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

## OECD Countries

<table>
<thead>
<tr>
<th>OECD Countries</th>
<th>Country</th>
<th>Country</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Greece</td>
<td>Norway</td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>Hungary</td>
<td>Poland</td>
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</tr>
<tr>
<td>Belgium</td>
<td>Ireland</td>
<td>Portugal</td>
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</tr>
<tr>
<td>Canada</td>
<td>Israel</td>
<td>Slovak Republic</td>
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</tr>
<tr>
<td>Chile</td>
<td>Italy</td>
<td>Slovenia</td>
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</tr>
<tr>
<td>Czech Republic</td>
<td>Japan</td>
<td>Spain</td>
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</tr>
<tr>
<td>Denmark</td>
<td>Korea</td>
<td>Sweden</td>
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</tr>
<tr>
<td>Estonia</td>
<td>Luxembourg</td>
<td>Switzerland</td>
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</tr>
<tr>
<td>Finland</td>
<td>Mexico</td>
<td>Turkey</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>Netherlands</td>
<td>United Kingdom</td>
<td>United States</td>
</tr>
<tr>
<td>Germany</td>
<td>New Zealand</td>
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<td></td>
</tr>
</tbody>
</table>

## Non-member economies

<table>
<thead>
<tr>
<th>Non-member economies</th>
<th>Country</th>
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<tbody>
<tr>
<td>Brazil</td>
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<tr>
<td>China</td>
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<tr>
<td>India</td>
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<tr>
<td>Indonesia</td>
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<tr>
<td>Russian Federation</td>
<td></td>
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<tr>
<td>South Africa</td>
<td></td>
</tr>
</tbody>
</table>

## Area

<table>
<thead>
<tr>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD Total</td>
</tr>
<tr>
<td>OECD + non-member economies</td>
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<tr>
<td>Major seven countries</td>
</tr>
<tr>
<td>OECD Europe</td>
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<tr>
<td>Euro area</td>
</tr>
<tr>
<td>Four big European countries</td>
</tr>
<tr>
<td>NAFTA</td>
</tr>
<tr>
<td>Major five Asia countries</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
- Reserve Bank of Australia
- Australian Bureau of Statistics (ABS)
- Reserve Bank of Australia

**Reference chronology of turning points**

## Austria

### Component Series (Unit)

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Commission</td>
<td>Manufacturing - Production: future tendency sa (% balance)</td>
<td>Manufacturing - Order books: level sa (% balance)</td>
</tr>
<tr>
<td>IFO Institute, Germany</td>
<td>Manufacturing - Business situation of Germany: present sa (normal=100)</td>
<td>Consumer - Confidence indicator sa (% balance)</td>
</tr>
<tr>
<td>European Commission</td>
<td>Job vacancies: unfilled sa (persons)</td>
<td>Spread of interest rates (% p.a.)</td>
</tr>
</tbody>
</table>

### 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
- National Bank of Belgium
- European Commission
- 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

**Reference chronology of turning points**

Chile

Component Series (Unit)

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production in total mining sa index (2015=100)</td>
<td></td>
<td>National Statistical Institute of Chile</td>
</tr>
<tr>
<td>Retail trade - Confidence indicator sa (% balance)</td>
<td></td>
<td>ICARE</td>
</tr>
<tr>
<td>Manufacturing - Production: tendency sa (% balance)</td>
<td></td>
<td>ICARE</td>
</tr>
<tr>
<td>Monetary aggregate M1 sa (CLP)</td>
<td></td>
<td>Central Bank of Chile</td>
</tr>
<tr>
<td>Share prices: IPSA index (2015=100)</td>
<td></td>
<td>Santiago Stock Exchange</td>
</tr>
<tr>
<td>ITIS Net trade (f.o.b. - c.i.f.) sa (CLP)</td>
<td></td>
<td>Central Bank of Chile</td>
</tr>
</tbody>
</table>

