2.10 PROJECTIONS

The projections for the Italian economy presented in this Economic Bulletin update those prepared as part of the Eurosystem staff macroeconomic projections, which were based on information available on 27 November.[1] Since then new data have been published on international trade, economic activity and business sentiment in Italy and the euro area that generally indicate a less favourable development in the global and Italian economy than suggested by the information available at the end of November. Moreover, the Italian Government has also revised the budget increase proposed for this year in the budget law (see Section 2.9); this revision has been accompanied by a drop in the yield on ten-year government bonds of about 75 basis points with respect to the peaks at the end of November.

The projections are based on the assumption of a slowdown in world trade

The scenario presented here assumes that international trade will reflect the current trade tensions, the lower growth projections for the Chinese economy and the less favourable performance of firms' foreign order books (see Section 2.4). The assumptions are of an increase in Italy's foreign demand, weighted by destination market, of slightly over 3 per cent in 2019 and about 3.5 per cent on average in each of the next two years; overall these projections are about 2 percentage points lower (of which 1.4 points in 2019) than projected in the forecasting scenario in July (see *Economic Bulletin*, 3, 2018). The medium-term outlook for the global economy continues to be shrouded in uncertainty.

Monetary conditions are still accommodative, but financial volatility is high

The scenario assumes that monetary conditions will remain highly accommodative, consistent with the statement of the ECB Governing Council following its December meeting. Consistent with financial market expectations, short-term interest rates are assumed to remain negative this year and the next before rising to 0.1 per cent in 2021.

In recent weeks, as the uncertainty fuelled by discussions with the European Commission over the budget for the coming years eased, risk premiums on Italian government bonds diminished, although they are still higher than the averages observed for 2016-17. Expectations based on market prices in the ten business days ending on 11 January are that the interest rates on ten-year Italian government bonds will average 3.2 per cent this year, rising slightly over the next two years (see the box 'The assumptions underlying the macroeconomic scenario'). The rise in sovereign yields will be passed on gradually to lending conditions in the private sector. The average cost of borrowing for firms is expected to rise by around 100 basis points over the three-year period.

THE ASSUMPTIONS UNDERLYING THE MACROECONOMIC SCENARIO

The forecasting scenario for the Italian economy prepared by the Bank of Italy experts as part of the Eurosystem staff macroeconomic projection exercise is published on the Bank's website at the start of June and December in concomitance with the euro-area projections.[1] The macroeconomic projections for Italy presented here update those based on data available up to 27 November and follow on the publication of more recent information, including the latest national accounts data published by Istat on 30 November, after the end of the previous projection exercise. The technical assumptions have been revised in the light of changes in the exogenous variables at 11 January.

[1] See the Bank of Italy's website: '*Macroeconomic projections for Italy*', containing the projections published to date as part of the Eurosystem coordinated exercise.

[1] See '*Macroeconomic projections for the Italian economy*', 14 December 2018, available on the Bank of Italy's website.

The main assumptions underlying the scenario are as follows (see the table):

a) Foreign demand, weighted by the outlet market for Italian exports, increases by 3.4 per cent on average in the three years 2019-21;

b) The euro/dollar exchange rate, which averaged 1.18 in 2018, stays at 1.15 in the three years 2019-21; [2]

c) The price of a barrel of Brent crude oil, equal to $72 on average in 2018, drops to $58 in 2019 and then rises slightly to $59 in 2021 (on 11 January it was $58.9);

d) Three-month interest rates on the interbank market (Euribor), equal to -0.3 per cent this year, rise to 0.1 per cent on average in 2021;

Assumptions for the main exogenous variables
(percentage changes on previous year unless otherwise specified)

	2018	2019	2020	2021
Potential foreign demand	3.6	3.1	3.5	3.5
Dollar/euro (1)	1.18	1.15	1.15	1.15
Nominal effective exchange rate (2)	-1.1	0.8	0.0	0.0
Crude oil prices (1) (3)	71.8	58.2	58.9	59.4
3-month Euribor (1)	-0.3	-0.3	-0.1	0.1
1-year BOTs (1)	0.1	0.4	0.6	0.9
10-year BTPs (1)	2.6	3.2	3.5	3.8

Sources: Based on Bank of Italy and Istat data.
(1) Annual averages. – (2) Positive changes indicate a depreciation. – (3) Dollars per barrel of Brent crude oil.

e) The yield on ten-year BTPs, equal to 2.6 per cent in 2018, rises to 3.2 per cent in 2019, 3.5 per cent in 2020 and 3.8 per cent in 2021, in line with the values of forward rates implied by the term structure of interest rates on government bond yields;

f) The scenario takes account of the measures set out in the budgetary legislation for 2019. As in previous macroeconomic projection exercises, for 2020-21 it is assumed that the safeguard clauses relative to VAT and excise duty increases are not activated. In accordance with the guidelines underlying the Eurosystem forecasts, which do not incorporate measures that have yet to be defined in sufficient detail, the macroeconomic scenario excludes alternative measures for recouping revenue.

