

Article

Coverage differences between the Harmonised Index of Consumer Prices and national Consumer Prices Indices

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1. Overview

The Harmonised Index of Consumer Prices (HICP) is compiled by National Statistics Institutes (NSIs) of the European Union member states and European Free Trade Association (EFTA) members and provided to Eurostat (the statistical authority of the European Union). Eurostat sets the methodological guidelines for the index in order to make the HICP internationally comparable between member states.

Often countries which produce HICP wish to cover goods and services which differ in scope to the HICP. To achieve this, they produce a national Consumer Price Index (CPI), which can be tailored to the countries' objectives, and is not required to follow Eurostat regulations. The Consumer Price Index of the UK is one of the very few cases where the CPI and the HICP are the same index.

This article summarises the main differences between the Eurostat HICP methodology and the national CPI indices. In total 28 countries from across Europe and surrounding areas are covered.

The information on coverage differences was extracted from the HICP metadata provided by Eurostat¹ and supplemented by information from the Organisation for Economic Co-operation and Development (OECD)², the International Monetary Fund (IMF)³ and the respective NSI websites.

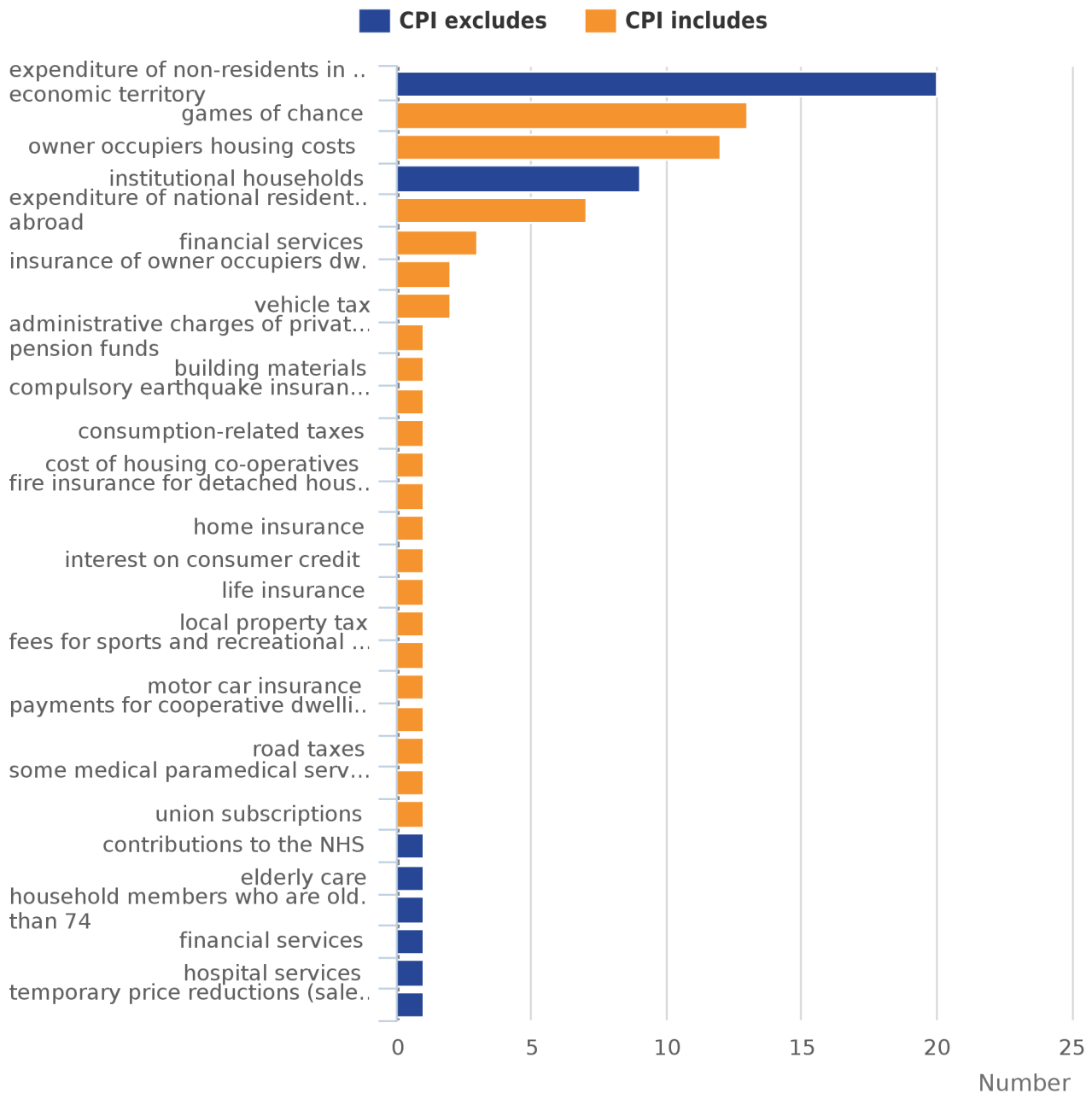
Notes:

1. This is provided to [Eurostat](#) directly from the National Statistical Institutes (NSIs).
2. [Methodological Notes: Compilation of G20 Consumer Price Index](#) and [Sources and Definitions for Main Economic Indicators \(OECD\)](#)
3. [International Monetary Fund \(IMF\)](#)

2. Differences between HICPs and national CPIs in summary

Figure 1: Frequency of the differences between the HICPs and national CPIs

Europe and Turkey, 2016



Source: Office for National Statistics

Several differences between the national CPIs and HICPs appear to be common across a number of countries, as shown in Figure 1. All differences marked as “CPI includes” are included in the national CPI but excluded from the HICP, similarly “CPI excludes” highlights the expenditure or items that are excluded from the CPI but included in the HICP. The magnitude of the bars represents how many countries have these differences within their national CPI. [More detailed breakdown is available as a data table associated with this article.](#)

The most common difference is the geographical coverage of the expenditure data used to weight the index, referred to as 'expenditure of non-residents in the economic territory' in figure 1¹. The HICP is based on the "domestic approach" which means that weights are compiled for the index using both the expenditure of domestic residents and foreign nationals, which is also the case in the UK CPI. However national CPIs across the surveyed countries tended to only cover the expenditure of domestic residents. This is known as the "national approach" and more than half of the countries covered in this article² seem to use the national approach rather than the domestic approach. This difference in expenditure coverage could mean different weights are used in the HICP and national CPIs, leading to differences in the two price indices.

The second most often reoccurring divergence from HICP is the inclusion of games of chance. 13 out of 28 countries include some form of games of chance within their national CPI indices. Owner occupiers' housing costs (OOH) closely follow games of chance in terms of frequency as 12 NSIs include OOH³ in national CPIs they produce. Sometimes this also includes insurance relating to owner occupiers' housing as is the case in Austria, Denmark and Finland. As the UK CPI is identical to the HICP it does not include these costs, however the Office for National Statistics produces the CPIH index (currently not a National Statistic) which does include the OOH component.

The choice of using net versus gross expenditure for compiling insurance weights is another area where in some cases the NSIs choose to diverge from HICP regulations. When pricing goods such as insurance the net weights are based on the amount paid by consumers, net of reimbursements whereas the gross weight approach takes the total expenditure by households. Both Ireland and the Netherlands use gross weights for insurance in their national CPIs but net weights when compiling the HICP as regulated by Eurostat.

Not only is there a distinction between net and gross weights, the weights are also sometimes collected from sources which differ between the two indices. For example, Bulgaria, Croatia, Greece and Poland calculate their CPI weights using Household Budget Survey (HBS) for the respective NSIs while the HICP weights are calculated using household expenditure data in the national accounts. However, it is more common for NSIs to use a mix of the 2 data sources in order to get a higher level of quality and accuracy. Other noteworthy inclusions are mandatory earthquake insurance in the Turkish CPI and local property tax in the Ireland CPI (similar to Council Tax in the UK). Iceland excludes expenditure of household members who are older than 74 from their CPI.

Notes:

1. It is important to note that "expenditure of national residents abroad" is only added for the cases where the NSIs specifically mention it to be included within their CPI.
2. 19 out of 28 countries use this approach: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Iceland, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovenia, Spain and Switzerland
3. OOH is included in the consumer price indices of the following countries: Austria, Czech Republic, Denmark, Finland, Germany, Hungary (until 2012), Iceland, Netherlands, Norway, Slovakia, Sweden and Switzerland.

3. Detailed differences and index comparison by country

This section provides detailed information on the coverage differences between the national CPIs and the HICPs for each country in turn. Most countries within the European region are covered as well as Turkey as it also produces an HICP. Similarly to figure 1, for each country the "CPI includes" title lists items or expenditure included in the CPI but excluded from the HICP and "CPI excludes" title lists items or expenditure excluded from the CPI but included in the HICP. Further differences in methodology are covered in the comments section.

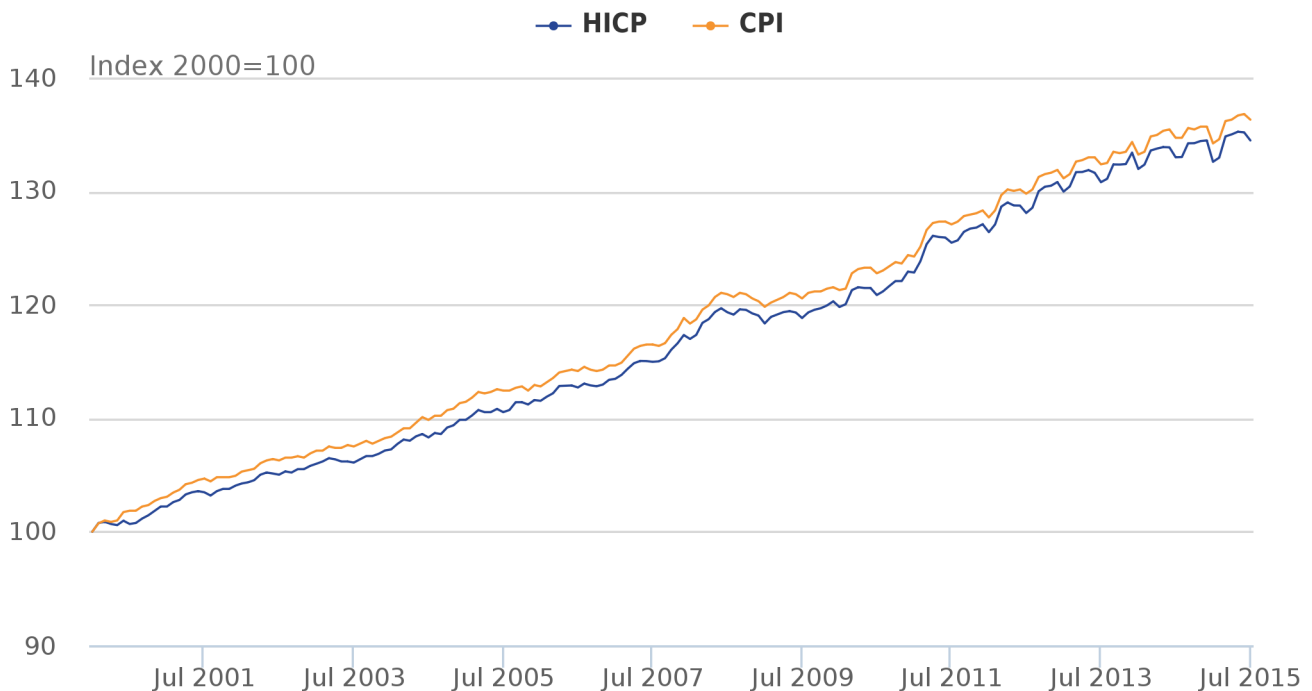
The HICP and CPI indices for each country are also presented in the charts. This serves to illustrate how the potential differences in coverage might affect the indices in question. The data used in the charts has been gathered from the OECD and Eurostat¹. It is important to note that the coverage differences presented alongside the indices might have not been in place at the beginning of the series and might have come into effect at a later point in the series.

Austria

1. CPI includes:
 - owner occupiers' housing costs (payments approach)
 - games of chance
 - road taxes
 - insurance of owner occupiers' dwellings
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments:

For more detail on the [Austrian CPI](#) visit their website.

