OECD Composite Leading Indicators:
Turning Points of Reference Series and Component Series

<table>
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<tr>
<th>OECD Countries</th>
<th>Non-member economies</th>
<th>Area</th>
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</thead>
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<tr>
<td>Australia</td>
<td>Brazil</td>
<td>OECD Total</td>
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<tr>
<td>Austria</td>
<td>China</td>
<td>OECD + non-member economies</td>
</tr>
<tr>
<td>Belgium</td>
<td>India</td>
<td>Major seven countries</td>
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<td>Canada</td>
<td>Indonesia</td>
<td>OECD Europe</td>
</tr>
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<td>Chile</td>
<td>Russian Federation</td>
<td>Euro area</td>
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<tr>
<td>Czech Republic</td>
<td>South Africa</td>
<td>Four big European countries</td>
</tr>
<tr>
<td>Denmark</td>
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<td>NAFTA</td>
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<tr>
<td>Estonia</td>
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<td>Major five Asia countries</td>
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<tr>
<td>Finland</td>
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<tr>
<td>France</td>
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<td>Germany</td>
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<td>Greece</td>
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<td>Hungary</td>
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<td>Italy</td>
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<td>Japan</td>
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<td>Korea</td>
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<td>Luxembourg</td>
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<td>Mexico</td>
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<td>Netherlands</td>
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<td>New Zealand</td>
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<td>Norway</td>
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<td>Poland</td>
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<td>Portugal</td>
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<td>Slovak Republic</td>
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<td>Slovenia</td>
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<tr>
<td>Spain</td>
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<td>Sweden</td>
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<td>Switzerland</td>
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<td>Turkey</td>
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<tr>
<td>United Kingdom</td>
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<tr>
<td>United States</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Australia

**Component Series (Unit)**

- Permits issued for dwellings sa (number)
- Manufacturing - Orders inflow: tendency sa (% balance)
- Manufacturing - Production: tendency sa (% balance)
- Manufacturing - Employment: tendency sa (% balance)
- Share prices: S&P/ASX 200 index (2015=100)
- Terms of trade
- Yield 10-year commonwealth government bonds (% p.a.) *inverted*

**Source**

- Australian Bureau of Statistics (ABS)
- ACCI Westpack
- ACCI Westpack
- ACCI Westpack
- Reserve Bank of Australia
- Australian Bureau of Statistics (ABS)
- Reserve Bank of Australia

**Reference chronology of turning points**

Austria

Component Series (Unit)

- Manufacturing - Production: future tendency sa (% balance)
- Manufacturing - Order books: level sa (% balance)
- Manufacturing - Business situation of Germany: present sa (normal=100)
- Consumer - Confidence indicator sa (% balance)
- Job vacancies: unfilled sa (persons)
- Spread of interest rates (% p.a.)

Source

- European Commission
- IFO Institute, Germany
- European Commission
- European Commission
- European Central Bank

Reference chronology of turning points

Belgium

Component Series (Unit)

- Passenger car registrations sa (number)
- Manufacturing - Employment: future tendency sa (% balance)
- Manufacturing - Export orders inflow: tendency sa (% balance)
- Manufacturing - Demand: future tendency sa (% balance)
- Manufacturing - Production: tendency sa (% balance)
- Consumer - Confidence indicator sa (% balance)

Source

- European Automobile Manufacturers’ Association
- European Commission
- National Bank of Belgium
- European Commission

Reference chronology of turning points

Canada

**Component Series (Unit)**

- Deflated Monetary aggregate M1 sa (2010 cad)
- Manufacturing - Industrial confidence indicator (USA - PMI) sa
- Consumer - Confidence indicator (2015=100)
- Spread of interest rates (% p.a.)
- Ratio of inventories to shipments *inverted*
- Share prices: S&P/TSX composite index (2015=100)

**Source**

- Statistics Canada
- Institute of Supply Management USA
- Conference Board Canada
- Statistics Canada
- Statistics Canada
- Statistics Canada

