

DOCUMENTATION

REAL-TIME DATA SETS*

Overview: Real-time data files available at the Bundesbank

| Variable | frequency of vintages | frequency of data | seasonally adjusted | area | Vintages | | Observations | |
|---|-----------------------|-------------------|---------------------|--------------|----------|--------|--------------|--------|
| | | | | | first | last | first | last |
| GNP (real and nominal) | monthly | quarterly | yes | West Germany | Dec 71 | Aug 95 | 62Q1 | 94Q4 |
| GDP (real and nominal) | monthly | quarterly | yes | West Germany | Jun 92 | Apr 99 | 76Q3 | 98Q4 |
| | | | | Germany | Sep 95 | Apr 99 | 91Q1 | 98Q4 |
| GNP (real) | monthly | quarterly | no | West Germany | Jan 78 | Aug 95 | 68Q1 | 94Q4 |
| | | | | Germany | Sep 95 | Jun 00 | 91Q1 | 00Q1 |
| GDP (real) | monthly | quarterly | no | West Germany | Jan 78 | Mar 99 | 68Q1 | 98Q4 |
| | | | | Germany | Sep 95 | Jun 00 | 91Q1 | 00Q1 |
| Production potential (as estimated by Bundesbank staff) | monthly | annual | no | West Germany | Apr 74 | Jan 99 | 1962 | 2000 |
| | | | | Germany | Aug 95 | Jan 99 | 1991 | 2000 |
| CPI ³⁾ | monthly | monthly | yes | West Germany | Jan 73 | Dec 99 | Jan 68 | Nov 99 |
| | | | | Germany | Nov 95 | Dec 99 | Nov 93 | Nov 99 |
| CPI ³⁾ | monthly | monthly | no | West Germany | Nov 73 | Jun 99 | Sep 72 | May 99 |
| | | | | Germany | Sep 95 | Jun 99 | Aug 94 | May 99 |
| Central bank money | monthly | monthly | yes | West Germany | Oct 74 | Feb 88 | Mar 69 | Jan 88 |
| Money stock M3 | monthly | monthly | yes | West Germany | Jan 88 | Jun 95 | May 82 | Dec 90 |
| | | | | Germany | Sep 91 | Mar 99 | Jul 91 | Dec 98 |

³⁾Cost-of-living index for all households

*We believe that each data set represents accurately the data that would have been available at the reference date. We have also taken steps to minimize our own data-entry errors. Undoubtedly, some errors remain, and users should examine the data carefully for outliers that we may have overlooked.

| | |
|--|-----------|
| INTRODUCTION | 1 |
| SEASONALLY ADJUSTED GDP / GNP | 1 |
| Range of data and file structure | 1 |
| Changes in base year | 1 |
| Seasonal Adjustment | 1 |
| GDP / GNP SOURCE DATA | 2 |
| Range of data and file structure | 2 |
| Changes in base year | 2 |
| Formats | 3 |
| Missing publications | 3 |
| SEASONALLY ADJUSTED CPI | 4 |
| Range of data and file structure | 4 |
| Changes in base year | 4 |
| Seasonal adjustment | 4 |
| Note | 5 |
| Formats | 5 |
| CPI SOURCE DATA | 6 |
| Range of data and file structure | 6 |
| Changes in base year | 6 |
| Formats | 6 |
| Note | 7 |
| MONETARY AGGREGATES | 8 |
| File structure and formats | 8 |
| Central bank money stock: Growth rate “d6” | 8 |
| Range of data and notes | 8 |
| Seasonal adjustment | 8 |
| Money supply (M3): Growth rate “d6” | 9 |
| Range of data and notes | 9 |
| Seasonal adjustment | 9 |
| Growth rate “dq4” | 9 |
| Range of data and notes | 9 |
| Seasonal adjustment | 10 |
| PRODUCTION POTENTIAL | 11 |
| Range of data | 11 |
| Data source | 11 |
| Reporting month/Data available at the end of a quarter | 11 |

Introduction

This note provides documentation for the excel files containing the real-time data sets compiled at the Bundesbank. The table on the front page gives an overview of the available files.

