# VI Inflation

Inflation measured 3.1% in Q1/2019, significantly lower than at year-end 2018, but rose again to 3.3% in April. Underlying inflation has followed a similar pattern. The contribution of house prices to inflation has continued to weaken, and in March, the twelve-month rise in the housing component was at its smallest since summer 2013. Furthermore, the pass-through from the depreciation of the króna to import prices receded in Q1/2019. The inflation outlook has improved from the February forecast due to the rapid cooling of the economy, even though it is offset to an extent by the rise in oil prices and firms' wage costs. In addition, long-term inflation expectations are starting to fall again.

## Recent developments in inflation

**Inflation has been slightly lower than expected**

Inflation eased in Q1/2019, after having risen rapidly towards the end of 2018, reaching 3.7% in December (Chart VI-1). It measured 3.1% in Q1, 0.3 percentage points below the forecast in the February *Monetary Bulletin*. The deviation is due mainly to weaker-than-expected exchange rate pass-through from the depreciation of the króna in autumn 2018 to imported goods prices and a smaller-than-expected rise in house prices. Reductions in imported goods prices, particularly new motor vehicles, had the strongest impact on the CPI during the quarter, although this came in the wake of a noticeable increase in Q4/2018. The effects of the decline in new vehicle prices were similar to those in Q1/2017, when the króna had appreciated by nearly a fifth year-on-year (Chart VI-2). The recent contraction in new vehicle sales is likely to be a factor in this.

The CPI rose by 0.4% month-on-month in April, and twelve-month inflation increased to 3.3%. The April measurement was affected mainly by rising airfares and petrol prices. The increase in airfares was larger than usual for this time of year, owing partly to the collapse of the airline WOW Air, although prices generally rise around the Easter holidays.

Twelve-month inflation excluding housing measured 2.8% in April and has risen by 3 percentage points year-on-year, far outpacing the rise in measured inflation. The difference between inflation including and excluding housing is at its smallest since autumn 2013 and is now close to its long-term average. The HICP, which also excludes owner-occupied housing costs, rose by 3.2% year-on-year in April, whereas in April 2018 there was 0.7% deflation.

## Underlying inflation and other indicators of inflationary pressures

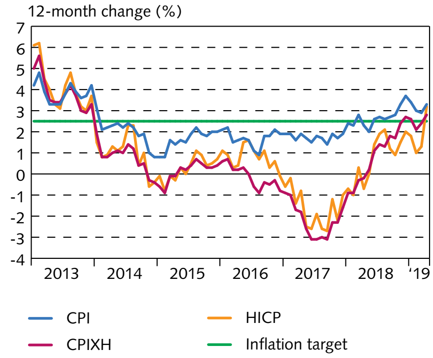
**Underlying inflation developing broadly in line with measured inflation**

Underlying inflation in terms of the median of various measures was 3.2% in April and has fallen since the last *Monetary Bulletin* (Chart

Chart VI-1

Various measures of inflation

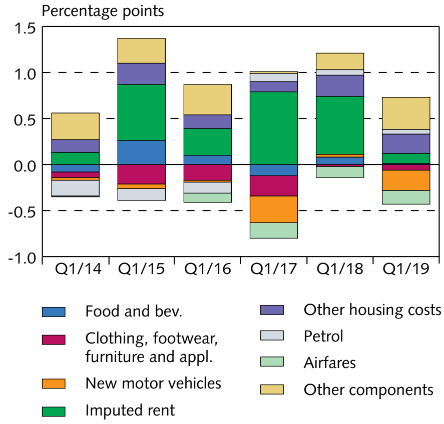
January 2013 - April 2019




*Sources:* Statistics Iceland, Central Bank of Iceland.

