COULD THE START OF THE GERMAN RECESSION 2008-2009 HAVE BEEN FORESEEN? EVIDENCE FROM REAL-TIME DATA

Ullrich Heilemann
Universität Leipzig
heilemann@wifa.uni-leipzig.de

Susanne Schnorr-Bäcker
Statistisches Bundesamt
susanne.schnorr-baecker@destatis.de

RPF Working Paper No. 2016-003
http://www.gwu.edu/~forcpgm/2016-003.pdf

February 16, 2016

Research Program on Forecasting (RPF) Working Papers represent preliminary work circulated for comment and discussion. Please contact the author(s) before citing this paper in any publications. The views expressed in RPF Working Papers are solely those of the author(s) and do not necessarily represent the views of RPF or George Washington University.
COULD THE START OF THE GERMAN RECESSION 2008-2009 HAVE BEEN FORESEEN?
EVIDENCE FROM REAL-TIME DATA

Ullrich Heilemann and Susanne Schnorr-Bäcker

Abstract

Given that the Great Recession in Germany was neither predicted nor identified at the time, this paper examines whether data available could have helped to predict or identify the crisis in real time. We inspect forecasts published during April–December 2008 by 12 major institutions, for available data: real-time data from official statistics for Germany and the European Union, major surveys, and indicators. Although annual real GDP forecasts for 2008 were rather accurate, forecasters failed to observe the onset of the recession in Q2 2008, though from May onward, an increasing amount of data—neither ambiguous nor misleading—indicated that the economy was in recession or would likely enter one soon. Nevertheless, forecasters recognised the recession only in mid-November, when the country was already seven months into the recession, thereby confirming forecasters’ ‘low priors about the likelihood of a recession’.

JEL classification: C53, E32, E37

Keywords: Forecast accuracy, Great Recession, real-time analysis, data processing

1 Previous versions of this paper were presented at the 32nd Annual International Symposium on Forecasting, Boston, June 24–27, 2012; the 31st CIRET Conference in Vienna, September 5–7, 2012; the DGSt Annual Meeting in Berlin, September 17–20, 2013; the Annual Meeting of the Econometrics Committee of the Verein für Socialpolitik in Rauschholzhausen, February 26-28, 20150 and the 35th Annual International Symposium on Forecasting in Riverside, CA, June 21–24, 2015. For their critiques and suggestions, we thank Klaus Abberger, Roland Döhrn, Katja Drechsel, Harald Lehmann, Udo Ludwig, Wolfgang Nierhaus, Ataman Ozyildirim, Herman Stekler, and Stefan Wappler. For skilful research assistance, we thank Karsten Müller, MSc.

2 Universität Leipzig, Institut für Empirische Wirtschaftsforschung, Grimmaische Straße 14, D-04109 Leipzig, heilemann@wifa.uni-leipzig.de; Fraunhofer MOEZ, Neumarkt 9-19, D-04109 Leipzig, ullrich.heilemann@wifa.uni-leipzig.de (corresponding author).

3 Statistisches Bundesamt, D-65180 Wiesbaden, susanne.schnorr-baecker@destatis.de.
1 Introduction

The worldwide recession during 2007–2009 was the most severe post-World War II crisis on record. Real GDP growth in advanced countries plummeted from nearly 3% in 2007 to stagnation in 2008 and, thereafter, to -3½% in 2009. By 2015, six years after crisis had ended, many countries had still not regained pre-crisis levels. For forecasters, the crisis ended up being a debacle. In particular, the accuracy of forecasts for Germany was among the poorest in Europe, surpassed only by the failures of Finland and Ireland, although exact reasons for different forecast performances remain unclear.

As for all recessions before, only few studies have examined why forecasts for Germany performed so poorly and none has asked why the recession 2008–0 9 was stated only seven months after it began. The Gemeinschaftsdiagnose, or Joint Diagnosis (JD), a group that then consisted of four major German forecasters, presented the analysis of its forecast performance in 2008 only in the usual (small) ‘Kasten’ (Box) (Arbeitsgemeinschaft 2009a, pp. 40f.; 2010a, p. 37f.) and did not address why the start of the recession had not been detected earlier. The Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung, or the Council of Economic Experts (CEE), did not provide any analysis of its forecast performance, whereas the Organisation for Economic Co-operation and Development (OECD) published a detailed analysis of the accuracy of its forecasts both during and after the financial crisis, yet similar to a study by the International Monetary Fund (IMF) remained unspecific in terms of national forecasts (Independent Evaluation Office of the International Monetary Fund).

4 Based on forecasts published by the Gemeinschaftsdiagnose, or Joint Diagnosis (JD) (Arbeitsgemeinschaft 2008a, 2010a); see Tables 2.3 and 2.1.

5 Correlation results from the Organisation for Economic Co-operation and Development (OECD) highlight forecasting errors and country related factors such as countries’ openness, regulations, and financial structure during 2007–2012 (Pain et al. 2014) and identify ‘trade openness’ as a major cause. Meanwhile, the International Monetary Fund (IMF) has examined the role of characteristics of forecast producers, including experience and occupational position, for errors in its 2007–2011 forecasts and found ‘experience’ to be important in reducing errors (Genberg, Martinez 2014, pp. 31ff.).

6 For a research summary of recession forecasts, see Tamirisa 2010.

7 The consortium of the contract for 2007–2010 included the Ifo Institut für Wirtschaftsforschung an der Universität München in cooperation with the Konjunkturforschungsstelle der ETH Zürich, the Institute für Weltwirtschaft an der Universität Kiel (IfW), the Institut für Wirtschaftsforschung Halle (IWH) in cooperation with the Institut für Makroökonomie in der Hans-Böckler-Stiftung (IMK), Österreichisches Institut für Wirtschaftsforschung (WIFO), and Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI) in cooperation with the Institut für Höhere Studien Wien (IHS) with medium-term forecasts.
Fund (henceforth: IEO) 2014; Pain et al. 2014). Macroeconometric model studies that can detail why forecasts were wrong are missing. ³⁸ Examining the capabilities of leading indicators in forecasting GDP and industrial production, Drechsel and Scheufele (2011, 2012) concluded that ‘many leading indicators, in particular surveys, performed relatively well during the crisis period’ (2012, p. 444) but did not show forecast results in detail. ⁹ Nierhaus and Abberger (2014) using the Ifo-Business climate Index (Ifo-BCI) and the so-called three-month rule dated the upper turning point of the economy in October 2007 and for industrial production in March 2008. Schreiber et al. (2012, pp. 200ff.) examined the potential of a broad range of methods in order to predict turning points and ultimately found that with data available for July 2008 nearly all methods examined indicated that Germany was in recession. Unfortunately, in these studies and others, neither the results of the benchmark approach nor those of other models have been analysed in the light of published forecasts.

In what follows, we ask whether the start of the recession in 2008–2009 in German could have been foreseen. Similar to Fintzen and Stekler (1999) regarding the 1990 recession in the United States, we examine whether real-time data could have enabled predictions of the recession. We abstain from presenting forecasts of our own. For comparison, we refer to the data based exercises cited above.

From a perspective prioritising data instead of theory or judgment, the failure to predict the recession or issue serious warnings can be split into three questions that may help to answer why forecasters’ performance was so poor (Fintzen, Stekler 1999):

1. Did forecasts published after April 2008 take full account of information available from official and of major surveys or indicators?

2. Were data available to forecasters after April 2008 ambiguous or erroneous—that is, were there meaningful revisions?

³⁸ For the United States, see Fair 2010 and Stock, Watson 2012; for the Netherlands, see de Jong, Abbing, Verbruggen 2010.

⁹ To illustrate this point with the two ‘best’ models examined by Drechsel and Scheufele (2012), only the simple AR-model within the sample period in four quarters ahead forecasts sees the start of the recession in Q2 2008 (Table 5*, Appendix).
3. Did any factors in the process of forecasting contribute to forecasting errors?

We concentrate on the beginning of the recession that is the transition from downswing to recession—given inside and outside lags of fiscal and monetary policy to fight a crisis of more than six months, their forecast or identification being for policy and other forecast consumers usually the most decisive stage.

The next section examines the numerical accuracy of recession forecasts for Germany, followed by Section 3, which describes our evaluation procedures. Later, Section 4 addresses the evolution of major forecasts with real-time data from the Statistisches Bundesamt, or the German Federal Statistical Office (FSO), and the Statistisches Amt der Europäischen Union, or the Statistical Office of the European Union (Eurostat), in addition to several surveys and composite leading indicators (CLI) or leading economic index (LEI). Lastly, Section 5 summarises our findings and offers some conclusions.

2 Recession forecasts

This section examines the accuracy of real GDP—hereafter, simply GDP—forecasts for 2008 and 2009. For comparison, we start with a brief look at the accuracy of previous recession forecasts by four major forecasters: the JD, the CEE, the OECD, and the federal government (Jahreswirtschaftsbericht der Bundesregierung, or the Government Annual Economic Report (GAER)). Recessions are technically defined as at least two consecutive periods of declining GDP.

2.1 Recessions, 1967–2002

Since quarterly forecasts\(^\text{10}\) began to be published only after 1980, seldom in numerical form and often revised, they and half-year forecasts are difficult to evaluate. Actual GDP data are first vintage data as published in the JD’s spring forecasts for the previous year.

The dating of business cycles and of recessions based on rates of change against the previous quarter (qtq) and growth cycles—that is, quarterly yty rates of change—rarely differed by more than one quarter. The recessions usually did not last longer than two or three quarters. More broadly defined as ‘Lower turning point’-phases (LTP),\(^\text{11}\) they lasted approximately four quarters. Depth, course, and duration of the recessions varied considerably (Figure 1).\(^\text{12}\)

- The 1966–1967 recession—a stabilisation crisis triggered by monetary policy, with shrinkage by 0.5% of GDP in 1967\(^\text{13}\)—was an exceptionally mild recession compared to later recessions and could even be labelled as stagnation, given later GDP revisions (Räth 2009).\(^\text{14}\) This recession lasted from Q2 1966 until Q3 1967, while the LTP phase lasted from Q1–Q4 1967.\(^\text{15}\)

It was followed by two exogenous crises.

- The first oil crisis lasted five quarters (Q2 1974–Q2 1975), during which GDP shrank by 3.5%. The LTP phase started in 1974:Q2 and lasted seven quarters, thus making it Germany’s longest LTP phase.

\(^\text{10}\) Adjusted for seasonal variations (with Census X-12-ARIMA) and calendar effects.

\(^\text{11}\) Terms refer to a four-phase business cycle classification, including ‘Upswing’ (UP), ‘Upper turning point’ (UTP), ‘Downswing’ (DOWN), and ‘Lower turning point’ (LTP), based upon a multivariate linear discriminant analysis using quarterly yty rates of change of 10 (12) major macroeconomic variables and ratios. For details concerning the scheme, see Heilemann, Schuhr 2008.

\(^\text{12}\) Data refer to the FSO’s February release for the previous year as shown in the spring forecasts of the JD (Arbeitsgemeinschaft 1967a ff.) rounded to 0.5%.

\(^\text{13}\) Until the early 1990s, many forecasts (i.e., rates of change) were rounded to 0.5%. To render forecasts - comparable in this study, all forecasts and actual data have also been rounded; accuracy measures for the rounded and original forecasts hardly differ. In 1993, the FSO replaced gross national product (GNP) as the measure of output by GDP and, in 2004, introduced a new system for national accounts and shifted to using the chain-weighted deflation of nominal values. Although forecasters followed this standard, the change should not have affected the present analysis (Heilemann, Stekler 2012).

\(^\text{14}\) This recession was limited to the first half of the year, when GDP fell by 1.7%, or 2.2%, excluding agricultural production (Sachverständigenrat 1967, Item 74).

\(^\text{15}\) Pre-1970 data are from the publication of quarterly national accounts data by German Institute for Economic Research; for the subsequent period, see Statistisches Bundesamt (2014). Quarterly national accounts data have been adjusted for working-day and seasonal variations (Census X-11 ARIMA).
Figure 1: Growth and labour market performance in recessions, 1974–2008, indices

Sources: FSO as of November 2015, authors’ computations. — 1 Q1 (=100) marks the cyclical peak, the X-axis the number of quarters after the peak.
Table 1: Real GDP forecasts by major institutions, rates of change against previous year, 1967–2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>JD</th>
<th>CEE</th>
<th>OECD</th>
<th>GAER</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Crisis 1966–1967</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td>At-I</td>
<td>2.5</td>
<td>3.0</td>
<td>3.5</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>St</td>
<td>2.0</td>
<td>-</td>
<td>-0.5</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>0</td>
<td>-0.5</td>
<td>-1.0</td>
<td>-0.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>3.0</td>
<td>2.5</td>
<td>3.5</td>
<td>-0.5</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>St</td>
<td>2.5</td>
<td>-</td>
<td>2.0</td>
<td>-</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>1.0</td>
<td>0.5</td>
<td>1.0</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>2.5</td>
<td>2.0</td>
<td>2.5</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>St</td>
<td>0.5</td>
<td>-</td>
<td>-2.0</td>
<td>-</td>
<td>-3.5</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>-4.0</td>
<td>-3.5</td>
<td>-4.0</td>
<td>-4.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>2.5</td>
<td>3.0</td>
<td>2.5</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>St</td>
<td>2.5</td>
<td>-</td>
<td>2.0</td>
<td>-</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>0</td>
<td>0.5</td>
<td>-0.5</td>
<td>-0.5</td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>St</td>
<td>-1.5</td>
<td>-</td>
<td>-1.5</td>
<td>-</td>
<td>-0.5</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>-1.0</td>
<td>-0.5</td>
<td>-1.0</td>
<td>-0.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>1.0</td>
<td>0.5</td>
<td>1.5</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td>St</td>
<td>0.5</td>
<td>-</td>
<td>1.0</td>
<td>-</td>
<td>-1.0</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>-1.0</td>
<td>-1.0</td>
<td>-1.5</td>
<td>-1.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>St</td>
<td>1.0</td>
<td>-</td>
<td>1.5</td>
<td>-</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>1.0</td>
<td>1.5</td>
<td>1.0</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>0.5</td>
<td>0</td>
<td>1.0</td>
<td>-0.5</td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>St</td>
<td>-2.0</td>
<td>-</td>
<td>-2.0</td>
<td>-</td>
<td>-2.0</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>-2.0</td>
<td>-2.0</td>
<td>-1.5</td>
<td>-2.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>St</td>
<td>2.0</td>
<td>-</td>
<td>2.0</td>
<td>-</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>1.5</td>
<td>0.5</td>
<td>1.0</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>St</td>
<td>-2.0</td>
<td>-</td>
<td>-2.0</td>
<td>-</td>
<td>-2.0</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>-2.0</td>
<td>-2.0</td>
<td>-1.5</td>
<td>-2.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>2.5</td>
<td>3.0</td>
<td>2.5</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>St</td>
<td>2.0</td>
<td>-</td>
<td>2.0</td>
<td>-</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>2.0</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>0</td>
<td>0</td>
<td>-1.0</td>
<td>-2.5</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>St</td>
<td>-6.0</td>
<td>-</td>
<td>-6.0</td>
<td>-</td>
<td>-5.0</td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>-5.0</td>
<td>-5.0</td>
<td>-5.0</td>
<td>-5.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At-I</td>
<td>1.2/2.9 (2.5)</td>
<td>1.3/2.6 (2.3)</td>
<td>1.3/2.9 (2.7)</td>
<td>0.8/2.1 (2.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>St</td>
<td>1.0/1.5 (1.6)</td>
<td>-</td>
<td>0.7/0.9 (0.9)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At</td>
<td>0.3/0.2 (0.3)</td>
<td>0 /0.1 (0.1)</td>
<td>0.2/0.5 (0.6)</td>
<td>0.1/0.2 (0.3)</td>
<td></td>
</tr>
</tbody>
</table>

Mean Absolute Errors (MAE) in pre-crisis/crises years:

Later,

– The second oil crisis lasted three quarters (Q2–Q4 1981), during which GDP in 1981 shrank by 0.5%.

The recession was followed by two endogenous crises — namely,

– The fiscal consolidation crisis (Q2–Q3 1982). Shrinking GDP by 1% in 1982 and lasting two quarters, the fiscal consolidation crisis was of medium scale, though the LTP phase (Q2 1982–Q 3 1983) of six quarters was one of the longest of such phases.

– Second, the unification crisis, triggered mostly by a large tax increase to finance German unification. It began in Q2 1992 and lasted four quarters, during which GDP shrank by 0.5% in 1993; the LTP phase lasted from Q2 1994 to Q3 1995.

Finally,

– The high-tech industry crisis, to a large extent caused by the end of the high-tech boom in the United States, lasted from Q4 2001 to Q2 2002, though GDP stagnated in 2002 and 2003. In this crisis, the LTP phase lasting seven quarters (QI 2002 to 2003-III) was one of the longest of these phases.

No German recession has been foreseen by these forecasters in their autumn year-in-advance forecasts. In fact, none of these institutions ever predicted any recession whatsoever (Heilemann, Stekler 2012). Even forecasts in spring for the current year overlooked recession in four (JD) and two cases (OECD) out of five, respectively (Table 1). Mean absolute errors (MAE) in autumn forecasts for the coming year were more than twice as large as for pre-crisis years, with spring forecasts one-third larger, and autumn forecasts, despite remaining considerably high, were more or less similar to those in non-crisis years. According to Diebold and Lopez’s (1996) concept of informational content (IC), the share of missed decreases was only slightly higher than of missed accelerations, though results differ considerably over time and, of course, decrease does not mean recession (Heilemann,

---

16 The multivariate classification scheme views the crises as part of the downswing phase beginning in Q2 1980 and Q1 1982, respectively.

17 The Annual Government Economic Report and, until recently, the Council of Economic Experts have published forecasts only in January and November, respectively.
Stekler 2012). As usual, forecast errors vary with the depth of the crisis; excluding the crisis 1966–1967, the lowest errors for the year ahead were recorded for the second oil crisis and the highest for the first oil crisis. For current-year spring forecasts, the record is better, notably per the OECD. Surprisingly, before the Great Recession, the size of errors appears to be rather independent of the origin of the crisis—that is, whether they were of domestic or foreign origin or caused endogenously or exogenously, respectively.