Figure 2: Monthly HICP and CPI indices for Austria, 2000 to 2015



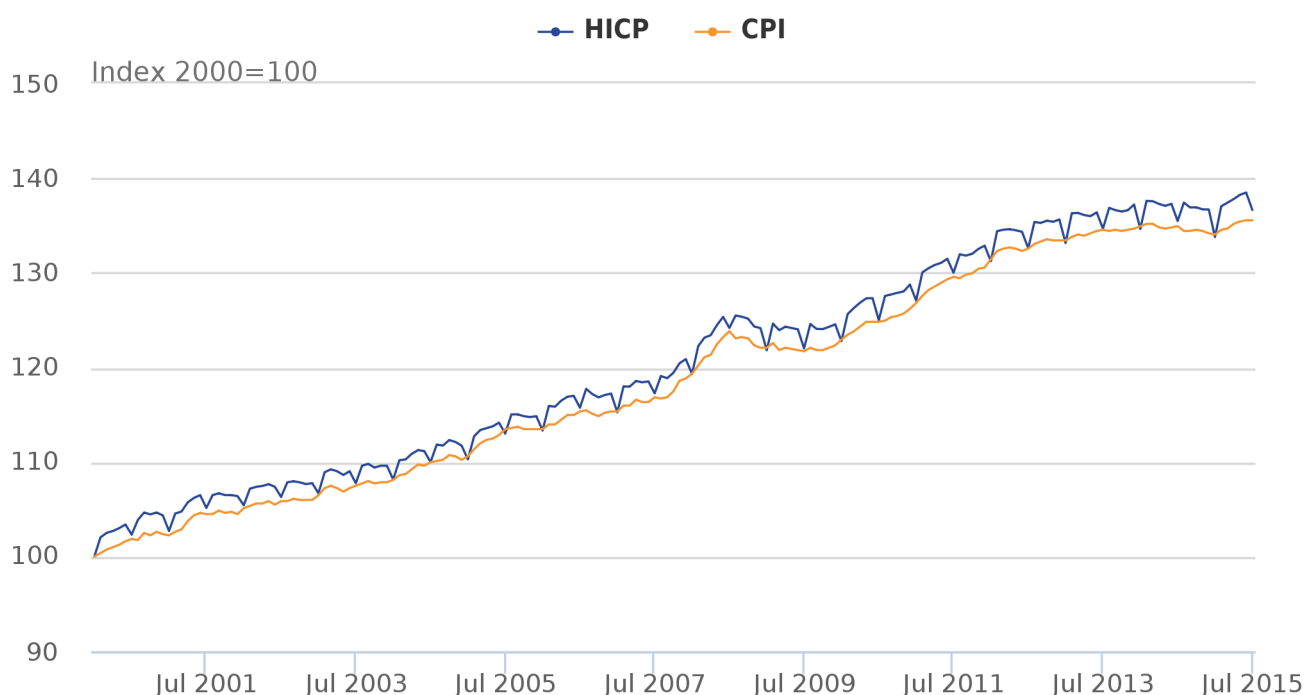
Source: Organisation for Economic Co-operation and Development, Eurostat

Belgium

1. CPI includes:
 - expenditure of national residents abroad
2. CPI excludes:
 - expenditure of non-residents in the economic territory
 - expenditure of institutional households
3. Additional comments: Figure 3 shows that there is an apparent difference in seasonality of the series. One explanation of this could be some form of seasonal adjustment. Further research established that seasonal adjustment is applied within the Belgian CPI for travel abroad and rent on holiday homes.

For a broader overview of [Belgian CPI](#) visit their website.

Figure 3: Monthly HICP and CPI indices for Belgium, 2000 to 2015



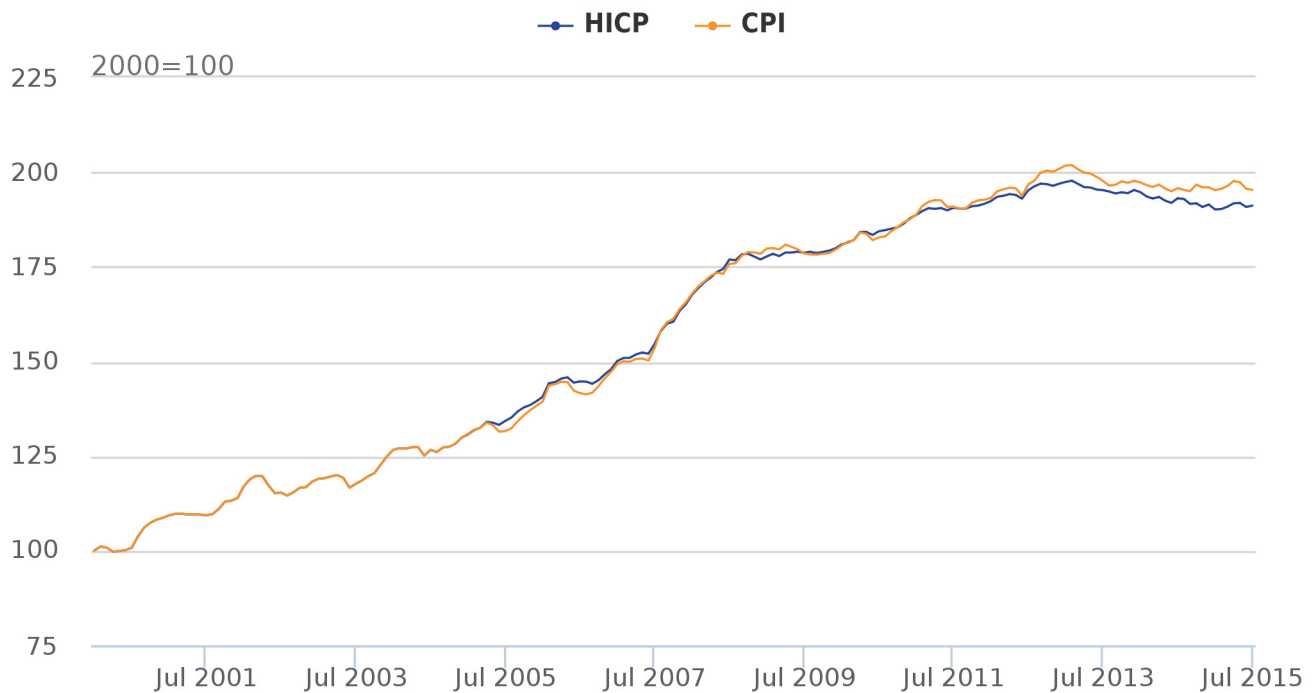
Source: Organisation for Economic Co-operation and Development, Eurostat

Bulgaria

1. CPI includes:
 - none
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments: Weights for the CPI are mainly calculated from the Household Budget Survey whereas weights for the HICP are calculated from household expenditure data in the national accounts. CPI weights are lagged by 1 year and HICP weights are lagged by 2 years.

For a broader overview of [Bulgarian CPI](#) visit their website.

Figure 4: Monthly HICP and CPI indices for Bulgaria, 2000 to 2015



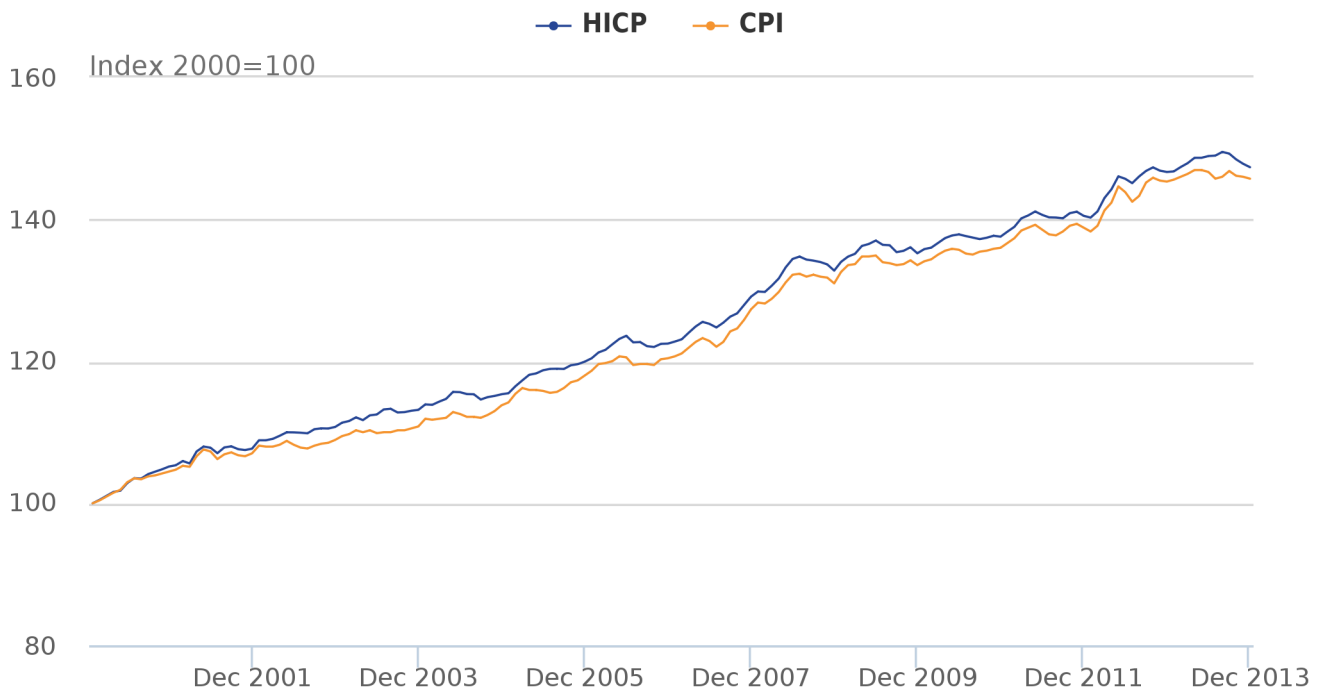
Source: National Statistical Institute of Bulgaria and Eurostat

Croatia

1. CPI includes:
 - none
2. CPI excludes:
 - expenditure of non-residents in the economic territory
 - expenditure of institutional households
3. Additional comments: Weights are mainly calculated from the Household Budget Survey for the CPI and from household expenditure data in the national accounts for the HICP.

For a broader overview of [Croatian CPI](#) visit their website.

Figure 5: Monthly HICP and CPI indices for Croatia, 2000 to 2013



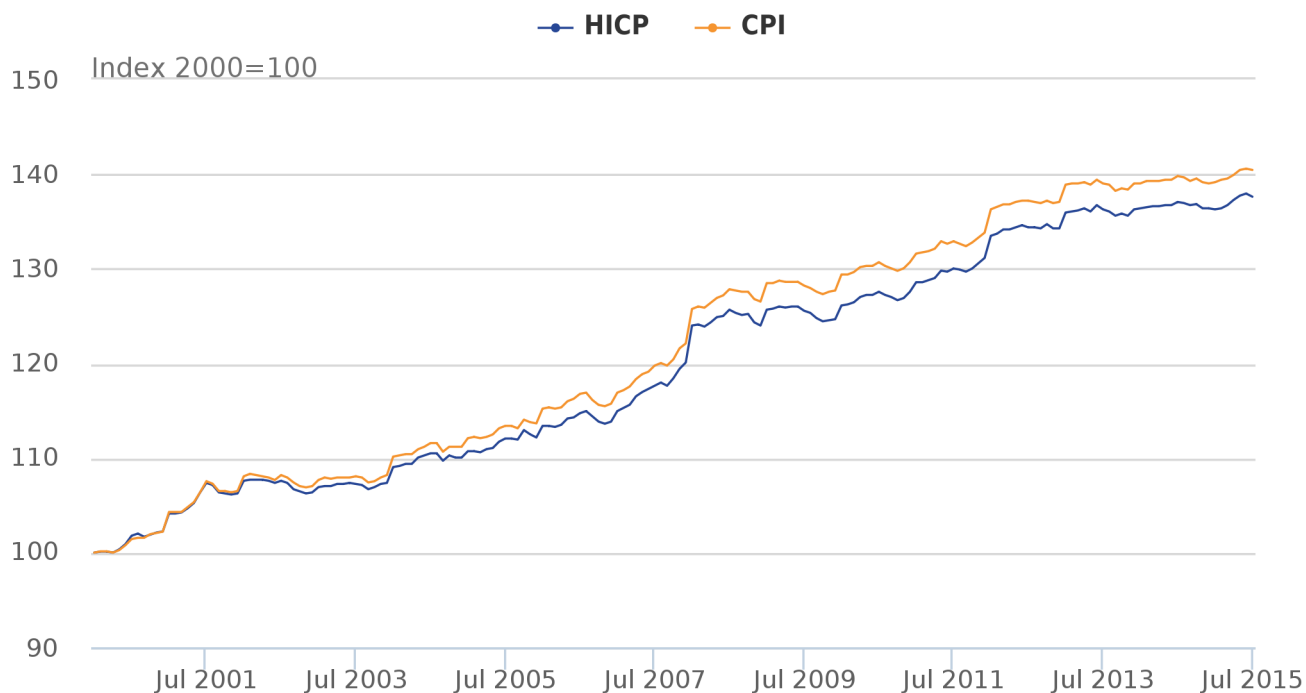
Source: Eurostat and Croatia Bureau of Statistics

Czech Republic

1. CPI includes:
 - owner occupiers' housing costs (rental equivalence approach)
 - payments for the use of cooperative dwellings
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments: The CPI basket is reviewed annually whereas the weights are updated every 2 years.

For a broader overview of [Czech CPI](#) visit their website.