**Reference chronology of turning points**

Chile

Component Series (Unit)

Production in total mining sa index (2015=100)  National Statistical Institute of Chile
Retail trade - Confidence indicator sa (% balance)  ICARE
Manufacturing - Production: tendency sa (% balance)  ICARE
Monetary aggregate M1 sa (CLP)  Central Bank of Chile
Share prices: IPSA index (2015=100)  Santiago Stock Exchange
I ITS Net trade (f.o.b. - c.i.f.) sa (CLP)  Central Bank of Chile

Reference chronology of turning points

Peak 1997M12, Trough 1999M4, Peak 2001M2, Trough 2003M10, Peak 2008M3, Trough 2009M8,
Peak 2013M7, Trough 2017M3, Peak 2018M4
Czech Republic

Component Series (Unit)

<table>
<thead>
<tr>
<th>Component</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOP Capital account, debit (czk)</td>
<td>Czech National Bank</td>
</tr>
<tr>
<td>Services - Demand evolution: future tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Manufacturing - Production: tendency sa (%)</td>
<td>European Commission</td>
</tr>
<tr>
<td>CPI HICP All items (2015=100) inverted</td>
<td>Czech Statistical Office</td>
</tr>
<tr>
<td>Consumer - Confidence indicator sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>ITS Exports f.o.b. total sa (czk)</td>
<td>Czech Statistical Office</td>
</tr>
<tr>
<td>Share prices: PX-50 index (2015=100)</td>
<td>Czech Statistical Office</td>
</tr>
</tbody>
</table>

Reference chronology of turning points

Denmark

Component Series (Unit)

<table>
<thead>
<tr>
<th>Series</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total retail trade (Volume) sa (2015=100)</td>
<td>Statistics Denmark</td>
</tr>
<tr>
<td>Passenger car registrations sa (number)</td>
<td>Statistics Denmark</td>
</tr>
<tr>
<td>Manufacturing - Employment: future tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Manufacturing - Production: future tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Central bank official discount rate (% per annum) inverted</td>
<td>National Bank of Denmark</td>
</tr>
<tr>
<td>Deflated monetary aggregate M1 (dkk)</td>
<td>National Bank of Denmark</td>
</tr>
<tr>
<td>ITS Mineral fuels, lubricants and related materials exports deflated CPI energy sa (dkk)</td>
<td>Statistics Denmark</td>
</tr>
<tr>
<td>Consumer - Confidence indicator sa (% balance)</td>
<td>European Commission</td>
</tr>
</tbody>
</table>

Source chronology of turning points

Estonia

Component Series (Unit)

- Manufacturing - Export order books: level sa (% balance)
- Total retail trade (Value) sa (2015=100)
- Passenger car registrations sa (2015=100)
- CPI Food excl. Restaurants (2015=100) \textit{inverted}
- Share prices: OMX Tallin index (2015=100)
- ITS Net trade (f.o.b. - c.i.f.) sa (Eur)

Source

- European Commission
- Eurostat
- European Automobile Manufacturers' Association
- Statistics Estonia
- NASDAQ OMX Baltic
- Eurostat

Reference chronology of turning points

- Trough 2009M9, Peak 2012M11, Trough 2016M6, Peak 2018M11
Finland

Component Series (Unit)

CPI All items (2015=100) inverted
Consumer - Confidence indicator sa (% balance)
Spread of interest rates (% p.a.)
Manufacturing - Production: tendency sa (% balance)
Domestic PPI Industrial activities (2015=100)
Manufacturing - Finished goods stocks: level sa (% balance) inverted
Share prices: OMXH index (2015=100)
Services – Demand evolution: future tendency (% balance)

Source

Statistics Finland
European Commission
European Central Bank
European Commission
Statistics Finland
European Commission
Bank of Finland
European Commission