Reference chronology of turning points

Czech Republic

**Component Series (Unit)**

- BOP Capital account, debit (czk)
- Services - Demand evolution: future tendency sa (% balance)
- Manufacturing - Production: tendency sa (%) inverted
- CPI HICP All items (2015=100)
- Consumer - Confidence indicator sa (% balance)
- ITS Exports f.o.b. total sa (czk)
- Share prices: PX-50 index (2015=100)

**Source**

- Czech National Bank
- European Commission
- European Commission
- Czech Statistical Office
- European Commission
- Czech Statistical Office
- Czech Statistical Office

**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>

### Reference 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) 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 2004M7, Peak 2007M5, Trough 2009M9, Peak 2012M7, Trough 2013M12, Peak 2014M9,
Trough 2016M4, Peak 2017M5
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 1997M10, Trough 1999M8, Peak 2000M11, Trough 2003M3, Peak 2008M1, Trough 2009M6,
Peak 2011M11, Trough 2015M3, Peak 2018M1
France

Component Series (Unit)

- Passenger car registrations sa (number)
- Consumer - Confidence indicator sa (% balance)
- Manufacturing - Production: future tendency sa (% balance)
- Share prices: CAC All-tradable index (2015=100)
- CPI HICP All items (2015=100) inverted
- Manufacturing - Export order books: level sa (% balance)
- Construction - Selling prices: future tendency sa (% balance)
- Permits issued for dwellings sa (2015=100)

Source

- INSEE
- European Commission
- Bank of France
- Eurostat
- European Commission
- INSEE

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 2008M3, Trough 2009M6, Peak 2011M6, Trough 2013M3,
Peak 2014M2, Trough 2015M7, Peak 2017M11
Greece

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
National Statistical Service of Greece
European Commission
National Statistical Service of Greece

Reference chronology of turning points

Hungary

Component Series (Unit)

Manufacturing - Production: future tendency sa (% balance)
Registered unemployment: level (all persons) sa
Monthly hours worked: manufacturing sa (hours)
Monetary aggregate M1 sa (HUF)
Share prices: BUX index (2015=100)
Central bank base rate (% per annum)
ITS Imports c.i.f. total sa (HUF)

Source

European Commission
Hungarian Central Statistical Office
Bank of Hungary
Bank of Hungary
Hungarian Central Statistical Office

Reference chronology of turning points

Ireland

Component Series (Unit)

- Exports to Northern Ireland sa (EUR)
- Exports of agricultural products to other Euro sa (EUR)
- Passenger car registrations sa (2015=100)
- Total PPI Mining and quarrying activities (2015=100)
- Share prices: ISEQ index (2015=100)
- Real effective exchange rates - CPI Based (2015=100) inverted
- Money supply M2 to Euro area (EUR)

Source

- Central Statistics Office Ireland
- Central Statistics Office Ireland
- Central Statistics Office Ireland
- Eurostat
- Central Bank of Ireland
- OECD, Economic Department
- Central Statistics Office Ireland

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
- Tel-Aviv Stock Exchange
- Bank of Israel
- Bank of Israel

Reference chronology of turning points

Italy

Component Series (Unit)

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

Reference chronology of turning points

### Japan

**Component Series (Unit)**

<table>
<thead>
<tr>
<th>Series</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>Ratio of inventories to shipments sa (2015=100) <em>inverted</em></td>
<td>Statistics Japan</td>
</tr>
<tr>
<td>ITS Volume of imports/volume of exports sa (2015=100)</td>
<td>Japan Customs</td>
</tr>
<tr>
<td>Ratio loans to deposits sa (%) <em>inverted</em></td>
<td>Bank of Japan</td>
</tr>
<tr>
<td>Monthly hours worked: manufacturing sa (2015=100)</td>
<td>Statistics Japan</td>
</tr>
<tr>
<td>Work started for dwellings sa (2015=100)</td>
<td>Ministry of Construction</td>
</tr>
<tr>
<td>Share prices: TOPIX index (2015=100)</td>
<td>Bank of Japan</td>
</tr>
<tr>
<td>Spread of interest rates (% p.a.)</td>
<td>Bank of Japan</td>
</tr>
<tr>
<td>Small Business Survey: Sales tendency (% balance)</td>
<td>Japan Finance Corporation for SMSE</td>
</tr>
</tbody>
</table>

