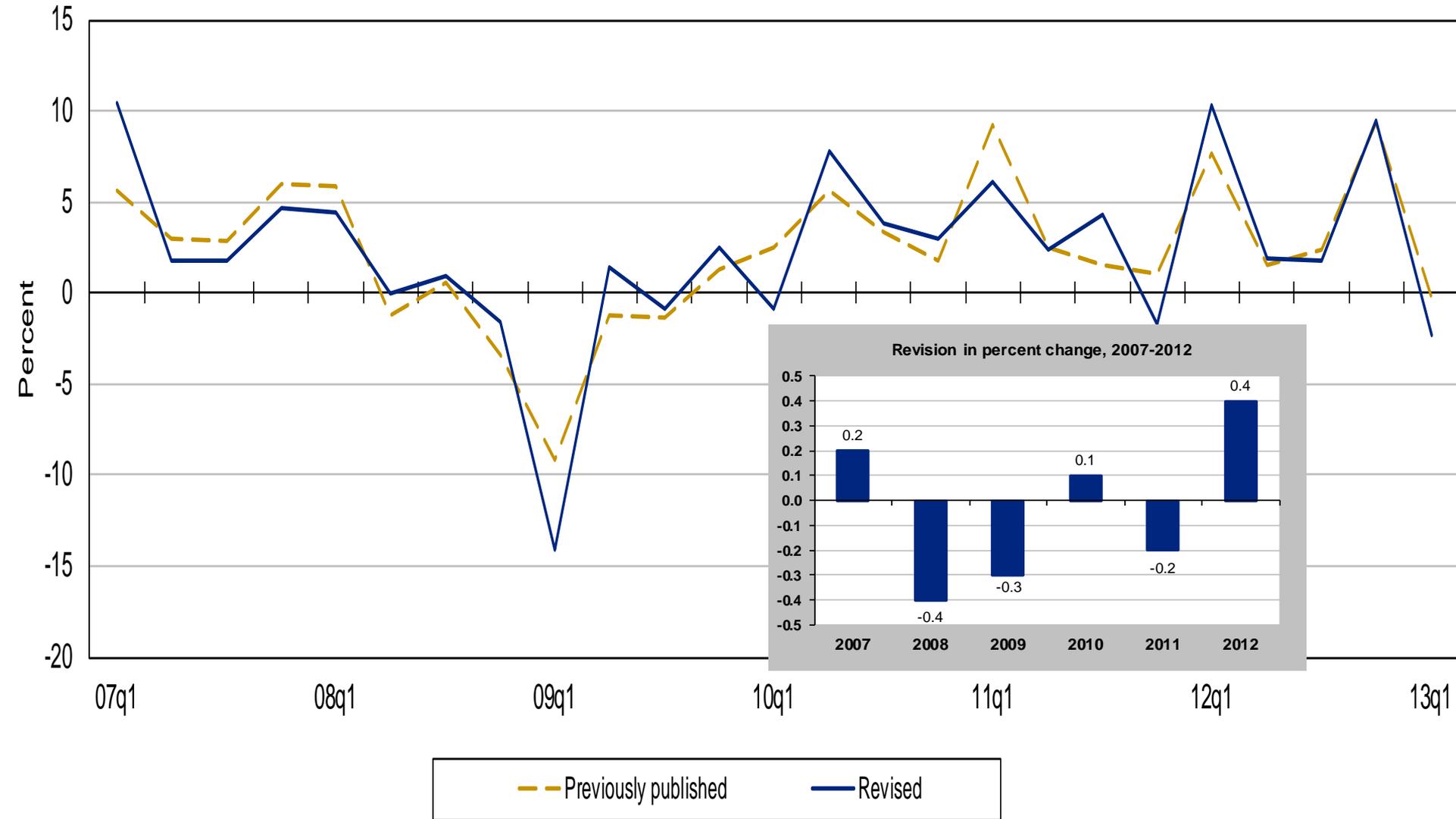
National income

[Revisions in level]