2.2 The Great Recession, 2008–2009

Though the Great Recession was by far the most profound crisis, in starting in Q2 2008 and ending in Q1 2009 it was only of average duration (Figure 1). In 2010, the Bundesbank wrote in 2010 that in spring and summer 2008, due to slowing of the world economy and rising inflationary tensions triggered by increasing prices for food and oil, the upswing had come to an end and entered normal cyclical moderation (Deutsche Bundesbank 2010, p. 20). From a business cycle perspective, the Economic Cycle Research Institute (2014) dates the start of the recession in May 2008.18 Relying on a two-phase classification of the Euro area business cycle, Drechsel and Scheufele (2011, 2012) mark its beginning in Q2 2008 and end in Q2 2009.19 By some contrast, employing the growth cycle-based, four-phase cycle classification mentioned above, Döhrn et al. (2008, p. 134) and Heilemann, Münch and Schuhr (2010) argue that the LTP phase began only in Q4 2008. For the German economy, skipping the DOWN phase of this scheme was an entirely new cyclical experience, as elaborated in Section 4.

---

18 The Economic Cycle Research Institute (2014) has ordered the entry of G7 countries into the Great Recession during 2004–2010 as follows: Italy (9/2007), the United States (1/2008), Canada (2/2008), France and Japan (3/2008), Germany (5/2008), and the United Kingdom (6/2008).

Table 2: Forecasts of real GDP growth for 2008–2009, rates of change, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Institution</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2</td>
<td>DIW</td>
<td>2.0</td>
<td>1.6</td>
</tr>
<tr>
<td>April 3</td>
<td>IMF</td>
<td>1.4</td>
<td>1.0</td>
</tr>
<tr>
<td>April 14</td>
<td>CF</td>
<td>1.7 (0.2)</td>
<td>1.6 (0.4)</td>
</tr>
<tr>
<td>April 17</td>
<td>JD</td>
<td>1.8</td>
<td>1.4</td>
</tr>
<tr>
<td>April 28</td>
<td>EUC</td>
<td>1.8</td>
<td>1.5</td>
</tr>
<tr>
<td>May 12</td>
<td>CF</td>
<td>1.7 (0.2)</td>
<td>1.5 (0.3)</td>
</tr>
<tr>
<td>June 5</td>
<td>IfW</td>
<td>2.1</td>
<td>1.0</td>
</tr>
<tr>
<td>June 9</td>
<td>CF</td>
<td>2.2 (0.2)</td>
<td>1.3 (0.3)</td>
</tr>
<tr>
<td>June 12</td>
<td>RWI</td>
<td>2.2</td>
<td>1.5</td>
</tr>
<tr>
<td>June 20</td>
<td>OECD</td>
<td>1.9</td>
<td>1.1</td>
</tr>
<tr>
<td>June 23</td>
<td>BB</td>
<td>2.3</td>
<td>1.4</td>
</tr>
<tr>
<td>June 24</td>
<td>Ifo</td>
<td>2.4</td>
<td>1.0</td>
</tr>
<tr>
<td>June 26</td>
<td>IMK</td>
<td>1.8</td>
<td>0.9</td>
</tr>
<tr>
<td>July 1</td>
<td>DIW</td>
<td>2.7</td>
<td>1.2</td>
</tr>
<tr>
<td>July 14</td>
<td>CF</td>
<td>2.2 (0.2)</td>
<td>1.2 (0.3)</td>
</tr>
<tr>
<td>July 15</td>
<td>IMF</td>
<td>2.0</td>
<td>1.0</td>
</tr>
<tr>
<td>August 11</td>
<td>CF</td>
<td>2.0 (0.3)</td>
<td>1.1 (0.4)</td>
</tr>
<tr>
<td>September 8</td>
<td>CF</td>
<td>1.9 (0.2)</td>
<td>0.8 (0.4)</td>
</tr>
<tr>
<td>September 9</td>
<td>IWH</td>
<td>1.8</td>
<td>0.9</td>
</tr>
<tr>
<td>September 10</td>
<td>EUC</td>
<td>1.8</td>
<td>-</td>
</tr>
<tr>
<td>September 11</td>
<td>IfW</td>
<td>1.9</td>
<td>0.2</td>
</tr>
<tr>
<td>September 16</td>
<td>RWI</td>
<td>1.7</td>
<td>0.7</td>
</tr>
<tr>
<td>September 16</td>
<td>IMK</td>
<td>1.7</td>
<td>0.4</td>
</tr>
<tr>
<td>October 2</td>
<td>IMF</td>
<td>1.8</td>
<td>-</td>
</tr>
<tr>
<td>October 8</td>
<td>DIW</td>
<td>1.9</td>
<td>1.0</td>
</tr>
<tr>
<td>October 13</td>
<td>CF</td>
<td>1.7 (0.1)</td>
<td>0.3 (0.4)</td>
</tr>
<tr>
<td>October 14</td>
<td>JD</td>
<td>1.8</td>
<td>0.2</td>
</tr>
<tr>
<td>November 3</td>
<td>EUC</td>
<td>1.7</td>
<td>0</td>
</tr>
<tr>
<td>November 6</td>
<td>IMF</td>
<td>1.7</td>
<td>-0.8</td>
</tr>
<tr>
<td>November 10</td>
<td>CF</td>
<td>1.7 (0.2)</td>
<td>-0.4 (0.7)</td>
</tr>
<tr>
<td>November 12</td>
<td>CEE</td>
<td>1.7</td>
<td>0</td>
</tr>
<tr>
<td>November 25</td>
<td>OECD</td>
<td>1.4</td>
<td>-0.8</td>
</tr>
<tr>
<td>December 8</td>
<td>CF</td>
<td>1.6 (0.1)</td>
<td>-1.2 (0.6)</td>
</tr>
<tr>
<td>December 10</td>
<td>RWI</td>
<td>1.7</td>
<td>-2.0</td>
</tr>
<tr>
<td>December 11</td>
<td>Ifo</td>
<td>1.5</td>
<td>-2.2</td>
</tr>
<tr>
<td>December 15</td>
<td>BB</td>
<td>1.6</td>
<td>-0.8</td>
</tr>
<tr>
<td>December 18</td>
<td>IMK</td>
<td>1.4</td>
<td>-1.9</td>
</tr>
<tr>
<td>December 18</td>
<td>IfW</td>
<td>1.6</td>
<td>-1.8</td>
</tr>
<tr>
<td>December 22</td>
<td>IfW</td>
<td>1.5</td>
<td>-2.7</td>
</tr>
<tr>
<td>January 7</td>
<td>DIW</td>
<td>1.6</td>
<td>-1.1</td>
</tr>
<tr>
<td>January 14, 2009</td>
<td>Actual</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>February 14, 2009</td>
<td>Actual</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>January 13, 2010</td>
<td>Actual</td>
<td></td>
<td>-5.0</td>
</tr>
<tr>
<td>February 12, 2010</td>
<td>Actual</td>
<td></td>
<td>-5.0</td>
</tr>
</tbody>
</table>

Sources: Appendix and Federal Statistical Office. 1 In (...) standard deviation.
Figure 2: Annual forecasts of real GDP growth for 2008 and 2009 in percent, April to December 2008

Sources: see Table 2.

In what follows, the forecasts examined originate from 12 major institutions; eight are non-profit research institutions substantially subsidised by the government and the unions (IMK) government—the CEE, the DIW, the Ifo, the IfW, the IWH, and the RWI; two are political institutions (Deutsche Bundesbank and the European Union Commission (EUC)), while the IMF and OECD fall in between.\(^\text{20}\) We abstained from including the Consensus Forecast (CF) (Consensus Economics 2014). By reporting forecasts monthly and by covering profit-oriented institutions, the CF delivers a broader picture than our selection, though for several reasons we decided to report only CF means and standard deviations (in parentheses) as memorandum items.\(^\text{21}\)

\(^{20}\) For sources of the forecasts, see Appendix.

\(^{21}\) A major reason was that such inclusion would mean considerable double-counting, for most institutions of our selection are also part of the CF. Other reasons are that the sample of the CF varies—not all institutions report continuously—and that the forecasts are often not truly new forecasts, since not all forecasters make monthly updates.
Regarding forecast methods, our selection is rather homogenous. All institutions use the so-called GDP model approach, which entails an informal combination of informal forecasts with results of macroeconometric models, indicators, and surveys (OECD 2014; Nierhaus, Sturm 2003; Zarnowitz 1996, pp. 401f.). GDP forecasts for 2008 and 2009 appear in Table 2 and Figure 2, as well as in greater detail in Table 3. To their point forecasts, some forecasters have added error margins or bandwidths which are not shown here.22

Forecast errors for 2008 are comparatively low, but this masks the fact that GDP growth was slightly overestimated for the first half of the year and grossly underestimated for the second. More importantly, from cyclical and policy perspectives, the start of the recession in the first half of the year was not observed, as elaborated in Section 4. For 2009, the errors were of unprecedented magnitude.

Although records of individual institutions are not of interest for our purposes, it is noteworthy that the IMF and OECD were sometimes more sceptical than national forecasters. In OECD forecasts, this scepticism did not necessarily mean a better informational underpinning—for example, with respect to international development—given its considerable publication lag compared to other forecasts (IEO 2014, p. 9ff.).

The first institution to see stagnation in 2009 was the IMF in October 2008, revised to -0.8% in November, as the OECD would similarly do later. The JD expected a minor increase in October (0.2%), yet referred to the bandwidth of its 2009 GDP forecast of -0.9% and 1.3%,23 which it supplemented with a risk scenario pointing at a possible decline of 0.8%.24 In mid-November, the CEE predicted stagnation for 2009 and was the first organisation on the national level to ask for fiscal stimuli (CEE 2008/2009, items 435ff.). With MAEs of 1 (1.5 % for recession years) in autumn

---

22 Error margins for GNP/GDP based on 1967 to 2007 MAEs of current-year forecasts in spring by JD and OECD would be approximately ½ %.

23 For spring 2008, the bandwidth of the forecast had ranged from 0.7%–2.9% (Arbeitsgemeinschaft 2008a, p. 36).

24 The scenario was based on assumptions that world trade would expand by a rate of only 1%, not the 3% in the forecast, with a worsening of financial conditions for business and private households, an increase of the saving rate by 0.5 ppts. and a reduction of crude oil prices and other raw materials by 10%, against assumptions in the forecast. As a result, GDP in 2009 would decline by 0.8%, while the forecast expected a growth of 0.2%. Past errors of the JD suggested a bandwidth for real GDP growth of -0.9%–1.3% for the 68% probability interval (Arbeitsgemeinschaft 2008b, p. 46f.).
forecasts for the next year, since July it had been risky to ignore the possibility, if not probability, of stagnation or recession in 2009.

The unusually high accuracy of the annual forecasts of the JD and OECD for 2008 also characterises the demand aggregates (results not shown here). While domestic use had been correctly foreseen, export forecasts were far too optimistic but were compensated by overly low forecasts of imports. However, in the light of the MAEs, these forecasts are more accurate than in the previous 10 years.

For 2009, of course, things were different. As to be expected from the experience with spring forecasts for the next year and the development after the Lehman Brothers collapse, the spring forecasts are entirely off the mark, particularly for investments, exports, and imports.

Three observations should be added. First, after having examined official data with a suite of methods, Schreiber et al. (2012, pp. 200ff.) concluded that, regarding month of report (not of publication), since July 2008 most approaches suggested that Germany was in recession—Probit model: February/August, Subset vector autoregressive model: June, Markov switching model: July, Single equation model: August and Benchmark model: October. Second, as for the 2009 forecasts, CF lists three national and international operating banks, which from 13 October 2008 published negative GDP forecasts. From 10 November, nearly all banks and IHS Global Insights, a commercial forecasting service, also did so, ranging from -0.1% (Bank Julius Bär) to -2.0% (BHF-Bank), according to Consensus Economics (2008) in October and November. Interestingly, standard deviations of forecasts, increases of which are often viewed to signal a turning point (Dovern, Fritsche, Slacalek 2009), forecasts for 2008 were rather low and constant. For 2009 forecasts, standard deviations increased as late as October, yet remained at that level for the rest of the year (Table 2).

3 Evaluation procedures

The supply of potentially relevant information for macroeconomic forecasting is extensive, particularly for countries with strong international linkages. For outsiders, it is difficult to identify

---

20 For data relevant to (German) informal GDP models, see Döhrn 2014, pp. 144ff.; and Nierhaus, Sturm 2003; for a larger compilation of data relevant to short-term predictions (of the US economy), see Bratt 1961, p. 417ff.)
these data and their influence, even if high correlations (>0.9) of annual growth forecasts by the JD, the CEE, the OECD, and the GAER point to common ground, notwithstanding the role of theory, idiosyncratic factors, and judgement. A statistics-based selection of key data and the identification of the informational as used in now-casting models (e.g. Giannone, Reichlin, Small 2005) is in the informal GDP model framework at best possible for forecasters themselves and even they might find such identification difficult. In addition, forecasts may be adjusted to one or more ‘star[s] of Bethlehem’.26

The data considered first included direct measures of current economic activity and prices as reported in press releases by the FSO27 and Eurostat for the European Union and Euro area. ‘Press releases’ allow an exact dating of the news and also seemed to us to ensure a high attention of the news; of course, since publication of most data follow a rather fixed calendar, forecasters can be expected to be well aware of the dates when data are available. We also included macroeconomic measures or policies announced by the federal government and the European Central Bank’s (ECB) short-term interest rate. Second, we involved indirect measures of current and future activity: the Ifo Business Climate Index (Ifo-BCI), ZEW Financial Markets Expectations (ZEW-FME), the OECD’s Composite Leading Indicator for Europe (OECD-CLI),28 and as a memorandum item, the Conference Board’s Composite Leading Economic Index for the US economy (TCB-LEI).

Whether all of these data were new when released or contain information that forecasters find stale or redundant (Tetlock 2008) is difficult for third parties to decide. As for surveys, leading composite indicators and many official statistics regarding orders, production, and sales, news agencies such as Bloomberg and Reuters publish estimates and these figures may be estimated by forecasters.29 In

---

26 See on this Osterloh 2009; for technical reasons, the issue of ‘herd behaviour’ is ignored here.
27 For an analysis of official data of production and new orders, see, for example, Schreiber et al. 2014, p. 30ff.
28 For details, see Döhrn 2014, pp. 69ff, for the OECD’s CLI, see http://stats.oecd.org/Content/themes/OECD/static/help/WBOS%20User%20Guide%20(EN).PDF.
29 For the role of estimates for the Conference Board’s US Composite Leading Index see Gilbert et al. 2012 and Tanchua 2010. See also the explanations of indicators, including the consumer sentiment index in large macroeconometric models.
either case, only the difference between estimates and actual data is new. However, since we lacked information on this point, we took the news at face value.

Briefly, we aimed to reflect the stream of daily data relevant to short-term prediction and focused on qtxt rates of change. The period examined begins on April 2008, early in the month when most forecasters sampled released spring forecasts, and ends on 31 December 2008 (with one exception).

In all, the selection of 25 series of monthly and quarterly official data, CLI/LEI, and survey was rather small considering the more than 800 variables possibly relevant to short-term forecasting and the more than 120 leading indicators available (Drechsel, Scheufele 2012). One reason for our restriction was the limited capacity of studies such as ours; another was the in fact slight relevance of many data, in part also due to overlapping and double counting. Again, we lack information on which data forecasters deem relevant and, in turn, did not include data on the automotive sector, for example, which in the government seems to have played a major role in navigating the crisis since late summer 2008.

We kept our assessment of data simple. We distinguished only positive (▲), negative (▼), and neutral (●) signals, mostly as changes against the previous period, and, developments are shown only for major series. The strength of signals as warnings varies for both objective and subjective reasons, thereby offering much room for interpretation. However, we refrained from discriminating lagging, coincident, and leading indicators (information on this can easily be learned from Overview 1*(Appendix) and Figures 3 and 5).30 We also refrained from making evaluations of the news which would be difficult to objectify regarding the news itself and their role in the forecasts, respectively.

The classification of news did not generally put problems; exceptions were price data where we categorized falling (rising) prices as negative (positive). That decision is cause for debate, since, for example, falling prices could also signify an imminent decrease of interest rates, as Fintzen and Stekler (1999) assumed for the United States.

30 For a detailed discussion of indicators such as orders, industrial production, sales, and construction, as well as surveys, lower confidence intervals, and quantifications of recent leads and lags, see Döhn (2014, p. 66ff.).
4 Results

4.1 Signals

Our selection of real-time data appears in chronological order in Overview 1*. In all, we recorded for 131 days 176 entries, on average 19 signals per month of which 47% were positive, 49% were negative, and 4% were neutral. Until June, positive signals clearly dominated. In July the picture started to be reversed and negative signals became prevailing, with the notable exception of October (Figure 3, right scale). Excluding price signals—about 30% of all signals—, which mostly reflected the steep increase of food and oil prices in the first half year of 2008 and its steep decline in the second half year,\(^{31}\) the relationship is 45%: 51%: 4%.

Overview 1* can be summarised as follows.

**April:** Positive signals came from production, sales in manufacturing, and orders in February and from the labour market in March and rising consumer prices and wholesale prices.

Negative: the Ifo-BCI continued to cool down remarkably.

**May:** Positive: real GDP in Q1 2008 indicated robust growth compared to Q4 2007, which was similar but only about one-third of the growth in the Euro area and EU; employment growth continued in April; manufacturing and wholesale sales (March), consumer prices (April) and Ifo-BCI (May).

Negative signals emerged from declining orders in the construction industry, diminished retail sales and reduced import prices.

**June:** Positive signals, an increase in new orders in manufacturing, a rise in sales of manufacturing (April); exports had increased in April, as had in May increased employment and orders in the construction industry in May, amid rising consumer and producer prices.