Figure 6: Monthly HICP and CPI indices for the Czech Republic, 2000 to 2015



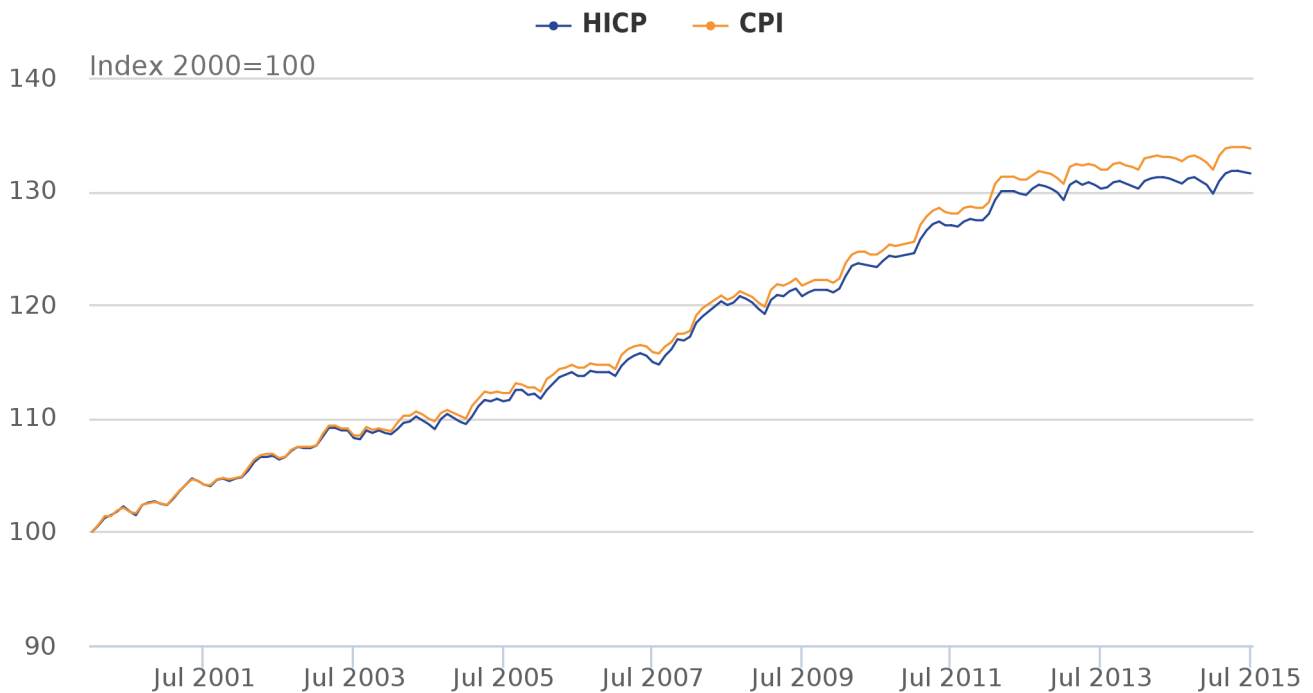
Source: Organisation for Economic Co-operation and Development, Eurostat

Denmark

1. CPI includes:
 - owner occupiers' housing costs (rental equivalence approach)
 - insurance of owner occupiers' dwellings
2. CPI excludes:
 - none
3. Additional comments: From January 2001 the HICP and CPI of Denmark are methodologically homogenous apart from the item coverage.

For a broader overview of [Danish CPI](#) visit their website.

Figure 7: Monthly HICP and CPI indices for Denmark, 2000 to 2015



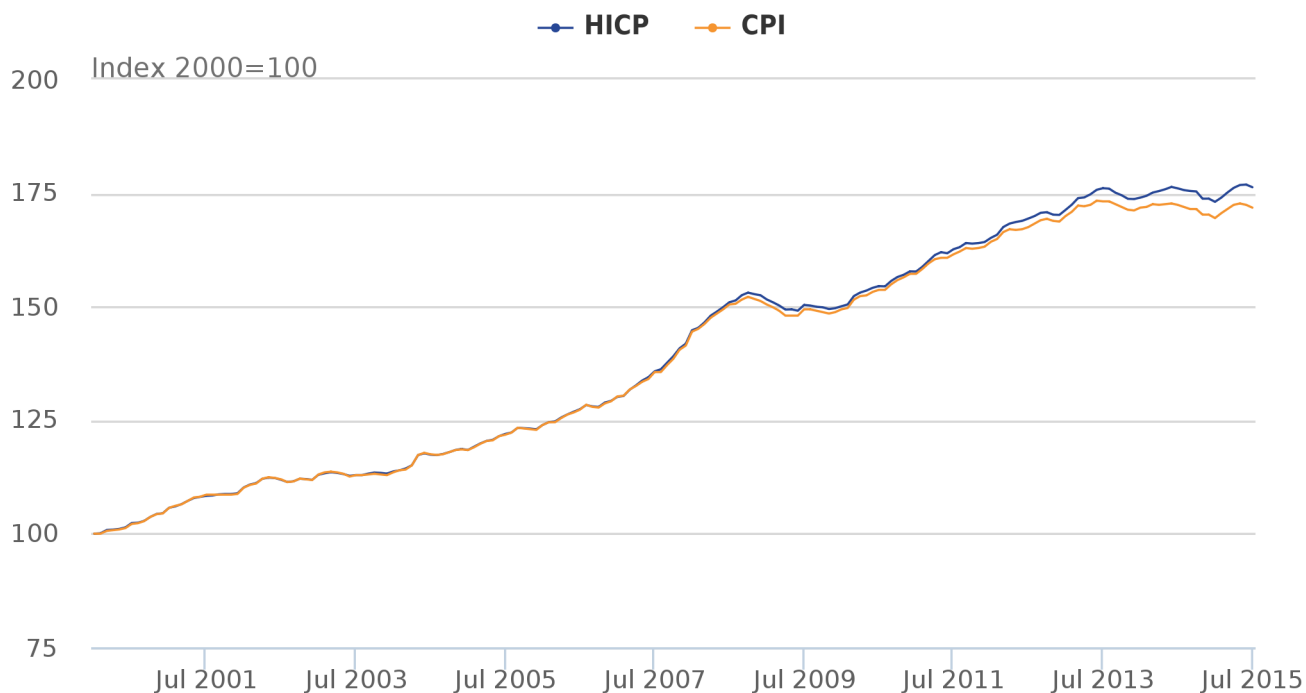
Source: Organisation for Economic Co-operation and Development, Eurostat

Estonia

1. CPI includes:
 - games of chance
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments: The weights for the CPI are not price updated whereas the weights for the HICP are price updated to December.

For a broader overview of [Estonian CPI](#) visit their website.

Figure 8: Monthly HICP and CPI indices for Estonia, 2000 to 2015



Source: Organisation for Economic Co-operation and Development, Eurostat

Finland

1. CPI includes:

- owner occupiers' housing costs (net acquisitions approach)
- games of chance
- interest on consumer credit
- vehicle tax
- fire insurance for detached houses

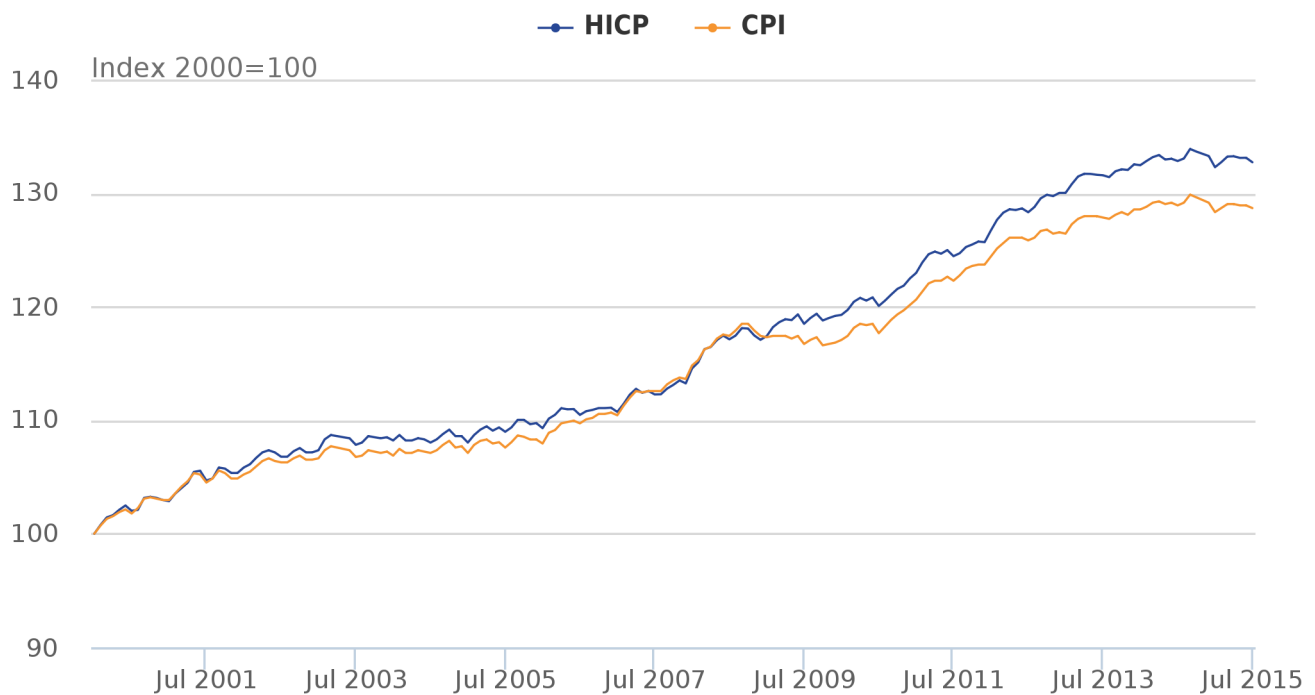
2. CPI excludes:

- none

3. Additional comments: The weights for the CPI are not price updated whereas weights for the HICP are price updated to December.

For a broader overview of [Finnish CPI](#) visit their website.

Figure 9: Monthly HICP and CPI indices for Finland, 2000 to 2015



Source: Organisation for Economic Co-operation and Development, Eurostat

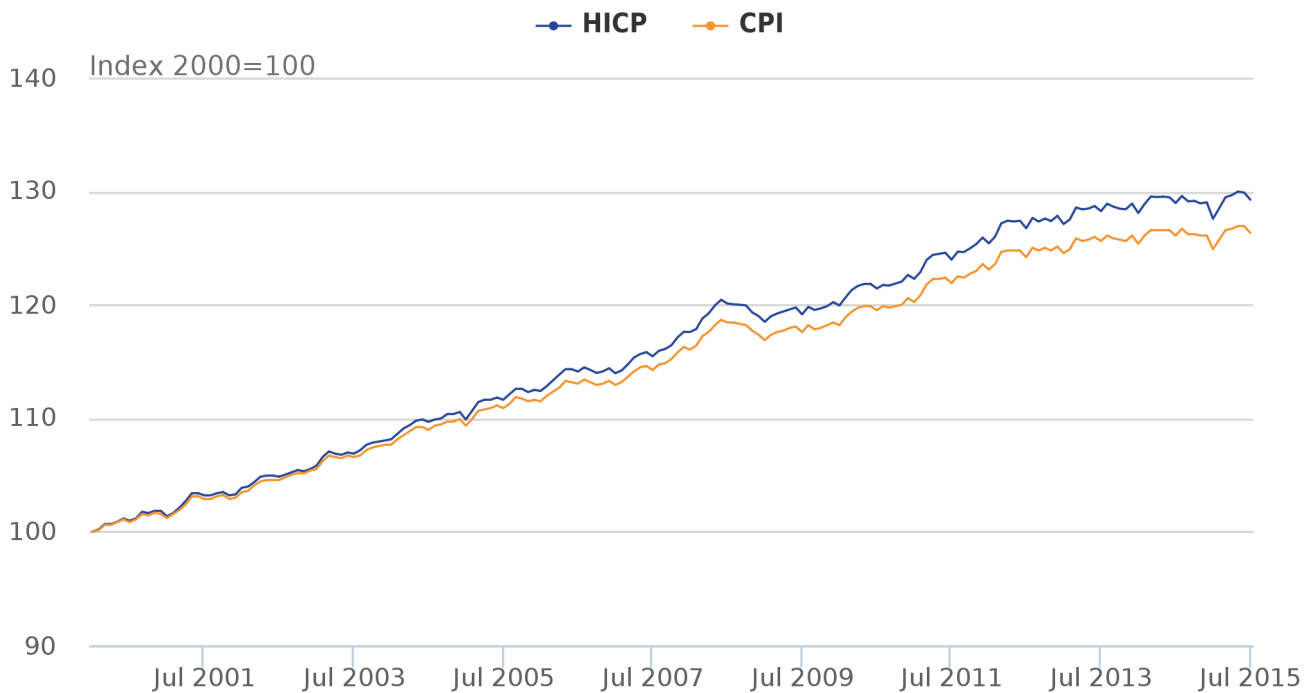
France

1. CPI includes:
 - none
2. CPI excludes:
 - none
3. Additional comments: The weights for the CPI are not price updated whereas the weights for the HICP are price updated to December.

Health, education and some social protection expenditure is calculated at gross prices whereas the HICP uses the net prices.

For a broader overview of [French CPI](#) visit their website.