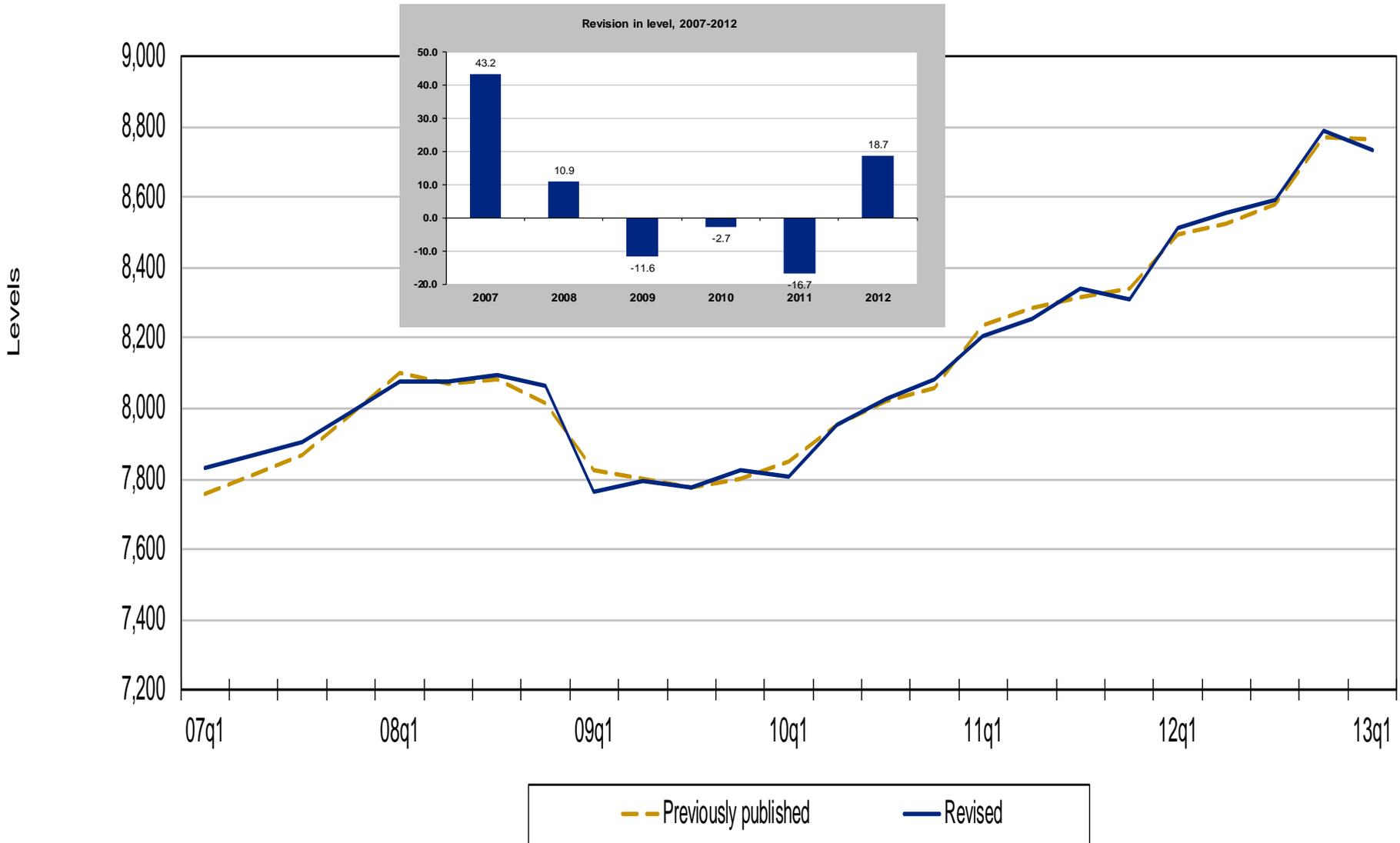
Compensation of employees

[Percent change from preceding period, SAAR]