Reference chronology of turning points

Peak 1985M4, Trough 1987M2, Peak 1990M1, Trough 1993M1, Peak 1995M5, Trough 1996M6,
2019M1
## France

**Component Series (Unit)**

<table>
<thead>
<tr>
<th>Component</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger car registrations sa (number)</td>
<td>INSEE</td>
</tr>
<tr>
<td>Consumer - Confidence indicator sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Manufacturing - Production: future tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Share prices: CAC All-tradable index (2015=100)</td>
<td>Bank of France</td>
</tr>
<tr>
<td>CPI HICP All items (2015=100) <em>inverted</em></td>
<td>Eurostat</td>
</tr>
<tr>
<td>Manufacturing - Export order books: level sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Construction - Selling prices: future tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Permits issued for dwellings sa (2015=100)</td>
<td>INSEE</td>
</tr>
</tbody>
</table>

**Reference chronology of turning points**

Germany

Component Series (Unit)

IFO business climate indicator (normal=100)
Orders inflow/demand (manuf.): tendency (% balance)
Export order books (manuf.): expectation (% balance)
New orders in manuf. industry (2010 = 100)
Finished goods stocks (manuf.): level (% balance) inverted
Spread of interest rates (% p.a.)
Services – Demand evolution: future tendency (% balance)
Consumer - Confidence indicator sa (% balance)

Source

IFO Institute for Economic Research
IFO Institute for Economic Research
IFO Institute for Economic Research
DESTATIS Federal Statistical Office
European Commission
European Central Bank
European Commission
European Commission

Reference chronology of turning points

Peak 2001M4, Trough 2005M2, Peak 2008M2, Trough 2009M6, Peak 2011M7, Trough 2013M3,
Peak 2014M2, Trough 2015M6, Peak 2017M11
Component Series (Unit)

Cost of construction: residential (materials) (2015=100) inverted
Bank credit to the manufacturing sector deflated sa (euro 2001)
Services - Employment: future tendency sa (% balance)
Manufacturing - Production: future tendency sa (% balance)
Production of manufactured non-durable consumer goods sa (2015=100)
Total retail trade (Volume) sa (2015=100)
Retail trade - Volume of stocks: level sa (% balance) inverted
Domestic PPI Industrial activities (2015=100) inverted

Source
National Statistical Service of Greece
Bank of Greece
European Commission
National Statistical Service of Greece

Reference chronology of turning points

2005M6, Peak 2008M4, Trough 2012M7, Peak 2015M1, Trough 2016M9, Peak 2018M8
# Hungary

## Component Series (Unit)

<table>
<thead>
<tr>
<th>Series</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing - Production: future tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Registered unemployment: level (all persons) sa</td>
<td>Hungarian Central Statistical Office</td>
</tr>
<tr>
<td>Monthly hours worked: manufacturing sa (hours)</td>
<td>Bank of Hungary</td>
</tr>
<tr>
<td>Monetary aggregate M1 sa (HUF)</td>
<td>Bank of Hungary</td>
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<tr>
<td>Share prices: BUX index (2015=100)</td>
<td>Bank of Hungary</td>
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<tr>
<td>Central bank base rate (% per annum)</td>
<td>Hungarian Central Statistical Office</td>
</tr>
<tr>
<td>ITS Imports c.i.f. total sa (HUF)</td>
<td></td>
</tr>
</tbody>
</table>

## Reference chronology of turning points

- Trough 2009M6, Peak 2011M9, Trough 2012M12, Peak 2015M3, Trough 2016M10

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**OECD Composite Leading Indicators**

Ireland

Component Series (Unit)

