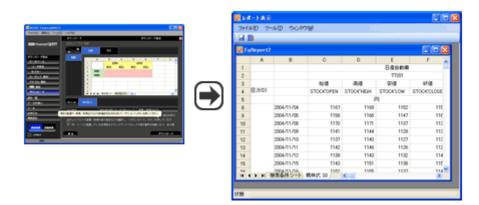
Version 1.0 2008/12/18

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(1) Features of FinancialQUEST

"NEEDS-FinancialQUEST" is one of the Japan's largest membership information service that can provide stock prices and financial and other economic data.



It can handle multiple databases, such as stock, financial, and macroeconomic data.

It can reference multiple databases, such as "Stock Price and Indicators", "Financial Data", and "Nikkei Economic Statistics". This service can quickly provide any data the application requires, from corporate financial analyses to macroeconomic analyses and comparisons of the finances of municipalities, from the "NEEDS" database which Nikkei Digital Media own.

Table: Databases provided with FinancialQUEST (extract)
(The types of databases that can be used depend on the contractual coverage.)

| Corporate information | Financial Data, Flash Report of Financial Data (Annual, Interim, Quarterly), Segment Information (Actual Data, Flash Reports), Earning Estimates, Earning Estimation by Company, Corporate Attribute Data, Corporate Borrowing from Financial Institutions, Major Share Holder, Corporate Action Data |
|--------------------------|---|
| The stocks and debenture | Stock Price and Indicators, Market Indicators, Dividend-included TOPIX (Indices, Issues), Listed Bond Prices and Yields, Security Financing by Issue, Security Financing by Issue, Security Financing by Market, Outstanding Margin Transactions by Issue, Outstanding Margin Transaction by Market, Stock Trading Volume & Value by Investor, Nikkei All Stock Index and Nikkei Style Indices, Stock Marcket Indicators, Stock Price Index Futures, Stock Price Index Options, Equity Options, Stock Portfolio Analysis, Unlisted Bond Prices and Yields, Japan Standard Bond Price (JS Price), JGB Futures, Options on JGB Futures, Nikkei Bond Index, Nikkei JGB Index |
| Commodity | Commodity Future Prices, Commodity Market Prices |
| Macro and finance | Foreign exchange and Interest Rates, Primary foreign exchange and interest rates, Nikkei Economic Statistics, Primary economic indicators, Statistics on Production/ Shipment/ Inventory, Consumer Statistical Data, Daily Households Survey Fata, Statistics on Foreign Direct Investment, Nikkei Monetary Data, BOJ's Price Indices, Corporate Goods Price Index (new category), Economic Data by Size of Company, SNA Stock Items Data, BOJ "Tankan" Surveys, Japan Trade Monthly Chart, Financial Statements Statistics of Corporations by Industry (Quarterly, Annual) |
| Industrial statistics | Nikkei Energy Data, Industrial Data, Consolidated Industrial Data, Current Survey of Production, Summary Report on Trade of JAPAN |
| Region and population | Comprehensive Regional Economic Data, National Census by 5 Year Age Groups, National Census, Population projections, Census of Commerce, Census of Manufactures, Local Fiscal Balance and Politics, Construction Statistics |
| Overseas macro | IMF International Financial Statistics (IFS), IMF Direction of Trade (DOT), OECD Main Economic Indicators, OECD Quarterly National Accounts, DRI U.S. Basic Economics, DRI International Economics, DRI, Monetary and Forex Data |

Can provide the most up-to-date data quickly

Since data is provided via the Internet, the latest information is downloaded quickly. For example, for daily stock prices in the "Stock Price and Indicators" database, the data is added around 3:40 pm (Japan time) of each business day for securities (for the end of day data). For macro-economic data in the "Nikkei Economic Statistics", in principle, data is added on the day it is released. (*The frequency with which data is updated depends on the database.)

It is easy to acquire data using the graphic user interface type operation screen This service uses a graphic user interface that works by manipulating icons on the screen, so you can easily acquire data by just operating your mouse. Since all databases can be searched with the same operability, there is no sense of difficulty even when searching for information different from that in your regular operations. Data can be output in Excel format This service has functions for outputting downloaded data to an Excel screen or storing it as Excel files. You can use Excel to prepare charts and graphs from the data you have acquired and to tabulate and analyze the numbers.

Complete array of function for acquiring just the data you want with screening, sorting, etc.

O This system is equipped with many functions with which you can acquire data to match your application. For example, there is a "screening function" with which you can narrow down your search target by specifying conditions, such as "Companies with sales over 1 trillion yen" and a "sorting function" that can sort data according to conditions such as "ascending order of market capitalization of corporation".

>> 2. "New Functions in Version 2.0

(2) New Functions in Version 2.0

1. Installing simple search and detailed search and updating the interface

The screen design has been updated. The procedure up to data acquisition has become easier to understand and easy operability has been achieved.

* Two search screens

First, a major change is the installation of two type of searches, "Easy Search" and "Detailed Search". Easy Searches are searches that can be made with the necessary minimum settings. Detailed Search can precisely specify conditions, such as the time. This service can be utilized from a wide range of persons from those using FinancialQUEST for the first time to professionals who do economic analysis and corporate analysis.

Easy search display

With this screen, you can acquire your target data in four steps by following the navigation on the left side.

Detailed search display



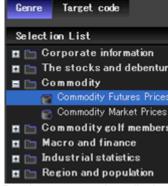
With this screen, you can set the target data time period and search conditions in detail.

* The procedure up to data downloading is easy to understand

For either Easy Searches or Detailed Searches, you can acquire data in a few steps by moving through the screens according to the download procedure shown in the left navigation. The database list has become genre-by-genre display to make it easier to find your search target.



For both simple searches (left) and detailed searches, the search settings are made according to the navigation on the left side of the screen.



Databases can be displayed by genre or by code system (detailed searches only).

* It is also possible to hand down settings from a Easy Search to a Detailed Search.

You can move from the Easy Search screen to the Detailed Search screen at any time. Search conditions specified during a Easy Search are handed over as is to the Detailed Search screen, which is handy when you want to specify more detailed conditions.

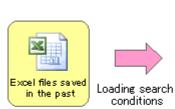


2. Equipped with new functions that improve the ease of use for searches

The service now has new functions such as search condition sheet loading and a Screening Wizard. You can utilize these functions to easily acquire the data you want to find.

* Support for search condition sheet loading

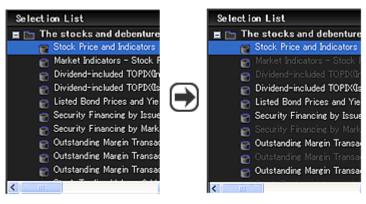
When an Excel file output in the past is read again with FinancialQUEST, the previous search conditions are reproduced and the search can be repeated with the same settings. This is handy for searching data periodically with the same conditions.





* Improved ease of use for searching multiple databases

The ease of use has also been improved for when searching information in multiple databases at one time. When you select the first database on the database select screen, databases that can not be searched at the same time are grayed out, so it is now easier to understand which databases you can select for the second and subsequent databases



Which databases can be searched at the same time has become easy to understand.

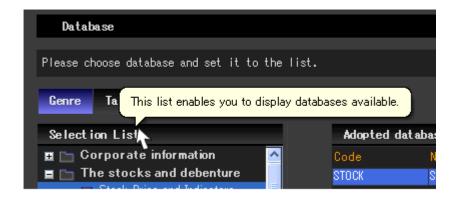
* Introduction of Screening Wizard

The screening function has become easier to use. This function lets you narrow down your search target with various starting points, such as "companies whose sales are greater than 1 trillion yen" or "cities whose municipal financial strength index is 1 or higher". With the new "screen wizard", if you specify the conditions according to the instructions on the screen, you can easily narrow down the corporations, company names, etc.



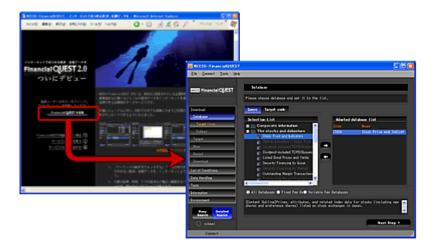
* Balloon help

The service has been equipped with balloon help that explains the operation method. If you do not understand the function of a button or menu item, move the pointer onto that button or menu item. If you leave it there a while, an explanation is displayed that matches the usage scene.



3. No need for software installation

Software installation is no longer needed. Because the program is started on the Web, even if functions have been added, you can always use the most up-to-date software. (* This online software cannot be used under proxy authentication environment.)



The software is downloaded from the Internet each time you start it.

For details on the usage method for individual functions, see "Basic Usage (Actual Usage Examples)".

>> 3. "Basic Usage"

(3) Basic Usage

* List of Items in "Usage"

- Flow of Easy Search
- Flow of Detailed Search (1. Stock Price)
- Flow of Detailed Search (2. Corporate financial data)
- Flow of Detailed Search (3. Macro-economics data)
- Flow of Detailed Search (4. Searching multiple databases)

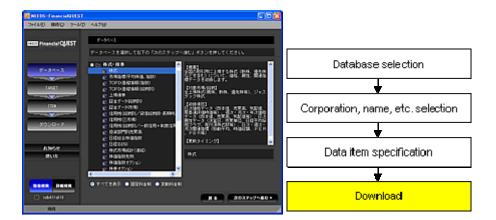
* Please read this first. (About Easy Searches and Detailed Searches)

This software is equipped with two search modes, "Easy Search" and "Detailed Search". With Detailed Searches, you can specify the searching conditions and time in detail. With Easy Searches, many settings are set to their default values and there are fewer steps up to the actual download.