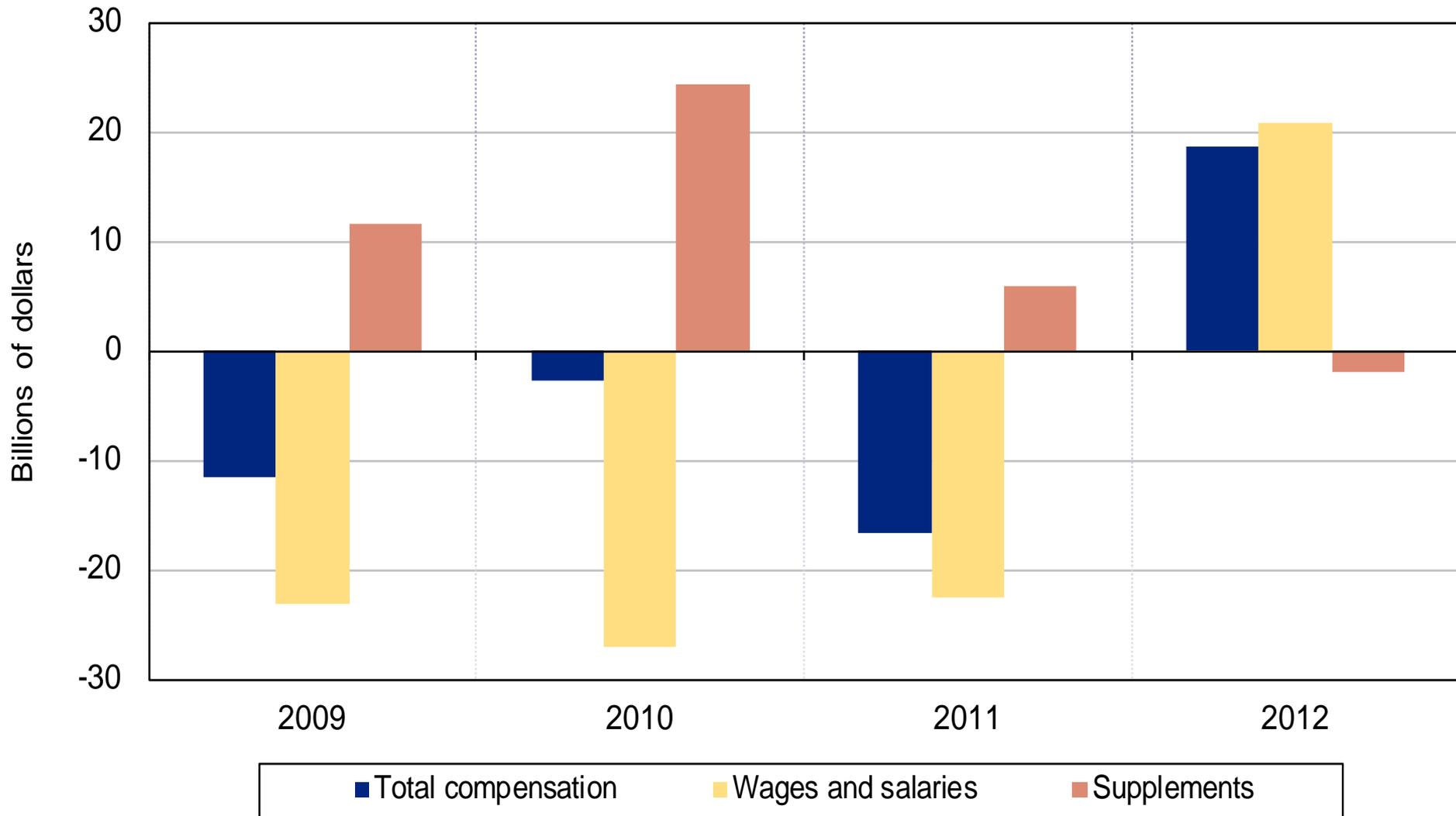
Compensation of employees

[billions of dollars]



