## Beginners' Manual for BOJ Time-Series Data Search Easy-to-Use On-Screen Instructions for Data Searching and Graph Drawing

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## I. Data Searching

How to quickly view the latest data of major time-series statistics produced by the BOJ.

- By viewing and/or downloading tables of data in the BOJ main time-series statistics.

The BOJ main time-series statistics are located in the upper part of the BOJ Time-Series Data Search Home page screen. Links to BOJ main time-series statistics -- classified by statistics and frequency -- are provided by clicking the category of the statistics.

Click List of main time-series statistics to view the list of all time-series statistics.
BOJ Time-Series Data Search Home page (upper part of screen)


Data can be downloaded by clicking the Download button in the upper left-hand corner of the table. Then click the Save button in the File Download window, and specify where to save the file.

Click the icon next to each data code for a simple graph for each table.

For designing graphs to create your own customized set of time-series data, see "II. Graph Drawing" on page 19 .

BOJ's Main Time-Series Statistics window (upper part of screen)


## How to find specific time-series data.

- By using the Time-series data search on the BOJ Time-Series Data Search website.

You can retrieve time-series data of a particular statistic -- for example, Call Rates (Monthly) -- using the following procedure.

## 1. Search by category of statistics

(1) Choose the category of the statistics you are looking for in Search by statistics, and then click the link of the statistics displayed under the category and move on to the search by statistics page.

- For the list of items included in each category, go to Statistics List.
- For Call Rates (Monthly), choose Financial Markets and then click Short-term Money Market Rates [FM02] displayed under Financial Markets.

BOJ Time-Series Data Search Home page (middle part of screen)

(2) The tab at the top of the search by statistics page is initially set at Data Selection by list of statistics. A list of items is displayed in the "Select an item" box.
(3) In the "Select an item" box, highlight the selected item and then click the Next button.

- If you select Short-term Money Market Rates [FM02] in the previous window, a list of items such as Call Rate (Monthly), Tokyo Repo Rate (Daily) (through Oct. 26, 2012), and Average Yields on Newly Issued Domestic Commercial Paper (through October 2009) appears in the box. Select Call Rate (Monthly), and then click the Next button.

Search by statistics page (upper part of screen)

(4) The list in the box changes. For more options, repeat the same process and then click the Next button to proceed with your search.
(5) Refine your search on the list of time-series data and this will take you to the final selection box where you will find "Select items. (A maximum of up to 250 series can be added.)" Once you have selected all the items, click the Add to search condition button.
(6) Information on the selected time-series data will be added to and saved in the Search and output time-series box shown at the middle of the page. Once you have selected all necessary time-series data, click the Search button at the bottom of the page.

## Notes

- Unless specified, the output year range derives data of the past five years for yearly data and the past one year for daily data. To include data of years prior to this range or to shorten the time period, enter the starting year in the left-hand box in the Output year range section.
- Information on the selected time-series data will be added to the Search and output time-series box in response to the number of clicks to the Add to search condition button.

Search by statistics page (upper part of screen)


Search by statistics page (bottom part of screen)

(7) After completing search, the selected data will appear in the Result of search page. To save the data, click the Download button on the right-hand side of the page. To look at the data without downloading them, press Time-series data. To download the list of time-series data codes, click the Save selected series codes button.

Result of search page
BOJ Time-Series Data Search
) Beginners' Manual



Click to save the list of time-series data codes of your search.
If you are to use the same data codes on future visits, you can shorten the search process by using the saved list (see page 12 for more information).
2. Search by keyword(s) (i.e., name of time-series data, such as the effective exchange rate)
(1) Click By name of series -- shown in the middle of the BOJ Time-Series Data Search Home page screen -- and start a search for a specific data out of all data available from the website using keywords.

- You can also find data by using keywords in the Search by statistics section. Click the link to the statistics in this section, and then choose Data Selection by name of series at the middle of the Home page.