Chart VI-2

Subcomponents' effects on the CPI in Q1 2014-2019

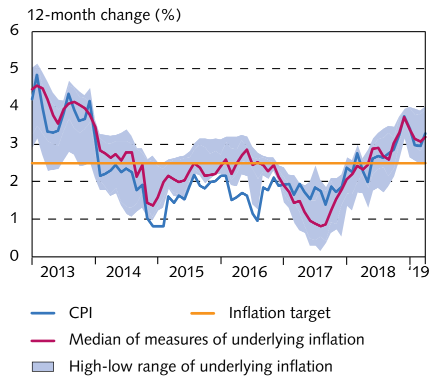



*Source:* Statistics Iceland.

Chart VI-3

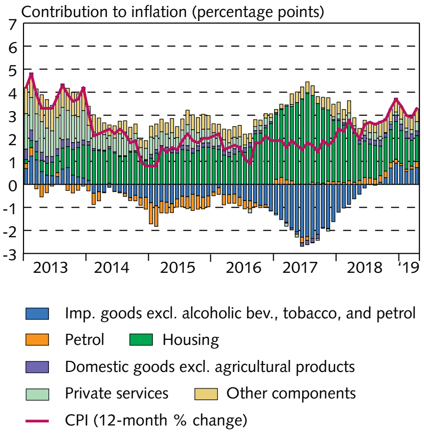
Headline and underlying inflation[1]

January 2013 - April 2019



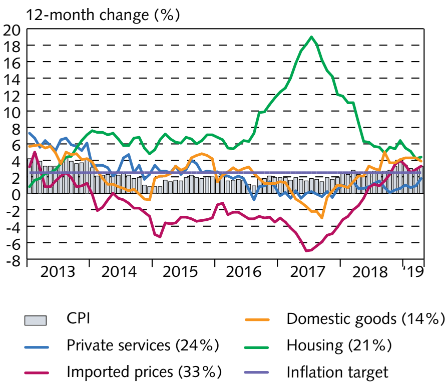

1. Underlying inflation measured using a core index (which excludes the effects of indirect taxes, volatile food items, petrol, public services, and real mortgage interest expense) and statistical measures (weighted median, trimmed mean, a dynamic factor model, and a common component of the CPI).
*Sources:* Statistics Iceland, Central Bank of Iceland.

Chart VI-4
Components of CPI inflation
January 2013 - April 2019



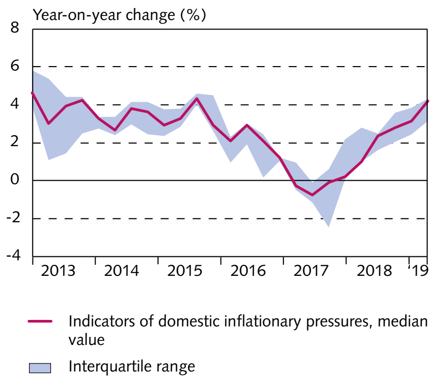

*Source:* Statistics Iceland.

Chart VI-5
Imported and domestic inflation[1]
January 2013 - April 2019




1. Imported inflation is estimated using imported food and beverages and the price of new motor vehicles and spare parts, petrol, and other imported goods. The figures in parentheses show the current weight of these items in the CPI.
*Sources:* Statistics Iceland, Central Bank of Iceland.

Chart VI-6
Domestic inflationary pressures[1]
Q1/2013 - Q1/2019




1. The shaded area includes five indicators of domestic inflationary pressures. The indicators are unit labour costs (moving average), the GDP price deflator, prices of private services and domestic goods, and producer prices of goods sold domestically. Central Bank baseline forecast Q1/2019 for the GDP price deflator and for unit labour costs.
*Sources:* Statistics Iceland, Central Bank of Iceland.

VI-3), although it was nearly 1 percentage point higher than in April 2018. Developments in underlying inflation have been very similar to developments in measured inflation since end-2017. At the same time, the contribution of housing to inflation has tapered off after peaking in summer 2017 (Chart VI-4). In April, owner-occupied housing costs had risen by 4% year-on-year, and about a third of the increase in twelve-month inflation was due to the housing component. The contribution of imported and domestic goods to inflation has increased, however, and these two items explain nearly half of the inflation rate.