Negative signals came from new orders in manufacturing and declining production in manufacturing in April as the Ifo-BCI cooled down considerably.

**July:** Positive signals included increased retail sales and imports in May and rising employment in June. Strong gains of GDP in the EU in Q1, drastically improved employment in the service sector during the same quarter, and robust increases in manufacturing, strong increase of consumer prices and producer prices, all caused by rising energy prices.

Negative signals were manufacturing and construction orders, a declining Ifo-BCI, falling wholesale sales, amid which the ECB raised interest rates (0.25 ppts.).

**August:** Positive signals came from exports, slightly increased industrial production in June, with its decline May revised slightly upwards. Employment and wholesale sales had increased a strong increase of consumer prices and of import prices.

---

\(^{31}\) On 3 July oil prices had reached on all time high of 145 US $ per barrel only to be followed by an even more spectacular collapse to less than 40 US $ by the end of 2008. While the run-up of oil prices in 2007–008 reflected a strong international demand confronting a stagnating world production, their spectacular fall after July was due to several factors, though the drop in global activity was one of them (Hamilton 2009).
Negative signals emerged from lower nominal retail sales, lower new orders in manufacturing, stagnant imports, increased wholesale prices, and shrinking GDP in Q2 (flash estimates: -0.2, now -0.5). Notably fewer construction outlays, a shrinking GDP in the Euro area (by -0.2 percent) and in the EU (by -0.1), expansion of employment diminished in Q2, and lower new orders in construction in Q1 and Q2. The Ifo-BCI worsened. Agreed wages and salaries hardly exceeded the inflation rate, which also had slightly declined.

**September:** Among positive signals, sales increased in various service sectors in Q2, as did imports. Consumer prices rose in July, the public deficit dropped in Q1–Q2, employment slightly increased in August, whereas wholesale prices declined, employment in manufacturing rose, and new orders in industry and in construction improved in July.

Negative signals were exports and manufacturing sales decreased in July — particularly in the Euro area — wholesale sales in real terms dropped in August, and producer and consumer prices sank. The Ifo-BCI Index further deteriorated in September.

**October:** Positive signals include a considerable increase of new orders in industry in August, sinking import prices, increased wholesale and retail sales, and increased employment. The ECB also lowered interest rates (-0.5 ppts.).

Negative signals included a considerable drop of exports and imports in August, a further worsening of Ifo-BCI Index in October, a slight increase in collectively agreed wage and salary incomes (real terms) and considerable drop in consumer prices.

**November:** Among positive signs were a slight increase in manufacturing employment, an increase in wholesale prices in October, stable producer prices in manufacturing, and a slight increase in new orders in September. The ZEW-FMI rose amid increased employment, exports and imports in September. The government decided upon measures to promote growth by 50 billion in 2009 and 2010.

Negative signs included a sharp decline of new orders in industry in September, which coincide that month with a steep fall in production in manufacturing — primarily in industry but also in construction — and manufacturing sales in September after an upward revised increase in August, a shrinking GDP in Q3 (flash estimate -.5 %), a further worsening of the Ifo-BCI, a shrinking GDP in the Euro area and in the EU by 0.2), a slowing down of employment expansion, shrinking wholesale sales and sharply falling of the inflation rate.

**December:** Positive signals include increasing exports and imports in October as well as in Q3 in general, increased employment, and lowered ECB interest rates (-0.75 %).

Negative signs included shrinking retail sales, a decreased GDP in the Euro area zone and in the EU by 0.2 in Q3, shrinking sales in manufacturing in October, diminished production in manufacturing, industry, and construction. The Ifo-BCI worsened further in December, amid a sharp decline in new construction orders, a heavy fall of wholesale prices in November, amid a declining increase in consumer prices, and a strong decline in producer prices and in import prices.

Testing a modified set of our data with the CUSU technique, assigning + (-)1 to positive (negative) signals and 0 to neutral signals and a threshold value of 0, Kovacs (2015) finds that the recession started in Q2 2008.32

---

32 For details, see Kovacs 2015; for the CUSUM approach, see Winker 2010.
Figure 3: Real GDP forecasts\(^1\) and real-time data, 2008 and 2009

Sources: See Overview 1* and Table 2. — \(^1\)yty rates of change.
4.2 Forecast revisions

Both annual and infra-annual forecasts for 2008 (Table 3) appear to show not much reaction to the increasingly worsening signals from the international (Figure 4) and from the national economy that had persisted since May, especially concerning the development of short-term indicators such as new orders, production, and sales (Figure 5). The forecast average increased from about 1.8% in April to more than 2% by July, after which it fell to 1.5% in December. However, only two institutions had raised their forecasts. Forecasts for 2009 were reduced by more than 1%, while international forecasters (EUC, IMF, and OECD) ranged mostly at the lower end of the forecast bandwidth.

**Figure 4**: Industrial production in OECD countries, 2008, index 2005=100

For quarterly and half-year forecasts, which not all forecasters publish, the record is not much different. Whereas most forecasts for Q2 turned negative, most forecasts for Q3 saw stagnation and became negative only in November, after actual GDP data had been released. The only exception was the EUC’s forecast, which as early as September expected negative growth for Q3, but did not characterise the declines as recession, perhaps because it expected growth to rebound in Q4.
mid-September onward, all forecasters expected stagnation in Q4, and one even predicted negative growth for Q3. Given the presumably high margins of error regarding quarterly forecasts compared with annual ones—numerical information on this point seems to be missing—it is astonishing that no forecaster noticed the high probability or even the possibility of the economy’s already being recession.

Figure 5: Real-time, short-term indicators in 2008, indices 2005=100


More reactions to signals of a deteriorating economy appear in the forecasts for 2009. Until August 2008, some forecasters expected GDP growth to decelerate to 1%; however, in early September—that is, before the collapse of Lehman Brothers on 15 September—they started to lower their forecasts to
stagnation. Nevertheless, not until mid-November did forecasters begin to expect a deepening of the recession, which they then realised the economy was in since April 2008.

A closer look at forecasts and their revisions (Table 3) suggests that until May, data about production, sales, and new orders, as well as lagging indicators such as labour market performance, had promised good economic performance in Q1 that official data would confirm in mid-May, with the exception of increased inflation. It may be added, that in Q1 a ‘Recession Word Index’ based on two major German-speaking newspapers had signalled ‘recession’, however, reached its all-time high only in Q4 2008 and in Q1 2009 (Iselin, Siliverstovs 2013). The prospectus started to turn in early June, when partially negative data about production, wholesale sales, and new orders for May were reported. The Ifo-BCI, which had since January 2007 signalled downswing, continued its fall in April. Rising prices, largely due to energy and food prices, diminished the expansion of real income, thereby halting private consumption that was expected to compensate for the diminishing international demand. On 3 July, the ECB raised interest rates by 0.25%; though the hike’s macroeconomic effects would be small in 2008, it darkened growth perspectives. However, for some observers, the step may have implied that despite financially turbulent times worldwide, the ECB’s outlook on growth in the Euro area and Germany remained positive—mostly similar to the view held by the Fed on the US economy at the time (Eichengreen 2015, p. 302ff, p. 418ff.).

---

33 ECB president Jean-Claude Trichet announced the ECB’s decision with the words ‘[…] While the latest data confirm the expected weakening of real GDP growth in mid-2008 after exceptionally strong growth in the first quarter, the economic fundamentals of the euro area are sound.’ (Hamilton 2009, p. 233).
Table 3: Annual and infra-annual forecasts of real GDP for 2008 and 2009, rates of change, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Institution</th>
<th>2008</th>
<th>2009</th>
<th>1st half-y.</th>
<th>2nd half-y.</th>
<th>1st half-y.</th>
<th>2nd half-y.</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2</td>
<td>DIW</td>
<td>2.0</td>
<td>1.6</td>
<td>2.0</td>
<td>2.0</td>
<td>1.0</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.8</td>
<td>1.4</td>
<td>0.6</td>
<td>0.3</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>April 17</td>
<td>JD†</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 28</td>
<td>EUC</td>
<td>1.8</td>
<td>1.5</td>
<td>0.7</td>
<td>0.3</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td>May 15</td>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June 5</td>
<td>IfW‡</td>
<td>2.1</td>
<td>1.0</td>
<td>1.6</td>
<td>-0.6</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>June 24</td>
<td>Ifo‡</td>
<td>2.4</td>
<td>1.0</td>
<td>1.6</td>
<td>-0.4</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>July 1</td>
<td>DIW</td>
<td>2.7</td>
<td>1.2</td>
<td>3.0</td>
<td>2.4</td>
<td>0.3</td>
<td>2.0</td>
</tr>
<tr>
<td>August 14</td>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>September 10</td>
<td>EUC</td>
<td>1.8</td>
<td></td>
<td>1.3</td>
<td>-0.5</td>
<td>-0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>September 11</td>
<td>IfW‡</td>
<td>1.9</td>
<td>0.2</td>
<td>1.3</td>
<td>-0.5</td>
<td>0</td>
<td>-0.1</td>
</tr>
<tr>
<td>September 16</td>
<td>RWI</td>
<td>1.7</td>
<td>0.7</td>
<td>2.4</td>
<td>0.9</td>
<td>-0.7</td>
<td>2.1</td>
</tr>
<tr>
<td>October 8</td>
<td>DIW</td>
<td>1.9</td>
<td>1.0</td>
<td>2.4</td>
<td>1.4</td>
<td>-0.1</td>
<td>2.1</td>
</tr>
<tr>
<td>October 14</td>
<td>JD†</td>
<td>1.8</td>
<td>0.2</td>
<td>1.3</td>
<td>-0.5</td>
<td>0</td>
<td>0.2</td>
</tr>
<tr>
<td>November 3</td>
<td>EUC</td>
<td>1.7</td>
<td>0</td>
<td>1.3</td>
<td>-0.5</td>
<td>-0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>November 12</td>
<td>CEE</td>
<td>1.7</td>
<td>0</td>
<td>1.3</td>
<td>-0.5</td>
<td>0</td>
<td>-0.1</td>
</tr>
<tr>
<td>November 13</td>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 10</td>
<td>RWI</td>
<td>1.7</td>
<td>-2.0</td>
<td>-</td>
<td>-</td>
<td>-5.4</td>
<td>-3.2</td>
</tr>
<tr>
<td>December 11</td>
<td>Ifo</td>
<td>1.5</td>
<td>-2.2</td>
<td>1.4</td>
<td>-0.4</td>
<td>-0.5</td>
<td>-0.9</td>
</tr>
<tr>
<td>December 22</td>
<td>IfW‡</td>
<td>1.5</td>
<td>-2.7</td>
<td>1.4</td>
<td>-0.4</td>
<td>-0.5</td>
<td>-1.1</td>
</tr>
<tr>
<td>January 7</td>
<td>DIW</td>
<td>1.6</td>
<td>-1.1</td>
<td>2.7</td>
<td>0.7</td>
<td>-2.2</td>
<td>-0.1</td>
</tr>
<tr>
<td>February 25, 2009‡</td>
<td>Actual</td>
<td>1.3</td>
<td>1.5</td>
<td>-0.5</td>
<td>-0.5</td>
<td>-2.1</td>
<td>-2.1</td>
</tr>
<tr>
<td>February 24, 2010‡</td>
<td>Actual</td>
<td>-5.0</td>
<td>-5.0</td>
<td>-3.5</td>
<td>0.4</td>
<td>0.7</td>
<td>0</td>
</tr>
</tbody>
</table>

Sources: see Table 2. Quarterly data are qto rates of change, half-year data are yty rates of change of unadjusted data. – 1 Original data – 2 Half-year data from July 2015.

Though a decline following a strong Q1 was anticipated, GDP data reported in August for Q2 (Germany: -0.5%; Euro area: -0.4%) and most other official statistics suggested that harder times were ahead. In effect, with the new forecast round starting in September, most forecasts for 2008 and 2009 became reduced. The outlook nonetheless seemed rosier on 7–8 October, when increases in new orders for industry—slightly corrected later—production, and sales for August were reported. While
orders for major industries had considerably declined, the positive news appears to have caused at least one forecaster to cling with his forecast for 2008 from the spring. However, the OECD’s G7 forecasts characterised Q3 with stagnation (Pain et al. 2014, p. 29), and until October, official statistics appear to have been interpreted to show that the economy was in a downswing, but not a recession.\textsuperscript{34} In November and December, prospects for the economy of Germany and the world further darkened, and in mid-November, official data left no doubt that Germany and the European Union were in recession.\textsuperscript{35}

Since October, growth forecasts for 2008 had been reduced by about 0.3\%, whereas predictions for 2009 fell on average by 2.1\%—from approximately 0.3\% in September to about -1.8\% in December—thus marking the largest swing ever in German growth forecasts.

According to the data, since early 2008 most forward-looking data—new domestic and foreign orders, industrial production, and investment activity—signalled a cooling down of the economy (Figure 3). Similar signs came from data for Europe and from the Ifo-BCI, the ZEW-FME, and the OECD’s CLI (Figure 3), as well as from the Conference Board’s US LEI. The decline seemed to have been halted in August, but in September new orders and production resumed their downward course, albeit on a far steeper path. In September, the Ifo Business Clock—a graphic of the Ifo-BCI’s business situation and expectations (Abberger, Nierhaus 2008)—nearly announced a recession, but survey respondents continued to regard their actual situation as slightly positive.\textsuperscript{36} Negative signals now came from the price side as well. Less clear were the trends of exports and imports; original values of imports increased until July and then started to fall, thus indicating a further cooling down, similar with exports, though both improved in October and November; revised data display until October stagnation (exports) or a much smoother decline (imports).

\textsuperscript{34} For a widely spread similar interpretation of the US economy in mid-2007, see Tanchua 2007 and Conference Board 2010.

\textsuperscript{35} This statement does also hold for FSO data seasonally adjusted with the Berlin method (BVB4).

\textsuperscript{36} Business expectations had been negative since at least April (Abberger, Nierhaus 2008, p. 17, Figure 3).
Figure 6: Business cycle monitor, January to December 2008

Sources: Statistisches Bundesamt (2008), Business cycle monitor, http://www.destatis.de/KoMo/Konjunkturmonitor.svg, authors’ compilations of monthly real-time data. ‘Months’ refers to the month for which data are reported."
A clearer picture emerged with the FSO’s Business Cycle Monitor, a four-phase classification of trend and seasonally adjusted real-time data for new orders, production, and turnover published monthly.\(^{37}\) The FSO’s monitor shows that from January 2008 onward, the economy exhibited a continuous, progressive downswing that improved only at the end of that year, unlike GDP and retail sales (Figure 6). Similarly, Eurostat’s Business Cycle Clock (Eurostat 2014) classified both the European Union and the Euro area since Q2 as being in recession. Quite differently, the linear discriminant analysis classification scheme, based on yty rates of change, observed the start of the LTP phase in Q4, as did yty GDP rates of change. As mentioned earlier, the UTP phase was immediately followed by a LTP phase, skipping the DOWN phase.\(^{38}\)

As usual and as diagnosed above, not all incoming data consistently pointed in the same direction and give a clearer picture ex post than at the time of publication. However, from Q2 onward, most aggregates of domestic use were on their way down, and even more salient was the decline of net exports.

The size of later data revisions was small and did not alter the picture formed by the first vintage data, despite the exceptions of data regarding exports and imports. Preliminary results for August showed a considerable fall of both exports and imports, which later might have caused forecasts to be changed to ‘stagnation’ (Figure 4).

Averaging individual forecasts for 2008 first reveals a considerable increase from April to July and thereafter a continuous reduction; for 2009, revisions are greater, as expected, particularly from September onward, but declaring recession only in November.

Forecast revisions for 2008 and 2009 were greater on average than those for advanced economies (Dovern et al. 2014, p. 19, Figures 3-6), yet in line with Dovern’s (2013) results for recession periods. Whether they are consistent with Isiklar, Lahiri and Louganis’s (2006) finding that it takes German

\(^{37}\) For details of its computation, see Statistisches Bundesamt 2008, Oltmans 2009.

\(^{38}\) Taking as a reference the cycles from 1974–2001, Q2 2008 shows characteristics of an UP-phase, primarily because employment, GDP, and short-term interest rates compensated for the other LTP characteristics of investment, net exports, and unit labour cost, which pointed toward an LTP phase.
forecasts (CF) five months to include 90% of the new information is more difficult to decide. After all, ‘forecast revision’ is only a rough proxy for measuring information updates and information rigidity, since forecasters are liable to update their information yet keep predictions constant, or else revise those predictions without new information (Sheng, Wall 2014)—particularly because ‘new’ is a subjective standard in the present context, notwithstanding that ‘quick revision’ does not necessarily mean more accurate forecasts, as Figure 2 illustrates.

Autumn forecasts for 2008 were on average approximately 1% less than the forecasts in spring, though that figure masks considerable shifts during the year. In reaction to unexpectedly good results for Q1, forecasts for the first half-year rose by roughly only 0.5%, whereas forecasts for the second half became negative only in November.

In texts explaining these predictions, until mid-November forecasters avoided mentioning the word recession, even when their forecasts actually implied one or were very close to doing so (Table 3). Even the JD, which predicted GDP shrinkage by 0.7% in the second half of the year along with negative growth in Q2, saw Germany only ‘at the brink of a recession’ (Arbeitsgemeinschaft 2008b, p. 7).

4.3 Explanations

It remains unclear why the start, the probability, or at least the possibility of recession was not observed earlier. Perhaps unusually good labour market performance (Figure 1)—clearly a lagging indicator—can explain the delay. However, Schreiber et al. (2012, p. 202, Table 9.1) found that turning points could be diagnosed as early as December 2007 and recession signals since February 2008. Yet, their models’ past performance is not free of false alarms, and theory, judgment, and other components of traditional business cycle analysis continue to be important parts in forecasting turning points and recessions.