<table>
<thead>
<tr>
<th>Component Series (Unit)</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>Exports to Northern Ireland sa (EUR)</td>
<td>Central Statistics Office Ireland</td>
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<tr>
<td>Exports of agricultural products to other Euro sa (EUR)</td>
<td>Central Statistics Office Ireland</td>
</tr>
<tr>
<td>Passenger car registrations sa (2015=100)</td>
<td>Central Statistics Office Ireland</td>
</tr>
<tr>
<td>Total PPI Mining and quarrying activities (2015=100)</td>
<td>Eurostat</td>
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<tr>
<td>Share prices: ISEQ index (2015=100)</td>
<td>Central Bank of Ireland</td>
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<tr>
<td>Real effective exchange rates - CPI Based (2015=100) inverted</td>
<td>OECD, Economic Department</td>
</tr>
<tr>
<td>Money supply M2 to Euro area (EUR)</td>
<td>Central Statistics Office Ireland</td>
</tr>
</tbody>
</table>

Reference chronology of turning points

Israel

Component Series (Unit)

Manufacturing - Production: future tendency sa (% balance)  
Total retail trade (Volume) sa (2015=100)  
Domestic PPI Manufacturing (2015=100)  
Share prices: TA 100 index (2015=100)  
Total Departures Of Israelis sa (number)  
Exports of manufactures diamonds prices 2010 (USD)  

Source

Bank of Israel  
Central Bureau of Statistics  
Central Bureau of Statistics  
Tel-Aviv Stock Exchange  
Bank of Israel  
Bank of Israel

Reference chronology of turning points

Peak 1997M1, Trough 1999M1, Peak 2000M9, Trough 2003M9, Peak 2007M11, Trough 2009M6,  
Peak 2011M9, Trough 2012M9, Peak 2014M10, Trough 2015M10, Peak 2018M1
Italy

Component Series (Unit)

Consumer - Confidence indicator sa (% balance)  
Manufacturing - Order books: level sa (% balance)  
Deflated orders for total manufactured goods (Value) sa (2010 = 100)  
Manufacturing - Production: future tendency sa (% balance)  
CPI All items (2010=10) inverted  
Imports from Germany c.i.f. (USD)  

Source

European Commission  
European Commission  
ISTAT  
European Commission  
ISTAT

Reference chronology of turning points


**Japan**

*Component Series (Unit)*

- Ratio of inventories to shipments sa (2015=100) *inverted*
- ITS Volume of imports/volume of exports sa (2015=100)
- Ratio loans to deposits sa (%) *inverted*
- Monthly hours worked: manufacturing sa (2015=100)
- Work started for dwellings sa (2015=100)
- Share prices: TOPIX index (2015=100)
- Spread of interest rates (% p.a.)
- Small Business Survey: Sales tendency (% balance)

*Source*

- Statistics Japan
- Japan Customs
- Bank of Japan
- Statistics Japan
- Ministry of Construction
- Bank of Japan
- Bank of Japan
- Japan Finance Corporation for SMSE

*Reference chronology of turning points*

Korea

Component Series (Unit)
Manufacturing - Business situation: future (% balance)
Share prices: KOSPI index (2010 = 100)
Stocks of manufactured investment goods (volume) sa inverted
Inventory circulation indicator (manufacturing)
Spread of interest rates (% p.a.)
Net Barter Terms of trade (2015=100)

Source
Bank of Korea
Bank of Korea
National Statistical Office
National Statistical Office
National Statistical Office
National Statistical Office

Reference chronology of turning points
Trough 1962M6, Peak 1964M12, Trough 1965M9, Peak 1969M9, Trough 1972M6, Peak 1973M12,
Trough 1975M2, Peak 1979M3, Trough 1980M12, Peak 1984M4, Trough 1986M1, Peak 1988M2,
Trough 2001M4, Peak 2002M8, Trough 2005M1, Peak 2008M1, Trough 2009M3, Peak 2011M1,
Trough 2012M12, Peak 2014M2, Trough 2015M4, Peak 2017M8
## Luxembourg

**Component Series (Unit)**
- OECD CLI for Germany (trend restored)
- OECD CLI for Belgium (trend restored)

**Source**
- OECD
- OECD

**Reference chronology of turning points**
Mexico

Component Series (Unit)