[2] The technical assumptions on interest rates, exchange rates and oil prices are calculated on the basis of the spot and forward prices observed in the market in the ten working days to 11 January.

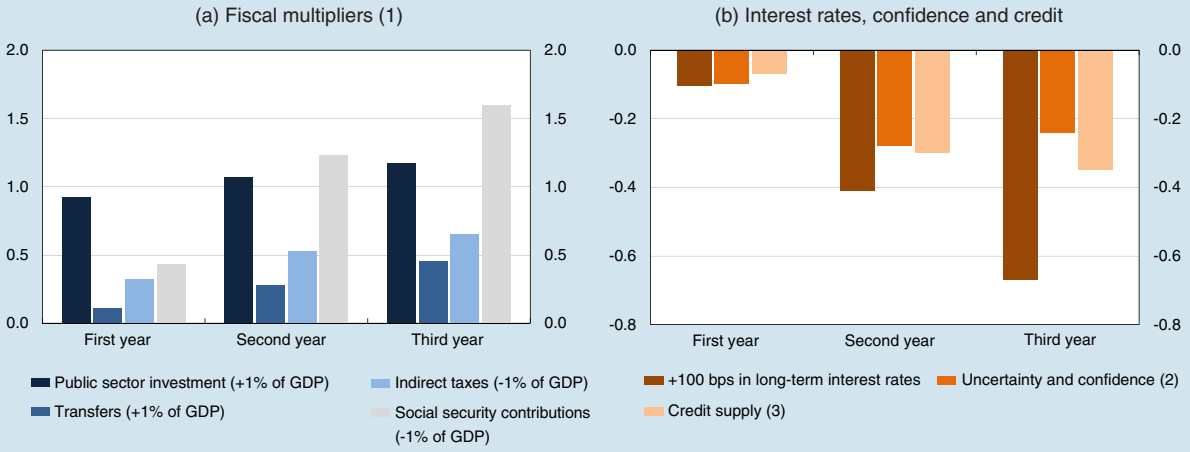
The assumptions underlying the scenario take into account the public finance package passed at the end of December. The effects on economic activity of the various measures planned by the Government are consistent with those estimated using the Bank of Italy's econometric model. However, it is assumed that transfers will be made to households with a higher than average propensity to consume (see the box 'The effects on the projections of changes in the underlying assumptions').

EFFECTS ON THE PROJECTIONS OF CHANGES IN THE UNDERLYING ASSUMPTIONS

The projections presented in this Economic Bulletin are based on technical assumptions regarding the external context, movements in the financial variables, economic policies and business and consumer confidence. For interest rates, risk premiums, oil prices and exchange rates, the expectations embedded in financial market prices are taken into account; for economic policy measures, those passed or approved with a sufficient degree of detail; and for confidence levels and credit standards,

Effects on GDP of different shocks

(percentage deviations in GDP with respect to the base simulation)



(1) Effects on the level of GDP of measures either to increase spending or reduce revenue amounting to 1 per cent of GDP. – (2) Increase in uncertainty and decrease in the confidence indicator equal to about half of the change observed in the 2008-09 crisis; temporary shock lasting two years. – (3) Shock to credit supply equal to about half the change observed in the 2008-09 crisis.

the information drawn from surveys. In the present situation these assumptions must be assessed with great care, given the considerable uncertainty surrounding them, but also because the variables do not move independently of one another; combined changes in them, particularly in cyclical phases marked by high volatility and uncertainty, can strengthen or weaken the impact on economic activity.

The effects on growth projections of changes in the assumptions regarding the composition of fiscal policy, financial and credit market conditions, and business confidence can be analysed by means of simulations using the Bank of Italy's econometric model.[1] The results of the exercises are shown in the figure.