**Source chronology of turning points**


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OECD Composite Leading Indicators

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
- 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)               Source
OECD CLI for Germany (trend restored) OECD
OECD CLI for Belgium (trend restored) OECD

Reference chronology of turning points

Mexico

Component Series (Unit)

<table>
<thead>
<tr>
<th>Series</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees - Manufacturing (D) sa (%)</td>
<td>INEGI</td>
</tr>
<tr>
<td>Manufacturing - Employment: tendency sa (% balance)</td>
<td>Bank of Mexico</td>
</tr>
<tr>
<td>Manufacturing - Finished goods: tendency sa (% balance) inverted</td>
<td>Bank of Mexico</td>
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<tr>
<td>Manufacturing - Production: tendency sa (% balance)</td>
<td>Bank of Mexico</td>
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<tr>
<td>Yield &gt;10-year US fed. Gov. securities (% p.a.). inverted</td>
<td>US Treasury Department USA</td>
</tr>
<tr>
<td>CPP Rate (% p.a.) inverted</td>
<td>Bank of Mexico</td>
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<tr>
<td>Real effective exchange rates - CPI Based (2015=100)</td>
<td>OECD</td>
</tr>
</tbody>
</table>

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

Trough 1961M9, Peak 1965M1, Trough 1967M6, Peak 1970M12, Trough 1972M8, Peak 1974M5,
Trough 1975M4, Peak 1976M8, Trough 1977M5, Peak 1979M11, Trough 1982M12, Peak 1986M5,
2015M3, Trough 2015M12, Peak 2018M2
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

Trough 1998M6, Peak 2000M2, Trough 2001M2, Peak 2004M3, Trough 2005M1, Peak 2007M9,
Trough 2009M2, Peak 2010M3, Trough 2013M10, Peak 2016M5
Norway

Component Series (Unit)

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

Poland

Component Series (Unit)

<table>
<thead>
<tr>
<th>Real effective exchange rates - CPI Based (2015=100) inverted</th>
<th>OECD</th>
</tr>
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<tbody>
<tr>
<td>3-month WIBOR (% per annum) inverted</td>
<td>Bank of Poland</td>
</tr>
<tr>
<td>Manufacturing - Production: tendency sa (% balance)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Job vacancies: unfilled sa (number)</td>
<td>Central Statistical Office</td>
</tr>
<tr>
<td>Production of coal (tonnes)</td>
<td>Central Statistical Office</td>
</tr>
</tbody>
</table>

Source

Reference chronology of turning points

Portugal

Component Series (Unit)

Industrial production: electricity, gas & water (2015=100)  INE
Manufacturing - Production: future tendency sa (% balance)  European Commission
Manufacturing - Order books: level sa (% balance)  INE
Manufacturing - Export order books: level sa (% balance)  European Commission
Share prices: PSL-20 index (2015=100)  Lisbon Stock Exchange
Job vacancies: unfilled sa (number)  INE
Services – Demand evolution: future tendency (% balance)  European Commission

Reference chronology of turning points

Slovak Republic

Component Series (Unit)

Retail trade - Confidence indicator sa (% balance)
Total retail trade (Volume) sa (2015=100)
Consumers - Expected economic situation sa (% balance)
Share prices: SAX index (2015=100)
ITS Imports c.i.f. total sa (USD)

Source

European Commission
Eurostat
European Commission
Bratislava Stock Exchange
Eurostat

Reference chronology of turning points

Trough 1993M9, Peak 1997M7, Trough 1999M12, Peak 2003M3, Trough 2004M5, Peak 2007M12,
**Slovenia**