- Employees - Manufacturing (D) sa (%)
- Manufacturing - Employment: tendency sa (% balance)
- Manufacturing - Finished goods: tendency sa (% balance) inverted
- Manufacturing - Production: tendency sa (% balance)
- Yield >10-year US fed. Gov. securities (% p.a.). inverted
- CPP Rate (% p.a.) inverted
- Real effective exchange rates - CPI Based (2015=100)

Source

- INEGI
- Bank of Mexico
- Bank of Mexico
- US Treasury Department USA
- Bank of Mexico
- OECD

Reference chronology of turning points

Netherlands

**Component Series (Unit)**

- Manufacturing - Order books: level sa (% balance)
- Manufacturing - Production: future tendency sa (% balance)
- Manufacturing - Finished goods stocks: level sa (% balance) *inverted*
- Manufacturing - Business situation of Germany: present sa (normal=100)
- Services – Demand evolution: future tendency (% balance)
- Consumer - Confidence indicator sa (% balance)
- Share prices: AEX index (2015=100)

**Source**

- European Commission
- European Commission
- IFO Institute Germany
- European Commission
- European Commission
- Statistics Netherlands

**Reference chronology of turning points**

New Zealand

**Component Series (Unit)**

- Manufacturing - Business situation: future sa (% balance)
- Consumer - Confidence indicator sa (% balance)
- Total retail trade (Value) sa (NZD)
- Short term unemployment sa (persons) *inverted*
- Monetary aggregate M1 sa (2015=100)
- Yield of 90-day bank bills (% p.a.) *inverted*

**Source**

- New Zealand Inst. Economic Research
- Westpac Banking Corporation N.Z.
- Statistics New Zealand
- Department of Labour N. Z.
- Reserve Bank N. Z.
- Reserve Bank N. Z.

**Reference chronology of turning points**

## Norway

### Component Series (Unit)

<table>
<thead>
<tr>
<th>Series</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exports to UK (USD)</td>
<td>UN – Comtrade database</td>
</tr>
<tr>
<td>Manufacturing, mining and quarrying - Stocks of orders for export sa</td>
<td>Statistics Norway</td>
</tr>
<tr>
<td>(% balance)</td>
<td></td>
</tr>
<tr>
<td>Manufacturing - Production: tendency sa (% balance)</td>
<td>Statistics Norway</td>
</tr>
<tr>
<td>Manufacturing, mining and quarrying - General judgment of the</td>
<td>Statistics Norway</td>
</tr>
<tr>
<td>outlook for the enterprise in next quarter sa (% balance)</td>
<td></td>
</tr>
<tr>
<td>CPI All items (2015=100)</td>
<td>Oslo Børs</td>
</tr>
<tr>
<td>Share prices: OSE20Gl index (2015=100)</td>
<td></td>
</tr>
</tbody>
</table>

### Reference chronology of turning points

- Peak 1961M7, Trough 1963M5, Peak 1965M5, Trough 1966M5, Peak 1967M6, Trough 1968M7,
- Peak 1969M6, Trough 1970M9, Peak 1972M6, Trough 1975M5, Peak 1976M7, Trough 1979M2,
- Peak 1998M2, Trough 1999M3, Peak 2001M9, Trough 2003M6, Peak 2007M10, Trough 2010M8,
- Peak 2012M3, Trough 2012M12, Peak 2015M7, Trough 2016M8, Peak 2017M8
Poland

Component Series (Unit)                      Source
Real effective exchange rates - CPI Based (2015=100) inverted OECD
3-month WIBOR (% per annum) inverted Bank of Poland
Manufacturing - Production: tendency sa (% balance) European Commission
Job vacancies: unfilled sa (number) Central Statistical Office
Production of coal (tonnes) Central Statistical Office