A general explanation as to why the start of the recession was not seen earlier might be what psychologists call the truth effect, meaning ‘a person’s belief in an ambiguous statement increases as he or she encounters the statement more often’ (Tetlock 2008, p. 2). Until October, forecasters, the federal government, and large portions of the business community, despite Ifo’s alarming business
expectations, continued to characterise the economy as being in a healthy, competitive position to withstand turbulence from international financial markets and the international economy. German business continued to assure the public that the economy was in a healthy condition and could withstand the decline of international markets (Süddeutsche Zeitung, 18 October 2008). Likewise, federal government spokesman Thomas Steg declared in the same article that the German economy, despite its current weakening, could defend its position in international markets. Stimulation programs were ruled out, though measures targeting branches particularly hit were seen as possible when needed. Federal Minister of Finance Peer Steinbrück still sought to become in 2009 the first federal minister of finance in more than 40 years to present a balanced budget and at this point was hardly enthusiastic about prospects of shrinking revenues or additional expenditures. All in all, backed by the fact that post-World War II Germany (before Lehman Brothers) had not experienced a financial crisis that is a banking crisis, a debt crisis or a sovereign crisis, it seemed to have reason to believe ‘That Germany is different’. But it also held the firm belief that a real economy crisis caused by contagion would ‘happen to other people in other countries and other times’ (Reinhart, Rogoff 2010, p. 9)—a variant of the ‘This time is different syndrome’—, however, a belief hardly supported by Germany’s post-World War II cyclical experience.

The EUC (2008, p. 1), which in September had stated that ‘in some cases, advanced economies appear to be close to a technical recession’, avoided to mention this possibility for Germany, but instead found economic fundamentals to be strong (EUC 2008, p. 11). The ECB’s raising interest rates in July, a decision reversed only on 9 October, could be added as a reason, as could the distraction of forecasters caused by financial turbulence worldwide in the wake of the collapse of Lehman Brothers. However, turbulence had in fact started much earlier (Eichengreen 2015, pp. 203ff.) and that collapse occurred only near the end of Q3.

The behaviour of German forecasters shows surprising parallels to those of the United States during the period (Stekler, Talwar 2011)— ignoring the different types of crises (Reinhart, Rogoff 2009, pp.

39 Similarly, the Fed, which in 2007 had recognised the downside risks to growth, started to focus on inflation risks in the first half of 2008 that did not change until the end of October (Stekler, Symington 2014).
28

40ff.): a shock-type crisis in the case of the US and a contagion crisis in the case of Germany, at least until the collapse of Lehman Brothers. According to The Wall Street Journal’s monthly survey forecasts of 50–60 business economists, no forecast for 2008 issued between November 2007 and March 2008 predicted negative growth for any quarter in 2008. Indeed, the National Bureau of Economic Research Cycle Dating Committee on 11 December 2008 dated the start of the recession in December 2007.40 From March to May 2008, 40%–50% of these economists predicted negative growth for 2008, though this share decreased from June to September 2008. However, contemporaneously published subjective probabilities that the United States would enter recession within the next 12 months had increased from 33.5% in December 2007 to 64.5% in March 2008. According to Stekler and Talwar (2011, p. 6), ‘In October nearly all survey participants predicted a recession that would last at least through the first quarter 2009’. A mixed, rapidly changing picture of the state of the economy also appears in the minutes of the Federal Open Market Committee (Stekler, Symington 2010). However, while US forecasters were equally wrong with their 2008 forecasts, which German forecasters might have viewed as backing their relative optimism in the first nine months of 2008, they were much faster than their German counterparts to acknowledge that the economy might be in recession.41

4.4 Forecast revisions, data revisions, and the forecasting process

To return to the three questions raised at the beginning of this paper, the answer to the first question (‘Did forecasts published after April 2008 take full account of information available from official and of major surveys or indicators?’) seems to be negative when forecast revisions are confronted with incoming data and the accuracy of infra-annual forecasts. Indeed, it may be reassuring to forecasters that the accuracy of all three sets of annual forecasts (i.e. A_{t-1}, S_t, and A_t) for 2008 was greater than for previous recessions and even greater on average than during the previous decade. But the onset of the recession was unforeseen and recognised only when the economy had already been in recession for

40 For a different view, dating the start of the (technical) recession in Q3 2008, see, for example, Blinder 2009.
41 Again, forecast errors were not beyond their usual range. For example, the spring forecast of the JD expected GDP growth of 1.5% (2008) and 2.2% (2009) for the US economy, which lingered at 1.5% and 1.0%, in autumn (Arbeitsgemeinschaft 2008a, p. 16; Arbeitsgemeinschaft 2008b, p. 32). Actual data were 1.1% (2008) and -2.6 (2009) (Arbeitsgemeinschaft 2009a, p. 15; Arbeitsgemeinschaft 2010a, p. 11).
seven months. Put differently, so-called actuality bias appears as to have prevented forecasters in early October from observing the start of the recession in Q2 because encouraging signs (for August) caused them to see merely stagnation in Q3. However, to assess data for just one month as an indication that the downward trend had been stopped was unusual and risky; in fact, during 1970–2007, 0% qtq GDP rates of change outside recession periods were recorded just five times. In the present case, the margin between a stagnating and shrinking GDP in Q3 of now EUR 659 billion barely exceeded EUR 1 billion. Forecasters seem to have much discounted the risks often associated with data for this month and the disturbing news from abroad, as shown, often a trigger of German recessions, not to mention the general positive bias of their forecasts and poor record of predicting or recognising them in a timely manner.

For 2009, forecasts expected only a continuation of the downturn and, as late as November still noted only stagnation. However, the origin and progress of this part of the crisis still seems poorly understood, and forecasters may well point out that Germany at the time had no experience with a financial crisis, which is quite different from the real economy crisis that had begun in April. More specific, German forecasters can hardly be blamed for not having anticipated the common shock of the collapse of Lehman Brothers, but for having downplayed ‘the transmission that occurs due to mechanisms that are really the result of cross-border contagion emanating from the epicentre of the crisis’ (Reinhart, Rogoff 2009, p. 240), that is the crisis in the United States that had started in 2007.

The answer to our second question (‘Were data available to forecasters ambiguous or erroneous—that is, were there meaningful revisions?’) is clearly negative. Simply put, there were no meaningful revisions of GDP data, and the revision of the decline of GDP in Q2 from -0.2% to -0.5% (25 November 2008) reinforced the picture of a downswing that turned out to be a recession.

Our last question (‘Did any factors in the process of forecasting contribute to forecasting errors?’) is more difficult to answer, for the process may vary among forecasters and little is known to third parties. As said before, one reason why forecasters were reluctant to see recession in Germany could

---

42 The MAE of the OECD’s GDP forecasts (1990–1999) was 1.2, whereas it was 2.0 and 1.8 for the JD and OECD (2000–2012), respectively.
have been that the country had not experienced a financial crisis before, and the magnitude and speed of this recession’s international dissemination made it unpredictable. This reasoning would align with Dominguez, Fair, and Shapiro’s (1988)—disputed—explanation as to why the Great Depression in the United States had not been predicted, as well as with Koll et al.’s (2009). Yet, the argument would hold primarily after the collapse of Lehman Brothers; at least, it had not been suggested before, despite considerable financial market turmoil since 2007. The argument also lacks detail. For example, was the failure to see the crisis caused by faulty assumptions,43 changing reactions of demand, or a combination of both? After all, by historical standards GDP forecasts for 2009 made in the spring of that year were surprisingly accurate, despite the further expansion of the crisis on the one hand and the effects of combined international fiscal and monetary interventions of unprecedented magnitude on the other.44

Another explanation could be that forecasts suffered from the ‘sticky’ processing of data by forecasters or from ‘noisy data’.45 The results shown here may offer some evidence of both. If there were stickiness, then it was asymmetrical; warning signals of indicators since 2007 (e.g. the Ifo-BCI, produced by an institution in our sample) seem to have received only minor attention, whereas positive signals in early October seem to have been addressed immediately. Though one forecaster in early October calculated a high probability that the Euro area has been in recession since late 2007, he abstained from revealing what that implied for Germany or from presenting a similar estimate for the country (Arbeitsgemeinschaft 2008b, p. 27f.).

Lastly, forecasters’ ‘low priors about the likelihood of a recession’ (Fintzen, Stekler 1999) may offer a general explanation as to why the recession was not observed earlier, as the next section elaborates.

44 For example, the JD’s GDP forecast in spring 2009 for that year was -6.0% and, in autumn 2009, -4.7%; the actual outcome was -4.7% (Arbeitsgemeinschaft 2009a, 2009b; 2010a). For details, consult Table 1.
45 So-called ‘sticky’ processing of information is considered to stem from the cost of acquiring and processing information (Mankiw, Reis, Wolfers 2003). By contrast, ‘noisy’ information models assume that forecasters update their information continuously yet observe the true state of the economy with error (Mackowiak, Wiederholt 2009), Sims 2003, and Woodford 2001).
5 Summary and some conclusions

In this paper, we analysed data to elucidate the late recognition of the start of the Great Recession 2008–2009 in Germany. We inspected real GDP forecasts for 2008 and 2009 by 12 major national and international institutions, as well as their reactions to key real-time data, CLIs and surveys from 2 April–31 December 2008.

Whereas accuracy of annual forecasts for 2009 proved to be a debacle, for 2008 they were slightly more accurate than had been regarding previous recessions. However, the onset of the recession in Q2 2008 was recognised as late as November of that year, when official data showed that the economy had been in recession for the past seven months. Forecasts did not issue warnings, though from July onward most data signalled that Germany might be in recession or else enter one soon. The recession might have been a mild one, compared with the steep decline that started in Q4 2008 (Figure 1). However, given the increasingly vulnerable situation in Germany and of its major trading partners from 2007 onward —a typically constellation for negative shocks to be of particular influence (Zarnowitz 1986) —, deliberations on how policy should react to the situation could have started much earlier than in October 2008. A lag of one or two months appears to be a brief period, though it does not consider inside and outside lags or that past recessions in Germany rarely lasted for more than four quarters.

In response to the three questions raised at the beginning of this paper,

1. Forecasts published in Q2 and Q3 2008 appear to have not fully reacted to negative signals indicated by real-time data, CLIs, LEIs and surveys, yet gave great weight to positive news, often about lagging indicators.

2. Data available to forecasters were not erroneous or ambiguous, and

3. It is difficult to decide to what degree the forecast process itself contributed to the errors. However, as in previous recessions, forecasters’ having low priors concerning the likelihood of recession seems to be evident.
The forecast community’s ‘low priors about the likelihood of a recession’ or preferring type II over type I errors is neither new in nor exclusive to German forecasts. While the hesitation of US forecasters, for example, to predict a recession appears to be the consequence of several false alarms (Fintzen, Stekler 1999; Fels, Hinshaw 1968), German forecasters examined here (Table 1) do not have this excuse, since they never predicted a recession in their year ahead forecasts and mostly missed them even in their spring forecasts for the current year. Accordingly, they could not issue false alarms.

As stated, this finding is not new. Examining US post-WWII recession forecasts, Fels and Hinshaw (1968, p. 122) summarised, ‘As time goes by, analysts become increasingly aware of first the possibility, then the probability, and finally the certainty of a turning point’. In 2008, German forecasters cited the possibility of a recession only when the country was already more than seven months in.

Though the focus of this paper is diagnostic rather than remedial and results are not tested but documented (as far as possible for outsiders), some conclusions and remarks may be added. Clearly, besides detailed analyses of forecasts, preferably by forecasters themselves, wider and more detailed evidence on the accuracy of infra-annual and recession forecasting is needed; due to aggregation gains, results of annual forecasts give an overly optimistic picture of forecasters’ capacity to recognise crises in a timely fashion. Comparative studies of recession forecasting should reveal whether forecasters’ behaviour shows cyclical variation, differs with types or origins of crisis, is internationally different, or varies over time. Ironically, up to and including the Federal Republic of Germany’s first recession (1966–1967), when the growth trend was more than 4%, with the memory of the Great Depression still vivid forecasters were far more eager to warn of imminent growth slowdowns than thereafter (Berger 1997; Antholtz 2005).

Second and more specifically, it is difficult to explain when and why forecasts are revised or not. The eclectic approach of the informal GDP model poses many advantages, yet complicates tracing the various factors that shape forecasts and where errors come from. Of course, forecasts, even when, for example, made with macroeconometric models, are, in one way or another, the result of a negotiation
process, in which personal elements play an important role.\textsuperscript{46} Exercises with purely statistically based forecasts—notably bound by subjective elements too—have so far failed to demonstrate their superiority.\textsuperscript{47} Lastly in this context, if information processing is sticky or noisy, then the gospel that ‘better data’ will improve forecasting accuracy as a general promise may not be as convincing as often assumed by the profession.

Forecasters often justify their ‘low priors’ to forecast a crisis by citing the risk of destabilising the economy by crying wolf\textsuperscript{48}, i.e. to make their prediction a ‘self-fulfilling prophecy’. However, to be destabilising, a forecast must have an impact, that is be acted upon, and generate feared results,\textsuperscript{49} conditions which are unlikely to hold in advanced economies given their vast supply of macroeconomic forecasts, even for the most reliable or influential forecasts; with forecasts by policy makers things may be different.\textsuperscript{50} In that sense, it is unsurprising that proponents of the reflexive role of forecasts do not offer evidence to support their belief. Thus a more plausible explanation is that forecasters simply shy to predict recessions because of the risks for them associated with doing so.

How might forecasters’ ‘low priors about the probability of a recession’ be changed? An initial idea would be to view these low priors as a symptom of a lack of competition in a profession characterised by a blend of profit- and non-profit-oriented institutions and a mixture of monopolistic, oligopolistic, and competitive behaviour. The past half-century has seen a considerable increase and internationalisation of the profession, though the accuracy of recession forecasts and macroeconomic forecasts in general has not improved, nor is there evidence that profit-oriented institutions produce more accurate forecasts (Heilemann, Klinger 2006). A major reason for this could be that the low priors originate in the loss function of forecasters. While there is no evidence of asymmetrical loss of

\textsuperscript{46} See Fritsche and Heilemann (2010) for the JD, and IEO (2014, pp. 10ff.) for the forecasting process at the IMF and for multi-country forecasting in other organisations, see IEO 2014, pp. 10ff.

\textsuperscript{47} For a recent exercise for the United States, see Hamilton 2011.

\textsuperscript{48} In interviews, forecasters usually disclaim such behaviour, though evidence is split (Döpke (2000).

\textsuperscript{49} For a broad discussion of the concept of reflexive forecasts and the preconditions of self-fulfilling or self-destroying forecasts, see Fulda 1994.

\textsuperscript{50} For the crisis in the United States beginning in 2007, Stekler and Symington (2014, p. 21) suggest that the Fed ‘may have been reluctant to state clearly that a recession was imminent because of the possibility that this announcement would become a self-fulfilling forecast’.

\textsuperscript{46} See Fritsche and Heilemann (2010) for the JD, and IEO (2014, pp. 10ff.) for the forecasting process at the IMF and for multi-country forecasting in other organisations, see IEO 2014, pp. 10ff.
functions among German forecasters in general (Döpke, Fritsche, Siliverstovs 2009), in critical situations payoffs may differ. In that sense, rocking the boat—that is, being substantially different from the herd (e.g. Consensus Forecasts)—needs to be strongly advocated and may harm not only individuals (IEO 2014, p. 19), but also institutions. However, it also has to be realised that forecast consumers too, in particular politics, tend to have low priors accepting that a crisis may be ahead. Recessions may urge action, which is a request rarely welcomed warmly — in booms even less than in recessions—by politics, the business community, or people in general. The onset of the crisis of 2008-2009 appears to be a case in point.

Literature


Arbeitsgemeinschaft deutscher wirtschaftswissenschaftlicher Forschungsinstitute e.V. (since 2007: Projektruppe Arbeitsgemeinschaft), Die Lage der Weltwirtschaft und der deutschen Wirtschaft im Frühjahr [Spring] (a) (Herbst [Autumn] (b)) 1966ff. Essen.


Eichengreen, B. (2015), Hall of Mirrors - the Great Depression, the Great Recession, and the uses-and misuses of History, Oxford, UK.


Tetlock, P. C. (2008), All the news that’s fit to reprint: do investors react to stale information? [Yale University].