The seasonally adjusted data on real and nominal GNP/GDP, on the CPI, on the central bank money stock and on M3 are taken from the statistical supplements called “Seasonally Adjusted Business Statistics” which the Bundesbank publishes regularly together with its monthly reports. Each column of the data sets represents a new vintage (i.e. a new time series) of data. The frequency of the vintages is monthly. As reference date, we take the month of issue (reporting month) of the respective supplements. Each column is headed by the reference date in the “YYMM” format. For example, “8003” would refer to the March 1980 issue of the statistical supplement. The exact day of printing of the supplements changed over time from around the 25th in the 70s to around the 15th in later years. It is therefore possible that data which became available in the second half of the month were only published in next month’s supplement. When working with the data, users should keep in mind that our data for a given reporting month reflect only to the information published in that month’s supplement. We leave it to the user to carry out further adaptations like the ones made by Gerberding et al. (2004).¹

The non-seasonally adjusted data on real GNP/GDP are taken from publications by the Federal Statistical Office and the non-seasonally adjusted data on the CPI (change from previous year in %) are taken from the Bundesbank’s monthly reports. Again, the frequency of the vintages is monthly and the heading of the columns refers to the month of issue of the respective publications.

The real-time vintages for the production potential (as estimated by Bundesbank staff) were reconstructed partly from official Bundesbank publications and partly from internal documents such as the briefing material for the Council’s discussions on the monetary target for the year to come. The frequency of the vintages is rather irregular, but the vintages which are available are again headed by the reference date in the “YYMM” format. For example, “8011” would refer to the vintage of estimates available to policy makers at the end of November 1980. The frequency of the data is annual. Gerberding et al. (2004) use a standard method of interpolation to convert the annual figures into quarterly data. Together, the real-time data sets for real GNP/GDP and for the production potential can be used to calculate a real-time data set for the output gap (as estimated by Bundesbank staff).

¹ See Gerberding et al. (2004): How the Bundesbank *really* conducted monetary policy – An analysis based on real-time data, paper prepared for the Conference on Real-Time Data and Monetary Policy, Eltville, Germany, May 28-29, 2004, p. 12.

Seasonally adjusted GDP / GNP

Files in the directory "GNP_GDP_seasonally_adjusted" contain quarterly data (levels) for GDP and GNP, as taken from the *Statistical Supplements* on seasonally adjusted business statistics ("Saisonbereinigte Wirtschaftszahlen") to the Bundesbank's *Monthly Reports*.

Range of data and file structure

Range of data

For the reporting period 7112 to 9904, nominal and real figures are divided into five Excel spreadsheets each.

| | | |
|-----|---------------------------|--|
| GNP | from reporting month 7112 | to reporting month 9508 (West Germany) |
| GDP | from reporting month 9206 | to reporting month 9904 (West Germany) |
| | from reporting month 9509 | to reporting month 9904 (Germany as a whole) |

File structure

| | | | |
|-----------------------|--------------------------------|-----------------------------------|-----------|
| Nominal data | REPORTING MONTH | Column heading ^{*)} NYMM | eg N8503 |
| Real data | REPORTING MONTH | Column heading ^{*)} RYMM | eg R8503 |
| Nominal and real data | OBSERVATION DATE (QUARTER): | Row heading YYYYQQ | eg 198503 |

^{*)}So that a distinction can be made, the column headings for the reporting months 9206 to 9508 bear the prefix GDP or GNP (GDPN9206, GNPR9206 etc) and for the reporting months 9509 to 9904 they include the infix *_w_* for data on West Germany (N_w_9509 etc).

The Excel files for nominal and real data are saved in two sub-directories. The file name indicates the reporting period.

Sub-directory **Nom**

GNP_NOM_7112_9205.xls
 GNP_NOM_9206_9508.xls
 GDP_NOM_9206_9508.xls
 GDP_NOM_9509_9904_west.xls
 GDP_NOM_9509_9904_Germany.xls

Sub-directory **Real**

GNP_REAL_7112_9205.xls
 GNP_REAL_9206_9508.xls
 GDP_REAL_9206_9508.xls
 GDP_REAL_9509_9904_west.xls
 GDP_REAL_9509_9904_Germany.xls

Changes in base year

The *rebased values* for seasonally adjusted GNP and GDP are published for the first time in the following reporting months.

| GNP | GDP West Germany | GDP Germany as a whole |
|------|------------------|------------------------|
| | | Base year 1962=100 |
| 7707 | | Base year 1970=100 |
| 8209 | | Base year 1976=100 |
| 8509 | | Base year 1980=100 |
| 9104 | | Base year 1985=100 |
| 9309 | 9309 | Base year 1991=100 |
| | 9905 | Base year 1995=100 |