When using the search function the first time, a handy way to work is to first try a Easy Search and if it is necessary to finely adjust the settings, switch over to a Detailed Search.

* Easy Search screen

With this screen, you can search data with the minimum necessary settings. The data acquisition time and subkeys (for example switching between unconsolidated and consolidated standards) use the values with the highest usage frequency by the customer as the default values.



>> Easy Search usage

* Detailed Search screen

On this screen, you can specify the data target time, code system, and other search conditions in detail. Functions such as simultaneous searches of multiple databases and screening can only be used on the Detailed Search screen.



Flow of Detailed Search
>> (1) Stock Price

>> (2) Corporate financial data >> (3) Macro-economics data >> (4) Searching multiple databases

<Comparison of Easy Search and Detailed Search functions>

| | | Easy Search | Detailed Search |
|--|--|--|---|
| Database selection | | Only one database at a time can be specified | Multiple databases can be selected |
| Target code se | election | The default setting is used | Can be selected freely |
| | on (for example een unconsolidated ed standards) | The default setting is used | Can be selected freely |
| | Specification with tree development | Can be used | Can be used |
| Target | Targets for entire group added to use list | Can be used (Only tree terminal groups can be specified.) | Can be used (Any group in the tre |
| specification | Target search | Can be used | Can be used |
| | Target set operations | Can not be used | Can be used |
| | Other functions that can be used | - | ScreeningScreening WizardSort |
| | Specification with tree development | Can be used | Can be used |
| Item | Items for entire group added to use list | Can be used (Only tree terminal item groups can be specified.) | Can be used (Any group in the tro |
| specification | Item search | Can be used | Can be used (Items in multiple databases can be searched at the same time.) |
| | Other functions that can be used | - | Function specificationsSeasonal adjustment |
| Period specification Layout specification Display option specification | | Use of default setting (Can not be changed) | Period can be selected from multi selection branches or the time period can be input manually |
| | | Select from 1-3 selection branches | Can be set freely |
| | | Can not be used | Can be used |
| Setting list scr | een reference | Can not be used | Can be used |
| Other functions that can be used | | - Saving Easy Search conditions | Auto RunSearch condition sheet loading |

>> 4. Function Details

Basic Usage > Flow of Easy Search

Flow of Easy Search

o This explains the flow for a easy search. For example, to acquire the "stock data for the past one year for Toyota, Nissan Motors, and Honda", set in the order (1) Database to be searched, (2) Target corporations, (3) Data items.

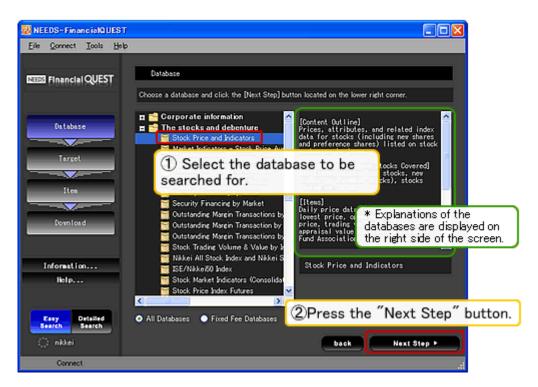
>> Next

| 1. | Database setting | Select the database to be searched for. |
|----|---------------------------|--|
| 2. | Company name setting | Select companies to be searched for. |
| 3. | Data item setting | Select Open, High, Low, Close, and Trading Vol to be searched for. |
| 4. | Download setting | Select the layout for the download data. |
| 5. | Data output | Acquire the data you searched for. |
| 6. | Move to "detailed search" | Clicking the "Detailed Search" icon moves you to the Detailed Search screen. |
| | | |

Basic Usage > Flow of Easy Search

(1) Database setting

⟨⟨ Back | Next ⟩⟩

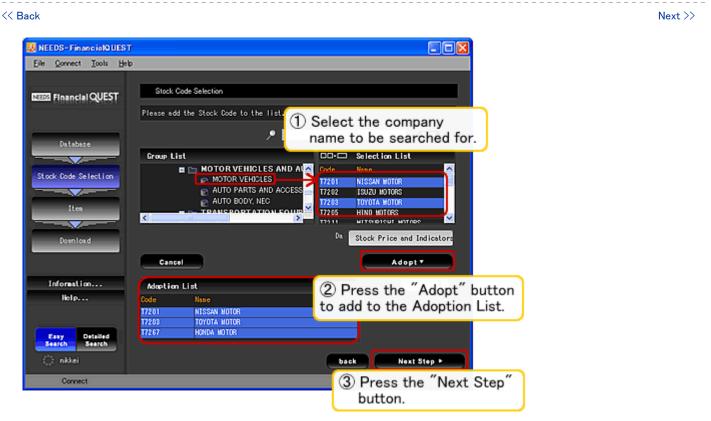


- When the easy search screen is started, first the database selection screen is displayed. Select the database to be searched, then press the "Next Step" button.
- When you select the database, an explanation including the contents of the data stored, the update frequency,
 etc. is displayed on the right side of the screen. When deciding the search target, reference this.

<< Back Next >>

Basic Usage > Flow of Easy Search

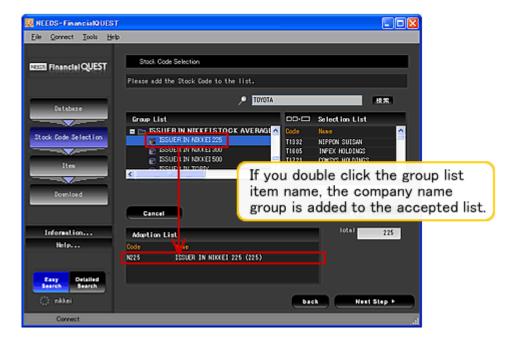
(2) Company name setting



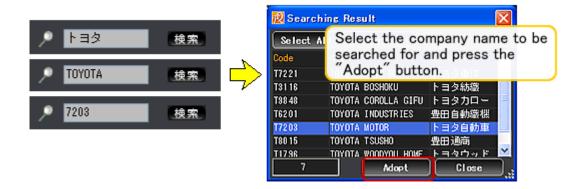
 Select the company name whose data is to be output. The target company name can be specified by moving through the "Group list" or by searching with the input window on the top right of the screen.
 (* This screen is not displayed when you search a database that does not require setting of a company name, for example the "Nikkei Economic Statistics".)

* *

If you double click the name of an item in the Group list of the left side of the screen or select "Adopt" in the right-click menu, groups of company names can be added to the Adopt list. (* On the easy search screen, you can only add groups displayed at the ends of the group list tree to the Adopt list. If you want to add a larger category of groups, shift to the "Detailed Search" screen.)



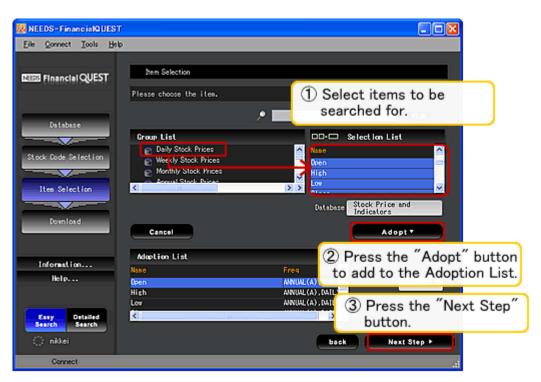
o If you use the search box on the top right of the screen, you can search for company names. You can search by name or code (here the stock code).



<< Back Next >>

Basic Usage > Flow of Easy Search

(3) Data item setting



 Next you set the items to be targeted for data output, either by going through the "Group list" tree or by using the search function.

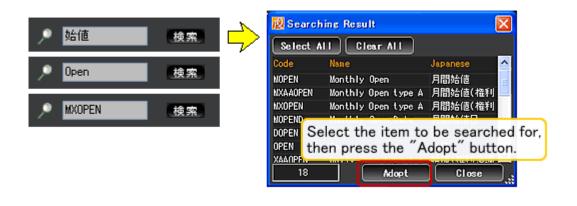
* *

o If you double click the name of an item in the Group list of the left side of the screen or select "Adopt" in the right-click menu, groups of items can be added to the Adopt list.

(* On the Easy Search screen, you can only add groups displayed at the ends of the group list tree to the accepted list. If you want to add a larger category of groups, shift to the "Detailed Search" screen.)



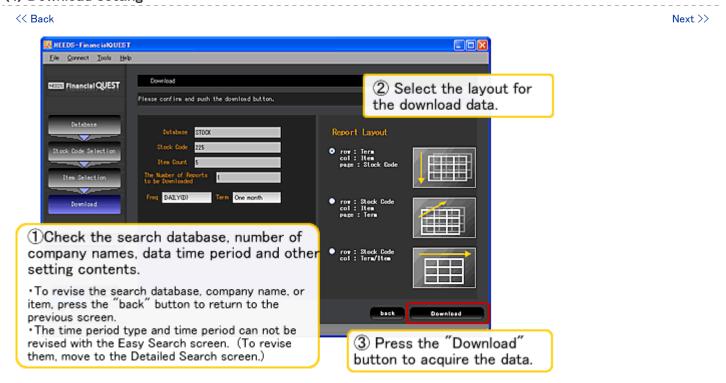
o You can search items with the search box on the top right of the screen. You can search by name or code.



