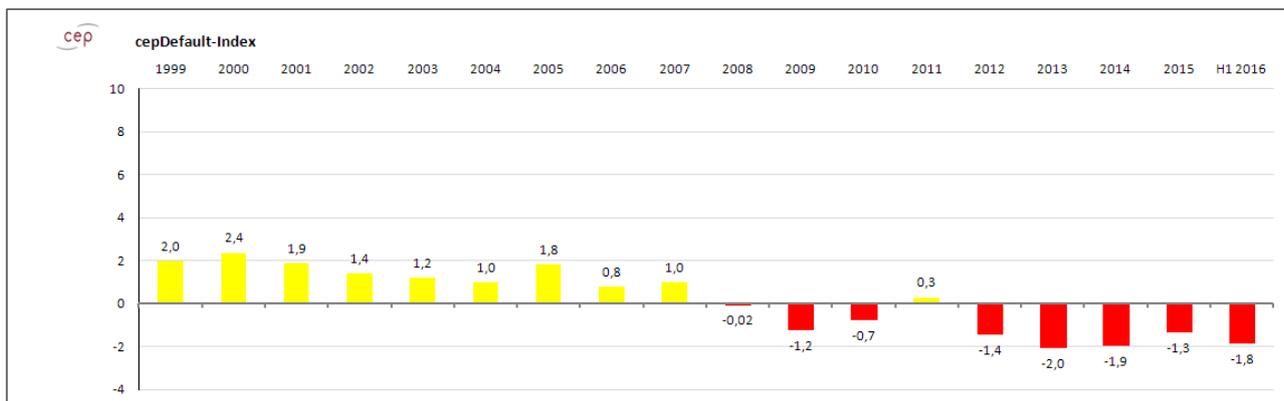


cepDefault-Index United Kingdom

Established decline of United Kingdom's creditworthiness

Prof. Dr. Lüder Gerken, Dr. Matthias Kullas and Till Brombach

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | H1 2016 |
|-------------------------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|---------|
| Risk category | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 4 | 4 | 4 |
| I^r | 4,4 | 4,5 | 3,8 | 3,5 | 2,9 | 2,8 | 3,1 | 3,1 | 3,5 | 3,48 | 1,7 | 2,0 | 2,1 | 2,3 | 2,4 | 2,8 | 3,0 | 2,8 |
| NTE | -2,4 | -2,1 | -1,9 | -2,1 | -1,7 | -1,8 | -1,3 | -2,3 | -2,5 | -3,50 | -2,9 | -2,7 | -1,8 | -3,7 | -4,4 | -4,7 | -4,3 | -4,6 |
| cepDefault-Index | 2,0 | 2,4 | 1,9 | 1,4 | 1,2 | 1,0 | 1,8 | 0,8 | 1,0 | -0,02 | -1,2 | -0,7 | 0,3 | -1,4 | -2,0 | -1,9 | -1,3 | -1,8 |



In a few days the United Kingdom will formally apply to withdraw from the EU. In that light the cep has examined the development of the creditworthiness of the United Kingdom:

- ▶ The United Kingdom's creditworthiness has been in decline almost continuously since 2008 – with the exception of 2011. This saw no change in the first half of 2016.
- ▶ The main reason for this is the British population's high propensity to consume: Since 2012, consumption has been more than 100% of total available income.
- ▶ The competitiveness of the British economy has also been in decline for years. Both, the GDP deflator as well as unit labour costs have been rising faster than those of the EU average.
- ▶ Its high propensity to consume and its declining competitiveness have led the United Kingdom to become a net borrower on global markets with net imports being at four percent of GDP or higher since 2013.

1 Methodology and significance of the cepDefault-Index

The cepDefault-Index measures the trends in a country's ability to repay external loans, in other words, its creditworthiness. This does not depend solely on the country's indebtedness but rather on the stability of the entire economy. The cepDefault-Index therefore also takes into account the credit behaviour of banks, companies and consumers. The Index considers the net lending or borrowing of the total economy (NTE) and the level of capacity enhancing capital formation (I^c) in a given period and as a percentage of the gross domestic product (GDP). The sum of the NTE and the I^c constitutes the index: cepDefault-Index = NTE + I^c .¹