Seasonal Adjustment

Recalculation of seasonal adjustment factors occurs in
 7203, 7303, 7403, 7503, 7509, 7603, 7609, 7703, 7707, 7709, 7803, 7809, 7903, 7909, 8003, 8009,
 8104, 8109, 8204, 8209, 8303, 8309, 8403, 8409, 8503, 8509, 8603, 8703, 8709, 8803, 8809, 8903,
 8909, 9003, 9009, 9104, 9109, 9203, 9209, 9303, 9309, 9406, 9409, 9503, 9509, 9606, 9609, 9612,
 9703, 9709, 9712, 9803, 9806, 9809, 9812, 9903.

GDP / GNP source data

Files in the directory "GNP_GDP_source_data" contain quarterly data (real, levels and growth rates) from various publications by the Federal Statistical Office.

Range of data and file structure

Range of data

For the reporting period 7801 to 0006, the following data are divided into a total of 12 spreadsheets, each saved in separate Excel files.

Levels

| | | |
|-----|---------------------------|--|
| GNP | from reporting month 7801 | to reporting month 9508 (West Germany) |
| GNP | from reporting month 9509 | to reporting month 0006 (Germany as a whole) |
| GDP | from reporting month 7801 | to reporting month 9903 (West Germany) |
| GDP | from reporting month 9509 | to reporting month 0006 (Germany as a whole) |

The growth rates are detailed in the same way (annual percentage change).

| | | |
|-------------|---------------------------|--|
| gnp_percent | from reporting month 7801 | to reporting month 9508 (West Germany) |
| gnp_percent | from reporting month 9509 | to reporting month 0006 (Germany as a whole) |
| gdp_percent | from reporting month 7801 | to reporting month 9903 (West Germany) |
| gdp_percent | from reporting month 9509 | to reporting month 0006 (Germany as a whole) |

Note: Growth rates may be calculated manually from changes in levels, as not all issues of the periodicals contain both time series. These calculations cannot be traced in the files.

File structure

REPORTING MONTH

| | | | |
|---------------|--|------------|---------------|
| levels: | Column heading ^{*)} | GNP_YYMM | eg GNP_8503 |
| | | GDP_YYMM | eg GDP_8503 |
| Growth rates: | the prefix "d4" is added to the column heading to denote growth rates. | d4GNP_YYMM | eg d4GNP_8503 |

OBSERVATION DATE

| | | | |
|-----------|-------------|--------|-----------|
| (Quarter) | Row heading | YYYYQQ | eg 198503 |
|-----------|-------------|--------|-----------|

^{*)}For West German GDP data as of reporting month 9509: GDP_w_YYMM, eg GDP_w_9509.

Changes in base year

The *rebased values* for GNP and GDP source data are published for the first time in the following reporting months. In our data files we date the revisions according to the earliest date of release given in the respective publications.

Arbeitsunterlage

| <i>FS 18 R 3²</i> | <i>WiSta³</i> | <i>StaWo⁴</i> | <i>FS 18 R S⁵</i> | |
|------------------------------|--------------------------|--------------------------|------------------------------|--------------------|
| | 8208 | 8209 | 8208 | Base year 1970=100 |
| 8508 | 8508 | 8509 | 8508 | Base year 1976=100 |
| 9106 | 9104 | 9103 | 9103 | Base year 1980=100 |
| 9309 | 9309 | 9309 | NA | Base year 1985=100 |
| 9906 | 9906 | 9906 | 9904 | Base year 1991=100 |
| | | | | Base year 1995=100 |

² *Fachserie 18 R 3, Vierteljahresergebnisse*, published by the Federal Statistical Office.

³ *Wirtschaft und Statistik*, published by the Federal Statistical Office.

⁴ *Statistischer Wochendiens*, published by the Federal Statistical Office.

⁵ *Fachserie 18 R S, Revidierte Vierteljahresergebnisse*, published by the Federal Statistical Office.