## Appendix

### Sources of forecasts

<table>
<thead>
<tr>
<th>Institution</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE</td>
<td><a href="http://www.sachverstaendigenrat-wirtschaft.de/fruehere_jahresgutachten.html">http://www.sachverstaendigenrat-wirtschaft.de/fruehere_jahresgutachten.html</a></td>
</tr>
<tr>
<td>DIW</td>
<td><a href="http://www.diw.de/de/diw_02.c.241932.de/forschung_beratung/daten/konjunkturprognosen/archiv/archiv_konjunkturprognosen.html">http://www.diw.de/de/diw_02.c.241932.de/forschung_beratung/daten/konjunkturprognosen/archiv/archiv_konjunkturprognosen.html</a></td>
</tr>
<tr>
<td>IfW</td>
<td><a href="https://www.ifw-kiel.de/wirtschaftspolitik/prognosezentrum">https://www.ifw-kiel.de/wirtschaftspolitik/prognosezentrum</a></td>
</tr>
<tr>
<td>IMK</td>
<td><a href="http://www.boeckler.de/imk_6750.htm">http://www.boeckler.de/imk_6750.htm</a></td>
</tr>
<tr>
<td>RWI</td>
<td><a href="http://www.rwi-essen.de/publikationen/rwi-konjunkturberichte/">http://www.rwi-essen.de/publikationen/rwi-konjunkturberichte/</a></td>
</tr>
</tbody>
</table>
Table 4*: Accuracy of quarterly real GDP forecasts 2008 and 2009, quarterly rates of change against previous quarter

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th></th>
<th></th>
<th></th>
<th>2009</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Real GDP, actual</td>
<td>0.9</td>
<td>-0.3</td>
<td>-0.4</td>
<td>-2.0</td>
<td>-4.5</td>
<td>0.1</td>
<td>0.6</td>
<td>0.9</td>
</tr>
<tr>
<td>FI_H1a</td>
<td>0.3</td>
<td>0.5</td>
<td>0.1</td>
<td>-0.2</td>
<td>-2.5</td>
<td>-2.1</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>FI_H1b</td>
<td>0.2</td>
<td>0.6</td>
<td>0.4</td>
<td>-0.8</td>
<td>-3.8</td>
<td>-1.0</td>
<td>-0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>FO_H1a</td>
<td>0.3</td>
<td>0.5</td>
<td>0.1</td>
<td>0.1</td>
<td>-1.0</td>
<td>-5.5</td>
<td>0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>FO_H1b</td>
<td>0.1</td>
<td>0.6</td>
<td>0.5</td>
<td>-0.3</td>
<td>-2.8</td>
<td>-1.1</td>
<td>-0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>FI_H4a</td>
<td>0.2</td>
<td>-0.5</td>
<td>-0.1</td>
<td>0.4</td>
<td>-0.9</td>
<td>3.4</td>
<td>3.3</td>
<td>2.8</td>
</tr>
<tr>
<td>FI_H4b</td>
<td>-0.1</td>
<td>-0.2</td>
<td>0.4</td>
<td>0</td>
<td>-4.0</td>
<td>-0.6</td>
<td>-1.2</td>
<td>-1.8</td>
</tr>
<tr>
<td>FO_H4a</td>
<td>0.3</td>
<td>-0.2</td>
<td>0.4</td>
<td>1.1</td>
<td>-1.0</td>
<td>3.0</td>
<td>2.7</td>
<td>2.0</td>
</tr>
<tr>
<td>FO_H4b</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.5</td>
<td>0.6</td>
<td>-2.8</td>
<td>1.0</td>
<td>0.6</td>
<td>0</td>
</tr>
</tbody>
</table>

Authors’ computations. – F….a: (real) GDP = a + b AR (1); F….b: (real) GDP = a + b AR (1) + c 3m-money rate + AR(1); quarterly rates of change of real GDP, 2002-II to 2007-IV, Marquardt nonlinear least squares algorithm, Moving Window; FI: in-sample forecast; FO: out-of-sample forecast; H1: moving one quarter ahead forecast, H4: moving four quarter ahead forecasts.
Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 04</td>
<td>New orders&lt;br&gt;Manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung des Auftragseingangs in der Industrie im Februar 2008</td>
<td>Die Auftragseingänge in der Industrie sind vorläufigen Angaben zufolge im Februar preis- und saisonbereinigt nochmals um 0,5 % gegenüber dem Vormonat zurückgegangen.</td>
<td>▼</td>
</tr>
<tr>
<td>April 07</td>
<td>Production&lt;br&gt;manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung der Produktion im Produzierenden Gewerbe im Februar 2008</td>
<td>Die Erzeugung im Produzierenden Gewerbe erhöhte sich im Februar preis- und saisonbereinigt um 0,4 %. Im Januar hatte sie leicht abwärts revidiert um 1,4 % zugenommen. Während die Erzeugung in der Industrie um 0,3 % zulegte, erhöhte sich die Produktion im Bauhauptgewerbe erneut deutlich um 3,7 %.</td>
<td>▲</td>
</tr>
<tr>
<td>April 08</td>
<td>Sales&lt;br&gt;manufacturing</td>
<td>Pressemitteilung Nr.140 vom 08.04.2008: Umsatz im Verarbeitenden Gewerbe im Februar 2008: Real + 6,2% zum Vorjahr</td>
<td>[...] verzeichnete das Verarbeitende Gewerbe nach vorläufigen Angaben arbeitstäglich bereinigt im Februar 2008 einen realen Umsatzzuwachs von 6,2% gegenüber dem Februar 2007 (nach revidiert + 7,0% im Januar 2008).</td>
<td>▲</td>
</tr>
<tr>
<td>April 09</td>
<td>Exports</td>
<td>Pressemitteilung Nr.142 vom 09.04.2008: Deutsche Ausfuhren im Februar 2008: + 9,0% zum Februar 2007</td>
<td>[…] anhand vorläufiger Ergebnisse (…), wurden im Februar 2008 von Deutschland Waren im Wert von 84,6 Milliarden Euro ausgeführt und Waren im Wert von 67,7 Milliarden Euro eingeführt. Die deutschen Ausfuhren waren damit im Februar 2008 um 9,0% und die Einfuhren um 7,0% höher als im Februar 2007. Kalender- und saisonbereinigt blieben die Ausfuhren gegenüber Januar 2008 nahezu unverändert und die Einfuhren nahmen um 0,4% ab.</td>
<td>▼</td>
</tr>
<tr>
<td>April 09</td>
<td>GDP</td>
<td>Eurostat-Pressemitteilung 48/2008 v. 9.04.08: BIP in der Eurozone um 0,4% und in der EU27 um 0,5% gestiegen</td>
<td>Im Vergleich zum Vorquartal ist das BIP der Eurozone (EZ13) im vierten Quartal 2007 um 0,4% und das der EU27 um 0,5% gestiegen. Dies geht aus von Eurostat, dem Statistischen Amt der Europäischen Gemeinschaften, veröffentlichten zweiten Schätzungen hervor. Im dritten Quartal 2007 betrug die Wachstumsrate +0,7% in der Eurozone und +0,8% in der EU27.</td>
<td>▲</td>
</tr>
<tr>
<td>April 11</td>
<td>Wholesale prices</td>
<td>Pressemitteilung Nr.147 vom 11.04.2008: Großhandelspreise März 2008: + 7,1% zum März 2007</td>
<td>Der Index der Großhandelsverkaufspreise lag […] im März 2008 um 7,1% über dem Vorjahresstand. Dies war die höchste Jahrestreuerungsrate seit Februar 1982 (+ 8,5%). Im Februar 2008 und im Januar 2008 hatte die Jahresveränderungsrate + 6,0% beziehungsweise + 6,6% betragen.</td>
<td>▲</td>
</tr>
<tr>
<td>April 11</td>
<td>CLI</td>
<td>News release OECD Composite leading indicators</td>
<td>The latest composite leading indicators (CLIs) suggest a slowdown in economic activity lies ahead in the OECD area. February 2008 data indicate a weakening outlook for all the major seven economies.</td>
<td>▼</td>
</tr>
</tbody>
</table>
**Overview 1*: Record of selected macroeconomic news, April to December 2008**

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 14</td>
<td>US Banking</td>
<td>Press release Bear Sterns from March 14, 2008: Financial Markets - Extensions of credit to The Bear Stearns Companies Inc.</td>
<td>The Federal Bank of New York provided to Bear Stearns, a New York based global investment bank, an emergency loan to avert a sudden collapse of the company. (Die Bank konnte nicht gerettet werden und wurde zwei Tage später mit JP Morgan Chase, einem anderen Bankhaus, verschmolzen.)</td>
<td>▼</td>
</tr>
<tr>
<td>April 15</td>
<td>ZEW-FME</td>
<td>Pressemitteilung ZEW Konjunkturerwartung</td>
<td>Die ZEW-Konjunkturerwartungen für Deutschland sind im April um 8,7 Punkte gefallen und betragen nun minus 40,7 Punkte nach minus 32,0 Punkten im Vormonat. Damit liegen sie weiterhin deutlich unter ihrem historischen Mittelwert von 30,0 Punkten.</td>
<td>▼</td>
</tr>
<tr>
<td>April 17</td>
<td>US economy</td>
<td>Press release The Conference Board, April 17, 2008</td>
<td>The US leading index increased 0.1 percent, the coincident index increased 0.1 percent, and the lagging index increased 0.3 percent in March.</td>
<td>▲</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>April 21</td>
<td>New orders construction industry</td>
<td>Pressmitteilung Nr. 157 vom 21.04.2008: Aufträge im Bauhauptgewerbe im Februar 2008: Real + 0,7% zum Vorjahr</td>
<td>[...] verzeichnete das Bauhauptgewerbe in Betrieben mit 20 und mehr Beschäftigten im Februar 2008 in Deutschland preisbereinigt um 0,7% höhere Auftragseingänge als im Vorjahresmonat. Dabei nahm die Baunachfrage im Hochbau um 2,4% zu, im Tiefbau dagegen um 1,1% ab. Im Vergleich der Ergebnisse der Monate Januar und Februar 2008 mit denjenigen des entsprechenden Vorjahreszeitraums sind die Auftragseingänge preisbereinigt um 5,5% gestiegen. Der Gesamtumsatz belief sich auf 9,6 Milliarden Euro und lag damit um 13,2% über dem Niveau der ersten beiden Monate 2007.</td>
<td>▲</td>
</tr>
<tr>
<td>April 28</td>
<td>Consumer prices</td>
<td>Pressmitteilung Nr. 165 vom 28.04.2008: Verbraucherpreise April 2008: Voraussichtlich + 2,4% gegenüber April 2007</td>
<td>[...] wird sich der Verbraucherpreisindex in Deutschland im April 2008 – nach vorliegenden Ergebnissen aus sechs Bundesländern – gegenüber April 2007 voraussichtlich um 2,4% erhöhen (März 2008: + 3,1%). Im Vergleich zum Vormonat ergibt sich eine Veränderung von - 0,2%.</td>
<td>▼</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 30</td>
<td>Employment</td>
<td>Pressemitteilung Nr. 168 vom 30.04.2008: Arbeitsmarkt profitiert von günstiger Konjunktur</td>
<td>Dies entspricht einer Zunahme um 687 000 Personen (+ 1,8%) gegenüber dem Vorjahresmonat März 2007. Im Vergleich mit dem Vormonat Februar 2008 ist die Zahl der Erwerbstätigen im März 2008 um 143 000 (+ 0,4%) gestiegen.</td>
<td>▲</td>
</tr>
<tr>
<td></td>
<td>Wholesale sales</td>
<td>Pressemitteilung Nr. 169 vom 30.04.2008: Großhandelsumsatz im März 2008 um real 4,6% gesunken</td>
<td>[…] setzte der Großhandel in Deutschland im März 2008 nominal 1,3% mehr und real 4,6% weniger um als im März 2007. Im Vergleich zum Februar 2008 wurde im Großhandel unter Berücksichtigung von Saison- und Kalendereffekten nominal 0,6% und real 1,4% weniger umgesetzt.</td>
<td>▼</td>
</tr>
<tr>
<td>May 07</td>
<td>New orders manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung des Auftragseingangs in der Industrie, März 2008</td>
<td>Die Auftragseingänge in der Industrie sind vorläufigen Angaben zufolge im März preis- und saisonbereinigt erneut um 0,6% zurückgegangen, nachdem sie im Monat zuvor leicht abwärts revidiert ebenfalls um 0,6% gesunken waren.</td>
<td>▼</td>
</tr>
<tr>
<td>May 08</td>
<td>Production manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung der Produktion im Produzierenden Gewerbe, März 2008</td>
<td>Die Erzeugung im Produzierenden Gewerbe ist im März preis- und saisonbereinigt um 0,5% zurückgegangen, nach abwärts revidierten +0,2% im Februar. Die Industrieproduktion nahm dabei zuletzt leicht um 0,2% ab. Im Bauhauptgewerbe kam es im März nach zum Teil hohen Produktionszuwächsen in den Monaten zuvor zu einem kräftigen Rückgang der Erzeugung um 12,3%.</td>
<td>▼</td>
</tr>
<tr>
<td>May 14</td>
<td>CLI</td>
<td>News release OECD Composite leading indicators</td>
<td>The latest composite leading indicators (CLIs) suggest that a slowdown in economic activity lies ahead in the OECD area. March 2008 data indicate a weakening outlook for all the major seven economies.</td>
<td>▼</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>---------------</td>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>May 16</td>
<td>Consumer prices</td>
<td>Pressemitteilung Nr.182 vom 15.05.2008; Verbraucherpreise April 2008: + 2,4% zum April 2007</td>
<td>[...] ist der Verbraucherpreisindex für Deutschland im April 2008 gegenüber April 2007 um 2,4% gestiegen. Im Vergleich zum Vormonat März 2008 verringerte sich der Index um 0,2%. Im März 2008 hatte die Jahresveränderungsrate bei + 3,1% gelegen. Die Schätzung für April 2008 auf Grund der Ergebnisse aus sechs Bundesländern wurde damit bestätigt.</td>
<td>▼</td>
</tr>
<tr>
<td>May 20</td>
<td>ZEW-FME</td>
<td>ZEW-Pressemitteilung: 20.05.2008 ZEW-Konjunkturerwartungen - Erwartungen stabilisieren sich</td>
<td>Die ZEW-Konjunkturerwartungen für Deutschland haben sich im Mai stabilisiert. Sie sind nur geringfügig um 0,7 Punkte gefallen und liegen nun bei minus 41,4 Punkten nach minus 40,7 Punkten im Vormonat. Damit liegen sie weiterhin deutlich unter ihrem historischen Mittelwert von 29,6 Punkten.</td>
<td>▼</td>
</tr>
<tr>
<td>May 20</td>
<td>US economy</td>
<td>The Conference Board: Press release May 19, 2008</td>
<td>The leading index increased 0.1 percent, the coincident index remained unchanged and the lagging index increased 0.1 percent in April</td>
<td>▲</td>
</tr>
<tr>
<td>May 20</td>
<td>Producer prices</td>
<td>Pressemitteilung Nr.186 vom 20.05.2008; Erzeugerpreise April 2008: + 5,2% gegenüber April 2007</td>
<td>Der Index der Erzeugerpreise gewerblicher Produkte lag […] im April 2008 um 5,2% höher als im April 2007. Eine höhere Jahresteuersätze hatte es letztmalig im August 2006 (+ 5,9%) gegeben. Gegenüber März 2008 stieg der Index um 1,1%.</td>
<td>▲</td>
</tr>
<tr>
<td></td>
<td>Quarterly GDP</td>
<td>OECD Quarterly National Accounts, 20 May 2008 GDP in OECD area rose by 0,5% in the first quarter of 2008</td>
<td>Gross Domestic product (GDP) in the OECD area rose by 0.5% in the first quarter of 2008, the same rate as in the previous quarter, according to preliminary estimates. … was highest in Germany (2.7%) …higher than in the previous quarter. … total OECD growth of 2.6% between the first quarter of 2007 and the first quarter 2008.</td>
<td>▲</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 21</td>
<td>Employment</td>
<td>Pressemitteilung Nr.188 vom 21.05.2008: 1,4 Millionen mehr Erwerbstätige binnen zwei Jahren</td>
<td>Nach vorläufigen Berechnungen […] waren im ersten Quartal 2008 rund 39,8 Millionen Personen mit Arbeitsort in Deutschland erwerbstätig. Seit dem ersten Quartal 2006 ist die Zahl der Erwerbstätigen in Deutschland im Zuge des konjunkturell bedingten Beschäftigungsaufbaus damit um 1,4 Millionen Personen oder 3,7% gestiegen. Alleine in den Dienstleistungs bereichen sind binnen zwei Jahren 1,1 Millionen (+ 3,8%) zusätzliche Arbeitsplätze entstanden. Auch im Produzierenden Gewerbe ohne Baugewerbe und im Baugewerbe wurden in diesem Zeitraum mit + 218 000 Personen (+ 2,8%) und + 104 000 Personen (+ 5,1%) nach zuvor jahrelangem Arbeitsplatzabbau kräftige Beschäftigungsgewinne erzielt. Gegenüber dem Vorjahr gab es im ersten Quartal 2008 686 000 oder 1,8% mehr Erwerbstätige. Somit setzte sich auch im Vorjahresvergleich der Anstieg der Erwerbstätigkeit mit fast unverminderter Dynamik fort (viertes Quartal 2007 gegenüber Vorjahr: + 703 000 Personen oder + 1,8%).</td>
<td>▲</td>
</tr>
<tr>
<td>May 21</td>
<td>New orders construction industry</td>
<td>Pressemitteilung Nr.189 vom 21.05.2008: Aufträge im Bauhauptgewerbe im März 2008: Real – 7,3% zum Vorjahr</td>
<td>[…] verzeichnete das Bauhauptgewerbe in Betrieben mit 20 und mehr tätigen Personen im März 2008 in Deutschland preisbereinigt um 7,3% niedrigere Auftragseingänge als im Vorjahresmonat. Dabei nahm die Baunachfrage im Hochbau um 9,7% und im Tiefbau um 4,7% ab.</td>
<td>▲</td>
</tr>
<tr>
<td>May 21</td>
<td>Ifo business climate</td>
<td>Pressemitteilung Ifo: Ifo Geschäftsklimaindex verbessert</td>
<td>Der Ifo Geschäftsklimaindex für die gewerbliche Wirtschaft Deutschlands ist im Mai gestiegen, nachdem er im Vormonat deutlich nachgegeben hat. Allerdings wurde der Rückgang vom April nur teilweise ausgeglichen.</td>
<td>▲</td>
</tr>
<tr>
<td>May 28</td>
<td>Import prices</td>
<td>Pressemitteilung Nr.194 vom 28.05.2008: Importpreise April 2008: + 5,7% gegenüber April 2007</td>
<td>Der Index der Einfuhrpreise lag […] im April 2008 um 5,7% über dem Vorjahresstand. Im März und im Februar 2008 hatte die Jahresveränderungsrate ebenfalls + 5,7% beziehungsweise + 5,9% betragen. Gegenüber März 2008 erhöhte sich der Einfuhrpreisindex um 0,9%.</td>
<td>▲</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>--------</td>
<td>------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>May 29</td>
<td>Consumer prices</td>
<td>Pressemitteilung Nr.197 vom 28.05.2008: Verbraucherpreise Mai 2008: Voraussichtlich + 3,0% gegenüber Mai 2007</td>
<td>[…] wird sich der Verbraucherpreisindex in Deutschland im Mai 2008 – nach vorliegenden Ergebnissen aus sechs Bundesländern – gegenüber Mai 2007 voraussichtlich um 3,0% erhöhen (April 2008: + 2,4%). Im Vergleich zum Vormonat ergibt sich eine Veränderung von + 0,6%.</td>
<td>▲</td>
</tr>
<tr>
<td>May 29</td>
<td>Employment</td>
<td>Pressemitteilung Nr.198 vom 29.05.2008: Weiterhin positive Entwicklung auf dem Arbeitsmarkt</td>
<td>[…] auf Grundlage erster Berechnungen für den Monat April 2008 mitteilt, waren in diesem Monat 40,08 Millionen Personen mit Wohnort in Deutschland erwerbstätig. Dies entspricht einer Zunahme um 650 000 Personen (+ 1,6%) gegenüber dem Vorjahresmonat April 2007. Im Vergleich mit dem Vormonat März 2008 lag die Zahl der Erwerbstätigen im April 2008 um 153 000 (+ 0,4%) höher.</td>
<td>▲</td>
</tr>
<tr>
<td>May 29</td>
<td>Wholesale sales</td>
<td>Pressemitteilung Nr.199 vom 29.05.2008: Großhandelsumsatz im April 2008 um real 9,3% gestiegen</td>
<td>[…] setzte der Großhandel in Deutschland im April 2008 nominal 15,7% und real 9,3% mehr um als im April 2007. Im Vergleich zum März 2008 wurde im Großhandel unter Berücksichtigung von Saison- und Kalendereffekten nominal 1,3% und real 0,2% mehr umgesetzt.</td>
<td>◆</td>
</tr>
<tr>
<td>May 30</td>
<td>Retail sales</td>
<td>Pressemitteilung Nr.201 vom 30.05.2008: Einzelhandelsumsatz im April 2008 real um 1,0% gesunken</td>
<td>Nach vorläufigen Ergebnissen […] setzte der Einzelhandel in Deutschland im April 2008 nominal 1,5% mehr und real 1,0% weniger um als im April 2007. Dabei ist allerdings zu berücksichtigen, dass der April 2008 mit 26 Verkaufstagen drei Verkaufstage mehr hatte als der April 2007. … Im Vergleich zum März 2008 war der Umsatz des Einzelhandels im April 2008 unter Berücksichtigung von Saison- und Kalendereffekten nominal um 1,3% und real um 1,7% niedriger.</td>
<td>▼</td>
</tr>
<tr>
<td>June 3</td>
<td>Real GDP</td>
<td>Eurostat-Pressemitteilung Nr. 78/2008 vom 3. Juni 2008: BIP in der Eurozone und in der EU27 um 0,8% gestiegen</td>
<td>Im Vergleich zum Vorquartal ist im ersten Quartal 2008 das BIP in der Eurozone (EZ15) und in der EU27 um 0,8% gestiegen. (…) Im vierten Quartal 2007 betrug die Wachstumsrate noch +0,3% in der Eurozone und +0,5% in der EU27.</td>
<td>▲</td>
</tr>
<tr>
<td>June 5</td>
<td>New orders</td>
<td>Pressemitteilung BMWi: Entwicklung des Auftragseingangs in der Industrie 2008</td>
<td>Die Auftragseingänge in der Industrie sind vorläufigen Angaben zufolge im April preis- und saisonbereinigt erneut um 1,8% zurückgegangen.</td>
<td>▼</td>
</tr>
</tbody>
</table>
## Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 6</td>
<td>Production manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung der Produktion im Produzierenden Gewerbe April 2008</td>
<td>Die Erzeugung im Produzierenden Gewerbe ist vorläufigen Angaben zuliege im April preis- und saisonbereinigt um 0,8% zurückgegangen. Im Vormonat war sie abwärts revidiert ebenfalls um 0,8% gesunken. Erneut spürbar rückläufig war zuletzt die Erzeugung im Bauhauptgewerbe (-2,9%). Die Industrieproduktion verringerte sich um 0,7%.</td>
<td>▼</td>
</tr>
<tr>
<td>June 9</td>
<td>CLI</td>
<td>News release OECD Composite leading indicators</td>
<td>The latest composite leading indicators (CLIs) suggest that a slowdown in economic activity lies ahead in the OECD area. April 2008 data indicate a continued weakening outlook for all the major seven economies.</td>
<td>▼</td>
</tr>
<tr>
<td>June 9</td>
<td>Exports</td>
<td>Pressemitteilung Nr.208 vom 09.06.2008: Deutsche Ausfuhren im April 2008: + 13,9% zum April 2007</td>
<td>[…] anhand vorläufiger Ergebnisse mitteilte, wurden im April 2008 von Deutschland Waren im Wert von 89,8 Milliarden Euro ausgeführt und Waren im Wert von 71,0 Milliarden Euro eingeführt. Die deutschen Ausfuhren waren damit im April 2008 um 13,9% und die Einfuhren um 11,7% höher als im April 2007. Im Vormonatsvergleich verlief die Entwicklung von Aus- und Einfuhren kalender- und saisonbereinigt gegenläufig: Während die Ausfuhren gegenüber März 2008 um 1,2% stiegen, sanken die Einfuhren um 2,1%.</td>
<td>▲</td>
</tr>
<tr>
<td>June 9</td>
<td>Sales manufacturing</td>
<td>Pressemitteilung Nr.209 vom 09.06.2008: Umsatz im Verarbeitenden Gewerbe im April 2008: Real + 4,7% zum Vorjahr</td>
<td>[…] verzeichnete das Verarbeitende Gewerbe nach vorläufigen Angaben arbeitstäglich bereinigt im April 2008 einen realen Umsatzzuwachs von 4,7% gegenüber dem April 2007 (nach unverändert + 4,1% im März 2008). Der Inlandsumsatz stieg im Vergleichszeitraum um 3,2%, die Erlöse im Geschäft mit ausländischen Abnehmern nahmen um 6,6% zu. Dabei lag der Umsatz mit den Ländern der Eurozone um 6,4% über dem Vorjahresniveau, während beim Absatz in das übrige Ausland ein Plus von 6,9% erreicht wurde.</td>
<td>▲</td>
</tr>
<tr>
<td>June 9</td>
<td>Labour cost/wage cost</td>
<td>Pressemitteilung Nr.210 vom 09.06.2008: 1. Quartal 2008: Arbeitskosten + 1,7%, Lohnnebenkosten - 0,1%</td>
<td>[…] zahlten Arbeitgeber im ersten Quartal 2008 im Produzierenden Gewerbe und im gesamten Dienstleistungsbereich kalenderbereinigt 1,7% mehr für eine geleistete Arbeitsstunde als in dem entsprechenden Vorjahresquartal. … Europaweit liegen Veränderungsraten der Arbeitskosten in der Privatwirtschaft für das 4. Quartal 2007 vor. Nach diesen Ergebnissen verteuerte sich in Deutschland eine Stunde Arbeit im Vergleich zum vierten Quartal 2006 kalenderbereinigt um 1,5%. Damit wies Deutschland nach Luxemburg (+1%) die zweitmiedrigste Wachstumsrate innerhalb der Europäischen Union auf.</td>
<td>▲</td>
</tr>
</tbody>
</table>