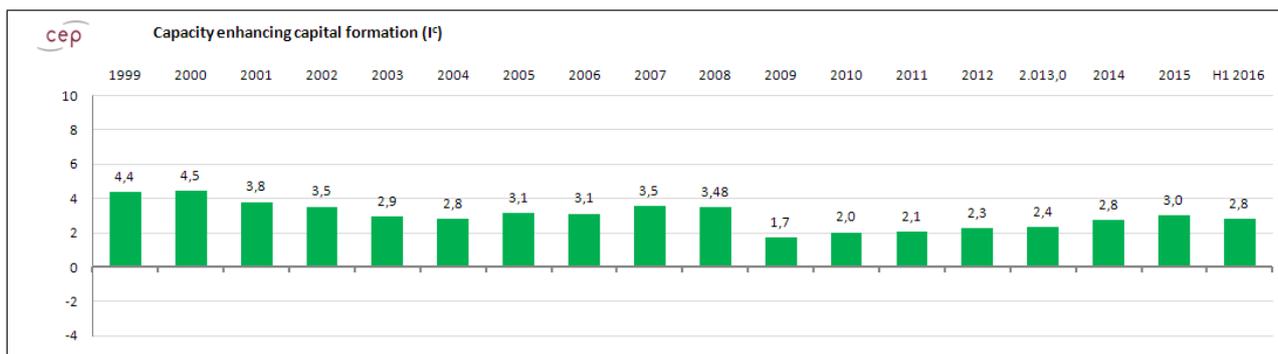
Risk Category 1 (green light) means: The country's creditworthiness is increasing. Risk Category 2 (amber light) means: It is not possible to give a clear assessment of the creditworthiness trend in the country. Risk Category 3 (red-amber light) means: The country's creditworthiness is declining. Risk Category 4 (red light) means: Erosion of creditworthiness lasting for one or more years; the erosion of creditworthiness is not a temporary problem but a structural one; the risk of a complete loss of creditworthiness has intensified or, in fact, become reality.

2 The cepDefault-Index for the United Kingdom

Summary: The United Kingdom's creditworthiness has been in decline almost continuously since 2008 – with the exception of 2011. This saw no change in the first half of 2016.

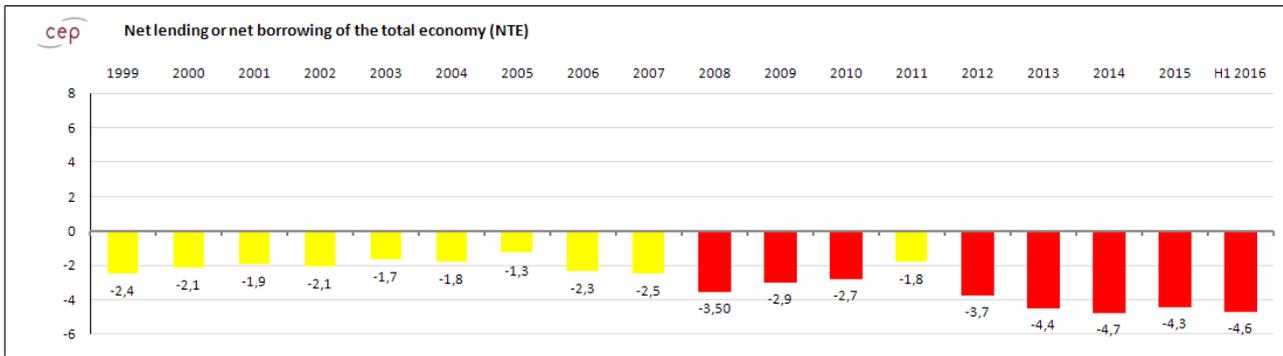
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | H1 2016 |
|---------------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|---------|
| Risk category | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 3 | 4 | 4 | 4 |
| I^c | 4,4 | 4,5 | 3,8 | 3,5 | 2,9 | 2,8 | 3,1 | 3,1 | 3,5 | 3,48 | 1,7 | 2,0 | 2,1 | 2,3 | 2,4 | 2,8 | 3,0 | 2,8 |
| NTE | -2,4 | -2,1 | -1,9 | -2,1 | -1,7 | -1,8 | -1,3 | -2,3 | -2,5 | -3,50 | -2,9 | -2,7 | -1,8 | -3,7 | -4,4 | -4,7 | -4,3 | -4,6 |
| $I^c + NTE$ | 2,0 | 2,4 | 1,9 | 1,4 | 1,2 | 1,0 | 1,8 | 0,8 | 1,0 | -0,02 | -1,2 | -0,7 | 0,3 | -1,4 | -2,0 | -1,9 | -1,3 | -1,8 |

Capacity enhancing capital formation (I^c): Capacity enhancing capital formation, having been halved to 1.7% in 2009, has continued to rise once again and almost reached its pre-crisis level in 2015. In the first half of 2016, however, it fell slightly to 2.8% of GDP