Formats

The source of the new entries/value adjustments is indicated in the files by the colour of the cell background.

| | | |
|---------------------|-----------|---|
| Arbeitsunterlage | FS 18 R 3 | <i>Arbeitsunterlage</i> (sky-blue cell background)/from 1988: <i>FS 18 R 3 Vierteljahresergebnisse</i> (pale blue cell background). Note: <i>Arbeitsunterlage</i> contains longer series than <i>WiSta</i> . For the reporting months March, June, September and December the <i>Vierteljahresergebnisse</i> are published at the beginning of the month and for February, May, August and November they are published at the end of the month. |
| WiSta | WiSta | <i>Wirtschaft und Statistik</i> , monthly issues (tawny cell background). No background colour indicates that the figures are taken from the monthly issues of <i>WiSta</i> , but do not contain any new entry or revision. Note: In the 9802 issue, a new observation is already added to the time series; data is annotated as being 9803 figures. Omitting the new value, we consider this printed series as the real-time data set of 9802. |
| FS 18 R 3 and WiSta | | Data entries that are the same in both publications (pastel green cell background). |
| FS 18 R S | | Special series (light pink cell background). Published regularly as part of the revisions, except the rebasing in 1993. |
| FS 18 R 1.3 | | Hauptbericht/"Jahresbericht" FS 18 R 1.3 (Main report/"Annual Report") (lilac cell background). Contains new information for cases where there is no <i>Arbeitsunterlage</i> and because the series published in the subsequent publications, <i>FS 18 R 3 Vierteljahresergebnisse</i> and <i>WiSta</i> , are not long enough. |
| StaWo | | <i>Statistischer Wochendienst</i> (light green cell background). Published weekly. It rarely provides additional information compared to <i>WiSta</i> and <i>FS 18 R 3</i> . |
| Suppl 93 | | The Federal Statistical Office rebased the GDP series in September 1993 without publishing a long series. We filled this gap with data from Bundesbank sources which were approved by the Federal Statistical Office. |

Missing publications

There are no publications (which are normally issued on a regular basis) available for the following reporting dates, either because they were never issued or they cannot be found.

| | |
|------|--|
| 8306 | <i>WiSta</i> |
| 8312 | <i>WiSta</i> |
| 8706 | <i>FS 18 R 3 Vierteljahresergebnisse?</i> (8703 last issue <i>Arbeitsunterlage</i>) |
| 8709 | <i>FS 18 R 3 Vierteljahresergebnisse?</i> |
| 8712 | <i>FS 18 R 3 Vierteljahresergebnisse?</i> |
| 8803 | <i>FS 18 R 3 Vierteljahresergebnisse?</i> |
| 9103 | <i>FS 18 R 3 Vierteljahresergebnisse?</i> |
| 9309 | No <i>FS 18 S</i> (rebasings to 91 without special publication) |

However, there only appear to be **gaps** in

| | |
|------|---|
| 9506 | <i>FS 18 R 3 Vierteljahresergebnisse</i> (likewise there are no new figures in <i>WiSta</i> , <i>StaWo</i>). |
|------|---|

Seasonally adjusted CPI

The monthly data (levels and growth rates) in the directory “cpi_seasonally_adjusted” have been taken from the *Statistical Supplements* on seasonally adjusted business statistics (“Saisonbereinigte Wirtschaftszahlen”) to the Bundesbank’s *Monthly Reports*.

Range of data and file structure

Range of data

The files

- cpi_seasonallyadjusted_73_83_west.xls
- cpi_seasonallyadjusted_84_99_west.xls
- cpi_seasonallyadjusted_95_99_Germany.xls

contain data in levels for West Germany during the reporting period 7301 to 9912; for Germany as a whole, the reporting period includes the reporting months 9511 up to and including 9912.

The files

- cpi_seasonallyadjusted_d_8204_9902_west.xls
- cpi_seasonallyadjusted_d_95_99_whole.xls

contain the growth rates (published in the *Statistical Supplements*). The reporting period for West Germany includes the reporting months 8204 up to and including 9902. For Germany as a whole, the reporting period, according to the data in levels, is from 9511 up to and including 9912. The growth rates are calculated as annual rates, in most cases from the change in levels during the previous six months.

File structure

Every file in this directory contains one spreadsheet showing the monthly figures. The spreadsheet is structured as follows

| | | | |
|------------------|----------------|--------------------------|---------------|
| REPORTING MONTH | Column heading | cpisa_YYMM ^{*)} | eg cpisa_8503 |
| OBSERVATION DATE | Row heading | MMM YY | eg Mar 85 |

^{*)}So that a distinction can be made, as of 9509 the data for West Germany are marked ascpisa_YYMM_w, eg cpisa_9509_w. The growth rates are flagged with the prefix “d6_”, eg d6_cpisa_8503.