<< Back Next >>

Basic Usage > Flow of Easy Search

(4) Download setting



o Finally, check the contents set so far and decide the data output layout, then press the "Download" button.

 When downloading data with different update frequencies (time type) at the same time, the data is output with the window split.

* *

* Function for saving file containing Easy Search conditions

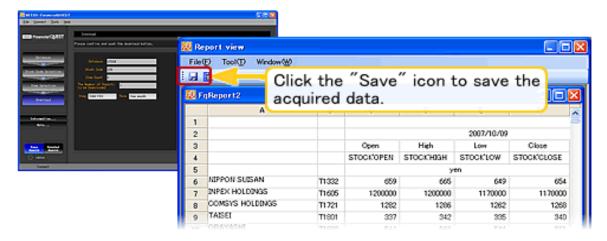
After moving to the download screen, if from the "File" menu you select "Save As...", you can save the search conditions specified so far in an XML-format file. You can reload these search conditions later by opening that XML file on the Easy Search screen.

<< Back Next >>

Basic Usage > Flow of Easy Search

(5) Data output

≪ Back
Next >>



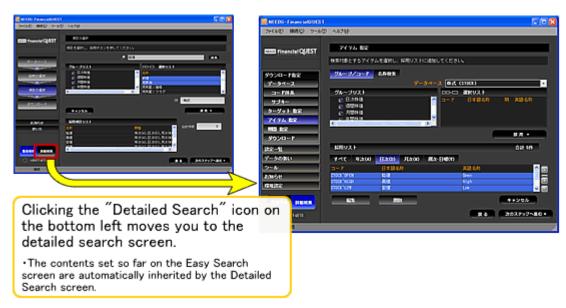
o If you press the download button, then wait, the data is output. To save the data, press the "Save" icon on the top left of the screen or from the "File" menu, select "Save" (Ctrl+S).

<< Back Next >>

Basic Usage > Flow of Easy Search

(6) Move to "Detailed Search"

Return to "Basic Usage" list >>



- With a Easy Search, the code system, subkey (unconsolidated or consolidated settlement and other detailed settings), and download data time period are the standard values already set.
- To check what values are set, press the "Detailed Search" button at the bottom left of the download screen to move to the Detailed Search screen, then press the "List of Conditions" button.

 When shifting from the Easy Search screen to the Detailed Search screen, the search conditions set up to part-way can be inherited as is. To set the conditions more precisely, for example acquiring the data over a slightly wider time period, adjust the conditions with the Detailed Search screen.

<< Back

Return to "Basic Usage" list >>

Basic Usage > Flow of Detailed Search (1. Stock Price)

Flow of detailed search ("Stock Price and Indicators" database)

 We will look at an example of the procedure actually using the "Stock Price and Indicators" database. Here, the daily stock prices (Open, High, Low, Close, Trading vol.) for the past one year for Toyota Motor, Nissan Motor, and Honda Motor are downloaded.

Next >>

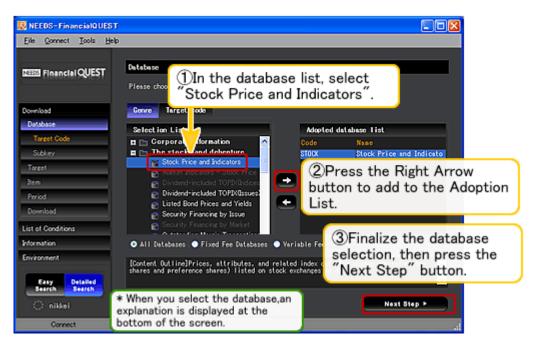
| 1. | Database specification | Select the database to be searched for. |
|--------|---------------------------|--|
| 2. | Target Code specification | Specify specific Target Code (e.g. Stock code, Nikkei Company code, etc.) in searching data. |
| 3. | Subkey specification | Specify detailed search conditions in accordance with databases such as issue type. |
| 4. | Target specification | Specify search Targets such as company, security name, index, etc. |
| 5. | Item specification | Select Items to be searched for. |
| 6. | Period setting | Specify term for the data you search for. |
| 7. | Download screen | Specify Report Layout or language in downloading data. |
| 8. | Data output | Acquire the data you searched for. |
| | | |

Basic Usage > Flow of Detailed Search (1. Stock Price)

(1) Database specification

≪ Back

Next >>



- When the detailed search screen is started, first the database selection screen is displayed. Open the genre list "The stocks and debenture" tree, select "Stock Price and Indicators", then press the Right Arrow button. Complete the specification of the database, then press the "Next Step" button.
 - * When you select the database with the "Selection List" on the left side of the screen, an explanation including the contents of the data stored, the update frequency, etc. is displayed at the bottom of the screen. When deciding the search target, reference this.

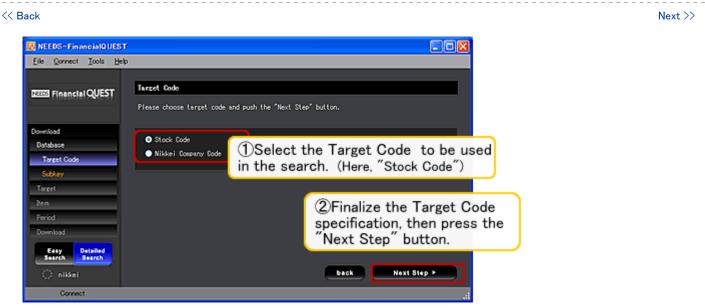
* Related links

- o [Function Details] Database specification screen
- o Operations when searching multiple databases

<< Back Next >>

Basic Usage > Flow of Detailed Search (1. Stock Price)

(2) Target Code specification



- This selects the **Target Code** with which to select the target (stock trading name, corporation, etc.) when searching data. Here, specify "Stock Code", then press the "Next Step" button.
- The Target Codes that can be used depend on the database.

* Related links

[Function Details] Database (and Target Code, Subkey) specification

<< Back Next >>

Basic Usage > Flow of Detailed Search (1. Stock Price)

(3) Subkey specification

<< Back Next >> NEEDS-FinancialQUEST Eile Connect Tools Help Financial QUEST This menu enables you to move to the win conditions in accordance with databases 1 Select the Issue Type. (Here, Common Stock) ock Price and Indicators Priority ✓ Common Stock New Stock 2nd New Stock ②Select the stock exchange. (Here, "Tokyo->Osaka-> ··· ->Hercules") yoto Stock Exchange - Hiroshima Stock Exchange ③Finalize the sub-key specification, then press the "Next Step" button.

- This specifies the "Subkey" when searching the data. A Subkey means supplemental search conditions such as "settlement unconsolidated or consolidated standard" "stock trading name market category". For the "stock" database, the "issue type" and "stock exchange" Subkeys are specified.
- Here specify the issue type as "Common Stock" and for the stock exchange, specify use in the order "Tokyo Stock Exchange > Osaka Stock Exchange > Nagoya Stock Exchange > (Kyoto Stock Exchange) > (Hiroshima Stock Exchange) > (Fukuoka Stock Exchange) > (Niigata Stock Exchange) > Sapporo Stock Exchange > Jasdaq > Hercules.

When specifying the stock exchange, for a stock trading name listed on multiple exchanges, the stock price data is output selecting one exchange in the priority order Tokyo Stock Exchange, Osaka Stock Exchange, Nagoya Stock Exchange ,,,,,, Hercules.

* Related links

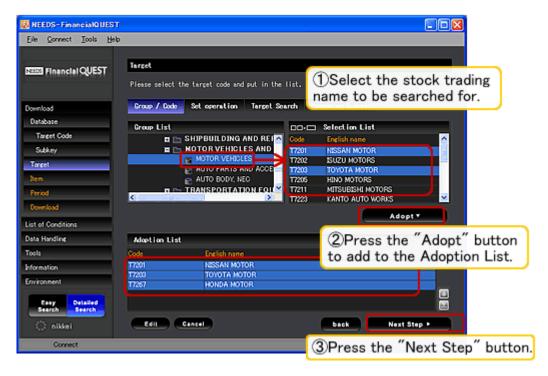
o [Function Details] Database (and Target Code, Subkey) specification

<< Back Next >>

Basic Usage > Flow of Detailed Search (1. Stock Price)

(4) Target specification

<< Back Next >>



Next, select the stock trading name whose data is to be output. Here on the "Group List" on the left side of the screen, develop the list "Industry type classification -> Nikkei industry classification -> Manufacturing -> Automobiles -> Automobiles", then on the Selection List on the right side of the screen, select the three stock trading names "Nissan Motor", "Toyota Motor", and "Honda Motor".

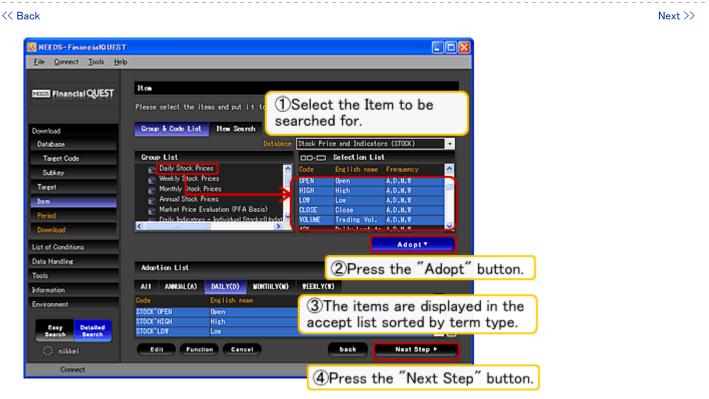
* Related links

- o [Function Details] Target specification screen (target searches etc.)
- o [Function Details] Screening
- o [Function Details] Screening Wizard
- o [Function Details] Sort

<< Back Next >>

Basic Usage > Flow of Detailed Search (1. Stock Price)





- Next, specify the Items to be targeted for data output (for the stock database, the "opening value" and "closing value"; for the financial database, the "term net profit" or other data item).
- Here on the "Group List" on the left side of the screen, select "Daily Stock Prices", then in the "Selection List" on the right side of the screen, select the five items of "Open", "High", "Low", "Close", and "Trading Vol.".

