The Big Mac index

Global exchange rates, to go
JANUARY 12TH 2017, BY D.H. & R.L.W.

The Big Mac index was invented by The Economist in 1986 as a lighthearted guide to whether currencies are at their "correct" level. It is based on the theory of purchasing-power parity (PPP), the notion that in the long run exchange rates should move to equalise the prices of an identical basket of goods and services (in this case, a burger) in any two countries. For example, the average price of a Big Mac in America in January 2017 was $5.06; in China it was only $2.83 at market exchange rates. So the "raw" Big Mac index says that the yuan was undervalued by 44% at that time.

Burgernomics was never intended as a precise gauge of currency misalignment, merely a tool to make exchange-rate theory more digestible. Yet the Big Mac index has become a global standard, included in several economic textbooks and the subject of at least 20 academic studies. For those who take their fast food more seriously, we have also calculated a gourmet version of the index.

This adjusted index addresses the criticism that you would expect average burger prices to be cheaper in poor countries than in rich ones because labour costs are lower. PPP signals where exchange rates should be heading in the long run, as a country like China gets richer, but it says little about today's equilibrium rate. The relationship between prices and GDP per person may be a better guide to the current fair value of a currency. The adjusted index uses the "line of best fit" between Big Mac prices and GDP per person for 48 countries (plus the euro area). The difference between the price predicted by the red line for each country, given its income per person, and its actual price gives a supersized measure of currency under- and over-valuation.
The Big Mac index

Select base currency:  US dollar

Raw index
Under(-)/over(+) valuation against the dollar, %

<table>
<thead>
<tr>
<th>Undervalued by:</th>
<th>Overvalued by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;50%</td>
<td>10-50%</td>
</tr>
<tr>
<td>25-50%</td>
<td>50-100%</td>
</tr>
<tr>
<td>10-25%</td>
<td>&gt;100%</td>
</tr>
</tbody>
</table>

Big Mac prices v GDP per person

User guide:
The 'select base currency' button allows you to choose from five base currencies: the yuan, the euro, the yen, sterling and the US dollar. You can also choose to see the index in its original 'raw' form, or adjusted for GDP per person. By default, the panel at the bottom displays a scatter chart plotting the local price of a Big Mac (expressed in the current base currency) against GDP per person in that country. Select individual points for details.

As you explore the map, the scatter chart will be replaced by a line chart plotting the highlighted country's under- or over-valuation against the current base currency over time. You can select a country on the map to 'freeze' it (with the exception of Internet Explorer), allowing you to mouse-over/tap the line chart and see detailed indicators for your selection over time. To 'unfreeze' the map, click/tap on the highlighted country again.

Correction: In an earlier version of this chart we miscalculated the GDP per person-adjusted valuations. This was corrected on January 23rd 2017.

Sorry.

Read “The all-meaty dollar”, our January 2017 Big Mac index assessment here.

Download the full data-set here