Reference chronology of turning points

Peak 1998M1, Trough 1999M1, Peak 2000M11, Trough 2003M1, Peak 2004M3, Trough 2005M5,
Peak 2008M2, Trough 2009M7, Peak 2011M10, Trough 2013M11, Peak 2015M9, Trough 2016M7,
Peak 2018M7
Portugal

Component Series (Unit)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>Industrial production: electricity, gas &amp; water (2015=100)</td>
<td>INE</td>
</tr>
<tr>
<td>Manufacturing - Production: future tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Manufacturing - Order books: level sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Manufacturing - Export order books: level sa (% balance)</td>
<td>INE</td>
</tr>
<tr>
<td>Share prices: PSI-20 index (2015=100)</td>
<td>Lisbon Stock Exchange</td>
</tr>
<tr>
<td>Job vacancies: unfilled sa (number)</td>
<td>INE</td>
</tr>
<tr>
<td>Services – Demand evolution: future tendency (% balance)</td>
<td>European Commission</td>
</tr>
</tbody>
</table>

Reference chronology of turning points

- Trough 1961M2, Peak 1962M7, Trough 1964M1, Peak 1965M5, Trough 1966M10, Peak 1968M5,
- Trough 2009M4, Peak 2010M10, Trough 2012M12, Peak 2015M4, Trough 2016M2, Peak 2018M1
## Slovak Republic

### Component Series (Unit)

<table>
<thead>
<tr>
<th>Series</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail trade - Confidence indicator sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Total retail trade (Volume) sa (2015=100)</td>
<td>Eurostat</td>
</tr>
<tr>
<td>Consumers - Expected economic situation sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Share prices: SAX index (2015=100)</td>
<td>Bratislava Stock Exchange</td>
</tr>
<tr>
<td>ITS Imports c.i.f. total sa (USD)</td>
<td>Eurostat</td>
</tr>
</tbody>
</table>

### Reference chronology of turning points

Slovenia

Component Series (Unit)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Manufacture Basic Metals sa (2015=100)</td>
<td>Statistical Office of the Republic of Slovenia</td>
</tr>
<tr>
<td>Manufacturing - Order books: level sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Manufacturing - Production: tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>CPI All items (2015=100) inverted</td>
<td>Statistical Office of the Republic of Slovenia</td>
</tr>
<tr>
<td>EUR/USD exchange rate monthly average (%)</td>
<td>OECD</td>
</tr>
<tr>
<td>Consumers - Expected economic situation sa (% balance)</td>
<td>European Commission</td>
</tr>
</tbody>
</table>

Reference chronology of turning points

Spain

Component Series (Unit)

- Manufacturing - Rate of capacity utilization sa (% balance)
- Construction - Employment: future tendency sa (% balance)
- CPI Services less housing (2015=100) inverted
- Share prices: IGBM general index (2015=100)
- Passenger car registrations (2015=100)
- Consumer - Confidence indicator sa (% balance)

Source

- European Commission
- European Commission
- Instituto Nacional de Estadística
- Bank of Spain
- Asociación Española de Fabricantes de Automóviles y Camiones
- European Commission

Reference chronology of turning points

Sweden

Component Series (Unit)  
Yield 5-year government bonds (% p.a.) *inverted*  
Overtime hours worked mining & manuf. (%)  
Orders for total manufactured goods (Volume) sa (2015=100)  
Order books (manuf.): level (% balance)  
Manufacturing - Finished goods stocks: level sa (% balance) *inverted*  
Services – Demand evolution: future tendency (% balance)  
Consumer - Confidence indicator sa (% balance)  
Share prices: OMXS30 index (2015=100)  

Source  
Bank of Sweden  
Statistics Sweden  
Statistics Sweden  
European Commission  
European Commission  
European Commission  
Bank of Sweden

Reference chronology of turning points

Switzerland

Component Series (Unit)