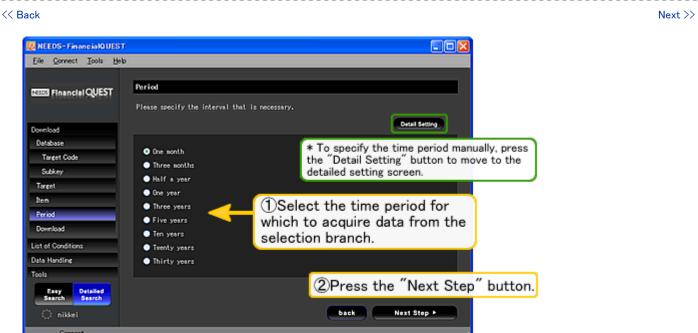
* Related links

- o [Function Details] Item specification screen (item searches etc.)
- o [Function Details] Arithmetic functions

<< Back Next >>

Basic Usage > Flow of Detailed Search (1. Stock Price)

(6) Period setting



On this screen, the time to be targeted for data acquisition is specified from the selection branch. Here, select
the standard setting of "One year".

* Related links

[Function Details] Time specification (Easy setting / Detailed setting)

<< Back Next >>

Basic Usage > Flow of Detailed Search (1. Stock Price)

(7) Download screen

≪ Back

Next >>



- o Finally, decide the data output layout, then press the "Download" button.
- When swapping the positions of elements, such as lines, columns, and pages, either drag and drop the item name.



* Related links

o [Function Details] Download screen setting item

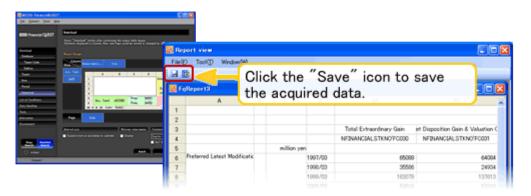
<< Back Next >>

Basic Usage > Flow of Detailed Search (1. Stock Price)
Basic Usage > Flow of Detailed Search (2. Corporate financial data)

(8) Data output

≪ Back

Return to "Basic Usage" list >>



- o If you press the download button, then wait, the data is output. To save the data in an Excel format file, press the "Save" icon on the top left of the screen or from the "File" menu, select "Save" (Ctrl+S).
- o If the saved file is read in again with the FinancialQUEST software, the search can be replicated with the same conditions as in the past. For details, see "Loading search condition sheet".

* Related links

o [Function Details] Loading search condition sheet

<< Back

Return to "Basic Usage" list >>

Flow of detailed search ("Financial Data" database)

o We will look at an example of the procedure actually using the "Financial Data" database. Here, the consolidated finance data (profit and loss statement) for the past ten years for Toyota, Nissan, and Honda is downloaded.

Next >>

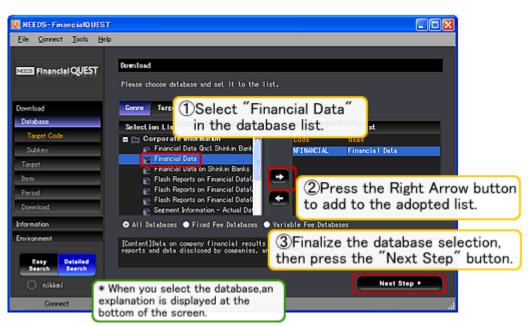
| 1. | Database specification | Select the database to be searched for. |
|--------|---------------------------|---|
| 2. | Target Code specification | Specify specific Target Code (e.g. Stock code, Nikkei Company code, etc.) in searching data. |
| 3. | Subkey specification | Specify detailed search conditions in accordance with databases such as unconsolidated results or consolidated results. |
| 4. | Target specification | specify search targets such as company, security name, etc. |
| 5. | Item specification | Select items to be searched for. |
| 6. | Period setting | Specify term for the data you search for. |
| 7. | Download screen | Specify Report Layout or language in downloading data. |
| 8. | Data output | Acquire the data you searched for. |
| | | |

Basic Usage > Flow of Detailed Search (2. Corporate financial data)

(1) Database specification

≪ Back

Next >>



- o When the detailed search screen is started, first the database selection screen is displayed.
- Open the genre list "corporate information" tree, select "Financial Data", then press the Right Arrow button.
 Complete the specification of the database, then press the "Next Step" button to move to the Target Code specification screen.
 - * When you select the database with the "Selection List" on the left side of the screen, an explanation including the contents of the data stored, the update frequency, etc. is displayed at the bottom of the screen. When deciding the search target, reference this.

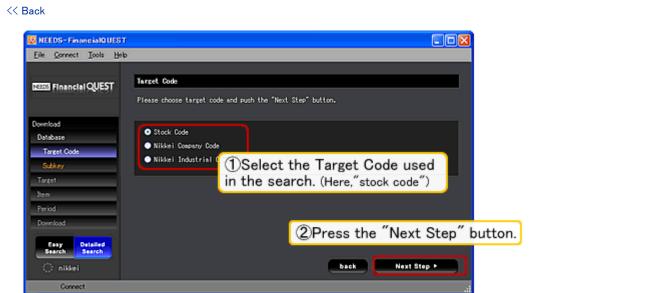
* Related links

- o [Function Details] Database specification screen
- o Operations when searching multiple databases

<< Back Next >>

Next >>

(2) Target Code specification



- This selects the Target Code with which to select the target (stock trading name, corporation, etc.) when searching data. Here, specify "Stock Code", then press the "Next Step" button.
- o The "Stock Code", "Nikkei Company Code", and "Nikkei Industrial Class Code" mean the following.

0

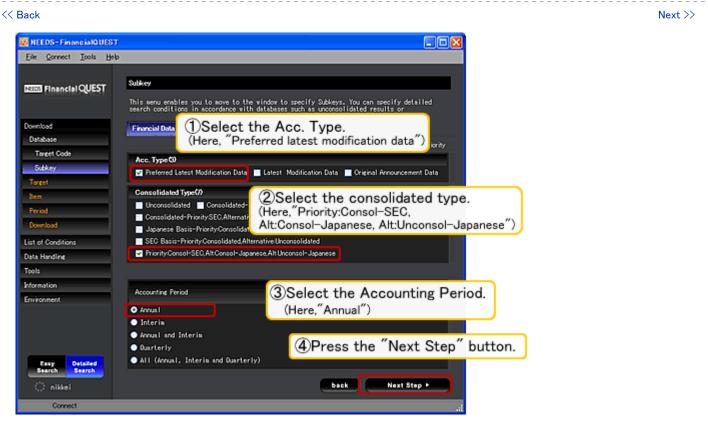
| Target Code | Meaning |
|------------------------------|--|
| Stock Code | These are the codes the securities code council assigns to listed companies. This specifies the company with a 4-digit code. When acquiring data only for companies currently listed on stock exchanges, select this. (Non-listed companies can not be specified.) |
| Nikkei Company Code | These are the codes that the Nikkei Inc. assigns to the companies recorded in the NEEDS database. To include non-listed companies, de-listed companies, and bankrupt companies in the search targets, always select this code. |
| Nikkei Industrial Class Code | This code is used for acquiring industry type totalization values in which data for individual companies is tabulated by industry type. When specifying an item in the "industrial/annual converted data" tree on the item selection screen, select this code. |

* Related links

o [Function Details] Database (and Target Code, Subkey) specification

<< Back Next >>

(3) Subkey specification



- This specifies the "Subkey" when searching the data. A Subkey means supplemental search conditions such
 as "consolidated type" "stock trading name market category". For the "Financial Data" database, the "Acc.
 Type", "Consolidated Type", and "Accounting Period" are specified. (The contents of the Subkeys specified
 depend on the database.)
- Here "Preferred latest modification data" is specified as the Acc. type, "Priority:Consol-SEC,
 Alt:Consol-Japanese, Alt:Unconsol-Japanese" is specified as the Consolidated Type, and "Annual" is specified
 as the Accounting Period, as in the default settings.

* *

o The search methods for when each selection branch is selected with "Consolidated Type" are as follows.

| | Unconsolidated settlement | Consolidated settlement (Japan standard) | Consolidated settlement (SEC standard) |
|---|---------------------------|--|--|
| Unconsolidated | 0 | | |
| Consolidated -Japanese Basis | | 0 | |
| Consolidated -SEC Basis | | | 0 |
| Consolidated Priority:SEC, Alternative:Japanese | | (2) | (1) |
| Japanese Basis-Priority:Consolidated, Alternative:Unconsolitdated | (2) | (1) | |
| SEC Basis-Priority:Cosolidated, Altarnative:Unconsolidated | (2) | | (1) |
| Priority:Consol-SEC, Alt:Consol-Japanese, Alt:Unconsol-Japanese | (3) | (2) | (1) |

* "O" means searching only the corresponding data and the search is done from lower numbers to higher numbers. The consolidated or unconsolidated selection when "consolidated priority" is specified is made for each settlement period, so there are cases in which this term displays the consolidated figures and the previous term displays the unconsolidated figures. It is also possible to specify more than one of these options and display both the unconsolidated and consolidated figures at the same time.