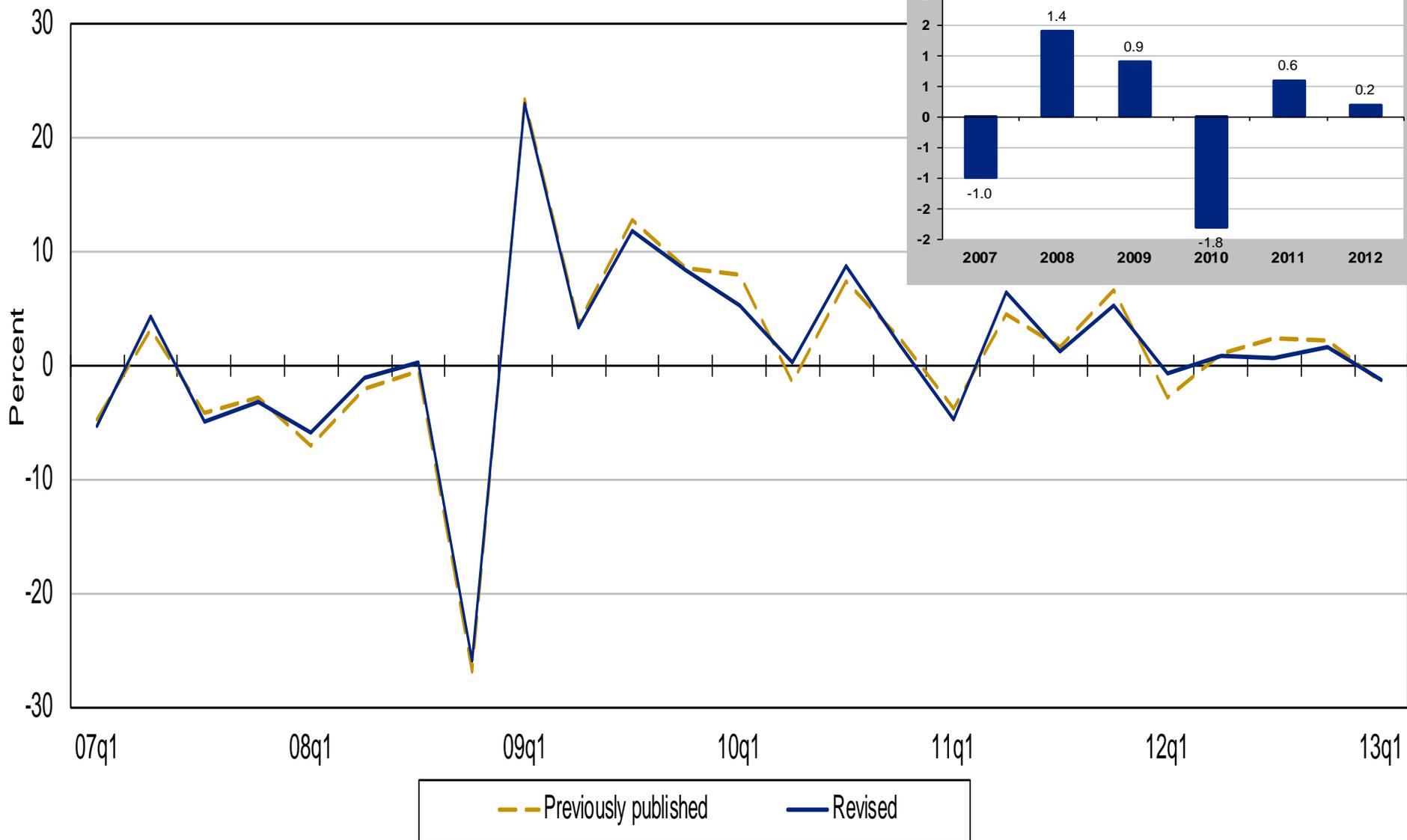
Compensation of employees

[Revisions in level]



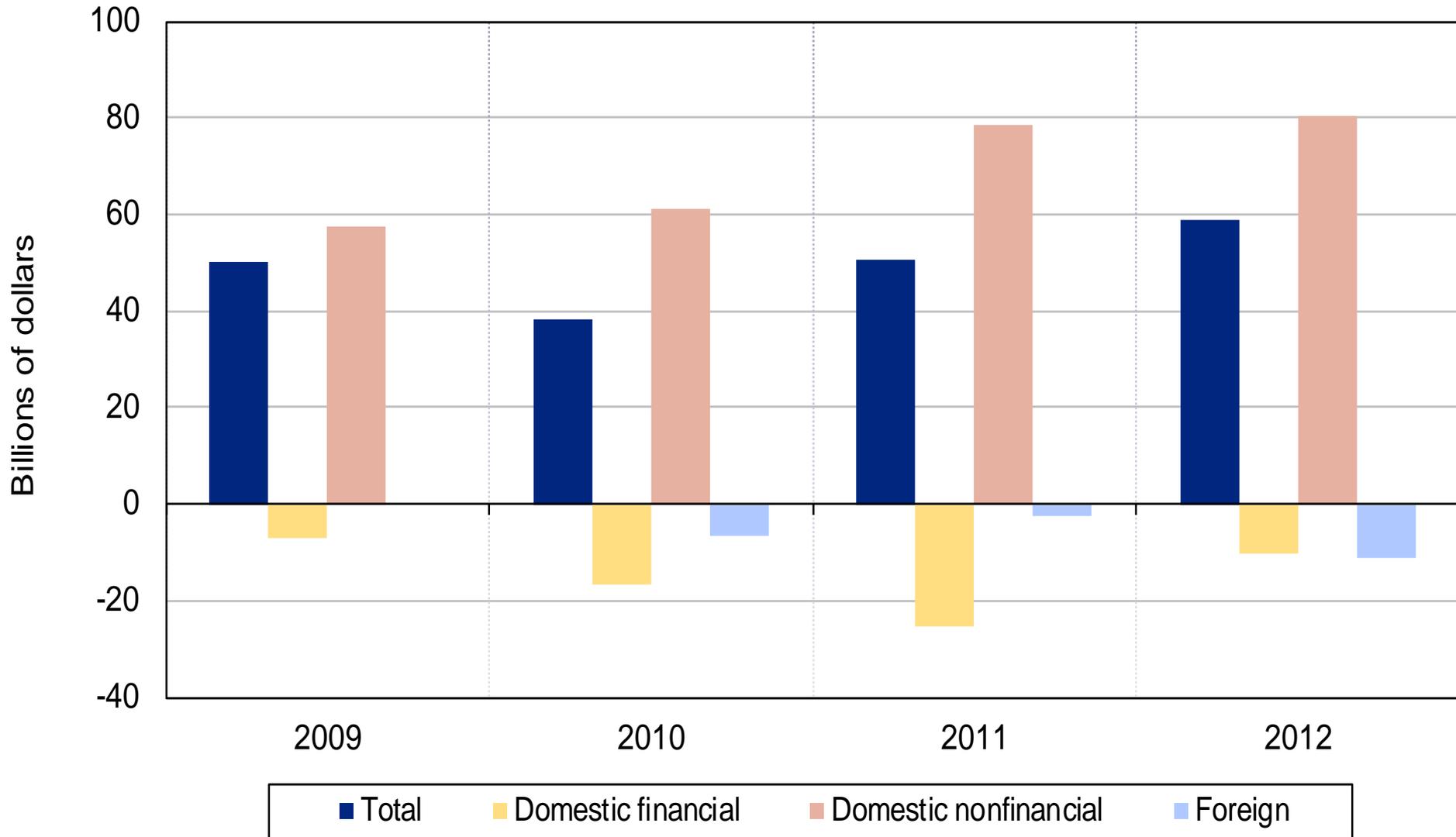
Corporate profits from current production

[Percent change from preceding period, quarterly rate]