## BOJ Time-Series Data Search Home page (middle part of screen)

## © Statistical data search

| Q Search by statistics | ) Statistics List |
| :---: | :---: |
| ¢ Interest Rates on Deposits and Loans | ¢ Flow of Funds |
| © Financial Markets | $\oplus$ Other Bank of Japan Statistics |
| $\oplus$ Payment and Settlement | © TANKAN |
| $\oplus$ Money and Deposits | $\oplus$ Prices |
| © Loans | $\oplus$ Public Finance |
| $\oplus$ Balance Sheets of the Bank of Japan and Financial Institutions | $\oplus$ Balance of Payments and BIS-Related Statistics <br> $\oplus$ Others |
| [0: : Relevant statistics page (in Bank of Japan's website) | D: Notes (in Bank of Japan's website) |
| Q Search by statistical category and nam | me of series * Search among all time-series data |
| O By name of series <br> Click By name of series. |  |
| Q Search by exact series codes | * Search among all time-series data |
| - By exact series codes |  |
| $\pm$ Prices,FOF,TANKAN,Balance of Payments, and BIS-Related Statistics - Flat Files Download |  |

(2) The data selection by name of series page window will open. Enter keyword(s) in the Keyword in name of series box, and then click the Search button.

Data Selection by name of series page (upper part of screen)

(3) In the box above the Add to search condition button, you will see a list of time-series data that contain keyword(s) that you have entered. Highlight the specific items of the time-series data and click the Add to search condition button. Information on the selected time-series data will be added to and saved in the Search and output time-series box.

Data Selection by name of series page (middle part of screen)

(4) Continue as shown in pages 6-8.

## 3. Search by using data codes

This time-saving method is a remedy for repeating searches.
(1) Choose By exact series codes at the middle of the BOJ Time-Series Data Search Home page screen to search for specific data out of all data available from the website using time-series data codes that you have already located.

## BOJ Time-Series Data Search Home page (middle part of screen)

## (1) Statistical data search


(2) The data selection by exact series codes page will open. Enter the data codes correctly in the Input box for exact series codes, and then click the Search button. Press Enter key for additional data codes. Data codes from a different file can be copied and pasted to the box.

Data Selection by exact series codes page (upper part of screen)

(3) The Select items box will show the data codes that you have entered. Highlight the specified data codes, and then click the Add to search condition button. Information on the selected time-series data will be added to the Search and output time-series box.

Data Selection by exact series codes page (middle part of screen)

(4) The procedure hereafter is the same as that shown in pages 6-8.

How to conduct an advanced search (i.e, how to find a customized set of time-series data).

- By using the name of the time-series data as keyword(s), you can locate a customized set of data on a specific industry from different categories.

For statistics such as the TANKAN and Flow of Funds -- whose categories are organized systematically -- you can obtain a customized set of data from different categories by combining multiple keywords.

## 1. TANKAN

In the TANKAN, for example, the name of time-series data regarding the business conditions D.I. of small enterprises in the retailing industry is either "D.I./Business Conditions/Small Enterprises /_Retailing/Actual result" or "D.I./Business Conditions/Small Enterprises/_Retailing/Forecast." By using "D.I.," "Small Enterprises" and "Retailing" as keywords, you can find all D.I. items of "Small Enterprises" and Retailing." The search process is as follows.
(1) On the Search by statistics page at the middle of the BOJ Time-Series Data Search Home page screen, choose TANKAN, and then press TANKAN (CO) displayed under TANKAN to search by statistics page. Then, choose Data Selection by name of series at the middle of the Home page.
(2) Under Keywords in the name of series, enter "D.I.," "Small," and "_Retailing" in the box, and then click the Search button. Be sure to include a space between each keyword.

Search by statistics page (middle part of screen)

(3) The box above the Add to search condition button will show a list of time-series data that match your keyword(s). By using "D.I.," "Small" and "_Retailing" as keywords, you will see a list of timeseries data that contain all D.I. items regarding small enterprises in the retailing industry, for instance, "Business Conditions" as well as "Domestic Supply \& Demand Conditions," "Inventory Level of Finished Goods \& Merchandise," "Production Capacity," "Employment Conditions," "Financial Position," "Lending Attitude," "Change in Interest Rate on Loans," "Change in Output Prices," "Change in Input Prices," etc.

## Search by statistics page (middle part of screen)


(4) Highlight all the time-series data in the box, and then click the Add to search condition button. Continue on with the same procedure shown in pages 6-8.

In the TANKAN, you can also find customized sets of data on a specific industry from categories other than the above D.I. items, including Annual Projections (including Sales, Current Profits, and others). An
example of the name of the time-series data regarding sales of small enterprises in the retailing industry (year-to-year percent change/half year) is "Sales/Year-to-year Percent Change/Half Year/Small Enterprises/_Retailing/Actual result." The keywords for searching such time-series data are "Year-toyear Percent Change/Half Year," "Small," and "_Retailing."