The impact of a budget package on economic activity depends largely on its composition and on the details of the single measures. Panel (a) of the figure shows the changes in GDP typically associated with fiscal measures entailing an increase in expenditure or a decrease in government revenues of 1 per cent of GDP (multipliers).[2]

In the case of measures that increase expenditure, a larger impact on GDP is produced by public sector investment, whose multiplier is close to 1 from the very first year. A multiplier of this size assumes that the measures are enacted rapidly and efficiently and that they effectively help to increase productivity in the economy.[3]

Transfers to households usually have a less marked effect, with a multiplier of just under 0.5 after three years. The macroeconomic projections presented in this Economic Bulletin assume that transfers for the 'citizen's income and pension' mainly relate to households with a high propensity to consume,

[1] G. Bulligan, F. Busetti, M. Caivano, P. Cova, D. Fantino, A. Locarno and L. Rodano, '*The Bank of Italy econometric model: an update of the main equations and model elasticities*', Banca d'Italia, Temi di Discussione (Working Papers), 1130, 2017.

[2] The multiplier estimates shown here assume that the measures are designed and enacted in a similar way, on average, to the past and that they do not contain any specific elements capable of strengthening or weakening their impact.

[3] '*Public investment for developing the economy*', address by the Governor of the Bank of Italy I. Visco, 64th Conference on Government Studies, Varenna, 22 September 2018. See also F. Busetti, C. Giorgiantonio, G. Ivaldi, S. Mocetti, A. Notarpietro and P. Tommasino, 'Capitale e investimenti pubblici in Italia: misurazione, effetti macroeconomici, criticità procedurali', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming.

implying a multiplier of about 0.7 after three years. This multiplier could be higher if the measures were designed to target households with tight liquidity constraints.

In the case of measures that reduce revenue, a very strong if gradual stimulus can be obtained with measures to lower the burden of firms' social security contributions in labour costs that foster export competitiveness and support households' real income; the multiplier is over 1 after two years. Reducing indirect taxes has a smaller impact, with a multiplier of just over 0.5 after three years.

However, the effects of a fiscal expansion or tightening may be combined with, and sometimes amply offset, the effects of potential changes in financial conditions, business confidence or credit conditions brought about by changes in the economic policy stance. Panel (b) of the figure looks at the effects on GDP of (a) a 100 basis point increase in risk premiums on medium- and long-term government security yields; (b) an increase in economic uncertainty and a deterioration in business confidence equal to about half the particularly large shifts recorded during the global financial crisis according to the main indices; and (c) credit rationing equal to half the amount estimated for the 2008-09 crisis as measured on the basis of the Bank Lending Survey.[4]

In each of the three cases, the negative effects on GDP derive mainly from the squeeze on private sector investment spending and they increase with time. In the first simulation the increase in risk premiums is passed on to firms' cost of capital – with a cut back in planned investment – and raises households' propensity to save. The resulting contraction in GDP is equal overall to about 0.7 percentage points after three years. In the second simulation, the deterioration in confidence and increase in uncertainty regarding the outlook for growth make firms more cautious about their investment decisions, subtracting nearly 0.3 points from GDP in the space of three years. In the third case, limits on credit supply lead to a contraction in private sector investment, with an overall drop in GDP of more than 0.3 percentage points.[5]

[4] The macroeconomic impact of uncertainty and lending conditions is based on the estimates of the investment equation of the Bank of Italy's econometric model as in F. Busetti, C. Giordano and G. Zevi, 'The drivers of Italy's investment slump during the double recession', *Italian Economic Journal*, 2, 2, 2016, pp. 143-165. These simulations therefore do not assume direct repercussions on consumption from a decrease in consumer confidence.

[5] In these simulations the effect of each factor on economic activity is assessed separately. However, interdependencies and non-linearity, which are not taken into account in these exercises, may amplify their overall effects.

In this scenario GDP growth continues at a modest pace

Based on these assumptions and the latest cyclical data, the central projection for GDP growth is equal to 0.6 per cent in 2019, to 0.9 per cent in 2020 and to 1 per cent in 2021 (Table 10 and Figures 41 and 42).[2] The dispersion of the probability distribution around these values is particularly large in the current environment.

Household consumption is expected to expand at the same rate as GDP and disposable income, boosted by the support measures included in the budget law. Although monetary conditions will remain accommodative, in 2019-21 investment is expected to reflect higher borrowing costs and the loss of business confidence caused by the poor outlook for international trade. Investment in METE (machinery, equipment and transport equipment) will slow, partly as a result of changes to earlier tax incentives, which will be cut back with respect to the previous three-year period. There will be a moderate growth in expenditure on construction, underpinned by a slowly strengthening real-

[2] The projections are based on quarterly data adjusted for seasonal and calendar effects.