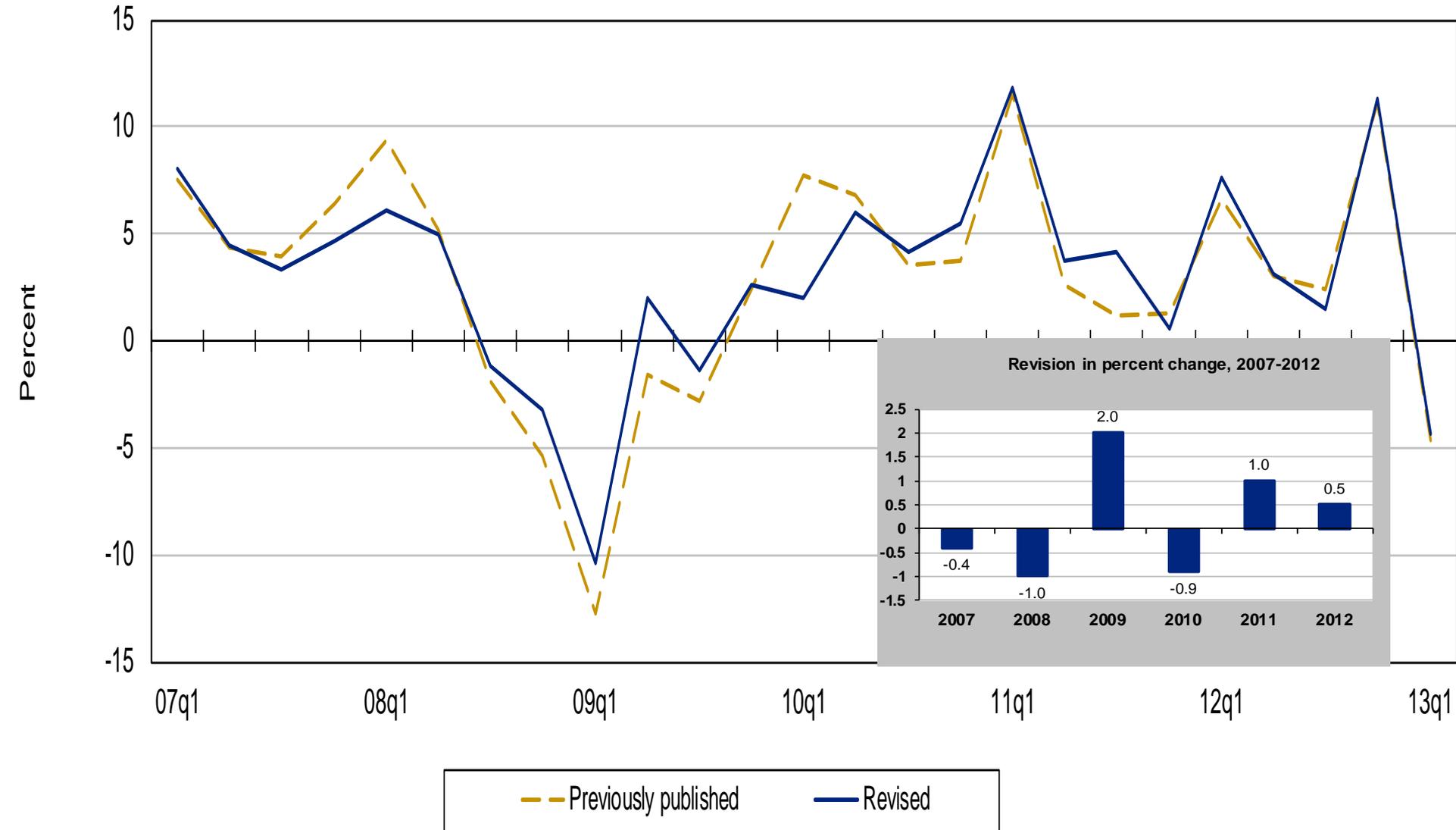
Corporate profits from current production

[Revisions in level]