**Exchange rate pass-through weakens …**

Following a rise in imported goods prices in H2/2018, the exchange rate pass-through from the depreciation of the króna to import prices weakened in Q1/2019. In trade-weighted terms, the króna has depreciated by just over 11% in the past twelve months, whereas in April, the price of imported goods in the CPI had risen by 3.3% between years (Chart VI-5). Firms have not as yet passed the entire depreciation through to prices, which probably reflects increased competition, weaker growth in domestic demand, lower trading partner inflation, and falling inflation expectations. For example, clothing and footwear prices have risen by only 1.3% between years, and furniture and housewares by around 3%. Global oil prices have risen since the beginning of the year, however, and in addition to the direct impact on measured inflation, there could be some indirect effects on, for example, airfares.

**… but the outlook is uncertain because of firms' cost increases**

Domestic inflationary pressures mounted as 2018 progressed and have continued to do so in 2019 to date (Chart VI-6). Domestic goods prices have risen by 3.9% in the past twelve months. They contributed 0.5 percentage points to twelve-month inflation in April, mainly because of an increase in domestic agricultural product prices. The rise in producer prices of goods sold domestically has eased, however, after a rapid increase in H2/2018. The contribution of private services to inflation has been limited in the recent term, and in Q1/2019 it was more or less unchanged year-on-year. It increased in April, however, mainly because of rising airfares, and at that time the twelve-month increase in private services prices measured 1.8% (Chart VI-7).

According to Gallup's spring survey of Iceland's 400 largest firms, just over half of respondents expected to have to raise their product prices in the next six months. This is virtually unchanged from the autumn 2018 survey (Chart VI-8). On the other hand, nearly 80% of executives expected input prices to rise in the next six months, a significant increase from the previous survey. The survey also revealed that 80% of executives considered wage costs the strongest driver of increases in their product prices.[1] In view of the fact that firms' costs have risen steeply in the recent term because of wage increases and the depreciation of the króna, the pay rises ahead could lead to grow-

1. The Gallup survey was carried out in February and March, before wage agreements were signed.

ing inflationary pressures, albeit offset to a degree by the prospect of a rapid narrowing of the output gap this year (see Chapter IV).

**Larger wage increase in 2017, but a smaller one in 2018**

In March 2019, Statistics Iceland published new figures on wages and related expenses after a slight revision of the previous figures. Estimated wage developments in 2017 changed the most, as the twelve-month rise in wages per hour was revised upwards by 1.7 percentage points, to 9.2%. Furthermore, year-2018 figures, published for the first time, indicated that wages per hour had risen by 4.5% year-on-year, whereas the forecast in the February *Monetary Bulletin* projected the increase at 7%. Based on the most recent Statistics Iceland figures, wage developments therefore appear to have been underestimated for 2017 but overestimated for 2018. Developments for the two-year period as a whole were broadly in line with the February forecast: in February, the average wage increase in 2017-2018 was estimated at 7.5%, whereas the new figures put it at 7%. The revision of previous numbers had a comparable effect on the wage share; i.e., wages and related expenses relative to gross factor income. In 2017, the wage share was slightly higher than previously estimated, in 2018 it was slightly lower, and for both years combined it was in line with the February forecast. The wage share is now estimated at 64.3% in 2018, about 0.5 percentage points higher than in 2017 and 3.8 percentage points above its twenty-year average.

**Unit labour costs set to rise more than forecast in February**

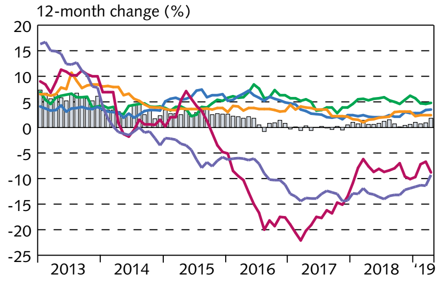
The twelve-month rise in wages continued to ease in Q1/2019, as no contractual wage increases had been negotiated for the year. The general wage index rose by 5.7% year-on-year during the quarter, broadly in line with the Bank's February forecast. The rise in the total wage index was somewhat smaller in Q4/2018, however, at 5.4%, as compared with 6.1% for the general wage index (Chart VI-9).