* Related links

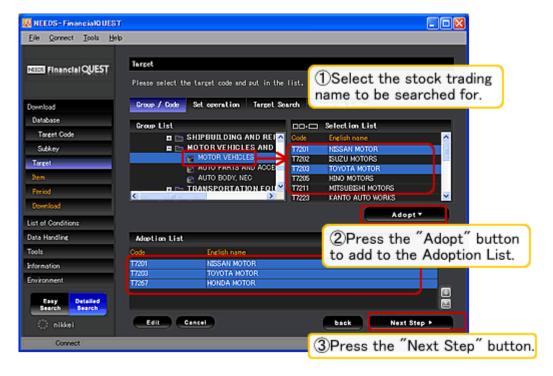
- o [Function Details] Database (and Target Code, Subkey) specification
- o [Function Details] Financial Data Handling

<< Back Next >>

Basic Usage > Flow of Detailed Search (2. Corporate financial data)

(4) Target specification

< ⟨ Back | Next ⟩>



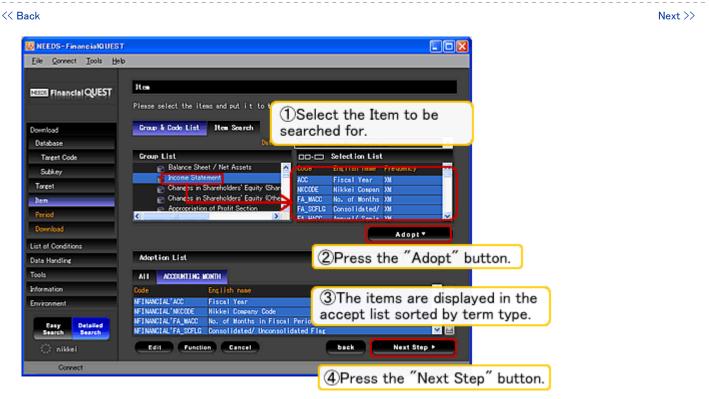
Next, select the stock trading name whose data is to be output. Here on the "Group List" on the left side of the screen, develop the list "Industrial Class-> Nikkei Industrial Class-> Manufacturing -> Motor vehicles and auto parts->Motor vehicles", then on the Selection List on the right side of the screen, select the three stock trading names "Nissan Motor ", "Toyota Motor ", and "Honda Motor ".

* Related links

- o [Function Details] Target specification screen (target searches etc.)
- o [Function Details] Screening
- o [Function Details] Screening Wizard
- o [Function Details] Sort

<< Back Next >>

(5) Item specification



- Next, specify the **Items** to be targeted for data output (for the financial database, the "term net profit"; for the stock database, the "opening value", "closing value" or other data item).
- Here on the "Group List" on the left side of the screen, select "Income Statement" in the "Industrial companies", then in the Selection List on the right side of the screen, select the item to be output.

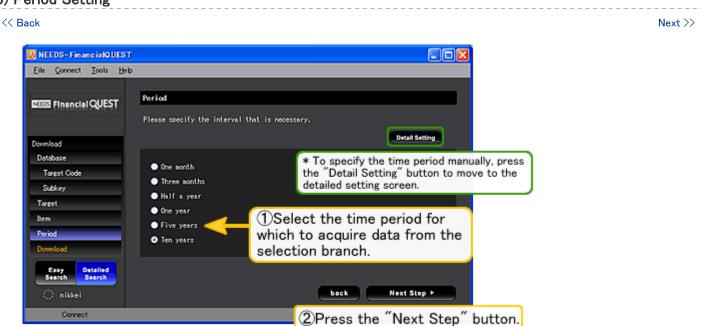
* Related links

- o [Function Details] Item specification screen (item searches etc.)
- o [Function Details] Arithmetic functions

<< Back Next >>

Basic Usage > Flow of Detailed Search (2. Corporate financial data)

(6) Period Setting



- On this screen, the time to be targeted for data acquisition is specified from the selection branch. Here, select
 the standard setting of "Ten years".
- To specify the time period precisely with manual input, press "Detail Setting" on the top right of the screen to move to the detailed time period specification screen.

* Related links

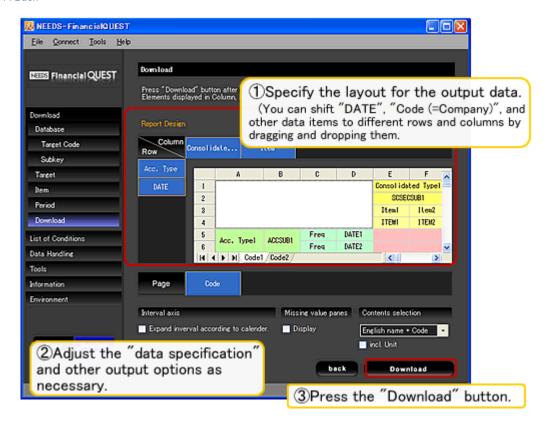
o [Function Details] Period Setting (Easy Setting / Detailed Setting)

<< Back Next >>

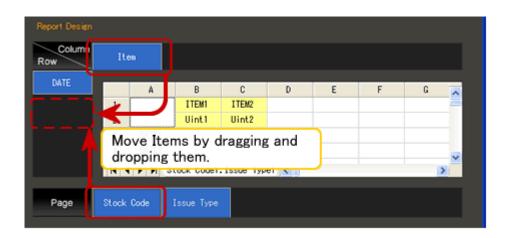
Basic Usage > Flow of Detailed Search (2. Corporate financial data)

(7) Download screen

<< Back</pre>



- o Finally, check the contents set so far and decide the data output layout, then press the "Download" button.
- When swapping the positions of elements, such as lines, columns, and pages, drag and drop the item name.



* Related links

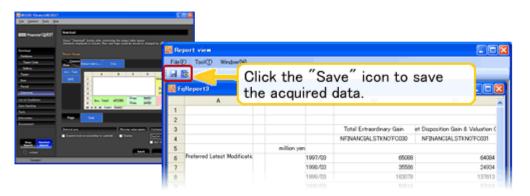
o [Function Details] Download screen setting item

<< Back Next >>

(8) Data output

≪ Back

Return to "Basic Usage" list >>



- o If you press the download button, then wait, the data is output. To save the data in an Excel format file, press the "Save" icon on the top left of the screen or from the "File" menu, select "Save" (Ctrl+S).
- o If the saved file is read in again with the FinancialQUEST software, the search can be replicated with the same conditions as in the past. For details, see "Loading search condition sheet".

* Related links

o [Function Details] Loading search condition sheet

<< Back

Return to "Basic Usage" list >>

Basic Usage > Flow of Detailed Search (3. Macro-economics data)

Flow of detailed search ("Nikkei Economic Statistics" database)

o We will look at an example of the procedure actually using the "Nikkei Economic Statistics" database. Here, we explain the flow for acquiring the data for the past year for mining industry production statistics.

Next >>

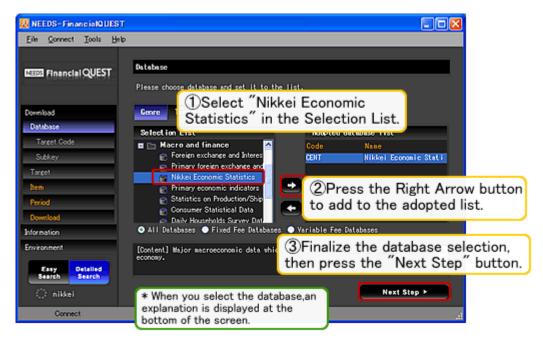
| 1. | Database specification | Select the database to be searched for. |
|--------|------------------------|--|
| 2. | Item specification | Select items to be searched for. |
| 3. | Period setting | Specify term for the data you search for. |
| 4. | Download screen | Specify Report Layout or language in downloading data. |
| 5. | Data output | Acquire the data you searched for. |
| | | |

Basic Usage > Flow of Detailed Search (3. Macro-economics data)

(1) Database specification

≪ Back

Next >>



- o When the detailed search screen is started, first the database selection screen is displayed.
- Open the genre list "macro and finance" tree, then select "Nikkei Economic Statistics". Complete the specification of the database, then press "Next Step".

 (When searching the macro-economics database, it is not necessary to specify the Target Code, Subkey, or Target. After specifying the database, move to the Item specification screen.)
 - * When you select the database with the "Selection List" on the left side of the screen, an explanation including the contents of the data stored, the update frequency, etc. is displayed at the bottom of the screen. When deciding the search target, reference this.