Table 10

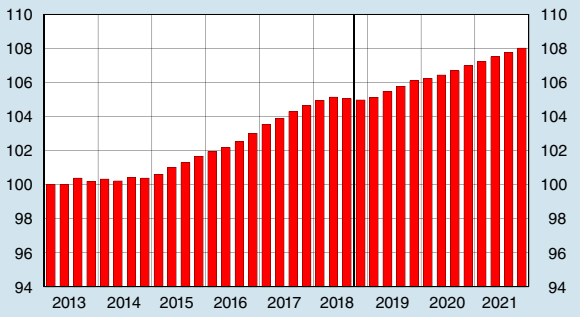
Macroeconomic scenario
(percentage changes on previous year unless otherwise indicated)

	2018	2019	2020	2021
GDP (1)	0.9	0.6	0.9	1.0
Household consumption	0.6	0.6	1.0	0.9
Government consumption	0.2	0.3	0.0	-0.2
Gross fixed investment	3.8	0.6	0.2	0.8
of which: in METE	5.2	-0.3	-1.2	0.5
Total exports	0.8	3.0	3.3	3.5
Total imports	1.7	2.8	2.5	2.5
Change in stocks (2)	0.1	-0.1	0.0	0.0
Memorandum item: GDP (3)	*1.0*	*0.6*	*1.0*	*1.0*
Prices (HICP)	1.2	1.0	1.3	1.6
HICP net of food and energy	0.6	0.8	1.2	1.5
Employment (standard units) (4)	0.6	0.4	0.6	0.7
Unemployment rate (5)	10.5	10.3	10.3	10.0
Export competitiveness (6)	-1.1	1.7	0.9	0.3
Current account balance (7)	2.5	2.8	2.8	2.9

Sources: Based on Bank of Italy and Istat data.
(1) For GDP and its components: chain-linked volumes; changes estimated on the basis of quarterly data adjusted for seasonal and calendar effects. – (2) Includes valuables. Contributions to GDP growth; per cent. – (3) Not calendar adjusted. – (4) Standard labour units. – (5) Annual averages; per cent. – (6) Calculated by comparing the price of foreign manufactures with the deflator of Italian merchandise exports (excluding energy and agricultural products); a positive value indicates a gain in competitiveness. – (7) Per cent of GDP.

Figure 41

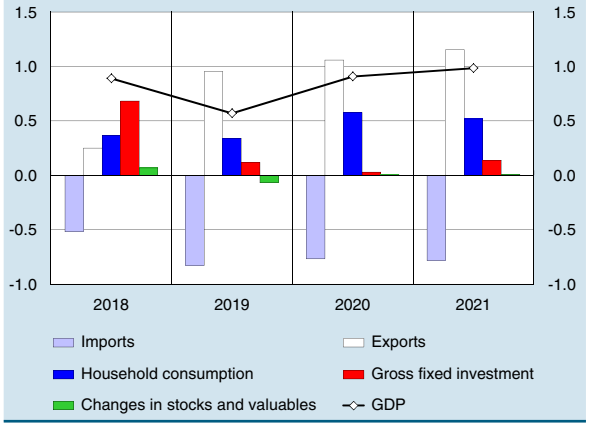
GDP projections: quarterly profile (1)
(levels; Q1 2013=100)



Sources: Based on Bank of Italy and Istat data.
(1) Data seasonally and calendar adjusted. Actual data up to Q3 2018; projections thereafter.

Figure 42

GDP growth and contributions of the main demand components and of imports (1)
(per cent)



Sources: Based on Bank of Italy and Istat data.
(1) Data seasonally and calendar adjusted.

estate market and by public sector investment. No further increase is expected in the ratio of investment in METE to GDP, which last year returned close to the level recorded prior to the double-dip recession. In the construction sector, in 2021 the ratio is expected to remain below the pre-crisis level by about 3.5 percentage points (Figure 43).