Figure 10: Monthly HICP and CPI indices for France, 2000 to 2015



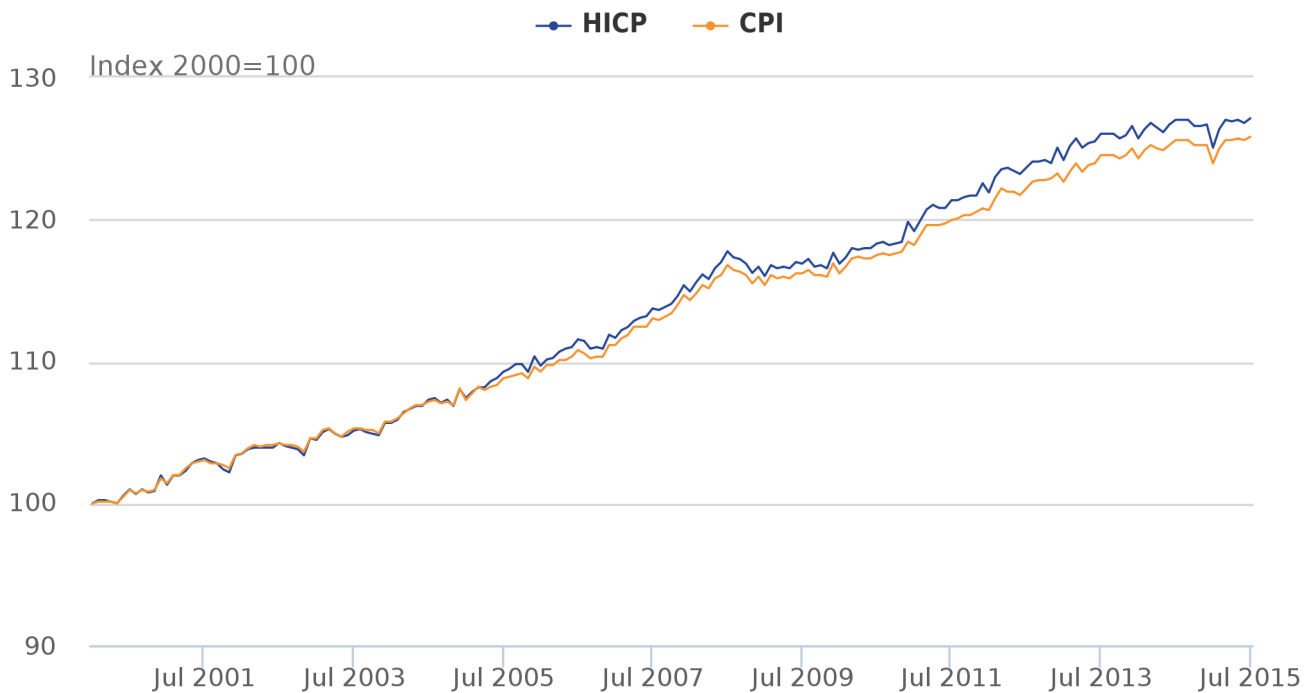
Source: Organisation for Economic Co-operation and Development, Eurostat

Germany

1. CPI includes:
 - games of chance
 - owner occupiers' housing costs (rental equivalence approach)
2. CPI excludes:
 - none
3. Additional comments: The CPI for the years 2015 to 2017 is based on 2010 weights whereas the HICP weights are updated annually.

For a broader overview of [German CPI](#) visit their website.

Figure 11: Monthly HICP and CPI indices for Germany, 2000 to 2015



Source: Organisation for Economic Co-operation and Development, Eurostat

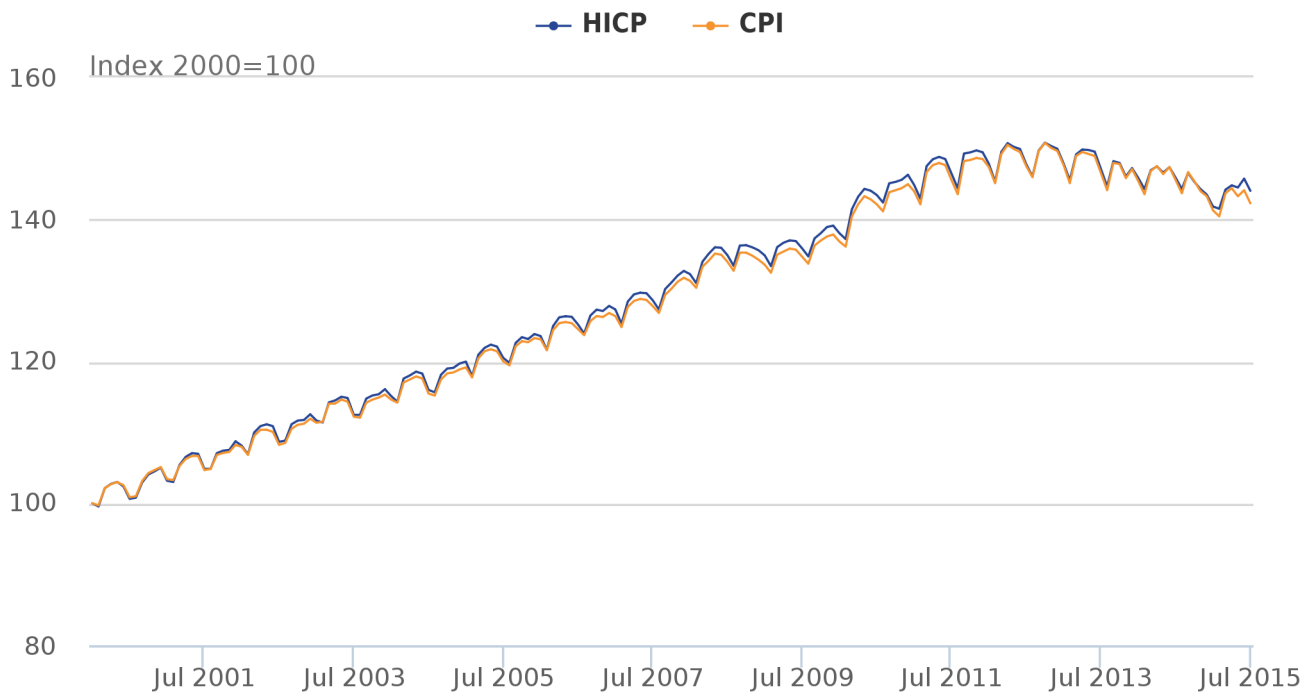
Greece

1. CPI includes:
 - expenditure of national residents abroad
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments:

Weights for the CPI are calculated from the Household Budget Survey, whereas the HICP uses additional household expenditure data from the national accounts.

For a broader overview of [Greek CPI](#) visit their website.

Figure 12: Monthly HICP and CPI indices for Greece, 2000 to 2015



Source: Organisation for Economic Co-operation and Development, Eurostat

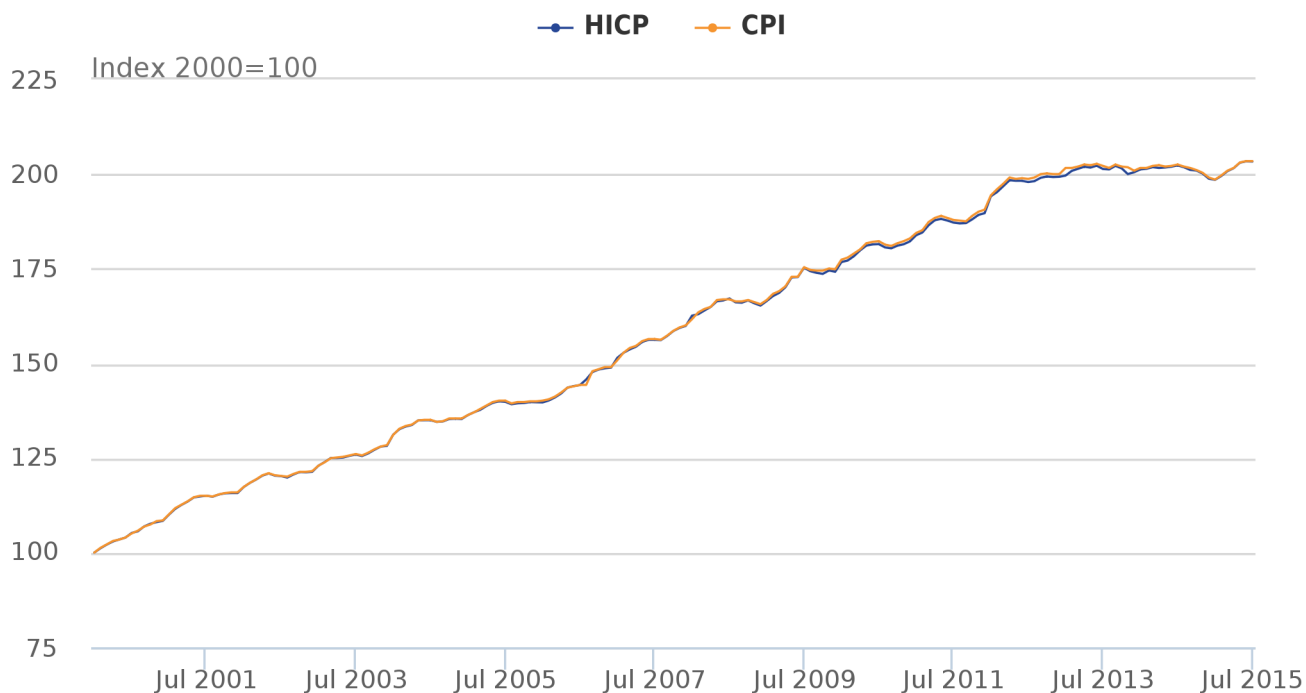
Hungary

1. CPI includes:
 - games of chance
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments: Prices for consumption of services are observed when they appear in the consumers' invoice in the CPI (payment approach) whereas in the HICP the prices enter the index for the month in which the service is consumed (acquisition approach).

It is worth mentioning that owner occupiers' housing costs (rental equivalence approach) was included in the CPI until 2012.

For a broader overview of [Hungarian CPI](#) visit their website.

Figure 13: Monthly HICP and CPI indices for Hungary, 2000 to 2015

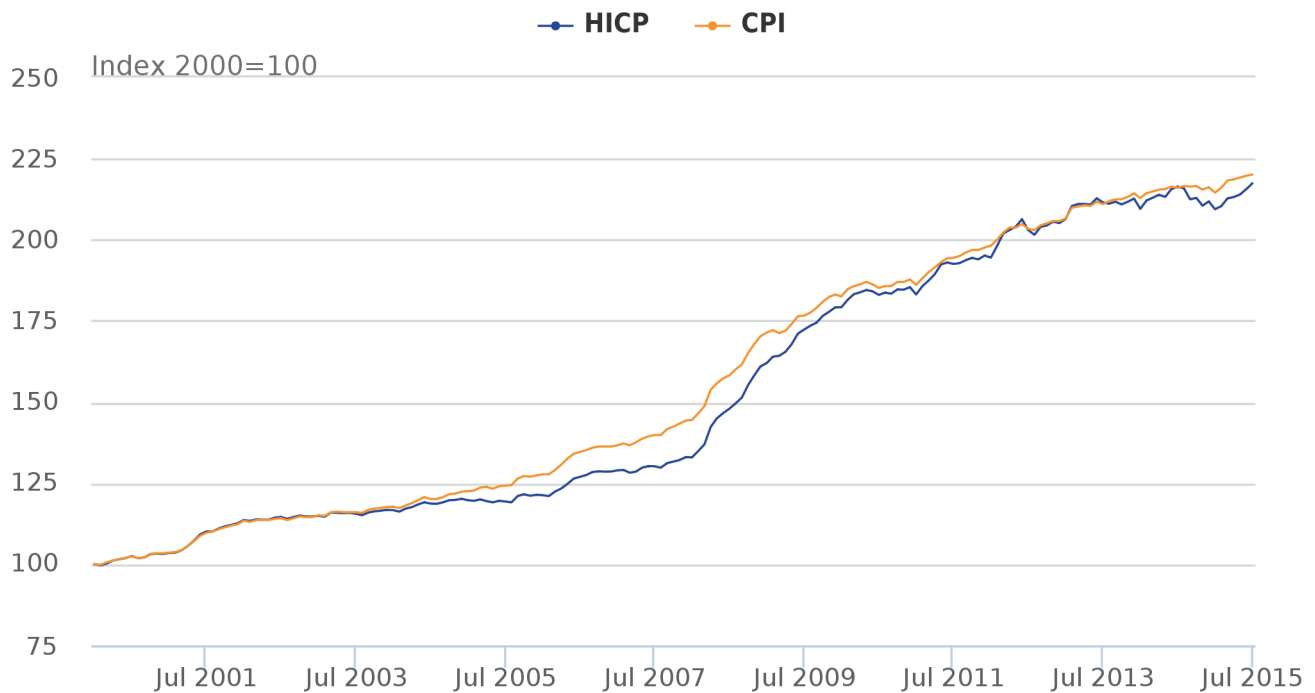


Source: Organisation for Economic Co-operation and Development, Eurostat

Iceland

1. CPI includes:
 - owner occupiers' housing costs (user cost approach)
 - games of chance
2. CPI excludes:
 - expenditure of non-residents in the economic territory
 - expenditure of household members who are older than 74
 - expenditure of institutional households
3. Additional comments: For a broader overview of [Icelandic CPI](#) visit their website.