- Manufacturing - Finished goods stocks: level (% balance)
- Manufacturing - Orders inflow: tendency sa (% balance)
- Manufacturing - Production: future tendency sa (% balance)
- Share prices: UBS-100 index (2015=100)
- Consumer - Expected economic situation sa (% balance)
- Silver prices (CHF/kj)

Source

- Swiss Economic Institute KOF/ETH
- Swiss Economic Institute KOF/ETH
- Swiss Economic Institute KOF/ETH
- Swiss Exchange
- Swiss State Secretariat for Economic Affairs (SECO) & Konso Basel
- Swiss National Bank

Reference chronology of turning points

Turkey

Component Series (Unit)

Production of electricity sa (GW hours)  
Manufacturing - Finished goods stocks: level sa (% balance) inverted  
New domestic orders: tendency sa (% balance)  
Manufacturing - Employment: future tendency sa (% balance)  
Prospects for exports (manuf.) (% balance)  
Discounted treasury auction interest rate (% p.a.) inverted  
ITS Import c.i.f. of intermediate goods sa (USD)  
Services – Demand evolution: future tendency (% balance)

Source

State Institute of Statistics  
Bank of Turkey  
Bank of Turkey  
Bank of Turkey  
Bank of Turkey  
Bank of Turkey  
State Institute of Statistics  
European Commission

Reference chronology of turning points

United Kingdom

Component Series (Unit)
Services – Demand evolution: future tendency (% balance)
Passenger car registrations sa (number)
Consumer - Confidence indicator sa (% balance)
Great British Pound Interbank LIBOR 3 Months Delayed (% p.a.) inverted
Manufacturing - Production: future tendency sa (% balance)
Share prices: FTSE LOCAL UK (£) index (2015=100)

Source
European Commission
Society of Motor Manufacturers and Traders
European Commission
Bank of England
European Commission
London Stock Exchange

Reference chronology of turning points
Peak 1955M9, Trough 1959M1, Peak 1960M2, Trough 1962M12, Peak 1964M9, Trough 1966M12,
Peak 1968M8, Trough 1970M2, Peak 1973M4, Trough 1975M8, Peak 1979M6, Trough 1981M4,
2004M11, Peak 2008M1, Trough 2009M7, Peak 2015M10, Trough 2018M4
United States

Component Series (Unit)
- Work started for dwellings sa (number)
- Net new orders - durable goods sa (USD)
- Share prices: NYSE composite (2015=100)
- Consumer - Confidence indicator sa (normal = 100)
- Weekly hours worked: manufacturing sa (hours)
- Manufacturing - Industrial confidence indicator (% balance)
- Spread of interest rates (% p.a.)

Source
- Bureau of the Census
- Bureau of the Census
- New York Stock Exchange
- (https://www.nyse.com/quote/index/NYA)
- Survey of consumers – Thomson Reuters / University of Michigan
- Bureau of Labor Statistics
- Institute of Supply Management Federal Reserve
- Federal Reserve

Reference chronology of turning points
Brazil

**Component Series (Unit)**

Share prices: BOVESPA - Total return index (2015=100)
Manufacturing - Production: future tendency sa (% balance)
Manufacturing - Order books: level sa (% balance)
Central Bank Policy rate (EOP) (% p.a.) \textit{inverted}
Services – Demand evolution: future tendency (% balance)
ITS Net trade (f.o.b.-f.o.b.) with EU (USD)

**Source**

Brazil Yahoo Finance and IMF
Fundação Getulio Vargas, Brazil
IMF
Fundação Getulio Vargas, Brazil
Ministry of Development, Industry and Foreign Trade, Brazil

**Reference chronology of turning points**

Peak 1997M9, Trough 1999M5, Peak 2000M12, Trough 2003M7, Peak 2004M9, Trough 2006M6,
## China