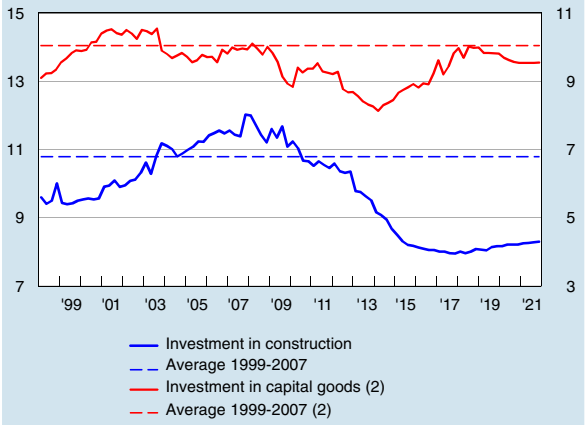
Export growth, which had come to a halt in the early months of 2018 partly as a delayed effect of the appreciation of the euro exchange rate in 2017, should resume at a moderate pace, close to that of foreign demand. Imports are expected to grow at a slightly slower pace, partly as a consequence of slacker domestic demand. The current account of the balance of payments should remain firmly over 2.5 per cent of GDP (Figure 44).

Inflation gradually increases

Inflation, measured by the harmonized index of consumer prices, is expected to be 1.0 per cent in 2019, slightly lower than in the previous year (Figure 45). It is projected to rise to 1.5 per cent on average in the following two years, mainly driven by the core component. The main contributory factor will be an acceleration in private sector wages, boosted by the gradual improvement in inflation expectations embodied in new labour contracts. Private sector profit margins are set to increase by around half a percentage point overall in the three years 2019-21.

Figure 43

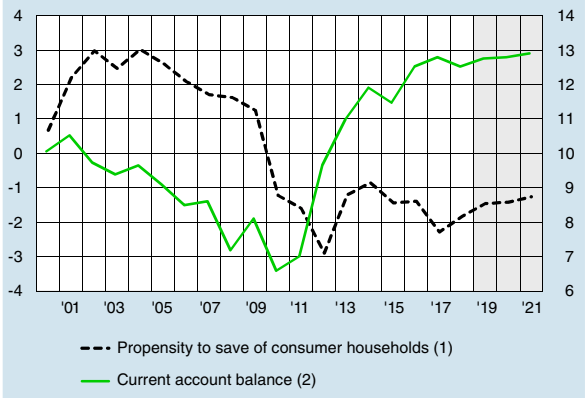
Investment as a percentage of GDP (1)
(quarterly data)



Sources: Based on Bank of Italy and Istat data.
(1) Data seasonally and calendar adjusted. – (2) Right-hand scale.

Figure 44

Propensity to save of consumer households and current account balance
(percentage points)



Sources: Based on Bank of Italy and Istat data.
(1) Right-hand scale. – (2) Per cent of GDP.

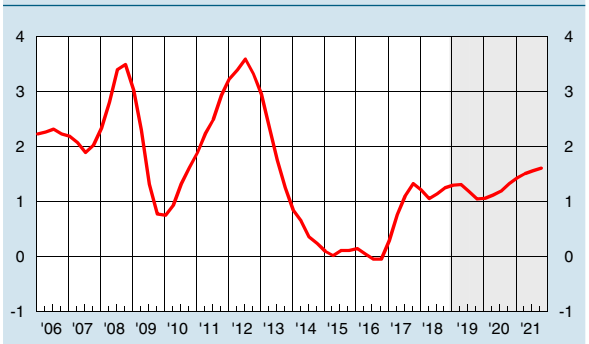
The growth projections are revised downwards

GDP growth projections have been revised downwards with respect to those based on end-November data by 0.4 percentage points for 2019 and 0.2 points for 2020. Inflation projections are lower than previous estimates by an average of about 0.2 points in the two years 2019-2020, mainly reflecting lower oil prices; the estimates for 2021 are virtually unchanged.

The GDP growth estimate for 2019 has been lowered largely in the light of new information (Figure 46) pointing to a sharper cyclical slowdown (see the box 'Economic activity in the fourth quarter of 2018'), a contraction in foreign demand and a cutback in firms' investment plans, as confirmed by December's quarterly survey of inflation and growth expectations (see the box 'Italian firms' investment according to

Figure 45

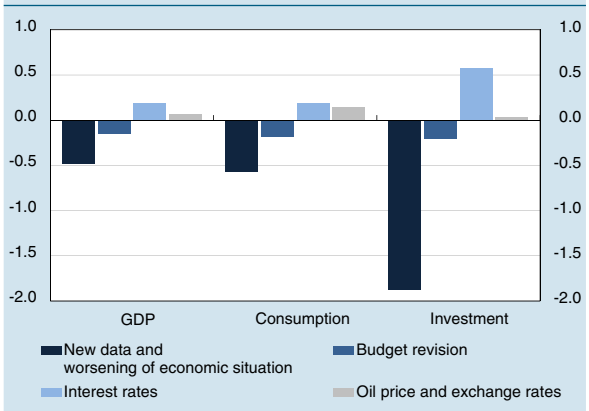
Consumer price inflation
(quarterly data; percentage changes on year-earlier period; 4-term moving averages)



Sources: Based on Bank of Italy and Istat data.