*Note: * CLI: Composite leading indicators
<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 10</td>
<td>Wholesale prices</td>
<td>Pressemitteilung Nr.211 vom 10.06.2008: Großhandelspreise Mai 2008: + 8,1% zum Mai 2007</td>
<td>Der Index der Großhandelsverkaufspreise lag […] im Mai 2008 um 8,1% über dem Vorjahresstand. Dies war die höchste Jahresteuerrungsraten seit Februar 1982 (+ 8,5%). Im April 2008 und im März 2008 hatte die Jahresveränderungsraten + 6,9% beziehungsweise + 7,1% betragen. Im Vergleich zum Vormonat stieg der Großhandelspreisindex im Mai 2008 um 1,4%.</td>
<td>▲</td>
</tr>
<tr>
<td>June 13</td>
<td>Consumer prices</td>
<td>Pressemitteilung Nr.216 vom 13.06.2008: Verbraucherpreise Mai 2008: + 3,0% zum Mai 2007</td>
<td>[…] ist der Verbraucherpreisindex für Deutschland im Mai 2008 gegenüber Mai 2007 um 3,0% gestiegen. Damit wurde die Drei-Prozent-Marke zum zweiten Mal in diesem Jahr erreicht (zuletzt im März: + 3,1%). Im April 2008 hatte die Jahresveränderungsraten bei + 2,4% gelegen. Im Vergleich zum Vormonat April 2008 erhöhte sich der Index um 0,6%. Die Schätzung für Mai 2008 auf Basis der Ergebnisse aus sechs Bundesländern wurde bestätigt.</td>
<td>▲</td>
</tr>
<tr>
<td>June 17</td>
<td>ZEW-FME</td>
<td>Pressemitteilung ZEW Konjunkturerwartungen</td>
<td>Die ZEW-Konjunkturerwartungen für Deutschland sind im Juni deutlich um 11,0 Punkte gefallen und liegen nun bei minus 52,4 Punkten nach minus 41,4 Punkten im Vormonat. Damit liegen sie weiterhin deutlich unter ihrem historischen Mittelwert von 29,2 Punkten.</td>
<td>▼</td>
</tr>
<tr>
<td>June 19</td>
<td>US economy</td>
<td>The Conference Board press release June 19, 2008</td>
<td>The US leading index increased 0.1 percent, the coincident increased 0.1 percent and the lagging index increased 0.2 percent in May.</td>
<td>▲</td>
</tr>
<tr>
<td>June 20</td>
<td>Producer prices</td>
<td>Pressemitteilung Nr.221 vom 20.06.2008: Erzeugerpreise Mai 2008: + 6,0% gegenüber Mai 2007</td>
<td>Der Index der Erzeugerpreise gewerblicher Produkte lag […] im Mai 2008 um 6,0% höher als im Mai 2007. Eine gleich hohe Jahresteuerrungsraten hatte es letztmalig im Juli 2006 gegeben. Gegenüber April 2008 stieg der Index um 1,0% (nach + 1,1% im April gegenüber März 2008).</td>
<td>▼</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 25</td>
<td>New orders in construction industry</td>
<td>Pressemitteilung Nr.225 vom 25.06.2008: Aufträge im Bauhauptgewerbe im April 2008: Real + 4,0% zum Vorjahr</td>
<td>[…] verzeichnete das Bauhauptgewerbe in Betrieben mit 20 und mehr tätigen Personen im April 2008 in Deutschland preisbereinigt um 4,0% höhere Auftragseingänge als im Vorjahresmonat. Dabei nahm die Baunachfrage im Hochbau um 11,6% zu, im Tiefbau dagegen um 4,0% ab.</td>
<td>▲</td>
</tr>
<tr>
<td>June 27</td>
<td>Consumer prices</td>
<td>Pressemitteilung Nr.232 vom 27.06.2008: Verbraucherpreise Juni 2008: Voraussichtlich + 3,3% gegenüber Juni 2007</td>
<td>[…] wird sich der Verbraucherpreisindex in Deutschland im Juni 2008 – nach vorliegenden Ergebnissen aus sechs Bundesländern – gegenüber Juni 2007 vorläufig um 3,3% erhöhen (Mai 2008: + 3,0%). Dies ist der stärkste Preisanstieg seit Dezember 1993. Im Vergleich zum Vormonat ergibt sich eine Veränderung von + 0,3%.</td>
<td>▲</td>
</tr>
<tr>
<td>June 30</td>
<td>Wholesale sales</td>
<td>Pressemitteilung Nr.233 vom 30.06.2008: Großhandelumsatz im Mai 2008 um real 0,8% gesunken</td>
<td>Nach vorläufigen Ergebnissen […] setzte der Großhandel in Deutschland im Mai 2008 nominal 6,1% mehr und real 0,8% weniger um als im Mai 2007. Im Vergleich zum April 2008 wurde im Großhandel unter Berücksichtigung von Saison- und Kalendereffekten nominal 0,7% und real 0,9% weniger umgesetzt.</td>
<td>▼</td>
</tr>
<tr>
<td>July 1</td>
<td>Employment</td>
<td>Pressemitteilung Nr.236 vom 01.07.2008: Beschäftigungsaufschwung verliert an Fahrt</td>
<td>[…] auf Grundlage erster Berechnungen für den Monat Mai 2008 mitteilte, waren in diesem Monat 40,19 Millionen Personen mit Wohnort in Deutschland erwerbstätig. Dies entspricht einer Zunahme um 619 000 Personen (+ 1,6%) gegenüber dem Vorjahresmonat Mai 2007. Im Vergleich mit dem Vormonat April 2008 lag die Zahl der Erwerbstätigen im Mai 2008 um 111 000 (+ 0,3%) höher.</td>
<td>▲</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>--------</td>
<td>------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>Retail sales</td>
<td>Pressemitteilung Nr.237 vom 01.07.2008: Einzelhandelsumsatz im Mai 2008 real um 0,7% gestiegen</td>
<td>Nach vorläufigen Ergebnissen [...] setzte der Einzelhandel in Deutschland im Mai 2008 nominal 3,5% und real 0,7% mehr um als im Mai 2007. Beide Monate hatten mit 24 Verkaufstagen die gleiche Anzahl an Verkaufstagen. Dieses Ergebnis für den Mai 2008 wurde aus Daten von sieben Bundesländern berechnet, in denen circa 76% des Gesamtumsatzes im deutschen Einzelhandel getätigt werden. Im Vergleich zum April 2008 war der Umsatz des Einzelhandels im Mai 2008 unter Berücksichtigung von Saison- und Kalendererfekten nominal 1,7% und real um 1,3% höher.</td>
<td>▲</td>
</tr>
<tr>
<td>July 4</td>
<td>New orders</td>
<td>Pressemitteilung BMWi: Entwicklung des Auftragseingangs in der Industrie im Mai 2008</td>
<td>Die Auftragseingänge in der Industrie sind vorläufigen Angaben zufolge im Mai preis- und saisonbereinigt um 0,9 % zurückgegangen.</td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td>manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 7</td>
<td>Production</td>
<td>Pressemitteilung BMWi: Entwicklung der Produktion im Produzierenden Gewerbe Mai 2008</td>
<td>Die Erzeugung im Produzierenden Gewerbe ist vorläufigen Angaben zufolge im Mai preis- und saisonbereinigt um 2,4% zurückgegangen. Im Vormonat war sie aufwärts revidiert um 0,2% gesunken. Dämpfend dürften sich die beiden Brückentage im Mai ausgewirkt haben. Einen deutlichen Rückgang um 2,6% hatte zuletzt die Industrieproduktion zu verzeichnen. Die Erzeugung im Bauhauptgewerbe nahm dagegen um 1,1% zu.</td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td>manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 9</td>
<td>GDP EU (2nd estimate)</td>
<td>Eurostat-Pressemitteilung Eurostat 97/2008: Zweite Schätzungen für das erste Quartal 2008: BIP in der Eurozone und in der EU27 um 0,7% gestiegen, nach +2,1% bzw. +2,3% im Vergleich zum ersten Quartal 2007</td>
<td>Relativ zum entsprechenden Quartal des Vorjahres ist das saisonbereinigte BIP im ersten Quartal 2008 in der Eurozone um 2,1% und in der EU27 um 2,3% gestiegen, nach +2,2% bzw. +2,5% im vorangegangenen Quartal. Im Vergleich zum Vorquartal ist das BIP der Eurozone (EZ15) im ersten Quartal 2008 wie das der EU27 um 0,7% gestiegen. Dies geht aus von Eurostat, dem Statistischen Amt der Europäischen Gemeinschaften, veröffentlichten zweiten Schätzungen hervor. Im vierten Quartal 2007 betrug die Wachstumsrate +0,4% in der Eurozone und +0,5% in der EU27.</td>
<td>▲</td>
</tr>
<tr>
<td>July 11</td>
<td>Wholesale prices</td>
<td>Pressemitteilung Nr.251 vom 11.07.2008: Großhandelspreise Juni 2008: + 8,9% zum Juni 2007</td>
<td>Der Index der Großhandelsverkaufspreise lag […] im Juni 2008 um 8,9% über dem Vorjahresstand. Dies war die höchste Jahrestrendsquote seit Januar 1982 (+ 9,5%). Im Mai 2008 und im April 2008 hatte die Jahresveränderungsrate + 8,1% beziehungsweise + 6,9% betragen. Im Vergleich zum Vormonat stieg der Großhandelspreisindex im Juni 2008 um 0,9%.</td>
<td>▲</td>
</tr>
<tr>
<td></td>
<td>CLI</td>
<td>News release OECD Composite leading indicators</td>
<td>The latest composite leading indicators (CLIs) point strongly to a slowdown in economic activity in the OECD area. May 2008 data indicate a continued weakening outlook for all the major seven economies, except Japan and Italy.</td>
<td>▼</td>
</tr>
</tbody>
</table>
**Overview 1**: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 15</td>
<td>ZEW-FME</td>
<td>Pressemitteilung ZEW Konjunkturerwartungen</td>
<td>Die ZEW-Konjunkturerwartungen für Deutschland sind im Juli erneut erheblich um 11,5 Punkte gefallen und liegen nun bei minus 63,9 Punkten nach minus 52,4 Punkten im Vormonat. Damit liegen sie weiterhin deutlich unter ihrem historischen Mittelwert von 28,8 Punkten.</td>
<td>▼</td>
</tr>
<tr>
<td>July 21</td>
<td>New orders construction industry</td>
<td>Pressemitteilung Nr.262 vom 21.07.2008; Aufträge im Bauhauptgewerbe im Mai 2008: Real – 7,0% zum Mai 2007</td>
<td>[…] verzeichnete das Bauhauptgewerbe (Betriebe mit 20 und tätigen Personen) im Mai 2008 in Deutschland preisbereinigt um 7,0% niedrigere Auftragseingänge als im Vorjahresmonat. Dabei nahm die Baunachfrage im Hochbau um 11,7% und im Tiefbau um 2,0% ab.</td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td>US economy</td>
<td>The Conference Board press release July 21, 2008</td>
<td>US leading index decreased 0.1 percent, the coincident index increased 0.1 percent and the lagging index decreased 0.3 percent in June.</td>
<td>▼</td>
</tr>
</tbody>
</table>
### Overview 1*