Figure 14: Monthly HICP and CPI indices for Iceland, 2000 to 2015



Source: Organisation for Economic Co-operation and Development, Eurostat

Ireland

1. CPI includes:

- owner occupiers' housing costs (payments approach)
- union subscriptions
- motor car tax
- motorcycle tax
- building materials
- motor car insurance (non-service)
- home insurance – contents (non-service)
- home insurance – dwelling
- local property tax

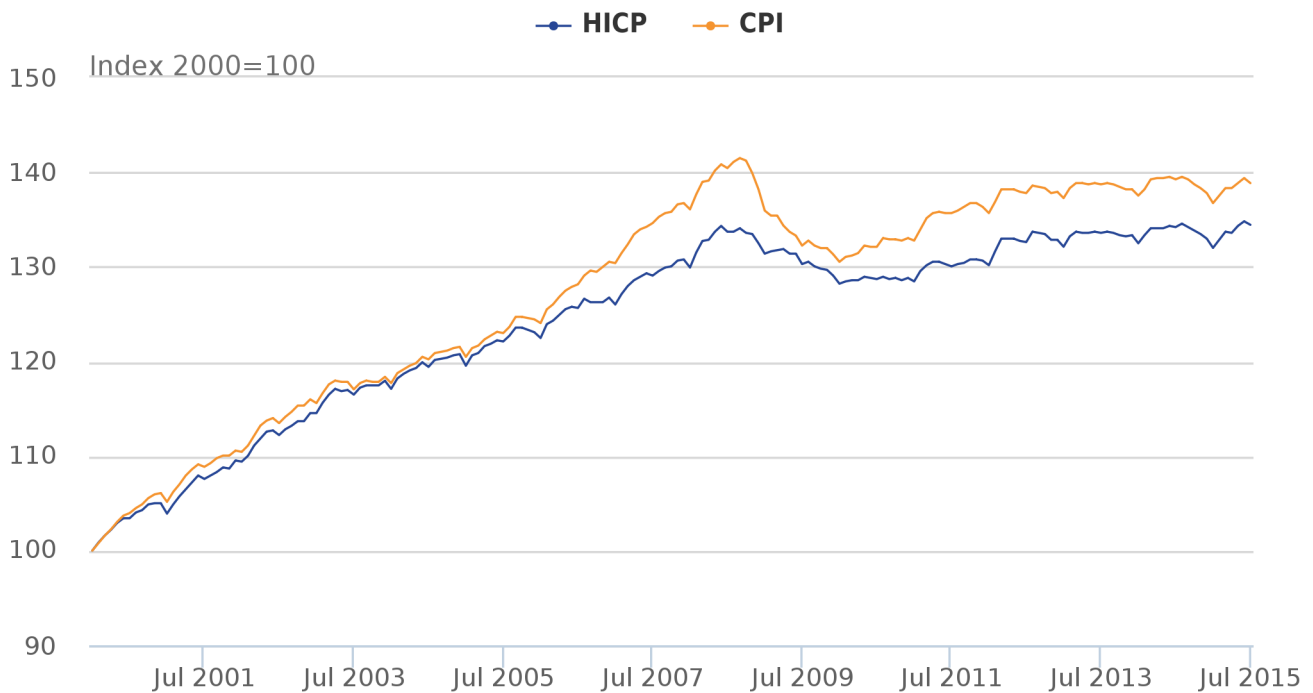
2. CPI excludes:

- none

3. Additional comments: Gross insurance premiums paid by households are included in CPI weights for dwelling, health and transport insurance. The HICP uses the service charges for these categories where the service charge is gross insurance premiums and premium supplements less claims and changes in actuarial provisions.

For a broader overview of [Irish CPI](#) visit their website.

Figure 15: Monthly HICP and CPI indices for Ireland, 2000 to 2015



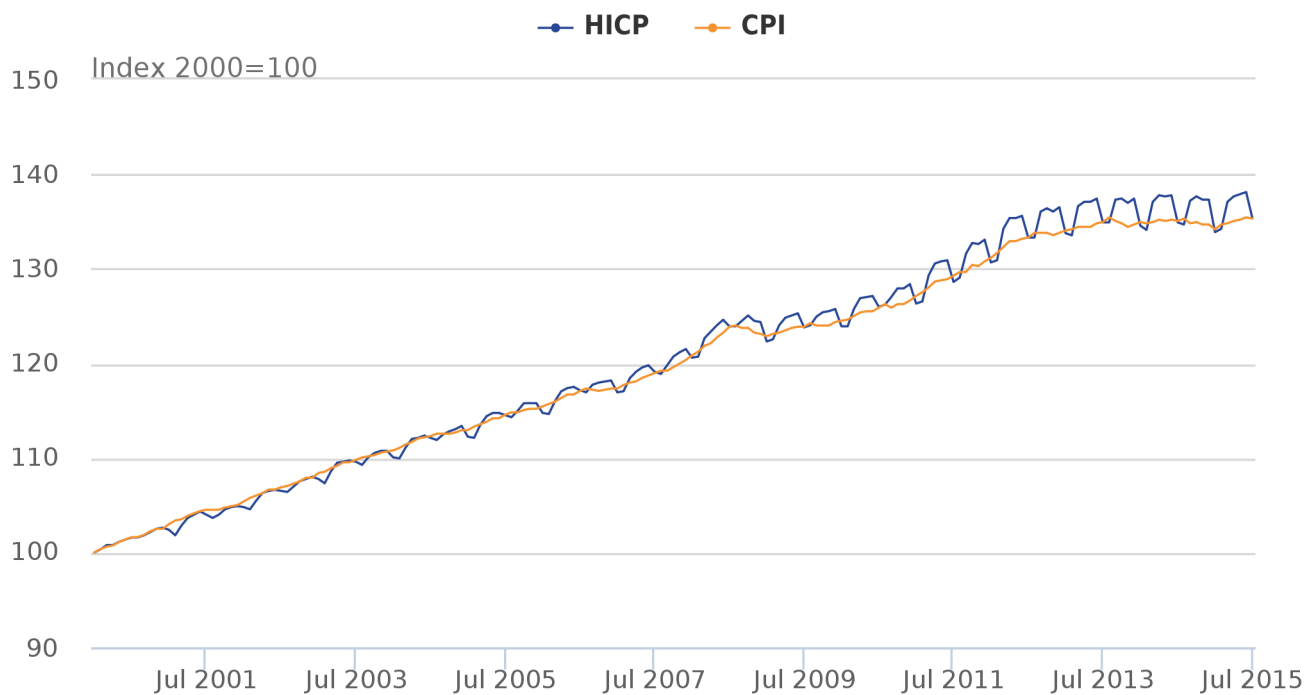
Source: Organisation for Economic Co-operation and Development, Eurostat

Italy

1. CPI includes:
 - games of chance
 - some medical and paramedical services
2. CPI excludes:
 - temporary price reductions (sales)
 - contributions to the NHS are excluded from the CPI
 - expenditure of non-residents in the economic territory
3. Additional comments: Health, education and some social protection expenditure is calculated at gross prices whereas the HICP uses net prices.

Figure 16 shows that there is an apparent difference in seasonality of the series. One explanation of this could be some form of seasonal adjustment. For a broader overview of [Italian CPI](#) visit their website.

Figure 16: Monthly HICP and CPI indices for Italy, 2000 to 2015

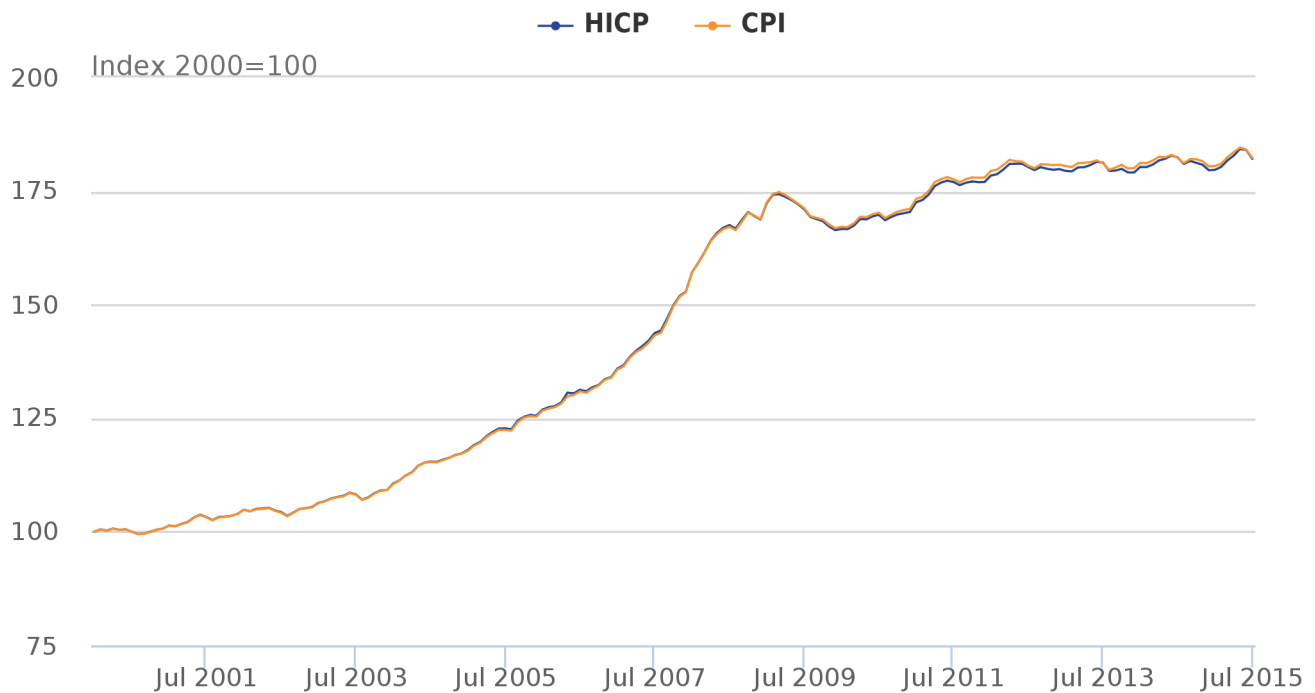


Source: Organisation for Economic Co-operation and Development, Eurostat

Latvia

1. CPI includes:
 - games of chance
 - expenditure of national residents abroad
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments: For a broader overview of [Latvian CPI](#) visit their website.

Figure 17: Monthly HICP and CPI indices for Latvia, 2000 to 2015



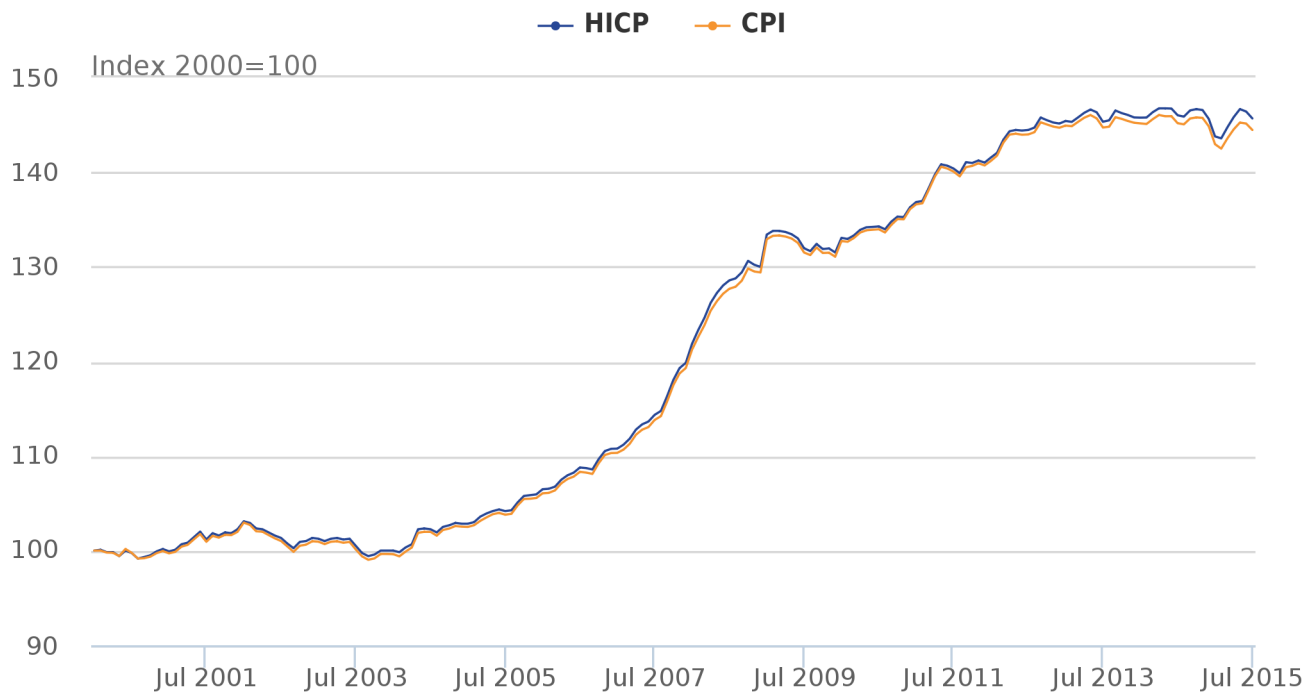
Source: Eurostat and Central Statistics Bureau of Latvia

Lithuania

1. CPI includes:
 - games of chance
 - financial intermediation services
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments: Different weighting systems are used for HICP and CPI due to difference coverage. According to the Eurostat metadata that "is the main factor causing differences in the value of indices"

For a broader overview of [Lithuanian CPI](#) visit their website.