Changes in base year

For the following reporting months, the seasonally adjusted CPI index was initially published as rebased values.

| | |
|------|--|
| 7311 | Change in base year to 1970=100 |
| 7912 | Change in base year to 1976=100 |
| 8406 | Change in base year to 1980=100 |
| 8911 | Change in base year to 1985=100 |
| 9509 | Change in base year to 1991=100 (West Germany 9509, figures for Germany as a whole only available as of 9511.) |
| 9903 | Change in base year to 1995=100 |

Seasonal adjustment

Recalculation of seasonal adjustment factors occurs in

Levels and growth rates(west): 7303, 7311, 7412, 7601, 7611, 7612, 7708, 7808, 7908, 7912, 8006, 8008, 8010, 8011, 8012, 8108, 8111, 8201, 8202, 8204, 8205, 8206, 8303, 8309, 8406, 8505, 8510, 8608, 8709, 8710, 8711, 8712, 8809, 8810, 8910, 9011, 9111, 9210, 9311, 9411, 9502, 9509, 9602, 9608, 9701, 9706, 9812, 9903, 9904.

Levels and growth rates(Germany): 9511, 9602, 9608, 9610, 9701, 9702, 9704, 9706, 9711, 9802, 9812, 9903, 9904, 9910, 9911.

Note

The figures are annotated with footnotes in the Statistical Supplements. Relevant information is summarised below.

The level value for observation month **Jan 1980** is influenced by a one-time refunding of the TV and radio licence fees. The first column entry for observation month Jan 1980 is in reporting month 8002, the last column entry is in reporting month 8601.

The level value for observation month **June 1982** is influenced by an increase in the tobacco tax rate. The first column entry for observation month June 1982 is in reporting month 8207, the last column entry is in reporting month 8804.

The growth rates for the observation period **Jan 1989 up to and including June 1989** are statistically adjusted so as to take account of the impact of the increase in the mineral oil tax rate and of other administrative measures. The growth rates are rounded to 0.5 percentage points. The first adjusted column entry for Jan 1989 is in reporting month 8903, the last entry for observation month June 1989 is in reporting month 9408.

The growth rates for the observation period **July 1991 up to and including Dec 1991** are statistically adjusted so as to take account of the impact of the increase in the mineral oil tax rate in July 1991. The growth rates are rounded to 0.5 percentage points. The first column entry for observation month July 1991 is in reporting month 9108, the last entry for observation month Dec 1991 is in reporting month 9510.

The calculation of the growth rates for the observation period **May 1993 up to and including July 1993** is based on the change in levels of the last three months in each case. The first column entry for observation month May 1993 is in reporting month 9306, the last column entry for observation month July 1993 is in reporting month 9510.

The growth rates for the observation period **Jan 1994 up to and including June 1994** are statistically adjusted so as to take account of the impact of the increase in the mineral oil tax rate in Jan 1994. The growth rates are rounded to 0.5 percentage points. The first column entry for Jan 1994 is in reporting month 9402, the last column entry for observation month June 1994 is in reporting month 9510.

The growth rates for the observation period **Jan 1996 up to and including June 1996** are less informative because of the abolition of the compensation tax on electricity ("Kohlepfennig") in observation month Jan 1996. The first adjusted column entry for observation month Jan 1996 is in reporting month 9602, the last column entry for observation month June 1996 is in reporting month 9707.

The growth rates for the observation period **Apr 1998 up to and including Sep 1998** are statistically adjusted so as to take account of the impact of the increase in the value added tax rate in Apr 1998. The growth rates are rounded to 0.5 percentage points. The first adjusted column entry for Apr 1998 is in reporting month 9805, the last column entry for observation month Sep 1998 is in the final reporting month 9902.

Area specific statistical changes applying only to Germany as a whole:

The growth rates for the observation period **Jan 1994 up to and including June 1994** are statistically adjusted so as to take account of the increases in rent in East Germany. The growth rates are rounded to 0.5 percentage points. The first column entry for Jan 1994 is in reporting month 9511, the last column entry for observation month June 1994 is in reporting month 9606.