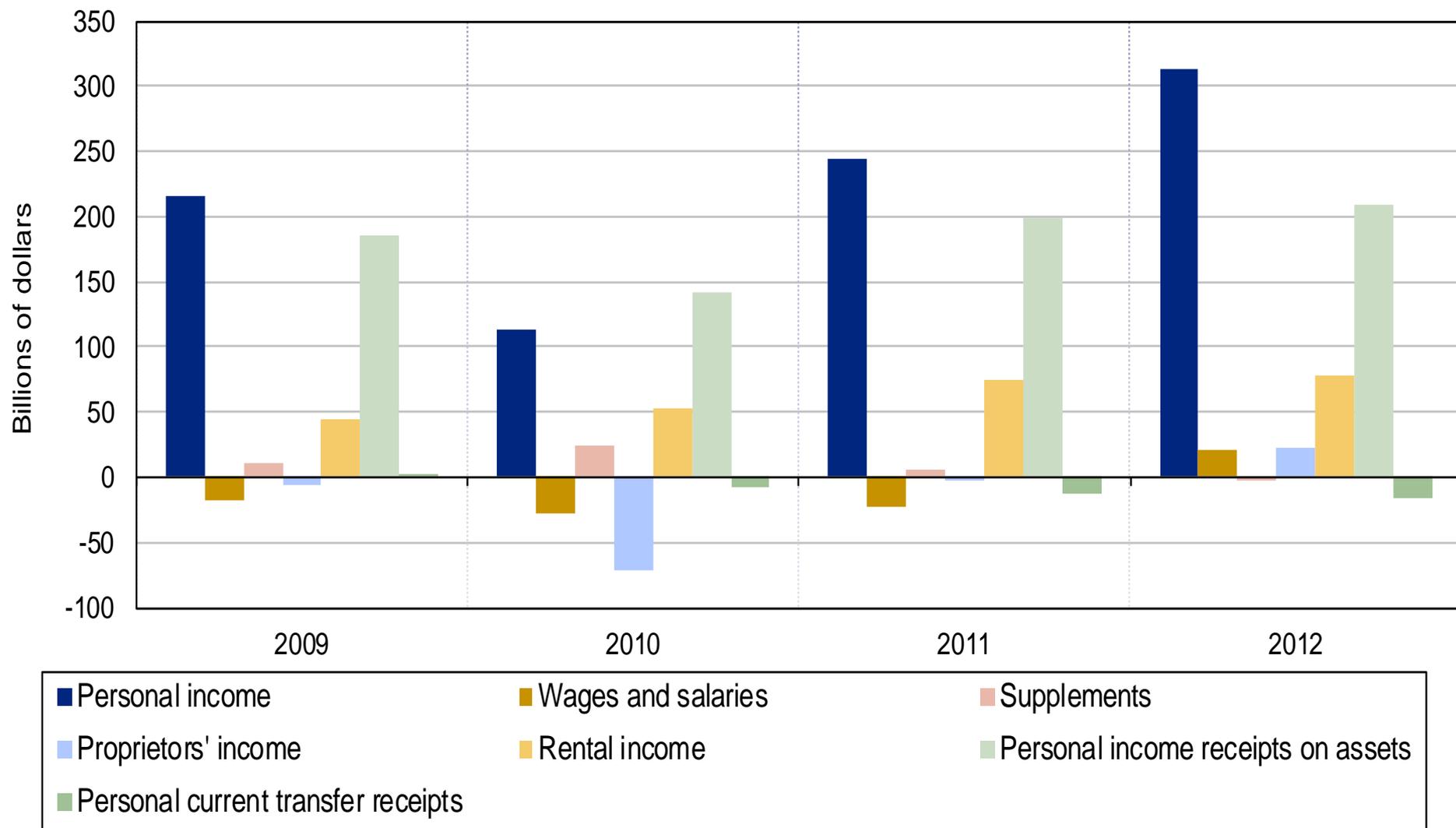
Personal income

[Percent change from preceding period, SAAR]