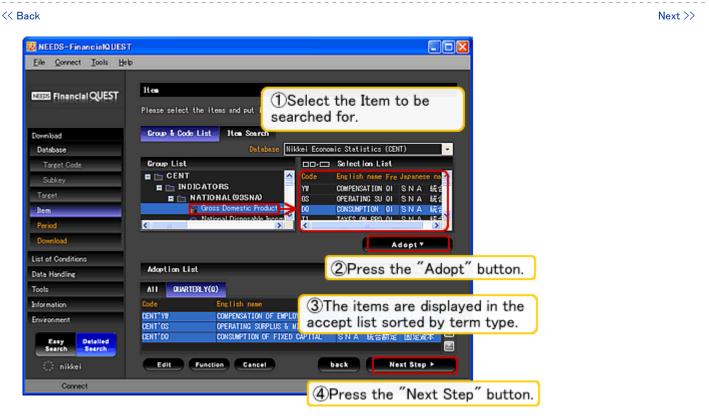
* Related links

- o [Function Details] Database specification screen
- Operations when searching multiple databases

<< Back Next >>

Basic Usage > Flow of Detailed Search (3. Macro-economics data)

(2) Item specification



- o Next, specify the **Items** whose data is to be output (GDP, economic trend indices, and other data items).
- Here on the "Group List" on the left side of the screen, from "INDICATORS", select "PRODUCTION", then select "Indexes of Industrial Production, Producers' Shipment, Inventory & Inventory Ratio to Shipment (SA)". In the Selection List on the right side of the screen, the item breakdowns are displayed, so select the output target, then press the "Adopt" button.

* Related links

- o [Function Details] Item specification screen (item searches etc.)
- o [Function Details] Arithmetic functions
- o [Function Details] Seasonal Adjustment

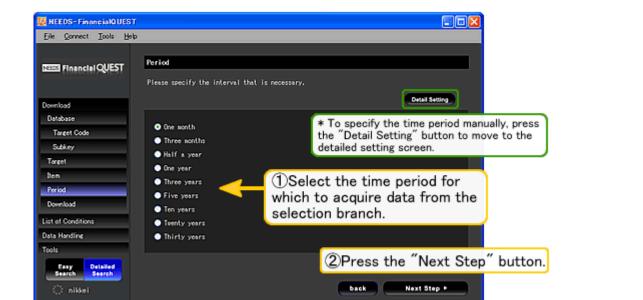
<< Back Next >>

Basic Usage > Flow of Detailed Search (3. Macro-economics data)

Next >>

(3) Period setting

<< Back



On this screen, the time to be targeted for data acquisition is specified from the selection branch. Here, select
the standard setting of "past one year".

o To specify the time period precisely with manual input, press "Detailed settings" on the top right of the screen to move to the detailed time period specification screen.

* Related links

o [Function Details] Period setting (Easy setting / Detailed setting)

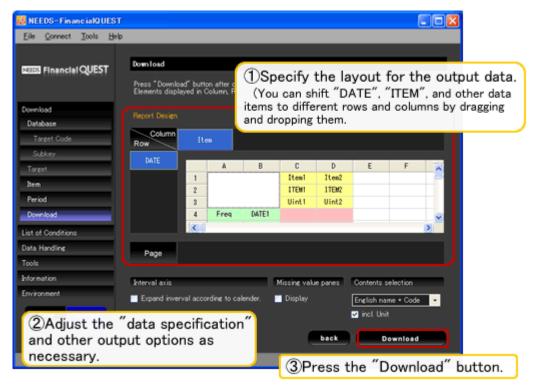
<< Back Next >>

Basic Usage > Flow of Detailed Search (3. Macro-economics data)

(4) Download screen

</ Back

Next >>



- o Finally, check the contents set so far and decide the data output layout, then press the "Download" button.
- When swapping the positions of elements, such as lines, columns, and pages, either drag and drop the item name.



* Related links

o [Function Details] Download screen setting item

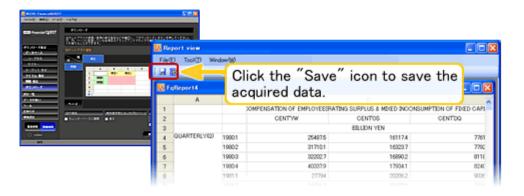
<< Back Next >>

Basic Usage > Flow of Detailed Search (3. Macro-economics data)

(5) Data output

≪ Back

Return to "Basic Usage" list >>



- If you press the download button, then wait, the data is output. To save the data in an Excel format file, press the "Save" icon on the top left of the screen or from the "File" menu, select "Save" (Ctrl+S).
- o If the saved file is read in again with the FinancialQUEST software, the search can be replicated with the same conditions as in the past. For details, see "Loading search condition sheet".

* Related links

o [Function Details] Loading search condition sheet

<< Back

Return to "Basic Usage" list >>

 ${\bf Basic\ Usage > Flow\ of\ Detailed\ Search\ (4.\ Searching\ multiple\ databases)}$

Next >>

Flow of detailed search (Searching multiple databases)

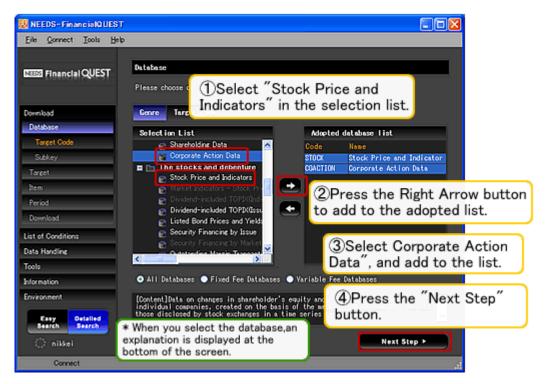
o With detailed searches, you can not only search a single database, but can even search multiple databases at the same time. Here, we explain the procedure for searching "stocks" and "Corporate Action Data" at the same time.

| 1 | | Database specification | Select the database to be searched for. |
|---|----|---------------------------|--|
| 2 | 2. | Target Code specification | Specify specific Target Code (e.g. Stock code, Nikkei Company code, etc.) in searching data. |
| 3 | 3. | Subkey specification | Specify detailed search conditions in accordance with databases. |
| 4 | ١. | Target specification | specify search targets such as company, security name, index, etc. |
| 5 | j. | Item specification | Select items to be searched for. |
| 6 | 6. | Period setting | Specify term for the data you search for. |
| 7 | 7. | Download screen | Specify Report Layout or language in downloading data. |
| 8 | 3. | Data output | Acquire the data you searched for. |
| | | | |

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(1) Database specification

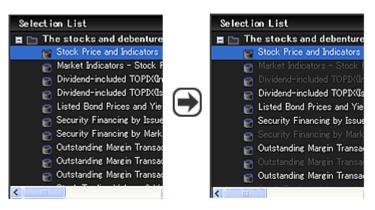
<< Back</pre>
Next >>



- First, select "Stock Price and Indicators" in "The stocks and debenture" in the database list, press the Right Arrow button, then select "Corporate Action Data" in "Corporate information", then press the Right Arrow button. Check that two databases are selected, then press the "Next Step" button.
- When you select the first database, databases that can not be searched at the same time are grayed out and can not be selected. For the second database, select a database with the same Target Code as the frist database.

* When you select the database with the "Selection List" on the left side of the screen, an explanation including the contents of the data stored, the update frequency, etc. is displayed at the bottom of the screen. When deciding the search database, reference this.

* Displaying the databases "by Target Code" makes it easier to see which databases have which Target Code.



Which databases can be searched at the same time has become easy to understand.

* Related links

o [Function Details] Database specification

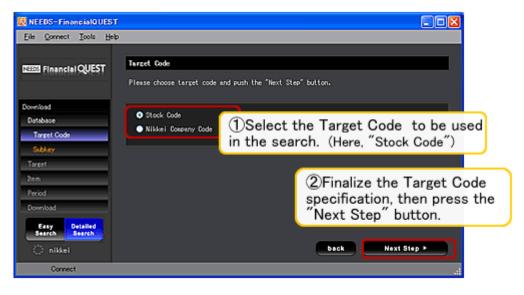
<< Back Next >>

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(2) Target Code specification

≪ Back

Next >>



- This selects the Target Code with which to select the target (stock trading name, corporation, etc.) when searching data.
- Here, specify "Stock Code", then press the "Next Step" button.

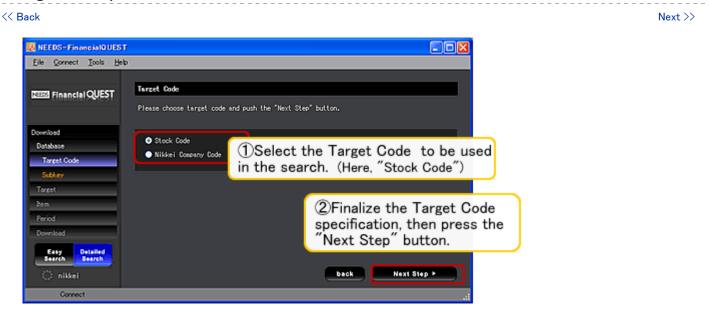
* Related links

[Function Details] Database (and Target Code, Subkey) specification

<< Back Next >>

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(2) Target Code specification



- This selects the Target Code with which to select the target (stock trading name, corporation, etc.) when searching data.
- Here, specify "Stock Code", then press the "Next Step" button.