### Component Series (Unit)

<table>
<thead>
<tr>
<th>Component Series (Unit)</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>IP Production of chemical fertilizer sa (tonnes)</td>
<td>National Bureau of Statistics</td>
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<tr>
<td>IP Production of manufactured crude steel sa (tonnes)</td>
<td>World Steel Association</td>
</tr>
<tr>
<td>5000 Industrial Enterprises: Diffusion Index: Overseas order level (%)</td>
<td>People’s Bank of China</td>
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<tr>
<td>Production of total construction sa (m2)</td>
<td>National Bureau of Statistics</td>
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<tr>
<td>Production of motor vehicles sa (number)</td>
<td>National Bureau of Statistics</td>
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<tr>
<td>Share prices: Shanghai Stock Exchange turnover (CNY)</td>
<td>Shanghai Stock Exchange</td>
</tr>
</tbody>
</table>

### Reference chronology of turning points

India

Component Series (Unit)

<table>
<thead>
<tr>
<th>Series</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>IP Production of manufactured durable consumer goods sa (2015=100)</td>
<td>Ministry of Statistics</td>
</tr>
<tr>
<td>IP Production of manufactured non-metallic mineral products sa (2015=100)</td>
<td>Ministry of Statistics</td>
</tr>
<tr>
<td>Passenger car sales sa (number)</td>
<td>Society of Indian Automobile Manufacturers</td>
</tr>
<tr>
<td>Monetary aggregate M1 sa (INR)</td>
<td>Reserve Bank of India</td>
</tr>
<tr>
<td>Share prices: BSE (100) national index (2015=100)</td>
<td>Reserve Bank of India</td>
</tr>
<tr>
<td>Call money rate (% p.a.) inverted</td>
<td>Reserve Bank of India</td>
</tr>
</tbody>
</table>

Reference chronology of turning points

Indonesia

Component Series (Unit)

Share prices: IDX composite index (2015=100)  
Central Bank Discount rate (% p.a.) inverted  
IDR/USD exchange rate end period (%) inverted  
Wholesale Price Index (2015=100) inverted  
Consumer - Confidence indicator (normal = 100)  
Production of paper and paper products sa (2015=100)  
Tourist arrivals sa (number)

Source

Jakarta Stock Exchange  
Central Bank of Indonesia  
International Monetary Fund  
Central Bank of Indonesia  
Central Bank of Indonesia  
National Bureau of Statistics  
National Bureau of Statistics

Reference chronology of turning points

Trough 2009M5, Peak 2013M2, Trough 2016M12
Russian Federation

**Component Series (Unit)**

Manufacturing - Order books: level sa (% balance)
Share prices: RTS index (2015=100)
World market price of crude oil (2015=100)
Manufacturing - Production: tendency sa (% balance)
Manufacturing - Export order books: level sa (% balance)

**Source**

GAIDAR, Institute for Economic Policy
Central Bank of R.F.
Hamburg Institute of International Economics (HWWA)
GAIDAR, Institute for Economic Policy
GAIDAR, Institute for Economic Policy

**Reference chronology of turning points**

South Africa

Component Series (Unit)

Manufacturing - Orders inflow/Demand: tendency (% balance)
Manufacturing - Confidence indicator (% balance)
Permits issued for total buildings sa (2015=100)
Passenger car registrations sa (2015=100)
Share prices: FTSE/JSE index (2015=100)
Spread of interest rates (% p.a.)

Source

Bureau of Economic Research
Bureau of Economic Research
Reserve Bank
Reserve Bank
International Monetary Fund
Reserve Bank

Reference chronology of turning points

Peak 1971M1, Trough 1972M8, Peak 1974M6, Trough 1977M10, Peak 1981M9, Trough 1983M4,
Trough 2017M1, Peak 2017M10
OECD

Reference chronology of turning points

OECD + non-member economies

Reference chronology of turning points

Major seven countries

Reference chronology of turning points

OECD Europe

Reference chronology of turning points

Euro area

*Reference chronology of turning points*

Four big European countries

Reference chronology of turning points

NAFTA area

Reference chronology of turning points

Major five Asia

Reference chronology of turning points