## 2. Flow of Funds

The above search method can also be applied to the Flow of Funds statistics. On the Search by statistics page at the middle of the BOJ Time-Series Data Search Home page screen, choose Flow of Funds (FF) and continue search. To find the list of time-series data regarding the amount outstanding of financial assets held by individual entities, choose Data Selection by name of series using "Assets/Total" and "Stock" as keywords.

How to download data packages of price statistics, Flow of Funds, TANKAN, Balance of Payments, and BIS-Related Statistics.

- By downloading flat files.

From Prices, FOF, TANKAN, Balance of Payments, and BIS-Related Statistics -- Flat Files Download at the bottom part of the BOJ Time-Series Data Search Home page screen, choose Go to Flat Files Download and move on to the Prices, FOF, TANKAN, Balance of Payments, and BIS-Related Statistics -- Flat Files Download page. Then choose the file name to download the file.

Prices, FOF, TANKAN, Balance of Payments, and BIS-Related Statistics -- Flat Files Download page
BOJ Time-Series Data Search
Prices, FOF, TANKAN, Balance of Payments, and BIS-Related Statistics -Flat Files Download
Single-click the right mouse button on a link of statistics, and a menu appear. From this menu, select the command that will save the file (e.g., "Save target as . ..") and then specify the directory into which you want to save the file (e.g., C:¥Temp, A:¥).

| Prices $\quad$, 雷 Data List [XLSX 663kB] |  |
| :---: | :---: |
| Statistics |  |
| (1aik Corporate Goods Price Index (CGPI) [ZIP 209KB] |  |
| (a)PProducer Price Index using chain-weighted index formula [ZIP 56KB] |  |
|  |  |
| (7) Wholesale Services Price Index [ZIP 2KB] <br> (12)Input-Output Price Index of the Manufacturing Industiv by Sector (IOPI) [ZIP 786KB] |  |
|  |  |
| $\square$ Flow of Funds |  |
| Statistics(*1) |  |
| [implow of Funds [ [IIP 5MB](*2) |  |
| (40).Flow of Funds (with name of time-series, etc.) [ZIP 2MB] |  |
| (Notes) |  |
| 1. We provide the Flat Files released on March 2015 onward. Please send us an e-mail (pc <br> 2. The data volume in "fof.zip" Flat Files exceeds the maximum number of rows in Micros | Click to download data. |

Click the Save button in the File Download window, and specify where to save the file.

## II. Graph Drawing

## How to view and/or draw graphs of statistical data produced by the BOJ.

## 1. View and use graphs of "Key figures at a glance"

To view graphs of the latest data, click icons such as Interest Rates, FX, or Money Stock under Key figures at a glance at the top of the BOJ Time-Series Data Search Home page screen.

For example, click the BOP icon to view a graph image of the Balance of Payments.

BOJ Time-Series Data Search Home page (upper part of screen)


Graph page (upper part of screen)

$\rightarrow$ To redraw this graph, see page 28 .
$\rightarrow$ To print this graph, see page 49 .
$\rightarrow$ To check information and data regarding this graph, see page 52 .

## 2. Draw graphs of your customized set of time-series data

You can draw graphs using any time-series data from the BOJ Time-Series Data Search website.
This can be done by using either of the following two ways: (i) select a list of time-series data, and then click to display a default graph image from the search by statistics page or (ii) search further on for selected time-series data and refine your search on the data before displaying a graph image.

- The following explanation is for data search by statistics. For ways to select a list of time-series data, see "How to find specific time-series data" on page 4.
A. Display a default graph image from the search by statistics page
(1) Choose the statistics you are looking for in the Search by statistics section.

BOJ Time-Series Data Search Home page (middle part of screen)

(2) In the search by statistics page, set the conditions for the time-series data for your graph.

- Unless specified, the frequency of the graph will be the same as that of the time-series data already in the database. In the case where the time-series data you choose differ in frequency, make sure to use the same frequency for all time-series data.
(3) Click the Graph button.

Search by statistics page (bottom part of screen)

(4) Graphs of selected time-series data will be displayed in a preformatted style.

Graph page (upper part of screen; displaying three line graphs)

$\rightarrow$ To redraw this graph, see page 28.

## B. Display a graph image after selecting data

(1) Click the link to the statistic you are looking for in the Search by statistics section and go to the search by statistics page.
(2) In the search by statistics page, set the conditions for the time-series data for your graph.