Figure 18: Monthly HICP and CPI indices for Lithuania, 2000 to 2015



Source: Eurostat and Statistics Lithuania

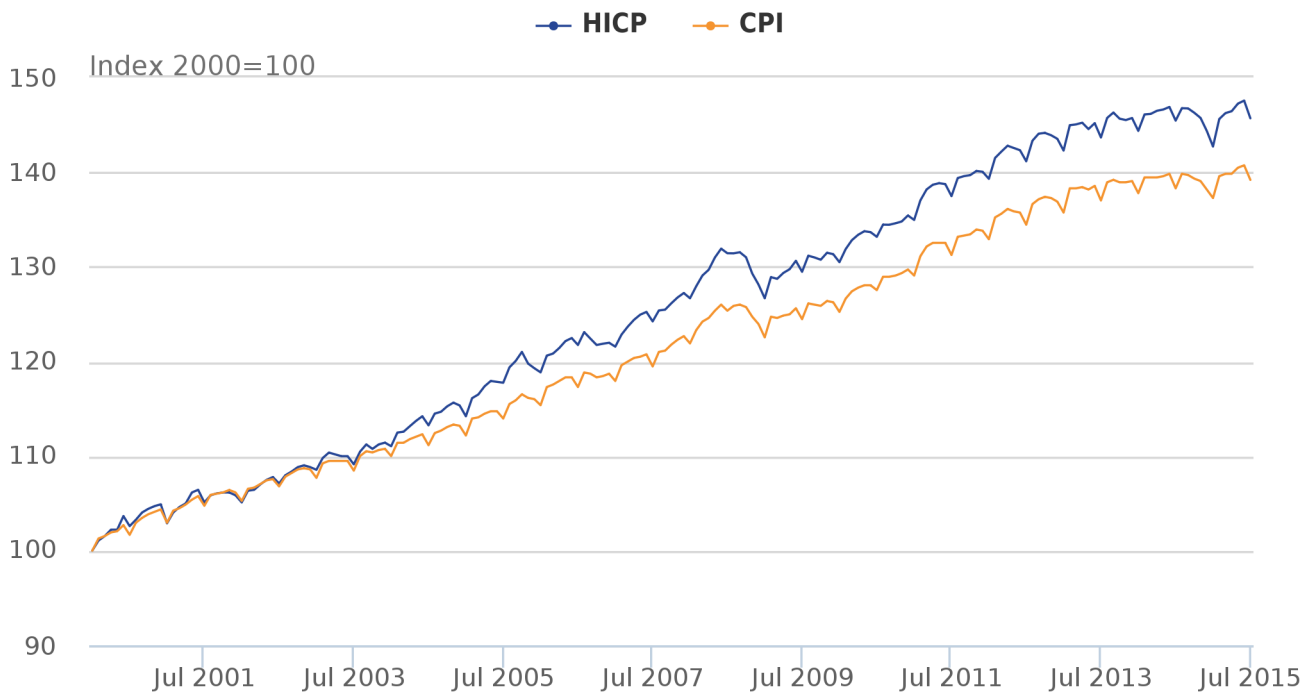
Luxembourg

1. CPI includes:
 - none
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments: The only difference between the CPI and HICP is exclusion of expenditure by non-residents in the CPI. This may seem surprising given the results in Figure 19.

However it is important to note that Luxembourg is a unique country due to its relatively small size and central location. Therefore the exclusion of expenditure by non-residents could heavily influence expenditure weights for certain categories.

For a broader overview of [Luxembourg CPI](#) visit their website.

Figure 19: Monthly HICP and CPI indices for Luxembourg, 2000 to 2015



Source: Organisation for Economic Co-operation and Development, Eurostat

Netherlands

1. CPI includes:

- owner occupiers' housing costs (rental equivalence approach)
- membership fees for sports and recreational clubs
- consumption-related taxes
- expenditure of national residents abroad

2. CPI excludes:

- expenditure of non-residents in the economic territory
- expenditure of institutional households

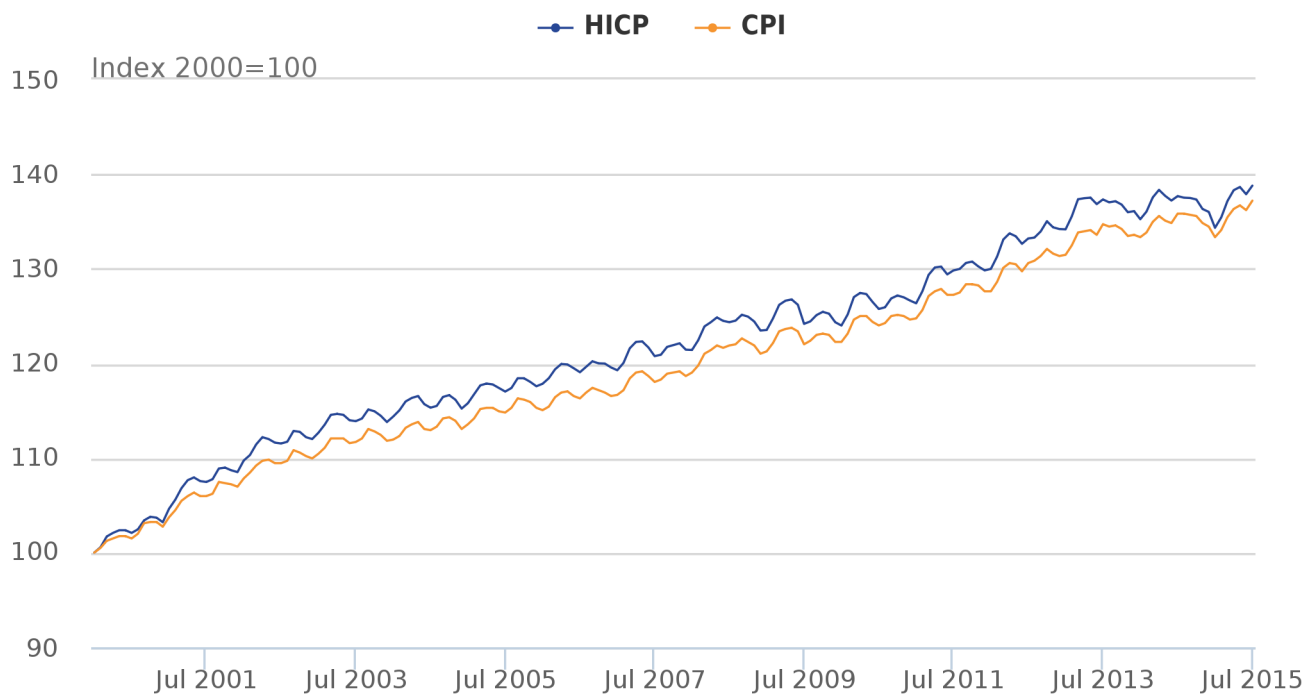
3. Additional comments: The weights for insurance in the CPI are based on full premiums while in the HICP the weight only includes the service part of the premium. Prices for both indices are collected on a gross basis thus CPI uses gross-gross approach while HICP uses the net-gross approach.

Sewerage collection, refuse collection, tuition fees and municipality services are classified differently under CPI. This would suggest a different distribution of weights and could affect the headline measure.

Child care is included by gross contributions (price including income-dependant subsidies) within the national CPI.

For a broader overview of [CPI of the Netherlands](#) visit their website.

Figure 20: Monthly HICP and CPI indices for the Netherlands, 2000 to 2015

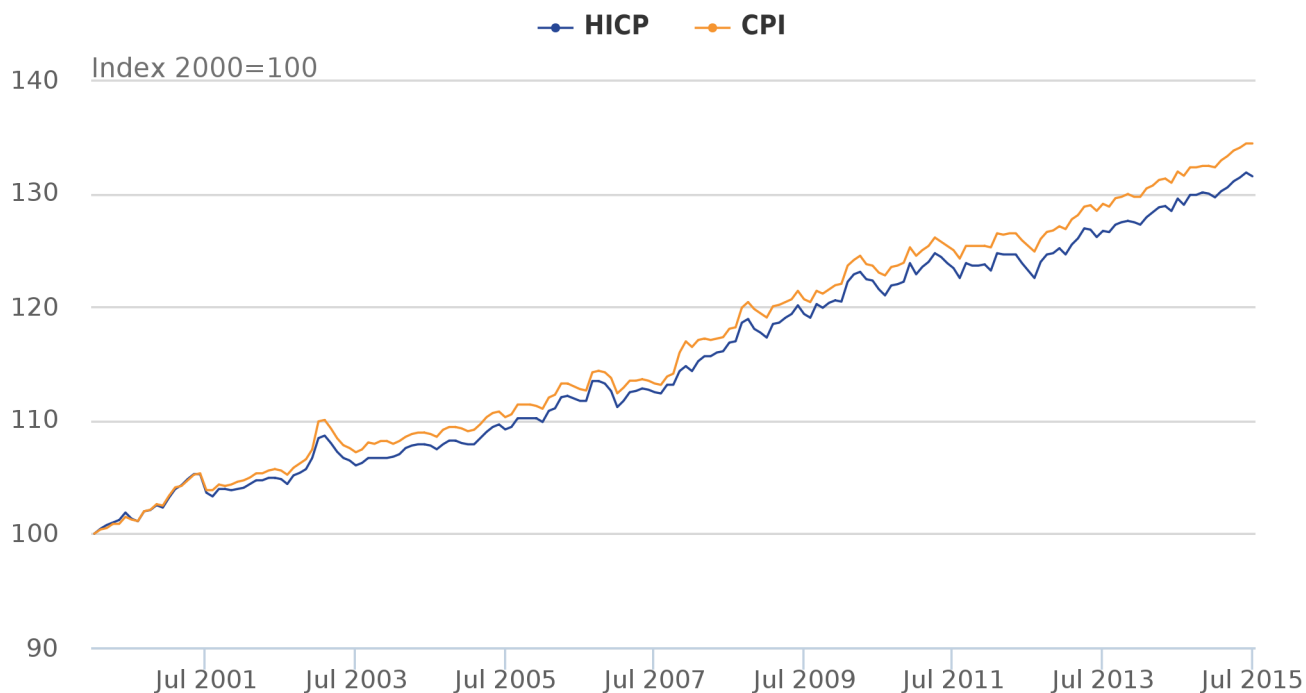


Source: Organisation for Economic Co-operation and Development, Eurostat

Norway

1. CPI includes:
 - owner occupiers' housing costs (rental equivalence approach)
 - financial intermediation services indirectly measured (FISIM)
 - life insurance
2. CPI excludes:
 - expenditure of non-residents in the economic territory
3. Additional comments: For a broader overview of [Norwegian CPI](#) visit their website.

Figure 21: Monthly HICP and CPI indices for Norway, 2000 to 2015



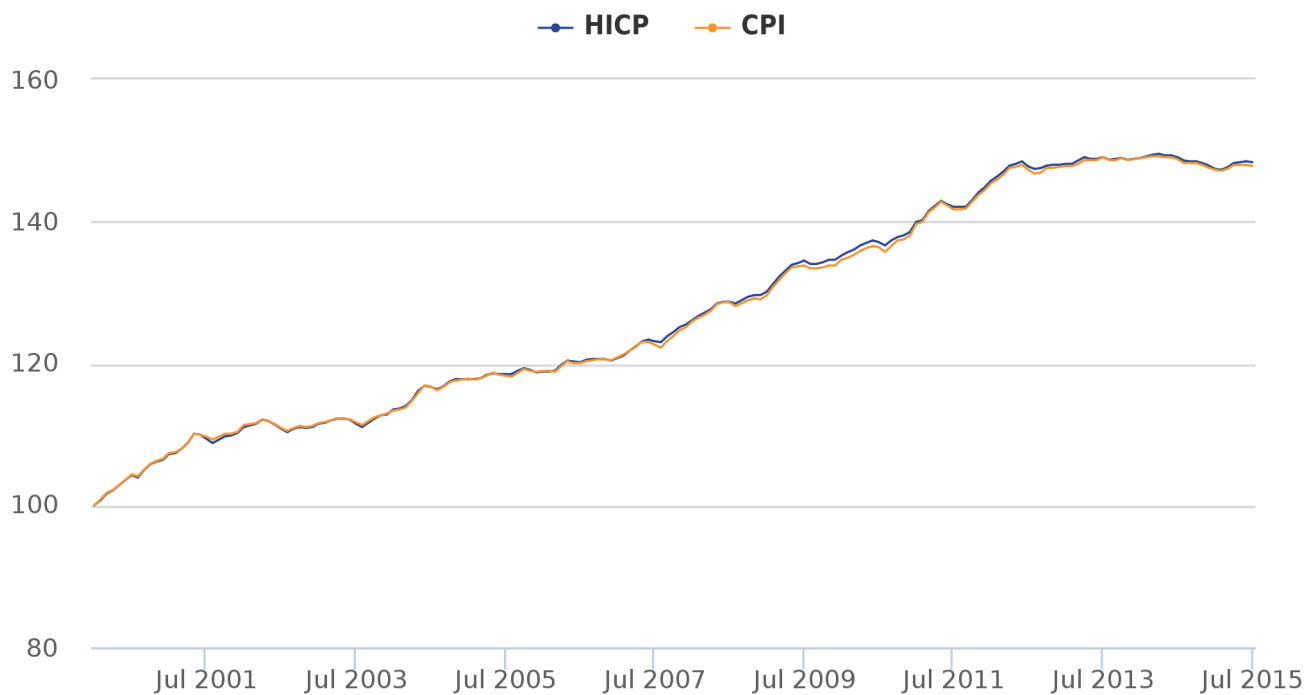
Source: Organisation for Economic Co-operation and Development

Poland

1. CPI includes:
 - games of chance
 - financial intermediation services
2. CPI excludes:
 - expenditure of non-residents in the economic territory
 - expenditure of institutional households
3. Additional comments: The main source of weights for the HICP is household expenditure data in the national accounts and CPI weights are based on Household Budget Survey data.