The growth rates for the observation period **Aug 1995 up to and including Jan 1996** are statistically adjusted so as to take account of the increases in rent in East Germany. The first column entry for Aug 1995 is in reporting month 9511, the last column entry for observation month Jan 1996 is in reporting month 9712.

Formats

A rebasing of the seasonally adjusted index is indicated in the files by a red line on the left-hand side of the column.

CPI source data

The directory "cpi_source_data" contains three files showing the monthly y-o-y percentage change in the level of the cost-of-living index for all households for the reporting months 7311 up to and including 9906. Data are taken from the Bundesbank's *Monthly Reports* (MR).

Range of data and file structure

Range of data

| File name | Reporting months | |
|------------------------------|-------------------------|--|
| cpi_sourcedata_73_83_west | from MR 7311 to MR 8312 | former territory of the Federal Republic |
| cpi_sourcedata_84_99_west | from MR 8401 to MR 9906 | former territory of the Federal Republic |
| cpi_sourcedata_95_99_Germany | from MR 9509 to MR 9906 | Germany as a whole |

File structure

REPORTING MONTH Column heading d4cpiYYMM^{*)} eg d4cpi8503

OBSERVATION MONTH Row heading MMM YY eg Mar 85

^{*)}So that a distinction can be made, the suffix "_w" is added as of reporting month 9509 to identify data for West Germany, eg d4cpi9509_w.

The publication lag sometimes varies between one and two months. Weekly periodicals by the Federal Statistical Office support the view, that, on a regular basis, the monthly CPI inflation was released during the first half of the following month.⁶

Changes in base year

Changes in base year occur in

| | |
|------|--|
| 7311 | Change in base year to 1970=100 |
| 7912 | Change in base year to 1976=100 |
| 8406 | Change in base year to 1980=100 |
| 8911 | Change in base year to 1985=100 |
| 9510 | Change in base year to 1991=100 ^{**)} |
| 9903 | Change in base year to 1995=100 |

^{**)} In the statistical section of MR 9509 there are no figures available for Germany as a whole: West Germany base year 85, East Germany base year 91. Evidence that supports reporting month 9509 as dating of the rebasing can be found in MR 9509, p. 58f (articles section). Figures for Germany as a whole only appear as in MR 9510.

Formats

Figures in black type: these are taken from the files in the Statistical Section of the *Monthly Reports*, which generally show the monthly figures for the past twelve months.

A red line on the left-hand side of the column denoting a rebasing of the CPI. The dating of the rebasing given in the files is in line with that in the Statistical sections of the *Monthly Report*.

⁶ See Gerberding et al. (2004): How the Bundesbank really conducted monetary policy – An analysis based on real-time data, paper prepared for the Conference on Real-Time Data and Monetary Policy, Eltville, Germany, May 28-29, 2004, p. 10.

Figures in blue type: in 9510 we added a longer time series found in the article “Zur Neuberechnung des Preisindex für die Lebenshaltung auf Basis 1991”, published by the *Federal Statistical Office*, among others in the monthly issue of *Wirtschaft und Statistik* in 9511.

An extension of the time series printed in the *Monthly Report* back to the beginning of the respective base year is possible by referring to the annual reports titled *Fachserie 17 R7*, formerly *Fachserie M6*, published by the *Federal Statistical Office*. These longer series are not included in the files here, but are available on request from the authors.

Note

The 9001 and 9512 Statistical Supplements, which contain seasonally adjusted data, refer to a revision of the source data carried out by the Federal Statistical Office. However, as the observation months in question are not included in the *Monthly Report's* shorter time series, these revisions are not included in our files for CPI source data (growth rates). For example, see *Statistical Supplement* reporting month 9001 (West Germany): observation months March 1987, May 1988.

MONETARY AGGREGATES

The files "ZBG_d.xls" and "M3_d.xls" in the directory "monetary_aggregates" contain data on the central bank money stock and M3 (monthly figures, growth rates) as taken from the *Statistical Supplements* on seasonally adjusted business statistics ("Saisonbereinigte Wirtschaftszahlen") to the Bundesbank's *Monthly Reports*. The file "M3_dq4.xls" contains one spreadsheet that shows the annualised change in M3 compared with the average for the fourth quarter of the previous year, as printed in the *Statistical Supplements*.