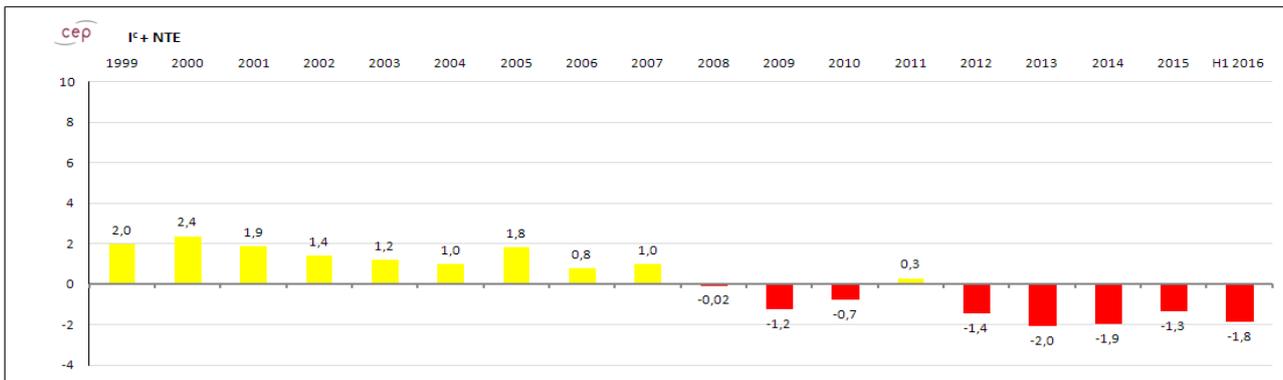


Net lending or net borrowing of the total economy (NTE): Without exception, the United Kingdom has been a net capital importer every year since 1999. Since 2012, net capital imports have continued to rise strongly and stabilized at a high level.

¹ For a more detailed explanation see Gerken/Kullas/Brombach (2017): cepDefault-Index, ch. 2.

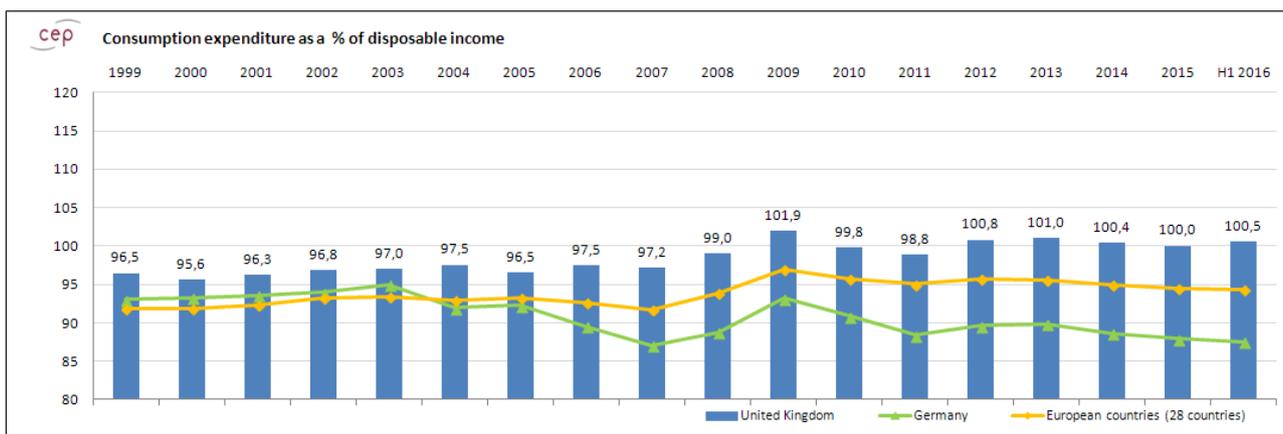


I^c + NTE: The sum of I^c and NTE has been negative since 2008 - with the exception of 2011.



This would not necessarily be an issue, so long as capital imports were used for capacity enhancing capital formation, rather than for consumption. However this is not the case:

Consumption rate: Since 2012, the population of the United Kingdom has consumed more than the total available income. The high consumption rate means that on balance foreign capital is required to finance domestic consumption.