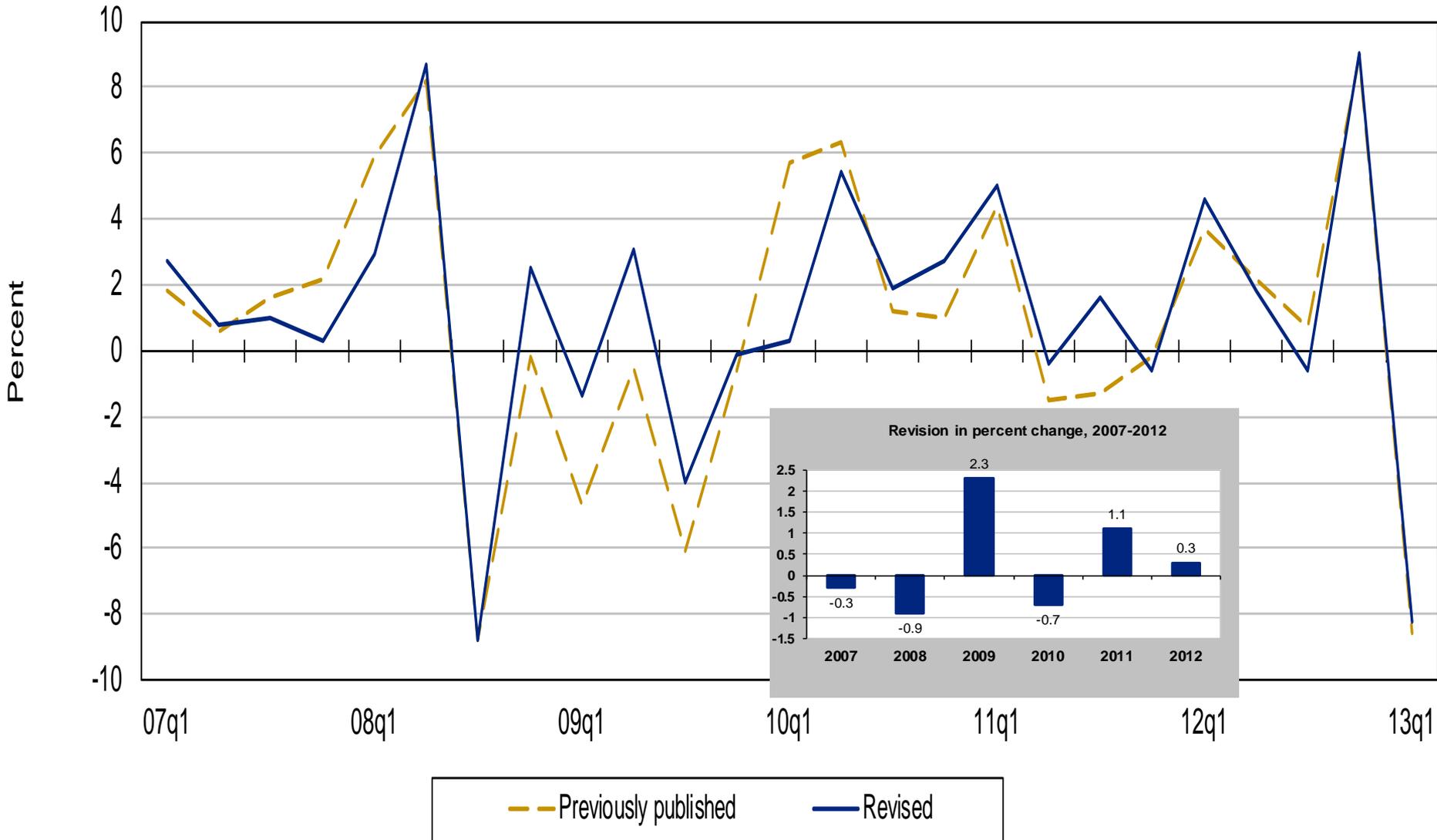
Personal income and its components

[Revisions in level]