*Record of selected macroeconomic news, April to December 2008*

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 25</td>
<td>Ifo business climate</td>
<td>Pressemitteilung Ifo: Ifo Geschäftsklimaindex gesunken</td>
<td>Der Ifo Geschäftsklimaindex für die gewerbliche Wirtschaft hat sich im Juli erneut merklich abgekühlt, nachdem es sich bereits im Vormonat verschlechtert hatte.</td>
<td>▼</td>
</tr>
<tr>
<td>July 29</td>
<td>Import prices</td>
<td>Pressemitteilung Nr.269 vom 25.07.2008: Importpreise Juni 2008: + 8,9% gegenüber Juni 2007</td>
<td>Der Index der Einfuhrpreise lag […] im Juni 2008 um 8,9% über dem Vorjahresstand. Dies war die höchste Jahressteuerungsrate seit November 2000 (+ 10,6%). Im Mai und im April 2008 hatten die Jahresveränderungsraten + 7,9 und + 5,7% betragen. Gegenüber Mai 2008 erhöhte sich der Einfuhrpreisindex um 1,5%.</td>
<td>▲</td>
</tr>
<tr>
<td></td>
<td>Wholesale sales</td>
<td>Pressemitteilung Nr.277 vom 31.07.2008: Großhandelsumsatz im Juni 2008 real um 2,6% gestiegen</td>
<td>Nach vorläufigen […] setzte der Großhandel in Deutschland im Juni 2008 nominal 10,0% und real 2,6% mehr um als im Juni 2007. Im Vergleich zum Mai 2008 sank der Umsatz im Großhandel unter Berücksichtigung von Saison- und Kalendereffekten um nominal 0,6% und um real 1,5%</td>
<td>▼</td>
</tr>
</tbody>
</table>
**Overview 1*: Record of selected macroeconomic news, April to December 2008**

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 6</td>
<td>New orders manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung des Auftragseingangs in der Industrie Juni 2008:</td>
<td>Die Auftragseingänge in der Industrie sind vorläufigen Angaben zufolge im Juni preis- und saisonbereinigt erneut deutlich um 2,9 % zurückgegangen. Im Vormonat hatten sie abwärts revidiert um 1,4 % abgenommen.</td>
<td></td>
</tr>
<tr>
<td>Aug. 7</td>
<td>Production manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung der Produktion im Produzierenden Gewerbe Juni 2008</td>
<td>Die Erzeugung im Produzierenden Gewerbe hat sich vorläufigen Angaben zufolge im Juni preis- und saisonbereinigt um 0,2% erhöht, nachdem sie im Vormonat aufwärts revidiert um 1,8% gesunken war. Während die Erzeugung im Bauhauptgewerbe einen deutlichen Rückgang um 2,1% zu verzeichnen hatte, erhöhte sich die Industrieproduktion um 0,5%. Innerhalb der industriellen Hauptgruppen ging der Ausstoß bei den Vorleistungsgüterproduzenten um 0,6% zurück. Die Investitions- und Konsumgüterproduzenten konnten dagegen Zuwächse um 1,4% bzw. 1,0% verbuchen.</td>
<td></td>
</tr>
<tr>
<td>Aug. 8</td>
<td>Sales manufacturing</td>
<td>Pressemitteilung Nr.284 vom 08.08.2008: Umsatz im Verarbeitenden Gewerbe im Juni 2008: Real + 1,5% zum Vorjahr</td>
<td>[…] verzeichnete das Verarbeitende Gewerbe nach vorläufigen Angaben arbeitstäglich bereinigt im Juni 2008 einen realen Umsatzzuwachs von 1,5% gegenüber dem Juni 2007 (nach revidiert + 2,3% im Mai 2008).</td>
<td></td>
</tr>
</tbody>
</table>

---

Note: The table contains a summary of selected macroeconomic news for the months of August 2008, focusing on retail sales, new orders, exports and imports, production, and sales in the manufacturing sector.
## Overview 1*

### Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 11</td>
<td>CLI</td>
<td>News release OECD Composite leading indicators</td>
<td>OECD composite leading indicators (CLIs) for June 2008 indicate a continued weakening outlook for all the major seven economies.</td>
<td>▼</td>
</tr>
<tr>
<td>Aug. 14</td>
<td>Wholesale prices</td>
<td>Pressemitteilung Nr.287 vom 11.08.2008: Großhandelspreise Juli 2008: + 9,9% zum Juli 2007</td>
<td>Der Index der Großhandelsverkaufspreise lag […] im Juli 2008 um 9,9% über dem Vorjahresstand. Dies war die höchste Jahresteserungsrate seit November 1981 (+ 10,0%). Im Juni 2008 und im Mai 2008 hatte die Jahresveränderungsrate + 8,9% beziehungsweise + 8,1% betragen. Im Vergleich zum Vormonat stieg der Großhandelspreisindex im Juli 2008 um 1,4%.</td>
<td>▲</td>
</tr>
</tbody>
</table>
### Overview 1*
*Record of selected macroeconomic news, April to December 2008*

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 19</td>
<td><strong>ZEW-FME</strong></td>
<td>Pressemitteilung ZEW Konjunkturerwartungen</td>
<td>Die ZEW-Konjunkturerwartungen für Deutschland haben sich im August um 8,4 Punkte verbessert und liegen nun bei minus 55,5 Punkten nach minus 63,9 Punkten im Vormonat. Damit liegen sie weiterhin deutlich unter ihrem historischen Mittelwert von 28,3 Punkten.</td>
<td>▲</td>
</tr>
<tr>
<td>Aug. 21</td>
<td><strong>US economy</strong></td>
<td>The Conference Board press release August 21, 2008</td>
<td>US leading index decreased 0.7 percent, the coincident index increased 0.1 percent and the lagging index increased 0.4. in July.</td>
<td>▼</td>
</tr>
<tr>
<td>Aug. 22</td>
<td><strong>New orders</strong></td>
<td>Pressemitteilung Nr.302 vom 22.08.2008: Aufträge im Bauhauptgewerbe im Juni 2008: Real + 1,6% zum Juni 2007</td>
<td>[…] verzeichnete das Bauhauptgewerbe (Betriebe mit 20 und mehr Beschäftigten) im Juni 2008 in Deutschland preisbereinigt um 1,6% höhere Auftragseingänge als im Vorjahresmonat. Dabei nahm die Baunachfrage im Hochbau um 4,6% zu, im Tiefbau dagegen um 1,5% ab. In den Betrieben des Hoch- und Tiefbaus waren Ende Juni 2008 703 000 Personen tätig; das waren 17 000 weniger als vor einem Jahr (– 2,4%). Der Gesamtumsatz belief sich im Berichtsmonat auf rund 7,7 Milliarden Euro (+ 5,3% gegenüber Juni 2007). Im Zeitraum Januar bis Juni 2008 sind die Auftragseingänge preisbereinigt um 0,3% gegenüber dem entsprechenden Vorjahreszeitraum gesunken.</td>
<td>▲</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 26</td>
<td>Ifo business climate</td>
<td>Pressemittlung Ifo: Geschäftsklimaindex für die gewerbliche Wirtschaft Deutschlands ist im August gesunken. Dies ist der dritte Rückgang des Index in Folge.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug. 27</td>
<td>Import prices</td>
<td>Pressemittlung Nr.311 vom 27.08.2008: Importpreise Juli 2008: + 9,3% gegenüber Juli 2007</td>
<td>Der Index der Einfuhrpreise lag […] im Juli 2008 um 9,3% über dem Vorjahresstand. Dies war die höchste Jahresteuerrate seit November 2000 (+ 10,6%). Im Juni und im Mai 2008 hatten die Jahresveränderungs- raten + 8,9 und + 7,9% betragen. Gegenüber Juni 2008 erhöhte sich der Einfuhrpreisindex um 0,6%.</td>
<td>▲</td>
</tr>
<tr>
<td>Aug. 27</td>
<td>Consumer prices</td>
<td>Pressemittlung Nr.314 vom 27.08.2008: Verbraucherpreise August 2008: Voraussichtlich + 3,1% gegenüber August 2007</td>
<td>[…] wird sich der Verbraucherpreisindex in Deutschland im August 2008 – nach vorliegenden Ergebnissen aus sechs Bundesländern – gegenüber August 2007 voraussichtlich um 3,1% erhöhen (Juli 2008: + 3,3%).</td>
<td>▲</td>
</tr>
<tr>
<td>Aug. 29</td>
<td>Wholesale sales</td>
<td>Pressemittlung Nr.318 vom 29.08.2008: Großhandelsumsatz im Juli 2008 real um 3,5% gestiegen</td>
<td>[…] setzte der Großhandel in Deutschland im Juli 2008 nominal 10,8% und real 3,5% mehr um als im Juli 2007. Im Vergleich zum Juni 2008 stieg der Umsatz im Großhandel unter Berücksichtigung von Saison- und Kalendereffekten um nominal 0,4% und um real 0,3%.</td>
<td>▲</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 4</td>
<td><strong>Agreed wages and salaries</strong></td>
<td>Pressmitteilung Nr.319 vom 29.08.2008: Viele Tarifabschlüsse im ersten Halbjahr 2008 über 4%</td>
<td>[...] fielen im ersten Halbjahr 2008 viele Tarifabschlüsse in Deutschland mit über 4% erneut deutlich höher aus als in den Vorjahren. In diesem Zeitraum gab es einen Anstieg der Verbraucherpreise von bis zu 3,3% (Juni gegenüber dem Vorjahresmonat).</td>
<td>▲</td>
</tr>
<tr>
<td>Sept. 4</td>
<td><strong>New orders manufacturing</strong></td>
<td>Pressmitteilung BMWi: Entwicklung des Auftragseingangs in der Industrie Juli 2008</td>
<td>Die Auftragseingänge in der Industrie sind vorläufigen Angaben zufolge im Juli preis- und saisonbereinigt um 1,7% zurückgegangen. Im Vormonat hatten sie leicht aufwärts revidiert um 2,6% abgenommen.</td>
<td>▼</td>
</tr>
<tr>
<td>Sept. 5</td>
<td><strong>Production manufacturing</strong></td>
<td>Pressemitteilung BMWi: Entwicklung der Produktion im Produzierenden Gewerbe Juli 2008</td>
<td>Die Erzeugung im Produzierenden Gewerbe ging vorläufigen Angaben zufolge im Juli preis- und saisonbereinigt um 1,8 % zurück. Im Vormonat war sie leicht abwärts revidiert um 0,1 % angestiegen. Sowohl die Industrie als auch das Bauhauptgewerbe hatten im Juli einen deutlichen Rückgang der Erzeugung um 2,0 % zu verzeichnen. Die Produktion wurde in allen drei industriellen Hauptgruppen eingeschränkt. Am stärksten war der Rückgang mit -3,7 % bei den Herstellern von Investitionsgütern. Die Produzenten von Konsumgütern und Vorleistungen reduzierten die Erzeugung um -1,7 % bzw. -0,6 %.</td>
<td>▼</td>
</tr>
<tr>
<td>Sept. 5</td>
<td><strong>Service sector Sales</strong></td>
<td>Pressmitteilung Nr.331 vom 05.09.2008: 2. Quartal 2008: Umsätze im Dienstleistungsbereich weiter gestiegen</td>
<td>[...] haben die Umsätze in ausgewählten Dienstleistungsbereichen im zweiten Quartal 2008 im Vergleich zum Vorjahresquartal nominal um 8,9% zugenommen. Damit setzte sich der positive Trend aus den Vorquartalen fort.</td>
<td>▲</td>
</tr>
<tr>
<td>Sept. 8</td>
<td><strong>CLI</strong></td>
<td>News release OECD Composite leading indicators</td>
<td>OECD composite leading indicators (CLIs) for July 2008 indicate a continued weakening outlook for all the major seven economies.</td>
<td>▼</td>
</tr>
<tr>
<td>Sept. 8</td>
<td><strong>Manufacturing sales</strong></td>
<td>Pressmitteilung Nr.334 vom 08.09.2008: Umsatz im Verarbeitenden Gewerbe im Juli 2008: Real – 0,8% zum Vorjahr</td>
<td>[...] mitteilte, verzeichnete das Verarbeitende Gewerbe nach vorläufigen Angaben arbeitstäglich bereinigt im Juli 2008 einen realen Umsatzzugewinn von 0,8% gegenüber dem Juli 2007 (nach revidiert + 1,4% im Juni 2008). Der Inlandsumsatz Sied im Vergleichszeitraum um 0,7%, die Erlöse im Geschäft mit ausländischen Abnehmern nahmen um 1,0% ab. Dabei lag der Umsatz mit den Ländern der Eurozone um 1,9% unter dem Vorjahresniveau, während beim Absatz in das übrige Ausland ein Minus von 0,3% zu verzeichnen war.</td>
<td>▼</td>
</tr>
</tbody>
</table>
Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 11</td>
<td>Wholesale prices</td>
<td>Pressemitteilung Nr. 344 vom 11.09.2008: Großhandelspreise August 2008: + 7,4% zum August 2007</td>
<td>Der Index der Großhandelsverkaufspreise lag […] im August 2008 um 7,4% über dem Vorjahresstand. Im Juli 2008 und im Juni 2008 hatte die Jahresveränderungsrate + 9,9% beziehungsweise + 8,9% betragen. Im Vergleich zum Vormonat sank der Großhandelspreisindex im August 2008 um 1,8%.</td>
<td>▼</td>
</tr>
<tr>
<td>Sept. 15</td>
<td>Exports</td>
<td>Pressemitteilung Nr. 348 vom 15.09.2008: Exporte steigen im ersten Halbjahr 2008 um 6,9%</td>
<td>[...] stiegen die deutschen Ausfuhren von Januar bis Juni 2008 im Vergleich zum ersten Halbjahr 2007 um insgesamt 6,9% auf 511,2 Milliarden Euro. Preisbereinigt erhöhten sich die Ausfuhren um 6,8%. Besonders deutlich nahmen die deutschen Ausfuhren in osteuropäische Länder sowie in die BRIC-Staaten (Brasilien, Russland, Indien und China) zu.</td>
<td>▲</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Sept. 16</td>
<td>ZEW-FME</td>
<td>Pressemitteilung ZEW Konjunkturerwartungen</td>
<td>Die ZEW-Konjunkturerwartungen für Deutschland haben sich im September um 14,4 Punkte verbessert. Sie liegen nun bei minus 41,1 Punkten nach minus 55,5 Punkten im Vormonat. Damit liegen sie weiterhin deutlich unter ihrem historischen Mittelwert von 28,0 Punkten.</td>
<td>▲</td>
</tr>
<tr>
<td>Sept. 18</td>
<td>US economy</td>
<td>The Conference Board press release September 18, 2008</td>
<td>The US leading index decreased 0.5 percent, the coincident index decreased 0.1 percent and the lagging index increased 0.4 percent in August.</td>
<td>▼</td>
</tr>
<tr>
<td>Sept. 19</td>
<td>Producer prices</td>
<td>Pressemitteilung Nr.359 vom 19.09.2008; Erzeugerpreise August 2008: + 8,1% zum August 2007</td>
<td>Der Index der Erzeugerpreise gewerblicher Produkte lag […] im August 2008 um 8,1% höher als im August 2007. Im Juli 2008 hatte er noch um 8,9% über dem Vorjahr gelegen. Gegenüber Juli 2008 sank der Index um 0,6%.</td>
<td>▼</td>
</tr>
<tr>
<td>Sept. 24</td>
<td>New orders in construction industry</td>
<td>Pressemitteilung Nr.362 vom 24.09.2008; Aufträge im Bauhauptgewerbe im Juli 2008: Real + 3,0% zum Juli 2007</td>
<td>[...] verzeichnete das Bauhauptgewerbe (Betriebe mit 20 und mehr Beschäftigten) im Juli 2008 in Deutschland preisbereinigt um 3,0% höhere Auftragszuführungen als im Vorjahresmonat. Dabei nahm die Baunachfrage im Hochbau um 9,9% ab, im Tiefbau dagegen um 17,4% zu.</td>
<td>▲</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 26</td>
<td><strong>Consumer prices</strong></td>
<td>Pressemitteilung Nr.368 vom 26.09.2008: Verbraucherpreise September 2008: Voraussichtlich +2,9% gegenüber September 2007</td>
<td>[...] wird sich der Verbraucherpreisindex in Deutschland im September 2008 – nach vorliegenden Ergebnissen aus sechs Bundesländern – gegenüber September 2007 voraussichtlich um 2,9% erhöhen (August 2008: + 3,1%). Im Vergleich zum Vormonat ergibt sich eine Veränderung von – 0,1%.</td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td><strong>Wholesale sales</strong></td>
<td>Pressemitteilung Nr.372 vom 30.09.2008: Großhandelsumsatz im August 2008 real um 1,6% gesunken</td>
<td>Nach vorläufigen Ergebnissen […] setzte der Großhandel in Deutschland im August 2008 nominal 5,1% mehr und real 1,6% weniger um als im August 2007. Im Vergleich zum Juli 2008 wurde im Großhandel unter Berücksichtigung von Saison- und Kalendereffekten nominal 0,1% weniger und real 0,5% mehr umgesetzt.</td>
<td>▲</td>
</tr>
<tr>
<td></td>
<td><strong>Fiscal performance</strong></td>
<td>Pressemitteilung Nr.373 vom 30.09.2008: Öffentliche Finanzen im ersten Halbjahr 2008</td>
<td>[…] nach vorläufigen Ergebnissen der Kassenstatistik der öffentlichen Haushalte für das erste Halbjahr 2008 mitteilte, stiegen die öffentlichen Einnahmen gegenüber dem ersten Halbjahr des Vorjahres um 4,0% auf 506,6 Milliarden Euro. Der Einnahmenzuwachs lag über dem Anstieg bei den öffentlichen Ausgaben, die sich um 2,1% auf 513,5 Milliarden Euro erhöhten. Im ersten Halbjahr 2008 resultierte aus der Differenz von öffentlichen Einnahmen und Ausgaben ein kassenmäßiges Finanzierungsdreizit der öffentlichen Haushalte (in Abgrenzung der Finanzstatistik, einschließlich des Saldos der haushaltstechnischen Verrechnungen) von 6,9 Milliarden Euro, das um 7,9 Milliarden Euro geringer war als im ersten Halbjahr des Vorjahres</td>
<td>▲</td>
</tr>
</tbody>
</table>
Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 8</td>
<td>Real GDP Eurozone and EU27</td>
<td>Eurostat-Pressemitteilung 8.10.2008: Zweite Schätzungen für das 2. Quartal 2008 BIP in der Eurozone um 0,2% gesunken, BIP in der EU27 unverändert</td>
<td>Im Vergleich zum Vorquartal ist das BIP der Eurozone im 2. Quartal 2008 um 0,2% gesunken während das BIP der EU27 unverändert blieb. Relativ zum entsprechenden Quartal des Vorjahres ist das saisonbereinigte BIP im zweiten Quartal 2008 in der Eurozone um 1,4% und in der EU27 um 1,7% gestiegen, nach +2,1% bzw. +2,3% im vorausgegangenen Quartal.</td>
<td>▼</td>
</tr>
<tr>
<td>Oct 9</td>
<td>Production manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung der Produktion im Produzierenden Gewerbe August 2008</td>
<td>Die Erzeugung im Produzierenden Gewerbe hat sich vorläufigen Angaben im August preis- und saisonbereinigt deutlich um 3,4% erhöht. Sie war im Juli leicht aufwärts revidiert um 1,6% zurückgegangen. Den kräftigsten Produktionsanstieg hatte das Bauhauptgewerbe mit +5,5% zu verzeichnen, nachdem die Erzeugung hier im Monat zuvor um 2,6% abgenommen hatte. Die Industrieproduktion nahm zuletzt um 3,2% zu, nach -1,8% im Juli. Innerhalb der industriellen Hauptgruppen konnten die Hersteller von Investitionsgütern mit +3,9% den stärksten Produktionszuwachs verbuchen. Bei den Konsum- und den Vorleistungsgüterproduzenten stieg die Erzeugung um 3,0% bzw. 2,6% an.</td>
<td>▲</td>
</tr>
<tr>
<td>Oct. 10</td>
<td>Interest rates</td>
<td>Pressemitteilung EZB</td>
<td>Bei einer Telekonferenz fasste der EZB-Rat die folgenden geldpolitischen Beschlüsse: Der Mindestbietungssatz für die Hauptrefinanzierungsgeschäfte des Eurosystems wird um 50 Basispunkte auf 3,75 % gesenkt. Dies gilt erstmals für das am 15. Oktober 2008 abzuwickelnde Hauptrefinanzierungsgeschäft. Der Zinssatz für die Spitzenrefinanzierungsfazilität wird mit sofortiger Wirkung um 50 Basispunkte auf 4,75 % gesenkt. Der Zinssatz für die Einlagefazilität wird mit sofortiger Wirkung um 50 Basispunkte auf 2,75 % gesenkt.</td>
<td>▲</td>
</tr>
<tr>
<td>Oct. 10</td>
<td>CLI</td>
<td>News release OECD Composite leading indicators</td>
<td>OECD composite leading indicators (CLIs) for August 2008 indicate a continued weakening outlook for all the major seven economies.</td>
<td>▼</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>----------</td>
<td>------------------</td>
<td>---------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Oct. 14</td>
<td>ZEW-FME</td>
<td>Pressemitteilung ZEW Konjunkturwartungen</td>
<td>Die ZEW-Konjunkturwartenungen für Deutschland sind im Oktober um 21,9 Punkte gefallen. Sie liegen nun bei minus 63,0 Punkten nach minus 41,1 Punkten im Vormonat. Mit diesem Wert liegen sie deutlich unter ihrem historischen Mittelwert von 27,5 Punkten.</td>
<td>▼</td>
</tr>
<tr>
<td>Oct. 20</td>
<td>US economy</td>
<td>The Conference Board press release October 20, 2008</td>
<td>The US economy leading index increased 0.3. percent, the coincident index decreased 0.5 percent and the lagging index decreased 0.2 percent in September.</td>
<td>▼</td>
</tr>
<tr>
<td>Oct. 27</td>
<td>Ifo business climate</td>
<td>Pressemitteilung ifo: ifo Geschäftsklima verschlechtert</td>
<td>Der ifo Geschäftsklimaindex für die gewerbliche Wirtschaft Deutschlands ist im Oktober deutlich gesunken. Er setzt damit seine bisherige Abwärtsentwicklung fort.</td>
<td>▼</td>
</tr>
<tr>
<td>Oct. 29</td>
<td>Consumer prices</td>
<td>Pressemitteilung Nr. 403 vom 29.10.2008: Verbraucherpreise Oktober 2008 – Voraussichtlich +2,4% gegenüber Oktober 2007</td>
<td>[…] wird sich der Verbraucherpreisindex in Deutschland im Oktober 2008 – nach vorliegenden Ergebnissen aus sechs Bundesländern – gegenüber Oktober 2007 voraussichtlich um 2,4% erhöhen (September 2008:+ 2,9%). Im Vergleich zum Vormonat ergibt sich eine Veränderung von - 0,2%.</td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td>Wholesale sales</td>
<td>Pressemitteilung Nr.405 vom 30.10.2008: Großhandelsumsatz im September 2008 real um 7,5% gestiegen</td>
<td>Nach vorläufigen Ergebnissen […] setzte der Großhandel in Deutschland im September 2008 nominal 14,7% und real 7,5% mehr um als im September 2007. Im Vergleich zum August 2008 wurde im Großhandel unter Berücksichtigung von Saison- und Kalendereffekten nominal 0,9% und real 0,5% mehr umgesetzt.</td>
<td>▲</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Nov. 6</td>
<td>New orders</td>
<td>Pressemitteilung BMWi: Entwicklung des Auftragseingangs in der Industrie September 2008</td>
<td>Die Auftragseingänge in der Industrie sind vorläufigen Angaben zufolge im September preis- und saisonbereinigt um 8% zurückgegangen. Im Vormonat waren sie leicht abwärts revidiert um 3,5% angestiegen.</td>
<td>▼</td>
</tr>
</tbody>
</table>
### Overview I*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 11</td>
<td>Wholesale prices</td>
<td>Pressemitteilung Nr.417 vom 11.11.2008: Großhandelspreise Oktober 2008:</td>
<td>Der Index der Großhandelsverkaufspreise lag […] im Oktober 2008 um 3,6% über dem Vorjahresstand. Im September 2008 und im August 2008 hatte die Jahresveränderungsrate + 5,8% beziehungsweise + 7,4% betragen. Im Vergleich zum Vormonat sank der Großhandelspreisindex im Oktober 2008 um 1,5%.</td>
<td>▼</td>
</tr>
<tr>
<td>Nov. 13</td>
<td>Economic activity</td>
<td>OECD-Pressemitteilung: OECD Forecasts a protracted economic slowdown in US, Japan and Euro area</td>
<td>Economic activity is expected to fall by 0.9 percent in the US next year, by 0.5 percent in the Euro area and by 0.1 percent in Japan as OECD countries enter a protracted slowdown, according to latest projections. Presenting OECD’s gross domestic product (GDP), inflation and unemployment forecasts for these three major economies ahead of the G20 summit on the financial crisis on 15 November, Jorgen Elmeskov, Director of Policy Studies in the OECD’s Economics Department, said a high degree of uncertainty surrounds the outlook. Much depends on the depth and duration of the financial crisis, the main driver of the current recession. And he added, “The ongoing adjustment in housing markets still has a long way to go.”</td>
<td>▼</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 20</td>
<td>US economy</td>
<td>The Conference Board press release Nov. 20, 2008</td>
<td>The US leading index decreased 0.8 percent, the coincident index increased 0.2 percent and the lagging index increased 0.1. in October 2008.</td>
<td>◆</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 25</td>
<td>Real GDP</td>
<td>Pressemitteilung Nr. 443 vom 25.11.2008: Ausführliche Ergebnisse zur Wirtschaftsleistung im 3. Quartal 2008</td>
<td>[…] bereits in seiner Schnellmeldung am 13. November 2008 mitgeteilt hat, war das Bruttoinlandsprodukt (BIP) – preis-, saison- und kalenderbereinigt – im dritten Quartal 2008 um 0,5% niedriger als im zweiten Quartal des Jahres. Im ersten Quartal 2008 war die Wirtschaftsleistung im Vorquartalsvergleich um 1,4% gestiegen und im zweiten Vierteljahr um 0,4% zurückgegangen.</td>
<td>▼</td>
</tr>
<tr>
<td>Nov. 25</td>
<td>New orders in construction industry</td>
<td>Pressemitteilung Nr. 444 vom 25.11.2008: September 2008: Aufträge im Bauhauptgewerbe real + 2,2% zum Vorjahr</td>
<td>[…] mitteilt, gingen im Bauhauptgewerbe im September 2008 in Deutschland in Betrieben mit 20 und mehr Beschäftigten preisbereinigt um 2,2% höhere Aufträge ein als im Vorjahresmonat. Dabei nahm die Baunachfrage im Hochbau um 14,1% zu, im Tiefbau dagegen um 8,6% ab. Im Zeitraum Januar bis September 2008 sind die Auftragseingänge preisbereinigt um 0,3% gegenüber dem entsprechenden Vorjahreszeitraum gesunken.</td>
<td>▼</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 27</td>
<td>Employment <em>Labour market</em></td>
<td>Pressemitteilung Nr.450 vom 27.11.2008:</td>
<td>[...] auf Grundlage erster Berechnungen mitteilt, waren im Monat Oktober 2008 40,84 Millionen in Deutschland lebende Personen erwerbstätig. Das sind 538 000 Personen (+ 1,3%) mehr als im Vorjahresmonat Oktober 2007 und damit so viele wie noch nie zuvor. Veränderte Tendenzen der gesamtwirtschaftlichen Entwicklung zeigen sich auf dem Arbeitsmarkt allerdings erfahrungsgemäß häufig erst mit einigen Monaten Verzögerung.</td>
<td>▼</td>
</tr>
<tr>
<td>Nov. 28</td>
<td>Wholesale <em>sales</em></td>
<td>Pressemitteilung Nr.453 vom 28.11.2008:</td>
<td>Nach vorläufigen Ergebnissen […] setzte der Großhandel in Deutschland im Oktober 2008 nominal 3,9% und real 0,8% mehr um als im Oktober 2007. Im Vergleich zum September 2008 wurde im Großhandel unter Berücksichtigung von Saison- und Kalendereffekten dagegen nominal 2,8% und real 1,1% weniger umgesetzt.</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 1</td>
<td>Retail <em>sales</em></td>
<td>Pressemitteilung Nr.455 vom 01.12.2008:</td>
<td>Nach vorläufigen Ergebnissen […] setzte der Einzelhandel in Deutschland im Oktober 2008 nominal 0,9% mehr und real 1,5% weniger um als im Oktober 2007. Beide Monate hatten jeweils 26 Verkaufstage. Dieses Ergebnis für den Oktober 2008 wurde aus Daten von sieben Bundesländern berechnet, in denen ca. 76% des Gesamtumsatzes im deutschen Einzelhandel getätigt werden.</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 4</td>
<td>Real GDP <em>Eurozone und EU27</em></td>
<td>Eurostat-Pressemitteilung 171/2008 vom 4.12.2008:</td>
<td>Im Vergleich zum Vorquartal ist im dritten Quartal 2008 das BIP sowohl in der Eurozone (EZ15) als auch in der EU27 um 0,2% gesunken (erste Schätzungen). Im zweiten Quartal 2008 betrug die Wachstumsrate -0,2% in der Eurozone und 0,0% in der EU27.</td>
<td>▼</td>
</tr>
</tbody>
</table>
### Overview 1*: Record of selected macroeconomic news, April to December 2008