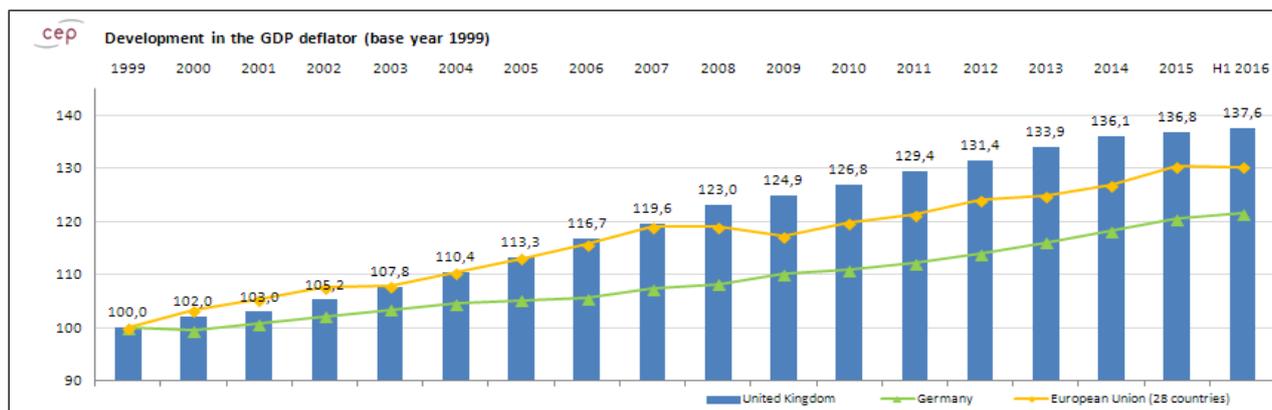


Erosion of competitiveness on world markets: Further reason for the deteriorating British creditworthiness is the declining competitiveness of the British economy in world markets, which can be measured using the GDP deflator and the development of the unit labour costs.²

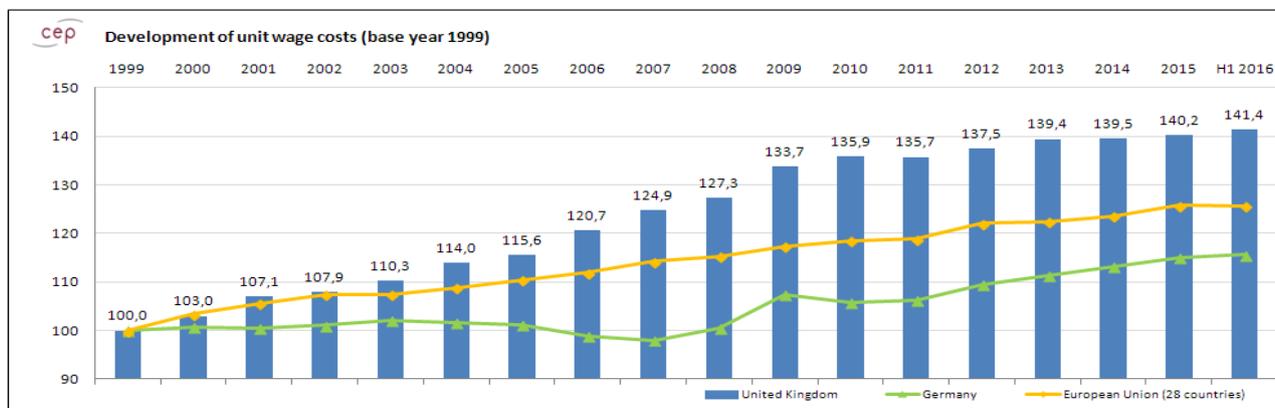
² On the advantages and disadvantages of both measures: Gerken/Kullas/Hohmann (2013): CEP-Default-Index 2013, ch. 4.4.

In contrast to the popular consumer price index, the GDP deflator does not only track price developments of consumer goods, but price developments of all goods in the GDP. A high value indicates a reduced price competitiveness on world markets.

Since 2008, the British GDP deflator has been rising faster than the deflator of the entire EU. Presently the British GDP deflator is seven percentage points above the EU average and even 16 percentage points above its German counterpart.



Unit labour costs specify the labour costs per unit of GDP, indicating the productivity of an economy.³ The higher the unit labour costs, the higher the cost of production comparative to other economies. Since 2003 British unit labour costs have been above those of the EU average. In 2016 the difference amounted to 15 percentage point, whereas the difference to Germany even amounted to 26 percentage points.



Result: The United Kingdom's creditworthiness has been in decline almost continuously since 2008 – with the exception of 2011.

Cause: Main reason for the decline in creditworthiness is the British population's excessive propensity to consume; domestic consumption has to be financed in part by foreign capital. At the same time the British economy's ability to compete internationally has been diminishing in the last years.

Recommended action: For the creditworthiness to strengthen, the British population's propensity to consume must fall significantly below 100% of total available income. In addition structural reforms need to be implemented to improve the competitiveness of the British economy.

³ For more information s. Gerken/Kullas/Voßwinkel (2011): CEP-Default-Index, Country Report Greece – 1st half of 2011, p. 13, online at: http://www.cep.eu/fileadmin/user_upload/cep.eu/Studien/cepDefault-Index_2011/Country_Report_Greece_2011_Abstract.pdf