- Unless specified, the frequency of the graph will be the same as that of the time-series data already in the database. In the case where the time-series data you choose differ in frequency, make sure to use the same frequency for all time-series data.
(3) Click the Search button.


## Search by statistics page (bottom part of screen)


(4) In the Result of search window, choose Information on time-series to check information on the selected time-series data or Time-series data to check the selected time-series data. After specifying data, click the Graph button.

## Result of search page

BOJ Time-Series Data Search


Information on time-series data page (upper part of screen)


## Time-series data page (upper part of screen)

BOJ Time-Series Data Search
Select or uncheck the box next to the series codes, and then click Graph. Only graphs of the selected time-series data will be displayed.

Information on time-series data
Graph
Back
Help

* To show time-series as graph, click on the corresponding checkbox(up to 18 time-series).

|  | BP01'BPBP6JYNCB <br> Current account/Net balance | BP01'BPBP6JYNTB <br> Goods/Net balance | BP01'BPBP6JYNPIN <br> Primary income/Net balance |
| ---: | ---: | ---: | ---: |
| $2015 / 01$ | 929.66535866 | -8833.2123078 | 14315.17804415 |
| $2015 / 02$ | 14660.06336511 | -1317.03908855 | 18802.2450386 |
| $2015 / 03$ | 27519.26268973 | 6477.92366804 | 23196.87287484 |
| $2015 / 04$ | 13717.85960308 | -1494.94421331 | 22665.36337686 |
| $2015 / 05$ | 18813.68940562 | -564.05885471 | 20795.27386665 |
| $2015 / 06$ | 6587.33651824 | 1006.6339384 | 7865.37341557 |
| $2015 / 07$ | 18482.78059089 | -1235.2497891 | 23157.79287201 |

These two pages can be switched by clicking either the Time-series data button or Information on time-series data button.
(5) Graphs of the selected time-series data will be displayed in a preformatted style.

Graph page (upper part of screen; displaying three line graphs)

## BOJ Time-Series Data Search

Graph


* To download the data table, click "View data" below.



## 3. Redraw graphs

You can redraw graphs illustrated in Key figures at a glance as shown on page 19, or for your customized set of time-series data as shown on page 21.

## A. Change type of graph

To change the type of graph, go to Basic settings and/or Time-series settings.

The example below shows how to change "three line graphs" to "one line graph and two bar graphs."

Graph page (upper part of screen; displaying three line graphs)

## BOJ Time-Series Data Search

Graph


* To download the data table, click "View data" below.

(1) In the Time-series settings section, change the Graph type of the two selected items, Goods/Net balance and Primary income/Net balance, from Line to Bar from the drop-down menu. After making the change, click the Redraw button.


## Graph page (bottom part of screen)


(2) The two line graphs will be changed into two bar graphs.

Graph page (upper part of screen; displaying one line graph and two bar graphs)

## BOJ Time-Series Data Search

比 Graph


* To download the data table, click "View data" below.

- For bar graphs, scales are automatically set with numbers on the left vertical axis. Bar graphs are displayed from left to right, starting from top to bottom in the Time-series settings section.

The next example shows how to change from "one line graph and two bar graphs" to "one line graph and one stacked bar graph."
(1) Select the Stacked bar check box in the Basic settings section.

- You can choose up to eight time-series data to draw stacked bar graphs.
(2) Click the Redraw button.

Graph page (upper part of screen; displaying one line graph and two bar graphs)

## BOJ Time-Series Data Search

Graph


* To download the data table, click "View data" below.



## Graph page (bottom part of screen)


(3) The two bar graphs will be combined and changed into a stacked bar graph, stacked from bottom to top in the order of time-series data listed in the Time-series settings section.

Graph page (upper part of screen; displaying one line graph and one stacked bar graph)


## B. Change frequency of graph

To change the frequency of your graph, go to the Basic settings section.
(1) From the drop-down menu for New frequency to be converted, select a new frequency.
(2) Click the Redraw button.

Graph page (upper part of screen; displaying monthly data)


Graph page (bottom part of screen)

(3) A graph with a new frequency will be displayed. Here, the frequency is changed from Monthly to Yearly (calendar year).

Graph page (upper part of screen; switch to calendar year data)


* To download the data table, click "View data" below.

Basic Settings

## C. Add new time-series data

You can add new time-series data to your graph by selecting items from all statistics available on the BOJ Time-Series Data Search website.
(1) In the Graph page, click the Add button.

Graph page (bottom part of screen)

(2) The Add time-series window will open. Choose the search method for the additional time-series data.