<table>
<thead>
<tr>
<th>Date</th>
<th>Keyword</th>
<th>Press release</th>
<th>Short description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 5</td>
<td>Interest rates</td>
<td>Pressemitteilung EZB</td>
<td>Auf der heutigen Sitzung, die in Brüssel stattfand, fasste der EZB-Rat die folgenden geldpolitischen Beschlüsse: Der Zinssatz für die Hauptrefinanzierungsgeschäfte des Eurosystems wird um 75 Basispunkte auf 2,50 % gesenkt. Dies gilt erstmals für das am 10. Dezember 2008 abzuwickelnde Geschäft. Der Zinssatz für die Spitzenrefinanzierungsfazilität wird mit Wirkung vom 10. Dezember 2008 um 75 Basispunkte auf 3,00 % gesenkt. Der Zinssatz für die Einlagefazilität wird mit Wirkung vom 10. Dezember 2008 um 75 Basispunkte auf 2,00 % gesenkt.</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 5</td>
<td>New orders manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung des Auftragseingangs in der Industrie Oktober 2008</td>
<td>Die Auftragseingänge in der Industrie sind vorläufigen Angaben zufolge im Oktober preis- und saisonbereinigt erneut kräftig um 6,1% zurückgegangen. Im Vormonat waren sie leicht abwärts revidiert um 8,3% gesunken.</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 8</td>
<td>CLI</td>
<td>News release OECD Composite leading indicators</td>
<td>OECD composite leading indicators (CLIs) for October 2008 continue to point to a weakening outlook for all the major seven economies but compared to last month the outlook has significantly deteriorated in the major non-OECD member economies, with China, India and Russia now also facing strong slowdowns. Etc</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 8</td>
<td>Production manufacturing</td>
<td>Pressemitteilung BMWi: Entwicklung der Produktion im Produzierenden Gewerbe Oktober 2008</td>
<td>Die Erzeugung im Produzierenden Gewerbe ist im Oktober vorläufigen Angaben zufolge preis-, kalender- und saisonbereinigt deutlich um 2,1% zurückgegangen. Im Monat zuvor war sie um 3,3% gesunken. Der aktuelle Produktionsrückgang ist auf eine schwache Entwicklung der Erzeugung im Bauhauptgewerbe von -3,0% sowie der Industrieproduktion von -2,2% zurückzuführen.</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 9</td>
<td>Exports, imports</td>
<td>Pressemitteilung Nr.467 vom 09.12.2008: Deutsche Ausfuhren im Oktober 2008: + 1,4% zum Oktober 2007</td>
<td>[...] anhand vorläufiger Ergebnisse mitteilte, wurden im Oktober 2008 von Deutschland Waren im Wert von 89,7 Milliarden Euro ausgeführt und Waren im Wert von 73,4 Milliarden Euro eingeführt. Die deutschen Ausfuhren waren damit im Oktober 2008 um 1,4% und die Einfuhren um 5,4% höher als im Oktober 2007. Kalender- und saisonbereinigt nahmen die Ausfuhren gegenüber September 2008 um 0,5% und die Einfuhren um 3,5% ab.</td>
<td>▲</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------</td>
<td>---------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Dec. 10</td>
<td>Wholesale prices</td>
<td>Pressemitteilung Nr.471 vom 10.12.2008:</td>
<td>Der Index der Großhandelsverkaufspreise lag [...] im November 2008 um 0,8% unter dem Vorjahresstand. Dies war der stärkste Rückgang gegenüber dem Vorjahresmonat seit Juni 2002 (– 1,0%). (…) Im Vergleich zum Oktober 2008 sank der Großhandelspreisindex im November 2008 um 3,3%.</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 15</td>
<td>Exports, imports</td>
<td>Pressemitteilung Nr.482 vom 15.12.2008:</td>
<td>[...] wurden in den Monaten Juli bis September 2008 Waren im Wert von 250 Milliarden Euro aus Deutschland ausgeführt. Das ist eine Steigerung um 4,1% gegenüber dem Vorjahresquartal. Preisbereinigt erhöhten sich die Ausfuhren um 1,5%.</td>
<td>▲</td>
</tr>
<tr>
<td>Dec. 17</td>
<td>Consumer prices</td>
<td>Pressemitteilung Nr.488 vom 17.12.2008:</td>
<td>[...] ist der Verbraucherpreisindex für Deutschland im November 2008 gegenüber November 2007 um 1,4% gestiegen. Der Preisauftrieb hat sich damit den vierten Monat in Folge abgeschwächt (Oktober: + 2,4%; September: +2,9%; August: +3,1%); im November blieb die jährliche Teuerung erstmalig seit Juni 2007 unter der 2%-Marke.</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 18</td>
<td>Ifo business climate</td>
<td>Pressemitteilung Ifo: Ifo Geschäftsclima weiter verschlechtert</td>
<td>Der Ifo Geschäftsklimaindex für die gewerbliche Wirtschaft Deutschlands ist im Dezember deutlich gesunken. Er setzt somit seine seit einem Jahr anhaltende Abwärtsbewegung fort.</td>
<td>▼</td>
</tr>
<tr>
<td>Date</td>
<td>Keyword</td>
<td>Press release</td>
<td>Short description</td>
<td>Effect</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Dec. 18</td>
<td>US economy</td>
<td>The Conference Board press release December 18, 2008</td>
<td>The US leading index decreased 0.4 percent, the coincident index decreased 0.3 percent and the lagging index increased 0.1 percent in November.</td>
<td>▼</td>
</tr>
<tr>
<td>Dec. 22</td>
<td>Import prices</td>
<td>Pressemitteilung Nr.500 vom 22.12.2008: Importpreise November 2008: – 1,3% gegenüber November 2007</td>
<td>Der Index der Einfuhrpreise lag […] im November 2008 um 1,3% unter dem Vorjahresstand. Dies war der höchste Rückgang gegenüber dem Vorjahresmonat seit März 2004 (– 1,6%). Im Oktober 2008 hatte die Jahresveränderungsrate noch + 2,9% und im September +7,6% betragen. Gegenüber Oktober 2008 sank der Einfuhrpreisindex um 3,4%.</td>
<td>▼</td>
</tr>
</tbody>
</table>

—Signals: : positive; ♦: neutral; ▼: negative.