For a broader overview of [Polish CPI](#) visit their website.

Figure 22: Monthly HICP and CPI indices for Poland, 2000 to 2015

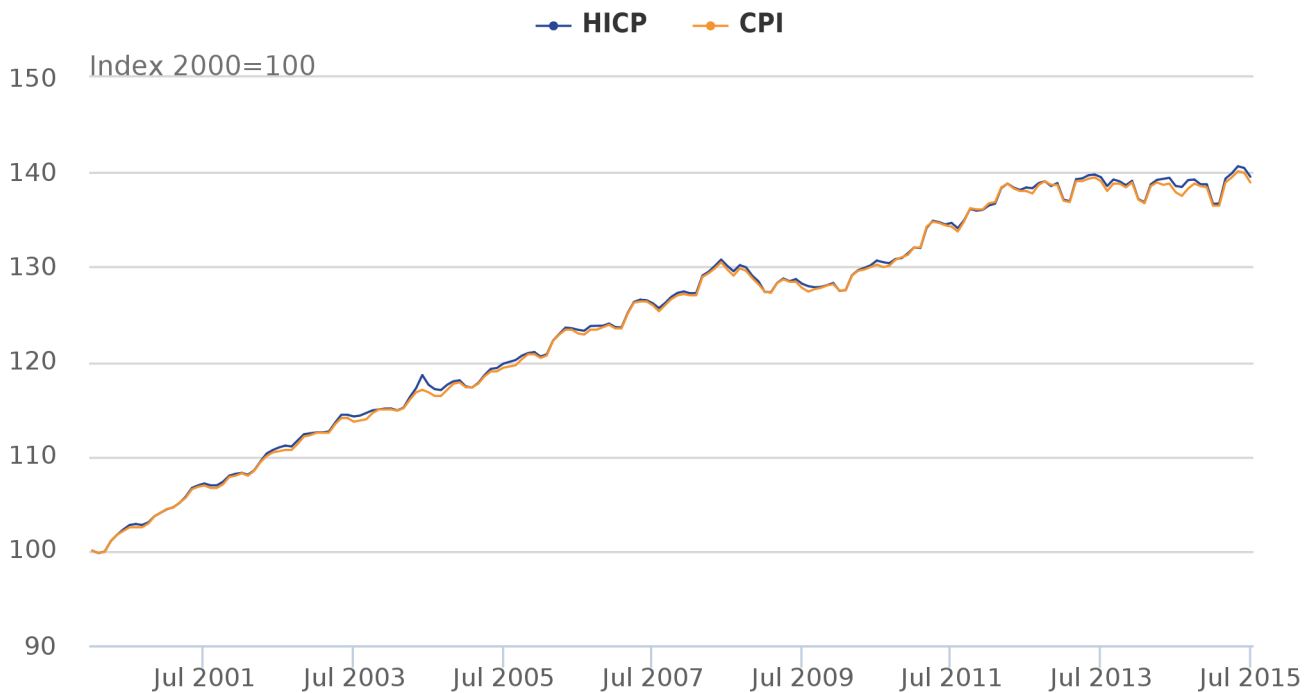


Source: Organisation for Economic Co-operation and Development, Eurostat

Portugal

1. CPI includes:
 - games of chance
 - expenditure of national residents abroad
2. CPI excludes:
 - expenditure of non-residents in the economic territory
 - expenditure of institutional households
3. Additional comments: For a broader overview of [Portuguese CPI](#) visit their website.

Figure 23: Monthly HICP and CPI indices for Portugal, 2000 to 2015



Source: Organisation for Economic Co-operation and Development, Eurostat

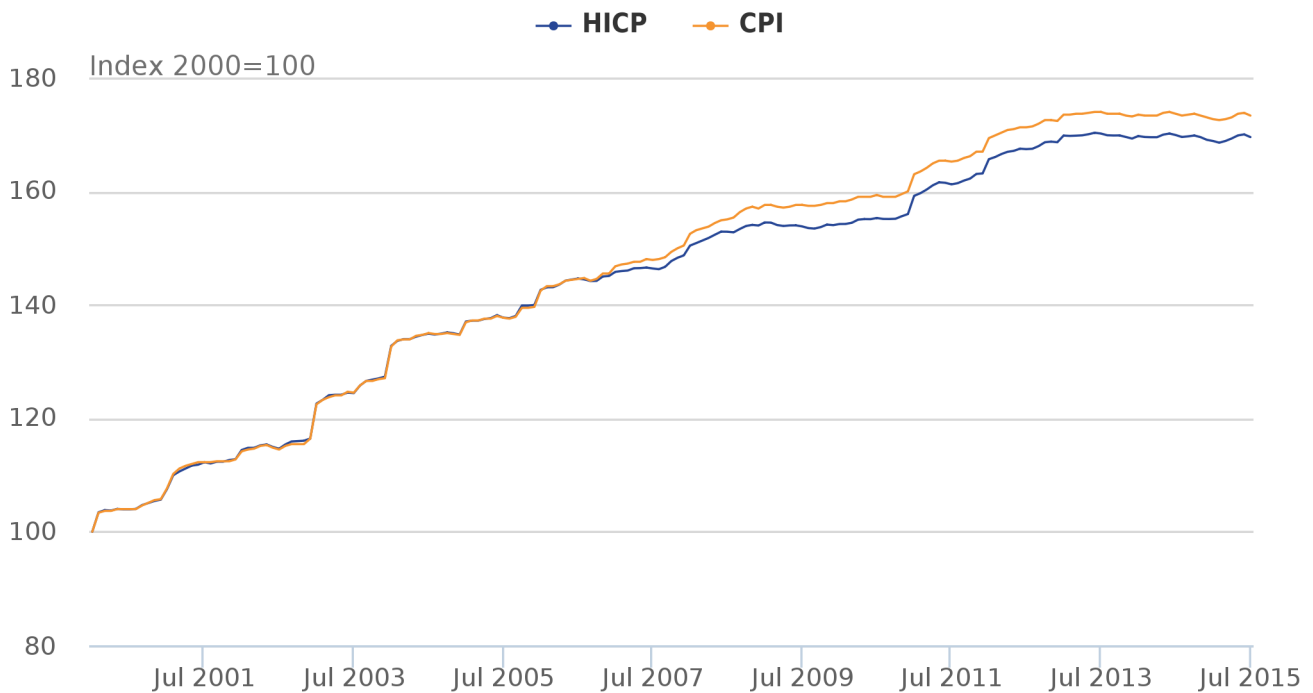
Slovakia

1. CPI includes:
 - owner occupiers' housing costs (see additional comments)
 - administrative charges of private pension funds
2. CPI excludes:
 - none
3. Additional comments: According to the information provided by the OECD, from 1997 to 2004 rental equivalence was used to calculate the owner occupiers' housing costs. From 2005 onwards "the method used to impute the rents is based on the monthly payments for repairs and maintenance of owner occupied apartments, calculated per apartments' square meter floor area".

The CPI and HICP use different weights for financial services and insurance. The HICP weights are based on averaged aggregate 3 year expenditure of households on service charges.

For a broader overview of [Slovakian CPI](#) visit their website.

Figure 24: Monthly HICP and CPI indices for Slovak Republic, 2000 to 2015



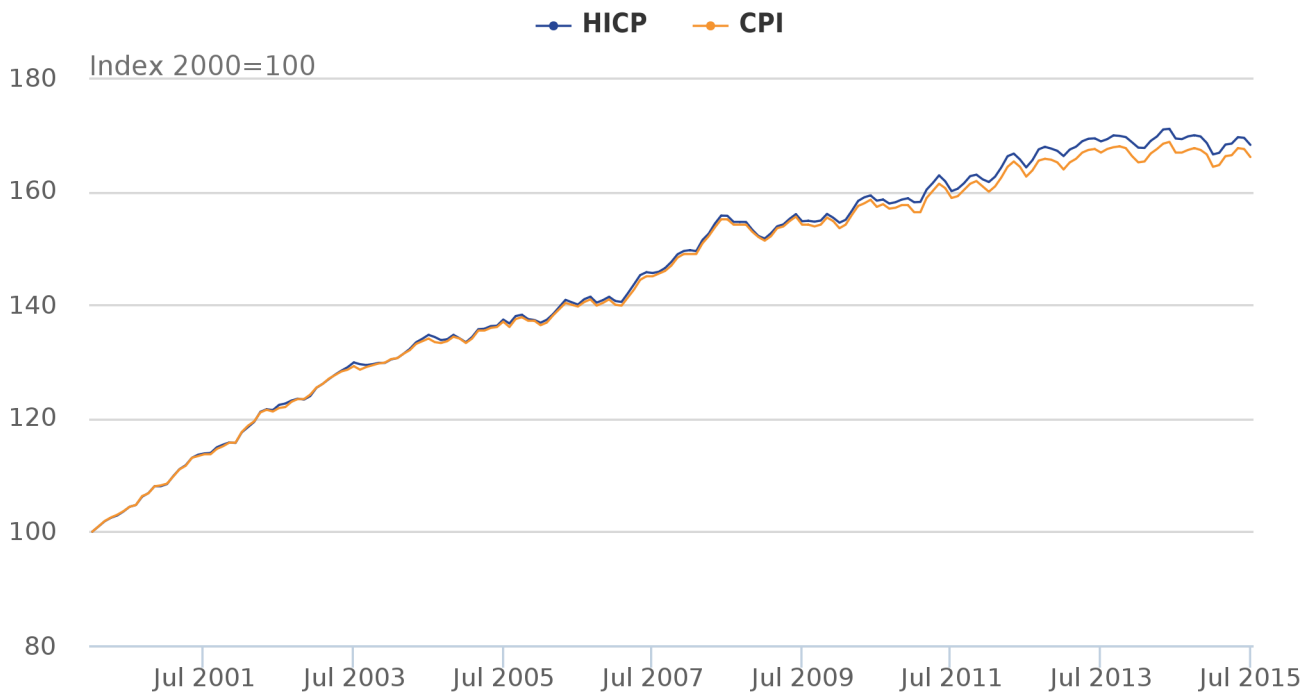
Source: Organisation for Economic Co-operation and Development, Eurostat

Slovenia

1. CPI includes:
 - none
2. CPI excludes:
 - expenditure of non-residents in the economic territory
 - expenditure of institutional households
3. Additional comments: Elementary aggregates in the national CPI are calculated using the Dutot formula whereas the HICP uses the Jevons formula.

For a broader overview of [Slovenian CPI](#) visit their website.

Figure 25: Monthly HICP and CPI indices for Slovenia, 2000 to 2015



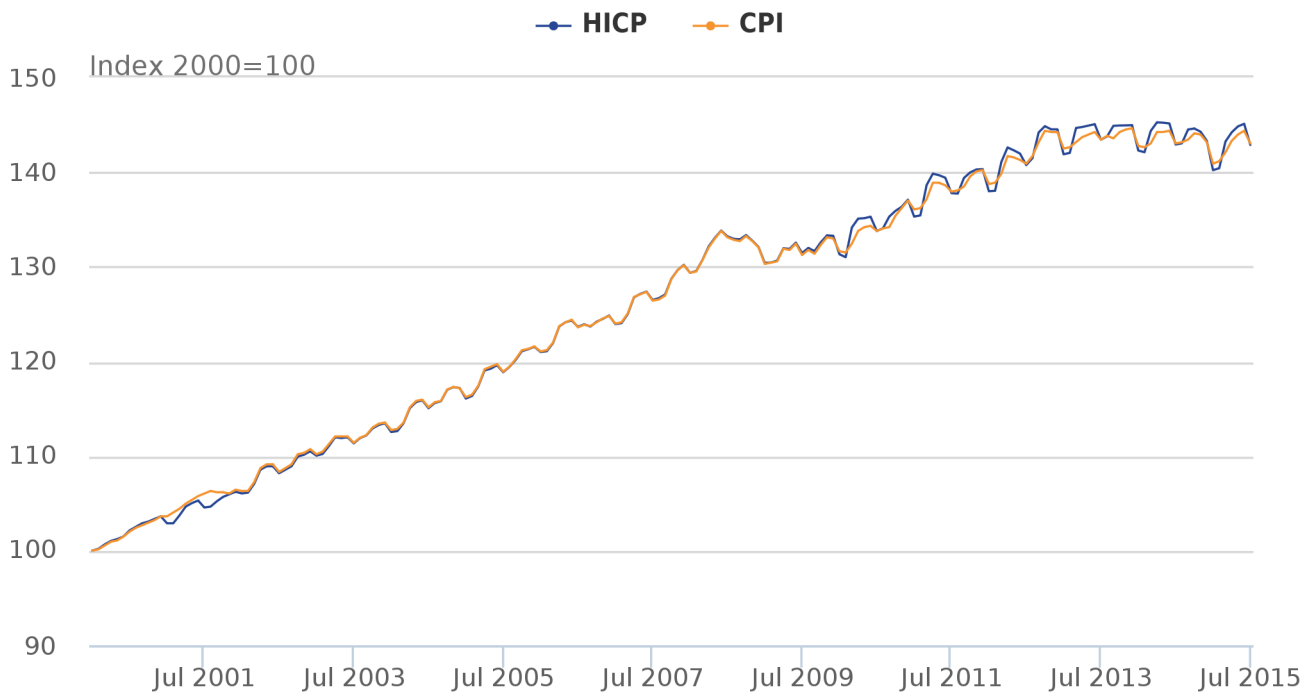
Source: Organisation for Economic Co-operation and Development, Eurostat

Spain

1. CPI includes:
 - expenditure of national residents abroad
2. CPI excludes:
 - expenditure of non-residents in the economic territory
 - expenditure of institutional households
3. Additional comments: The CPI uses gross prices within its weights for insurance and second-hand cars. Out of season prices for seasonal products are estimated for HICP but this is not the case for the Spanish CPI.