The wage settlements signed in April apply to a large share of private sector workers, although the impact will probably be felt more widely. The negotiated pay rises for 2019 are similar to those assumed in the Bank's February forecast. On the other hand, the February forecast assumed that wage agreements would be relatively front-loaded, whereas now it appears that the bulk of the pay increases will come later in the contract period (see also Box 4). According to the current baseline forecast, wages per hour will rise by 6.1% this year, slightly more than was projected in February. Nearly half of the increase for the year is due to base effects, however, because even if wages remained flat in 2019, the change between the 2018 and 2019 averages would measure 2.6%. Over the three years from 2019 through 2021, wages will rise by nearly 1 percentage point more per year than was assumed in the February forecast. The difference is greater in terms of unit labour costs, as the outlook is for weaker productivity growth during the period (see Chapter V). Labour productivity is expected to decline marginally this year and then increase by nearly 1 percentage point per year in 2020 and 2021. Unit labour costs will therefore rise by 7% this year and 4%, on average, in the two years following, or

Chart VI-7

Private services and selected subcomponents of the CPI

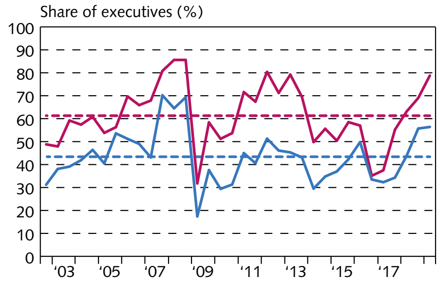
January 2013 - April 2019




1. Twelve-month moving average.
*Sources:* Statistics Iceland, Central Bank of Iceland.

Chart VI-8

Corporate expectations of input and product prices 6 months ahead 2002-2019[1]

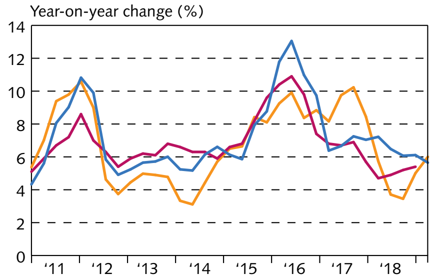



1. Broken lines show averages from 2002.
*Source:* Gallup.

Chart VI-9

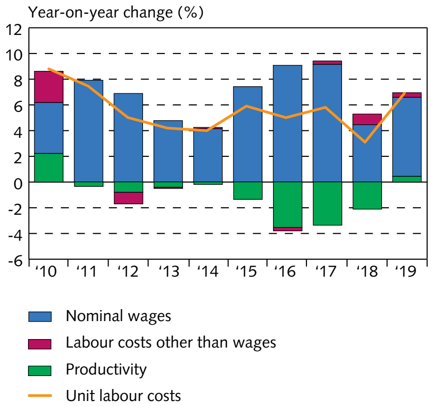
Different measures of wages[1]

Q1/2011 - Q1/2019



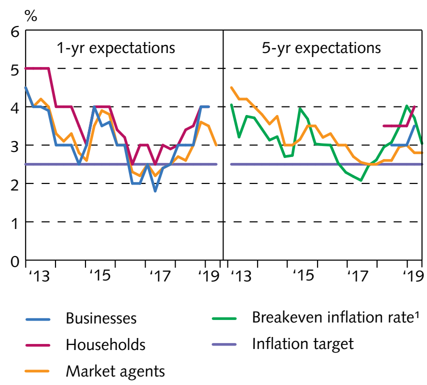

1. Wages per hour worked are based on annual figures for the wage portion of the "wages and related expenses" category from the production accounts, as a share of total hours worked according to the Statistics Iceland labour force survey and are estimated for Q1/2019.
*Sources:* Statistics Iceland, Central Bank of Iceland.