**Component Series (Unit)**

- IP Manufacture Basic Metals sa (2015=100)
- Manufacturing - Order books: level sa (% balance)
- Manufacturing - Production: tendency sa (% balance)
- CPI All items (2015=100) *inverted*
- EUR/USD exchange rate monthly average (%)
- Consumers - Expected economic situation sa (% balance)

**Source**

- Statistical Office of the Republic of Slovenia
- European Commission
- European Commission
- Statistical Office of the Republic of Slovenia
- OECD
- European Commission

**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
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
- European Commission
- European Commission
- European Commission
- Bank of Sweden

Reference chronology of turning points

Switzerland

Component Series (Unit)

Manufacturing - Finished goods stocks: level (% balance) inverted
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


OECD Composite Leading Indicators
http://www.oecd.org/std/leading-indicators/
Turkey

Component Series (Unit)

<table>
<thead>
<tr>
<th>Series</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of electricity sa (GW hours)</td>
<td>State Institute of Statistics</td>
</tr>
<tr>
<td>Manufacturing - Finished goods stocks: level sa (% balance) inverted</td>
<td>Bank of Turkey</td>
</tr>
<tr>
<td>New domestic orders: tendency sa (% balance)</td>
<td>Bank of Turkey</td>
</tr>
<tr>
<td>Manufacturing - Employment: future tendency sa (% balance)</td>
<td>Bank of Turkey</td>
</tr>
<tr>
<td>Prospects for exports (manuf.) (% balance)</td>
<td>Bank of Turkey</td>
</tr>
<tr>
<td>Discounted treasury auction interest rate (% p.a.) inverted</td>
<td>State Institute of Statistics</td>
</tr>
<tr>
<td>ITS Import c.i.f. of intermediate goods sa (USD)</td>
<td>European Commission</td>
</tr>
<tr>
<td>Services – Demand evolution: future tendency (% balance)</td>
<td></td>
</tr>
</tbody>
</table>

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 1961M2, Trough 1962M12, Peak 1964M9, Trough 1966M12,
Peak 1968M8, Trough 1970M2, Peak 1973M4, Trough 1975M8, Peak 1979M6, Trough 1981M4,
Peak 1997M5, Trough 1999M5, Peak 2001M6, Trough 2002M6, Peak 2003M11, Trough 2004M11,
Peak 2008M1, Trough 2009M6, Peak 2014M12, Trough 2018M5
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
(Sources: 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.) *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>Series</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Production of chemical fertilizer sa (tonnes)</td>
<td>National Bureau of Statistics</td>
</tr>
<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>
</tr>
<tr>
<td>Production of total construction sa (m2)</td>
<td>National Bureau of Statistics</td>
</tr>
<tr>
<td>Production of motor vehicles sa (number)</td>
<td>National Bureau of Statistics</td>
</tr>
<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)                                      Source
IP Production of manufactured durable consumer goods sa (2015=100)  Ministry of Statistics
IP Production of manufactured non-metallic mineral products sa (2015=100)  Ministry of Statistics
Passenger car sales sa (number)  Society of Indian Automobile Manufacturers
Monetary aggregate M1 sa (INR)  Reserve Bank of India
Share prices: BSE (100) national index (2015=100)  Reserve Bank of India
Call money rate (% p.a.) inverted  Reserve Bank of India

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

Russian Federation

Component Series (Unit)

<table>
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<tr>
<td>Manufacturing - Order books: level sa (% balance) GAIDAR, Institute for Economic Policy</td>
</tr>
<tr>
<td>Share prices: RTS index (2015=100) Central Bank of R.F.</td>
</tr>
<tr>
<td>World market price of crude oil (2015=100) Hamburg Institute of International Economics (HWWA)</td>
</tr>
<tr>
<td>Manufacturing - Production: tendency sa (% balance) GAIDAR, Institute for Economic Policy</td>
</tr>
<tr>
<td>Manufacturing - Export order books: level sa (% balance) GAIDAR, Institute for Economic Policy</td>
</tr>
</tbody>
</table>

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**

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