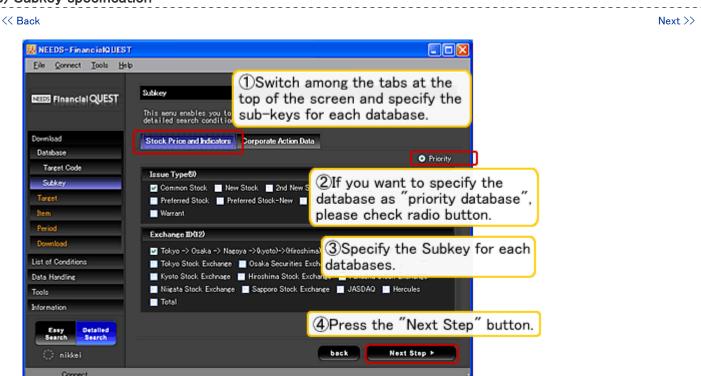
* Related links

[Function Details] Database (and Target Code, Subkey) specification

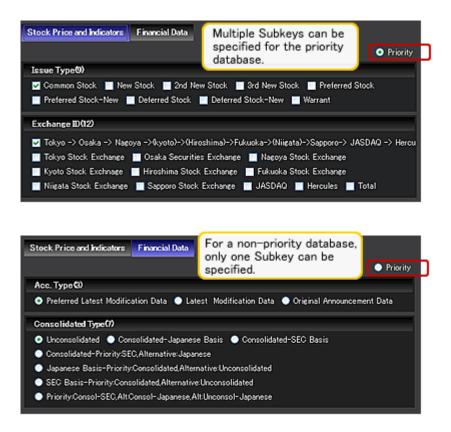
<< Back Next >>

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(3) Subkey specification



- This specifies the "**Subkey**" when searching the data. A Subkey means supplemental search conditions such as "settlement unconsolidated or consolidated standard", "stock trading name market category" or the like. When searching multiple databases, switch among the tabs at the top of the screen and specify the Subkeys for each database. (The contents of the specified Subkey depend on the database.)
- When specifying the Subkeys, it is necessary to specify the "**Priority database** (only one such database can be specified)" and the "**non-Priority database**(s)". For the priority database, multiple Subkeys can be specified, but for a non-priority database, only one can be specified. To change the database to give priority to, open the tab for the new priority database, and check "Priority" at the top right of the screen.



Here specify "Stocks" as the priority database for the Subkeys specify the issue type as "Common Stock" and for the stock exchange, specify use in the order "Tokyo Stock Exchange > Osaka Stock Exchange > Nagoya Stock Exchange > (Kyoto Stock Exchange) > (Hiroshima Stock Exchange) > (Fukuoka Stock Exchange) > (Niigata Stock Exchange) > Sapporo Stock Exchange > Jasdaq > Hercules. For the Corporate Action Subkeys, specify "Acquisition of self-stocks" in the ID code and input "001" for the record SEQ.

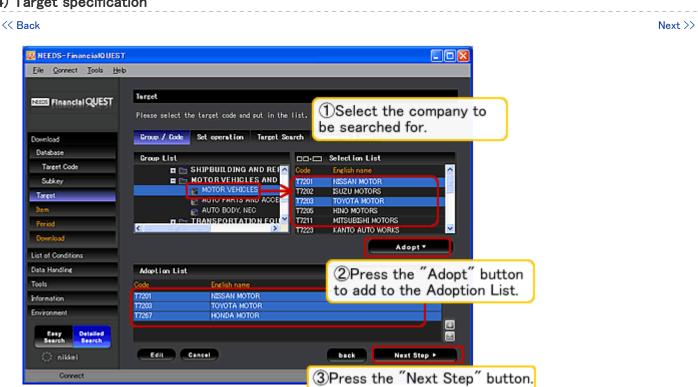
* Related links

[Function Details] Database (and Target Code, Subkey) specification

<< Back Next >>

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(4) Target specification



Next, select the stock trading name whose data is to be output. Select the three stock trading names "Nissan Motor", "Toyota Motor", and "Honda Motor", then press the "Next Step" button.

* Related links

- o [Function Details] Target specification screen (target searches etc.)
- [Function Details] Screening
- o [Function Details] Screening Wizard
- o [Function Details] Sort

<< Back Next >>

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(5) Item specification

<< Back Next >>

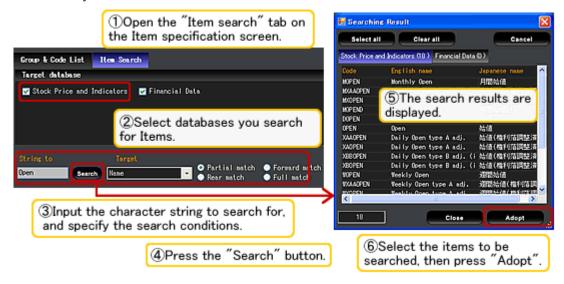


- Select the Item whose data is to be output. When searching information in multiple databases, it is not possible
 to display the items for both databases at the same time. Select the items while switching the target
 database with the top right pull down menu.
- Here, select five items for the "Stocks" database, "Open", "High", "Low", "Close", and "Trading vol." and select four items for "Corporate Action, stock information "change type", "change contents", "change capacity/numeric item (1)", and "change capacity/numeric item (2)".
- For the Adoption List, the items selected with the Selection List are displayed classified by **Term Type** (= data updating frequency). Here, with the "All" tab displayed, press the "Next" button. (If you press "Next" with the "Daily" or "Monthly" tab open, only the corresponding items are searched.)

* -----*

* Item search

If multiple databases are checked on the "item search screen", items matching the keyword are searched simultaneously in both databases.



* Related links

- o [Function Details] Item specification screen (item searches etc.)
- o [Function Details] Arithmetic functions

<< Back Next >>

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(6) Period setting

<< Back Next >> NEEDS-FinancialQUEST Eile Connect Tools Help NEES Financial QUEST Please specify the interval that is necessary. * To specify the time period manually, press the "Detail Setting" button to move to the One month detailed setting screen. Subker Half a year One year Select the time period for Five years which to acquire data from the selection branch.

back Next Step >

2Press the "Next Step" button.

- Select the time period for which data is to be acquired. Here, select the standard setting of "One year", then
 press the "Next Step" button.
- To specify the time period precisely with manual input, press "Detailed Setting" on the top right of the screen to move to the detailed time period specification screen.

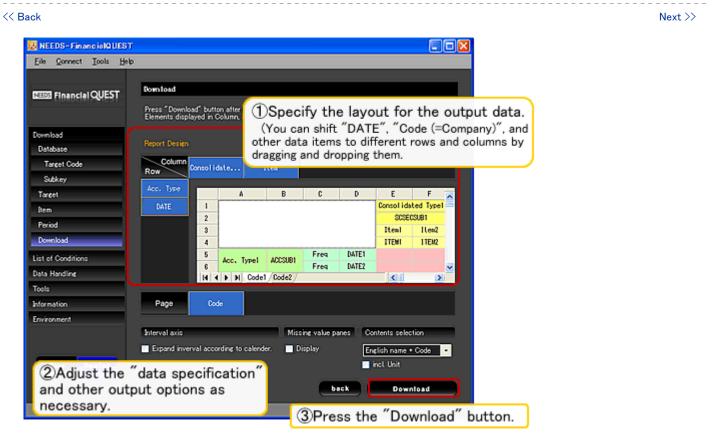
* Related links

o [Function Details] Period setting (Easy setting / Detailed setting)

<< Back Next >>

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(7) Download screen



- o Finally, check the contents set so far and decide the data output layout, then press the "Download" button.
- When swapping the positions of elements, such as lines, columns, and pages, either drag and drop the item name.



* Related links

o [Function Details] Download screen setting item

<< Back Next >>

Basic Usage > Flow of Detailed Search (4. Searching multiple databases)

(8) Data output

Keturn to "Basic Usage" list >>



- o If you press the download button, then wait, the data is output. To save the data in an Excel format file, press the "Save" icon on the top left of the screen or from the "File" menu, select "Save" (Ctrl+S).
- o If the saved file is read in again with the FinancialQuest software, the search can be replicated with the same conditions as in the past. For details, see "Loading search condition sheet".

* Related links

o [Function Details] Loading search condition sheet

<< Back

Return to "Basic Usage" list >>

(4) Function Details

- * Database specification screen
- o Database (and Target Code, Subkey) specification
- o Financial data handling

0

- * Target specification
- Target selection screen
- o Screening function
- o Screening Wizard function
- o Sort function

0

- * Item specification
- Item specification screen
- o Arithmetic operations, function usage
- o Seasonal Adjustment

0

- * Period specification
- Period specification (Easy setting / Detailed setting)
- 0
- * Download setting screen
- Download screen setting items
- 0
- * "Data handling" setting
- o Unavailable (NA) Data
- o Handling of Stock Price Data
- o Error

0

- * Other functions and settings
- o Auto Run
- o Loading search condition sheet
- "Information" and other menu items
- o Start / end method



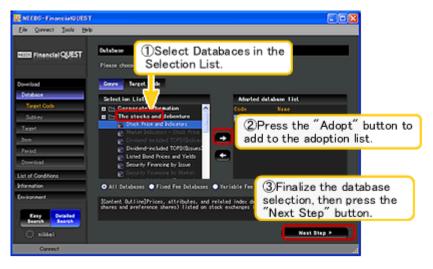
>> 5. "Environment" settings

Function Details > Database specification screen

Database (and Target Code, Subkey) specification

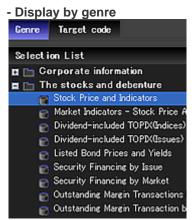
* Database specification

When the detailed search screen is started, first the database specification screen is displayed. From the list tree, select the database to be searched, then press the Right Arrow button. Check that the database to be searched has been added to the Adoption List, then press the "Next Step" button.

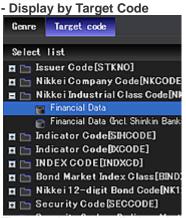


* Genre / Target Code

The databases can be displayed by genre or by Target Code.



The database is displayed by content, "Corporate information", "The stocks and debenture", etc.



The database is displayed by target code, "Issurer Code (=Stock Code, STKNO)", "Nikkei company code (NKCODE)", or the like.