Chart VI-10
Unit labour costs and contribution of underlying components 2010-2019[1]




1. Labour productivity growth is shown as a negative contribution to an increase in unit labour costs. Central Bank baseline forecast 2019.
*Sources:* Statistics Iceland, Central Bank of Iceland.

Chart VI-11
Inflation expectations
Q1/2013 - Q2/2019




1. The most recent value is the average of daily values from 1 April through 17 May 2019.
*Sources:* Gallup, Central Bank of Iceland.

about 1½ percentage points more per year than was forecast in February (Chart VI-10).

## Inflation expectations

**Short-term inflation expectations appear to have peaked …**
Short-term inflation expectations are now higher by all measures than they were a year ago, but they appear to have peaked. According to the surveys carried out by Gallup this spring, households' and corporate executives' one-year inflation expectations were unchanged from the previous survey, at 4%. Their two-year inflation expectations are broadly similar and have remained unchanged in the past year. Market agents' short-term inflation expectations have started to fall again, however, as has the breakeven inflation rate in the bond market (Table VI-1 and Chart VI-11).[2]

**… and long-term inflation expectations have declined again**
According to Gallup's spring surveys, households and executives expect inflation to average 3.5-4% over the next five years. This is an increase of 0.5 percentage points between surveys. On the other hand, market agents expect inflation to average 2.8% over the next five years and 2.7% over the next ten years, with ten-year expectations down slightly between surveys while five-year expectations are unchanged. The five- and ten-year breakeven inflation rate in the bond market has also fallen in recent months and has averaged 3% in Q2 to date. Long-term inflation expectations in the market have therefore eased towards the inflation target again, probably because of the prospect of a rapid easing of demand pressures, reduced uncertainty about wage agreements, and the relative stability of the króna in recent months.

Table VI-1 Inflation expectations (%)[1]

| | Q2 2019 | Q1 2019 | Q2 2018 | Q2 2019 | Q1 2019 | Q2 2018 |
|---|---|---|---|---|---|---|
| | | *1 year* | | | *2 years* | |
| Businesses | - | 4.0 | 3.0 | - | 3.5 | 3.5 |
| Households | - | 4.0 | 3.4 | - | 4.0 | 4.0 |
| Market agents | 3.0 | 3.5 | 2.6 | 2.8 | 3.0 | 2.7 |
| Breakeven inflation rate | 3.2 | 3.6 | 2.5 | 3.2 | 3.7 | 2.7 |
| | | *5 years* | | | *10 years* | |
| Businesses | - | 3.5 | 3.0 | - | - | - |
| Households | - | 4.0 | 3.5 | - | - | - |
| Market agents | 2.8 | 2.8 | 2.7 | 2.7 | 2.8 | 2.7 |
| Breakeven inflation rate | 3.0 | 3.7 | 3.1 | 2.9 | 3.7 | 3.3 |

1. The most recent Gallup surveys of corporate and household inflation expectations were carried out in February and March 2019, and the Central Bank's survey of market agents' expectations was conducted in early May 2019. Households and businesses are not asked about ten-year inflation expectations. The most recent value for the breakeven inflation rate in the bond market is the average of daily values from 1 April 2019 through 17 May 2019.
*Sources:* Gallup, Central Bank of Iceland.

2. The breakeven inflation rate is calculated based on the interest rate differential between indexed and non-indexed bonds. It should be borne in mind, however, that the breakeven rate also includes a liquidity risk premium and an inflation risk premium. To some extent, last year's rise in the breakeven rate reflected a rise in the bond market risk premium. Therefore, the recent decline in the breakeven rate could also be attributed in part to a reduction in the risk premium.