For a broader overview of [Spanish CPI](#) visit their website.

Figure 26: Monthly HICP and CPI indices for Spain, 2000 to 2015



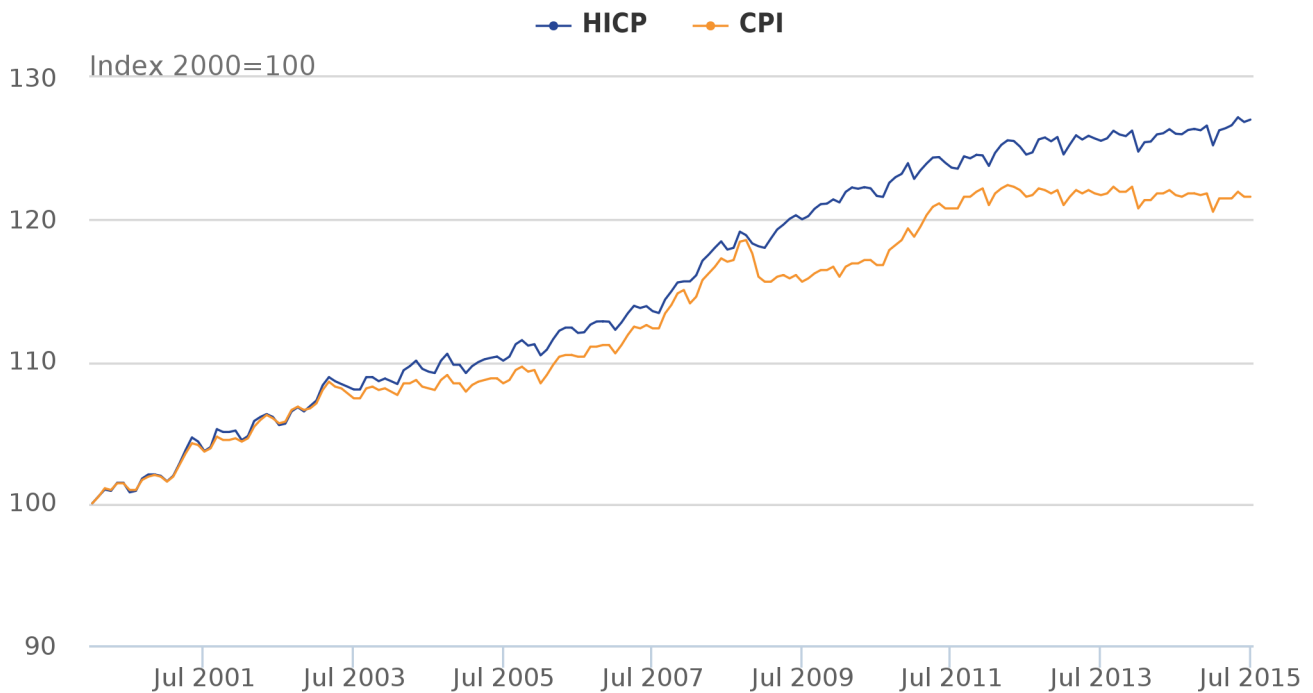
Source: Organisation for Economic Co-operation and Development, Eurostat

Sweden

1. CPI includes:
 - owner occupiers' housing costs (user cost approach)
 - cost of housing co-operatives (measured by imputed rentals)
 - games of chance
2. CPI excludes:
 - hospital services
 - elderly care (partially)
 - financial services that are charged in proportion to transaction value
3. Additional comments: The Swedish CPI is considered to be a Cost-of-Living index. The CPI uses the Walsh-index formula for annual linking which takes the geometric mean of quantities of the previous and current period. The HICP and CPI tend to share the same data sources.

For a broader overview of [Swedish CPI](#) visit their website.

Figure 27: Monthly HICP and CPI indices for Sweden, 2000 to 2015



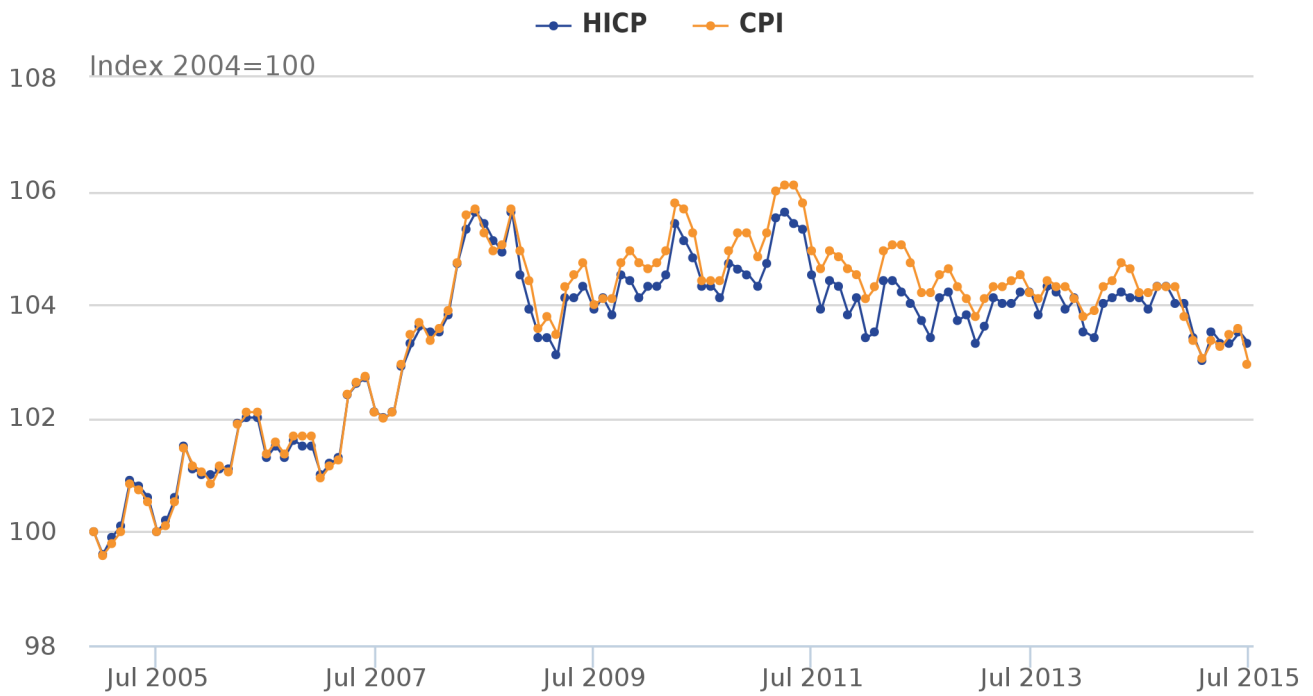
Source: Organisation for Economic Co-operation and Development

Switzerland

1. CPI includes:
 - owner occupiers' housing costs (rental equivalence approach)
 - expenditure of national residents abroad
2. CPI excludes:
 - expenditure of non-residents in the economic territory and
 - expenditure of institutional households
3. Additional comments: Package holidays and air fares prices are included in the CPI for the month of booking, whereas the HICP includes these price quotes in the month when the consumer is due to depart for the holiday.

For a broader overview of [Swiss CPI](#) visit their website.

Figure 28: Monthly HICP and CPI indices for Switzerland, 2004 to 2015

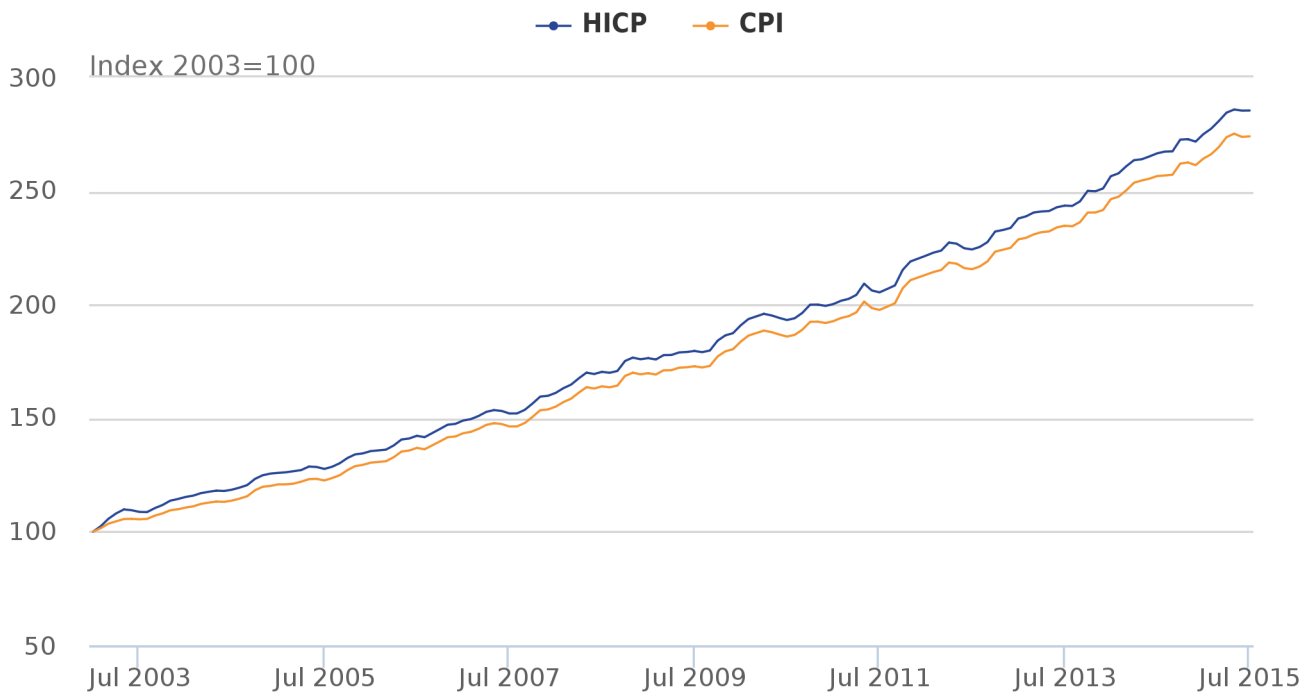


Source: Organisation for Economic Co-operation and Development, Eurostat

Turkey

1. CPI includes:
 - games of chance
 - compulsory earthquake insurance
2. CPI excludes:
 - none
3. Additional comments: For a broader overview of [Turkish CPI](#) visit their website.

Figure 29: Monthly HICP and CPI indices for Turkey, 2003 to 2015



Source: Organisation for Economic Co-operation and Development, Eurostat

Notes:

1. [OECD](#) and [Eurostat](#) respectively

CPI Includes	AU	BE	BG	HR	CZ	DK	EE	FI	FR	DE	GR	HU	IS	IE	IT	LV	LT	LU	NL	NO	PL	PT	SK	SI	ES	SE	CH	TR		
administrative charges of private pension funds																							X							
building materials														X																
compulsory earthquake insurance																												X		
consumption-related taxes																			X											
cost of housing co-operatives																										X				
expenditure of national residents abroad		X									X				X				X			X			X		X			
financial services																	X		X	X										
fire insurance for detached houses								X						X																
games of chance	X						X	X		X		X	X		X	X					X	X				X		X		
home insurance														X																
insurance of owner occupiers' dwelling	X					X																								
interest on consumer credit								X																						
life insurance																				X										
local property tax														X																
membership fees for sports and recreational clubs																			X											
motor car insurance														X																
owner occupiers' housing costs	X				X	X		X		X			X	X					X	X			X			X	X			
payments for the use of cooperative dwellings					X																									
road taxes	X																													
some medical paramedical services															X															
union subscriptions														X																
vehicle tax								X						X																
CPI Excludes																														
contributions to the NHS are excluded from the CPI															X															
elderly care																											X			
expenditure of household members who are older than 74													X																	
expenditure of institutional households		X		X									X						X		X	X		X	X		X			
expenditure of non-residents in the economic territory	X	X	X	X	X		X				X	X	X		X	X	X	X	X	X	X	X		X	X		X			
financial services																											X			
hospital services																											X			
temporary price reductions (sales)															X															

Austria AU, Belgium BE, Bulgaria BG, Croatia HR, Czech Republic CZ, Denmark DK, EE Estonia, Finland FI, France FR, Germany DE, Greece GR, Hungary HU, Iceland IS, Ireland IE, Italy IT, Latvia LV, Lithuania LT, Luxembourg LU, Netherlands NL, Norway NO, Poland PL, Portugal PT, Slovakia SK, Slovenia SI, Spain ES, Sweden SE, Switzerland CH, Turkey TR