File structure and formats

File structure

REPORTING MONTH

| | | | |
|--|--------------------------|---------------------------|---------------|
| Growth rate "d6" | M3 | Column heading d6_mYYMM | eg d6m_8803 |
| | Central bank money stock | Column heading d6_zbgYYMM | eg d6zbg_8503 |
| Growth rate in comparison to the fourth quarter of the previous year "dq4" | M3 | Column heading dq4_mYY_MM | eg dq4_m_8906 |

OBSERVATION DATE Row heading MMM YY eg Mar 85

Formats:

Dotted red horizontal line:

As of the observation month Jan 91, figures apply to Germany as a whole.

As of the observation month Jan 94, there is a definitional change in computing money stock M3.

Dotted red vertical line:

Definitional change in computing the growth rates (reporting months 7507 and 9003).

The publication procedures for central bank money stock and M3 are different. As of 7503, data on the central bank money stock for the preceding month are published regularly in a reporting month (Exception: 8711, 8712 and 8801). M3 data for a particular observation point are published with a delay of two months (Exception: 9509).

Central bank money stock: Growth rate "d6"

Range of data and notes

| | |
|------------------|--|
| "ZBG_d" | Growth rate (annualised rate) |
| Reporting months | d3_zbg_7410 to d3_zbg_7506, d6_zbg_7507 to d6_zbg_8802 |

As of reporting month 7507, the change in the last six months is recalculated as an annualised percentage change. Up to 7506 the change in the last three months was recalculated as an annualised rate. (Note: In the reporting period from 7810 up to and including 7908, the growth rates for the observation period Oct 78 up to June 77, as calculated from level values, are greater than the growth rates published in the *Statistical Supplement*. In 7810 and 7909, new factors for seasonal adjustment are calculated, the recalculation in 7909 eliminating the difference between the calculated and published growth rates.)

Seasonal adjustment

Recalculation of seasonal adjustment factors occurs in 7502, 7511, 7611, 7710, 7810, 7909, 8011, 8112, 8212, 8312, 8412, 8511, 8701, 8712.

Data are annotated with several footnotes in the publications. In order to give a clear summary, only the observation period marked with a footnote is reported here, the corresponding reporting months affected have to be checked in the file.

"statistically adjusted."

Dec 75-Mar 76, Apr 78-Oct 78, Oct 79, Nov79, June 80, Oct 81, Nov 81.

Nov 78 and Dec78 as to 7908.

“statistically adjusted so as to take into account credit institutions' cash holdings of domestic notes and coins deductible from minimum reserve requirements.” This footnote first applies in reporting month 8201.

Apr 78-Aug 78.

“statistically adjusted so as to take account of the transfer of public funds (as of reporting month 8205 'Federal balances') to credit institutions.” This footnote first applies in reporting month 8201.

Aug 78-Oct 78, Oct 79, Nov 79, July 80, Oct 81, Nov 81, Jan 82, May 82-Aug 82, Oct 82, Dec 82-Feb 83, Oct 83-Dec 83, Mar 84-June 84, Aug 84-Nov 84, Sep 85-Okt 85, Jan 86, Mar 86-May 86, Aug 86, Sep 86, Nov 86, Jan 87, Feb 87, Apr 87, June 87, Aug 87, Oct 87.

The level value for observation month Mar 78 is statistically adjusted so as to take into account credit institutions' cash holdings of domestic notes and coins deductible from minimum reserve requirements. In 8201 the text in the footnote changes to “cash holdings excluded”.

Money supply (M3): Growth rate “d6”

Range of data and notes

| | | |
|------------------|--|------------------|
| “M3_d” | Growth rate in comparison to the stock | |
| | at month-end | on daily average |
| Reporting months | m8801 to m9002 | m9003 to m9903 |

The monthly changes in each of the last six months are recalculated as an annualised percentage change. As of observation month Jan 91 figures apply to Germany as a whole, the growth rates for the observation period Jan 91 up to and including June 91 are missing.⁷ Data in levels applying to Germany as a whole are published for the first time in reporting month 9103.

Seasonal adjustment

Recalculation of seasonal adjustment factors occurs in 8802, 8902, 9003, 9103, 9301, 9403, 9503, 9603, 9703, 9803.

Data are annotated with several footnotes. In order to give a clear summary, only the observation period marked with a footnote is reported here, the corresponding reporting months affected have to be checked in the file.