- Time-series data can be searched by: list of statistics, name of series, and exact series codes. The explanation below employs the search by list of statistics method.


## Add time-series window


(3) In the Data Selection by list of statistics window, select and highlight the database -- that includes the time series you are looking for -- and then click the Next button.

Data Selection by list of statistics window (graph)

## BOJ Time-Series Data Search

## Data Selection by list of statistics

- Select a database.

Outstanding of Loans(Others)(LA03)
Commitment Lines Extended by Japanese Banks(LA04)
Senior Loan Officer Opinion Survey on Bank Lending Practices at Large Japanese Banks(LA05)
Bank of Japan Accounts(BS01)
Financial Institutions Accounts(BS02)
Financial Institution
Flow of Funds(FF)
Flow of Funds(FF)
Bank of Japan's Transactions with the Government(OB01)
Collateral Accepted by the Bank of Japan(OB02) TANKAN(CO)
Corporate Goods Price Index(CGPI)(PR01) Services Producer Price Index(SPPI)(PR02 Input-Output Price Index of the Manufacturing Industry h, sector(IOPI)(PR03) Bank of Japan Overseas Commodity Index(OC1)(TR04)
Statement of Receipts and Payments of the Treasury Accounts(PF01)
National Gnvornmont Deht(R $\mathbf{R}^{\prime}$ 2)
Balance of Payments(BP01)
Baiance of Paymenis(BP01)
BIS International Locational Banking Statistico and International Consolidated Banking Statistics in Japan(BIS)
Regular Derivatives Market Statistics i. Japan(DER)
Others(OT)
(4) Select and highlight the item in the time-series data, and then click the Add button. Once information on the selected item is transferred to the Graph page, a message will tell you that the data transfer was successful.

- Differences in frequencies of the newly added time-series data and the time-series data already included in the Graph page will be automatically converted to the longest frequency.

Data Selection by list of statistics window (graph)

(5) In the Graph page, the default newly added time-series data will appear as line graphs.

Graph page (upper part of screen)

(6) Confirm information on the newly added time-series data listed at the bottom of the Time-series settings section.

## Graph page (bottom part of screen)


(7) To combine two of the three newly added time-series data -- currently shown in two separate line graphs -- into a stacked bar graph, change the Graph type from Line to Bar using the drop-down menu. Make sure that the Stacked bar check box in the Basic settings section is selected.

Graph page (middle part of screen)


Graph page (middle part of screen)

(8) After changing the type of graph, click the Redraw button.

Graph page (bottom part of screen)

(9) The Graph page will have two line graphs and one stacked bar graph.

Graph page (upper part of screen; displaying two line graphs and one stacked bar graph)
BOJ Time-Series Data Search

## Graph



* To download the data table, click "View data" below.


## D. Remove time-series data

Time-series data can be removed from your list of customized set of data and graph image.
Given below is an example of removing a time-series item shown in one line graph.

Graph page (upper part of screen; displaying two line graphs and one stacked bar graph)

(1) In the Time-series settings section, click the Remove button in the time-series item to delete the item (in this case, the last line graph).

Graph page (bottom part of screen)

(2) Make sure that the selected time-series item has been removed from the list in the Time-series settings section and the line graph deleted from the Graph page.

Graph page (upper part of screen; displaying one line graph and one stacked bar graph)


Graph page (bottom part of screen)


## E. Hide recession bars

The default settings of recession periods are displayed automatically as shaded gray bars (recession bars) behind other bars. Recession bars can be removed if unnecessary.
(1) Clear the Recession bars check box in the Basic settings section.

Graph page with the recession bar displayed (upper part of screen<default setting>)

(2) Click the Redraw button.

Graph page (bottom part of screen)

(3) The recession bar will not show.

Graph page with the recession bar hidden (upper part of screen)

## BOJ Time-Series Data Search

Graph


* To download the data table, click "View data" below.


## F. Rearrange order of stacked bar graphs

The order of stacked bar graphs can be rearranged -- using the drag \& drop function -- by changing the order of the list of time-series items in the Time-series settings section.

The default time-series data listed in descending order in the Time-series settings section are rearranged into ascending order (i.e., the time-series data listed on the top is shown at the bottom of the vertical axis).

Graph page (upper part of screen; displaying stacked bar graph with green bar on top)

## BOJ Time-Series Data Search

Beginners' Manual

## Graph



* To download the data table, click "View data" below.
(1) Drag and drop the time-series items to rearrange the order of the items.