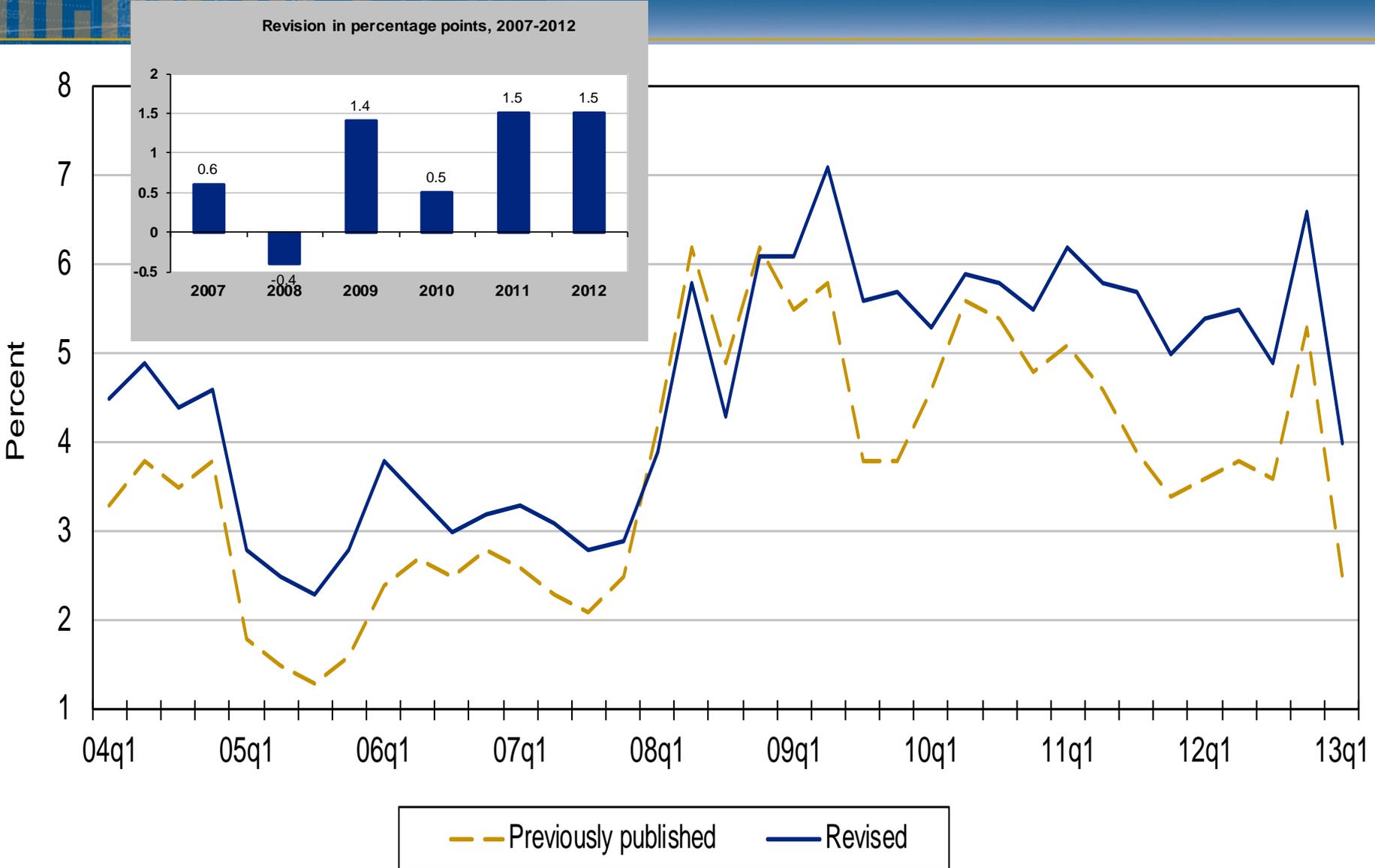


Real disposable personal income (DPI)

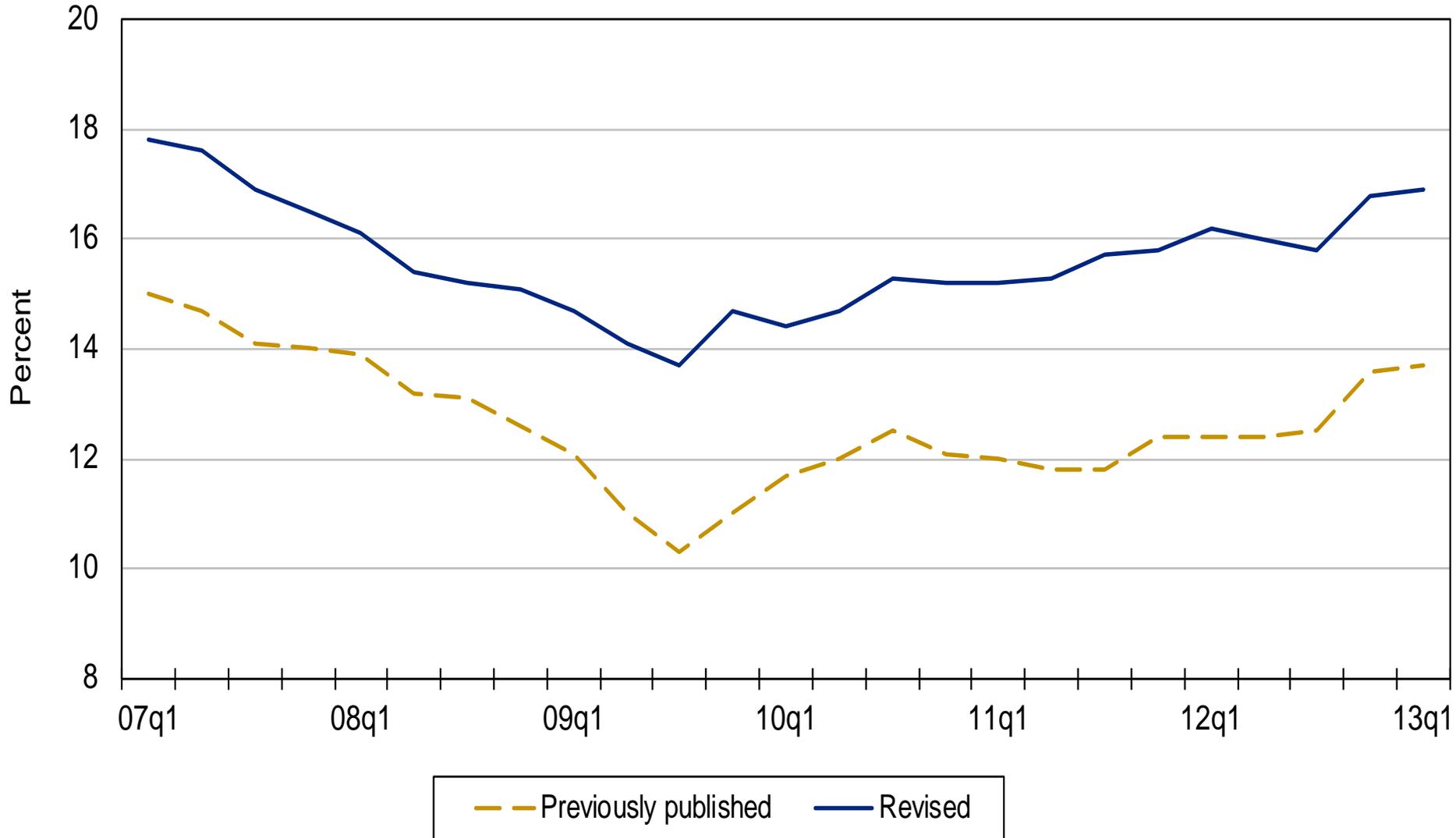
[Percent change from preceding period, SAAR]



Personal saving as a percentage of DPI



Gross (national) saving as a percentage of gross national income



Selected components of national saving

[Revisions in level]