“statistically adjusted so as to take account of the temporary transfer of federal funds to credit institutions”

May 82, Sep 82, Oct 83, Sep 85, Oct 83, Sep 85, May 87, Sep 87, Oct 87 (Note: as of 8908 no adjustments have been made to October 1987, but the adjustment for observation months May 87 and Sep 87 have been added). May 90, Aug-Oct 90, Nov 91, Jan 92, June 92, Sep 92, Oct 92, Feb 93 June 92, July 93.

“change in reporting requirements for co-operative banks”

Dec 85

“statistical changes have been eliminated” (*footnote in column heading 'annualised change rate')
all observations, from vintage 8801 up to and including 9709

“statistical changes have been eliminated” (*footnote in table heading)
all observations, from vintage 9710 up to and including 9903

Growth rate “dq4”

Range of data and notes

The “M3_dq4.xls” file shows the annualised percentage change in M3 in comparison to the monthly average of the 4th quarter of the previous year. As of 8906, this growth rate is published in the

⁷ See Gerberding et al. (2004): How the Bundesbank really conducted monetary policy – An analysis based on real-time data, paper prepared for the Conference on Real-Time Data and Monetary Policy, Eltville, Germany, May 28-29,2004, p. 12.

Statistical Supplements and is marked with the same footnotes in the reporting period as the annual growth rate, which is calculated from the monthly change in stock over the last six months (“d6”).

This file supplements the figures on M3 as it contains continuous data for all observation dates from January 1988, ie contrary to the growth rate “d6”, there are no gaps in the data for the observation period from January to June 1991 (change in the German terrestrial area).

The monthly average of the 4th quarter of the previous year which is used for the “dq4” growth rate, is calculated from the figures for the bank-week return day.

Seasonal adjustment

Recalculation of seasonal adjustment factors occurs in 8908, 9003, 9103, 9112, 9301, 9403, 9503, 9603, 9703, 9803.

Production Potential

The directory “production_potential” consists of two files containing historical vintages of the Bundesbank staff’s estimates of the aggregate production potential. The data were reconstructed from official Bundesbank publications and from internal documents such as the briefing material for the Council’s discussions on the monetary target for the year to come.⁸

The source of each vintage is indicated in the column header (for details, see below). The frequency of the vintages is rather irregular, but the vintages which are available are headed by the reference date in “YYMM” format (for details, see below). The frequency of the data is annual.

Range of data

| File name | area | reporting period |
|----------------------|--------------------|---------------------------|
| prod_pot_Germany.xls | West Germany | 7404 – 9901 |
| prod_pot_west.xls | Germany as a whole | 9508 – 9901 ^{*)} |

^{*)} The starting point 9508 for the all-German data set is chosen to match the changeover from West-German to all-German data in the real-time data set for real GDP. The Bundesbank staff started to produce (very rough) estimates of the East German production potential in the autumn of 1990. Those data are available from the authors of Gerberding et al. (2004) on request.

Data source

The source of each vintage is indicated in the column header, using the following abbreviations in both files:

BM, BMR

Briefing material for the Council’s discussions on the monetary target for the year to come (“BM”) and for the mid-year review of the monetary target (“BMR”)

INT

Internal notes containing updates of the regular estimates of the aggregate production potential, discussions on the method of estimation, comments on the estimates produced by other institutions etc.

AR

Deutsche Bundesbank’s annual report.

MR

Deutsche Bundesbank’s monthly report.

Reporting month/Data available at the end of a quarter

The reporting month of each of the original vintages is indicated in the second row of the column header. In order to facilitate the calculation of real-time output gaps, the data sets have been filled up with additional columns so that the columns represent the information available to policy makers at the end of each quarter. For instance, the vintage named P74Q3 contains the estimates available at the end of the third quarter of 1974 (which are identical to the vintage of 7404). Please note that there are four columns - the vintages dated 7707, 7804, 8110 and 9804 – which do not fit into this scheme and should therefore be deleted before treating the columns as end-of-quarter vintages. If you want to make full use of the monthly frequency of the vintages, please note that the changeover to the base year 1970 already occurred in 7707 (which means that in order to calculate the vintages of 7707 and 7708, you first have to rebase the vintage of 7704).

⁸ See Gerberding et al. (2004): How the Bundesbank really conducted monetary policy – An analysis based on real-time data, paper prepared for the Conference on Real-Time Data and Monetary Policy, Eltville, Germany, May 28-29,2004, p. 7f and Table 2: Structure of the Real-time data set for potential output.