Figure 46

Determinants of revised growth forecasts in 2019 (1)
(percentage changes)



Sources: Based on Bank of Italy and Istat data.
(1) Revisions of growth forecasts for GDP, consumption and investment with respect to the scenario based on data at the end of November. Data seasonally and calendar adjusted.

the Survey on Inflation and Growth'). The favourable stimulus provided by lower long-term interest rates following the agreement reached with the European Commission will instead more than offset the direct effects of the revision in the budgetary measures (see the box 'Effects on the projections of changes in the underlying assumptions').

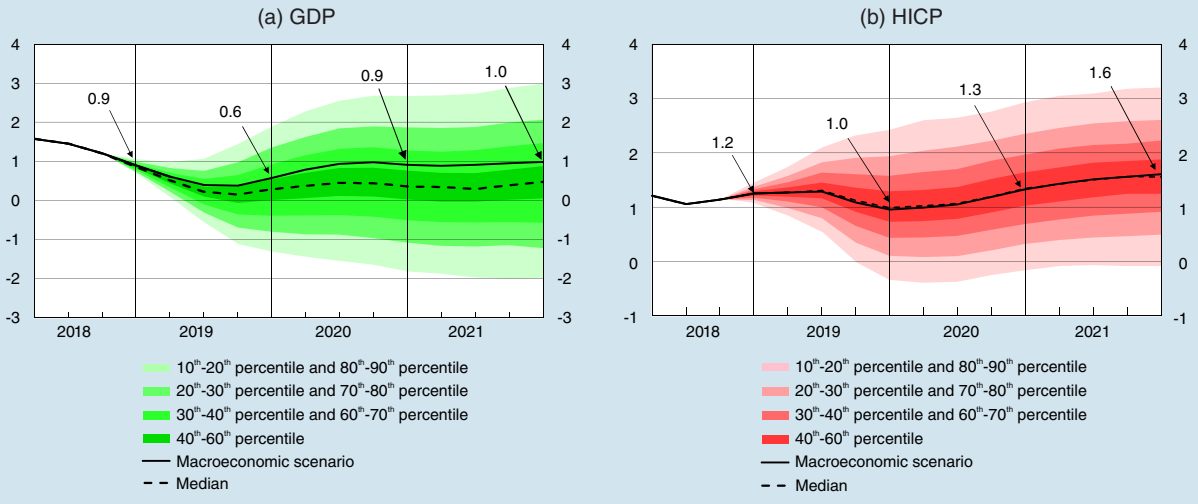
The risks to growth are still downside

The risks for growth are tilted to the downside (Figure 47). Those of international origin reflect trade policy tensions, which are not only holding back global economic activity but might also fuel new bouts of financial volatility, leading to an even sharper deterioration in firms' expectations. At the national level, renewed increases in interest rates on government bonds and a faster transmission of current rates to private sector borrowing conditions or a sharper drop in firms' propensity to invest would negatively affect GDP growth. On the other hand, the growth rate might actually exceed this projected scenario in the medium term if sovereign spreads diminish further.

The upward risks to inflation associated with the pressures stemming from higher energy commodity prices will be offset by the impact of a potential slowdown in domestic and international economic activity and the possibility that, in a situation of fairly weak demand, existing wage increases will be passed on to prices more slowly than under similar conditions in the past.

Figure 47

Distribution of probabilities of GDP and HICP projections (1)
(percentage changes on year-earlier period; 4-term moving averages)



(1) Calendar adjusted quarterly data. The probability distribution is graphed for percentile groups by fan charts, based on stochastic simulations made via random extraction from the shock distribution of the Bank of Italy's quarterly econometric model. The distribution takes account of asymmetric shocks to the equations that reflect the main risk factors according to the procedure in C. Miani and S. Siviero, '*A non-parametric model-based approach to uncertainty and risk analysis of macroeconomic forecasts*', Banca d'Italia, Temi di Discussione (Working Papers), 758, 2010. The figure shows year-on-year percentage changes of 4-term moving averages. The value corresponding to the fourth quarter of each year coincides with the average annual percentage charge.