Graph page (middle part of screen; prior to drag)


## Graph page (middle part of screen; after drag)


(2) Click the Redraw button.

Graph page (bottom part of screen)

(3) The stacked bar graphs are rearranged.


## 4. Print graph image

You can print the image of graphs illustrated in the Key figures at a glance section or for your customized set of time-series data, as well as information on graph settings, such as inputs in the Basic settings and Time-series settings sections.

## A. Print graph image and graph settings

(1) Select a Print graph settings check box, and then click the Print button.

Graph page (bottom part of screen)

(2) Once the Print preview window opens, move on to the File menu and press Print.

- This procedure may differ depending on your browser.

Print preview with graph settings


## B. Print only graph image

Clear the Print graph settings check box, and then click the Print button. Continue on with procedure shown on page 50.

Graph page (bottom part of screen)


Print preview without graph settings


## 5. Check information and data of graphs

You can check data and information on time-series items of your illustrated graphs using data in the Key figures at a glance section or your customized set of time-series data.
(1) In the Graph page, click the View data button to open the Result of search (Graph) window.

Graph page (bottom part of screen)

(2) In the Result of search (Graph) window, choose Information on time-series for information on the time-series data, or click the link to Time-series data to check data content.

## Result of search (Graph) window

## BOJ Time-Series Data Search

© Result of search(Graph)

(3) In the Information on time-series data (Graph) window, you can get information on graphs of timeseries data. In the Time-series data (Graph) window, you can view the data content of the timeseries data.

- You can switch windows by clicking the button.

Information on time-series data (Graph) window


Time-series data (Graph) window

| BOJ Time-Series Data Search |  |  |  |  | , Beginners' Manual |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 揑Time-series data(Graph) |  |  |  |  |  |
| Information on time.series data Back |  |  |  |  |  |
| * In the case that "Frequency conversion" or "Difference" is applied, some figures may differ from those in other publications as data processing is conducted using digital equipment on this site. |  |  |  |  |  |
|  | BP01'BPBP6JYNCB Current account/Net balance | BP01'BPBP6JYNPIN Primary income/Net balance | BP01'BPBP6JYNTB Goods/Net balance | BP01'BPBP6JYNSN Services/Net balance | BP01'BPBP6JYNSIN Secondary income /Net balance |
| 2015 | 165194.04380261 | 213032.0805006 | -8862.45774899 | -19306.96754323 | -19668.6114058 |
| 2016 | 213909.55035195 | 191477.852965 | 55175.5393597 | -11287.66768315 | -21456.17428959 |
| 2017 | 227779.24872529 | 206843.41311959 | 49113.1108563 | -6906.65070889 | -21270.62454171 |
| 2018 | 195046.95925327 | 214026.25171904 | 11264.68641872 | -10212.5888677 | -20031.39001678 |
| 2019 | 192106.31578409 | 215124.11230884 | 1502.755381 | -10820.70368855 | -13699.84821718 |
| 2020 | 158789.5574656 | 191531.89134445 | 30106.27815551 | -37356.57625021 | -25492.03578412 |
| 2021 | 137851.45257608 | 164299.07788455 | 23530.65928138 | -31533.54055868 | -18444.74403117 |

$\rightarrow$ To redraw graphs, see page 28 .

## 6. Features of Graph page

Features of the Graph page are described below. Details of the graph image can be altered using these features.

Graph page (upper part of screen)


## Graph page (bottom part of screen)


(1) Enter output year range.
(2) Specify frequency.
(3) Specify method of changing frequency.
(4) Select check box to display recession period.
(5) Select check box to stack bar graphs.
(6) Select check box to display the left axis in reverse scale.
(7) Select check box to display the right axis in reverse scale.
(8) Click button to remove time-series data.
(9) Specify graph type.
(10) Choose either the left- or right-scale vertical axis. (For bar graphs, scales are automatically set at the left vertical axis.)
(11) Click to open color window to change color (see illustration below).
(12) Specify style for line graphs.
(13) Specify width for line graphs.
(14) Specify mark type for line graphs.
(15) Specify to change graphs into rate of change basis.
(16) Click to redraw graphs after changing graph settings in the Basic settings or Time-series settings section.
(17) Click to open the Add time-series window to add time-series data.
(18) Click to check information and data for graphs.
(19) Click to print graphs by opening the Print preview window.
(20) Select a check box to display graph settings in the Print preview window.

## Color window