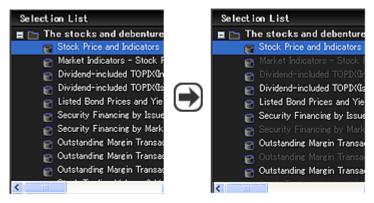
* All / Fixed Fee / Variable Fee

By using the radio buttons at the top of the screen, you can switch to "fixed fee system only" or "variable fee system only" database display.



* Select multiple databases

You can also select multiple databases. In this case, when you select the first database, databases that can not be searched at the same time are grayed out and can not be added to the Adoption List. For the second database, select a database with the same Target Code as the first database or a database that has no Target Code.



Which databases can be searched at the same time has become easy to understand.

- Related links
- o [Basic Usage] Flow of detailed search (Searching multiple databases)
 - * Target Code specification



When you complete the specification of the database, display shifts to the **Target Code** specification screen. This selects the Target Code with which to specify the target (= stock trading name or corporation, region, etc.) when searching.

(* This screen is not displayed when you search a database with no specification of targets, for example the "Nikkei Economic Statistics".)

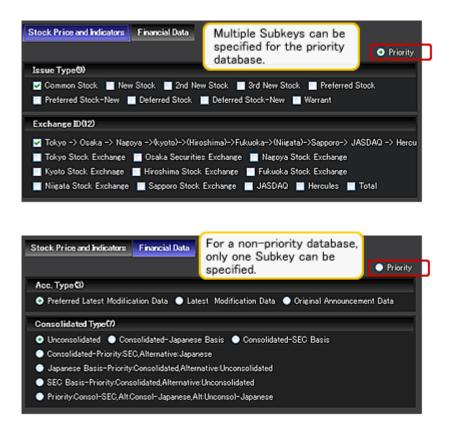
* Subkey specification



If the Target Code is specified, the "Subkey" setting screen appears. A Subkey means supplemental search conditions such as "settlement unconsolidated or consolidated standard", "stock trading name market category", or the like. The

contents of the Subkeys specified depend on the database. (There are also databases that do not require Subkey specification.

When searching multiple databases, switch among the tabs at the top of the screen and specify the Subkeys for each database. At this time, it is necessary to specify the "priority database (only one database can be so specified among those searched at the same time)". For the priority database, multiple Subkeys can be specified, but for a non-priority database, only one can be specified. To change the database to give priority to, open the tab for the new priority database, and check "Priority" at the top right of the screen.



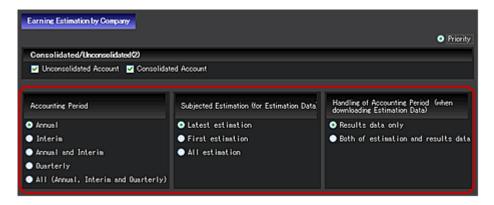
(* This screen is not displayed when you search a database that does not require specification of Subkeys, for example the "Nikkei Economic Statistics".)

>> "Function Details" top

Function Details > Financial data handling

Financial data handling

When searching "Financial Data", "Earning Estimation by Company", and other financial databases, the "financial data handling" is set with the Subkey specification screen. The default values are selected ahead of time, so switch the setting to match the application.



* Accounting Period

With a financial system database, specify whether the search target is annual settlement, interim settlement, or quarterly settlement. This is set for searching a database such as "Financial Data", "Corporate Action", "Flash Reports on Financial Data", "Segment Information (flash/actual information)", "Earning Estimates", "Earning Estimation by Company", "Major Share Holder", or the like.

| Selection branch | Meaning | |
|--------------------|--|--|
| Annual | Sets only annual settlements as the search target. | |
| Interim | Sets only interim settlements as the search target. | |
| Annual and Interim | Sets both annual settlements and interim settlements as the search target. When the settlement is not irregular, in the output data, the data is displayed arranged in order of time series "annual settlement, interim settlement, annual settlement, interim settlement ,,,,". | |
| Quarterly | Sets only quarterly settlements (3-month settlements) as the search target. [Flash Reports on Financial Data] Targets all quarterly settlements from the 1st through 4th quarters. [Earning Estimation by Company] Targets first and third quarter settlements. | |
| All | Sets annual settlements, interim settlements, and quarterly settlements (1st and 1st 3rd cumulative settlements) as the search target. | |

^{*} The "quarterly settlements" and "All" selection branches are only valid for "Earning Estimation by Company" and "Flash Reports on Financial Data" databases. For any other financial database, if "Quarterly" is specified, the output contents are blank and if "All" is specified, the result is the same as when "Annual and Interim" is specified.

* Subjected Estimation (Estimation data)

When searching the "Earning Estimates" or "Earning Estimation by Company" database, this specifies which data to acquire for the future settlement period that is the subject of the estimate.

| Selection branch | Meaning | |
|-------------------|---|--|
| Latest estimation | Acquires the latest estimation for the settlement period that is the subject of the estimate. | |
| First estimation | Acquires the estimate data from the settlement announcement of the previous term (the initial estimate data) for the settlement period that is the subject of the estimat | |
| All estimation | Acquires all the estimate data for the settlement period that is the subject of the estimate, including the settlement announcement of the previous term. | |

* Handling of Accounting Period (when downloading Estimation Data)

This specifies how to acquire data from past terms for which there is actual settlement performance data when searching the "Earning Estimates" or "Earning Estimation by Company" database.

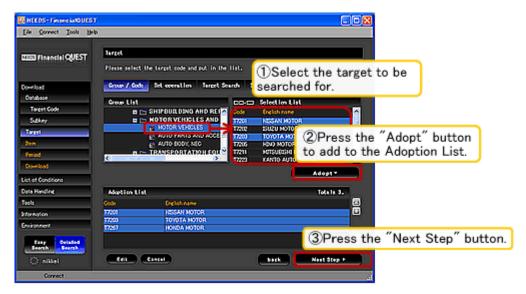
| Selection branch | Meaning | |
|---|--|--|
| Results data only | For settlement terms for which there is actual performance data, acquire only the performance data in the settlement announcement. | |
| Both of estimation and results data For settlement terms for which there is actual performance data, acquire be in the settlement announcement and the past forecast data. | | |

>> "Function Details" top

Function Details > Target Selection

Target Selection Screen

On the **Target** selection screen, select the "corporation", "stock trading name", "index" or the like that is to be searched for. (The item selected depends on the database.)

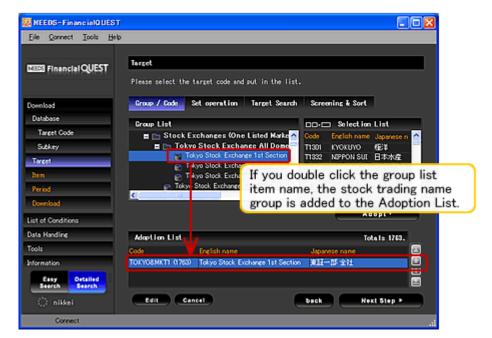


Here on the "Group List" on the left side of the screen, the industry type, exchange listed on, and other categories are displayed and on the "Selection List" on the right side of the screen, the breakdown of the category selected in the Group List is displayed.

If you want to select an individual stock trading name or the like, click the target on the Selection List, then press the "Adopt" button. (You can select multiple individual corporations by clicking each item while holding down the Ctrl button.)

*-----

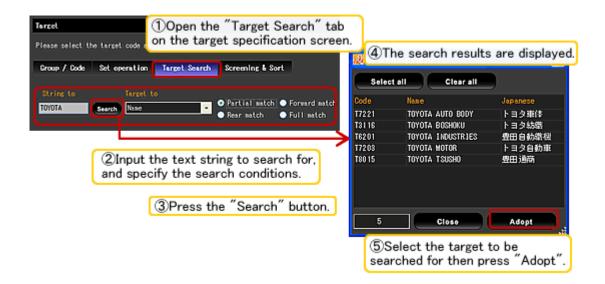
If you double click the name of an item in the Group List or select "Adopt" in the right-click menu, groups of corporations or trading names can be added to the Adoption List.



* Target search

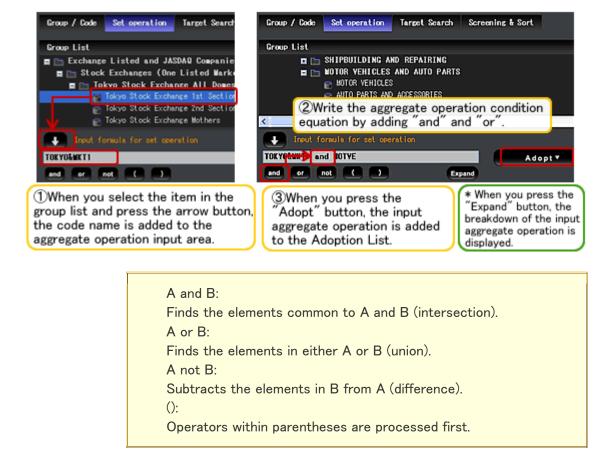
If you open the "Target search" tab, you can search for corporations and stock trading names with keyword input. Select the search target language (Japanese name, English name, code) and search conditions (partial match, forward match, rear match, complete match), input the keyword, then search. (The picture shows the results of searching with partial matching using a English keyword.)

When searching with codes, the only targets are the code selected with the Target Code specification screen. For example, if "Stock Code" was selected on the Target Code specification screen, searching with a Nikkei Company Code is not possible.



* Set Operation

If you want to search just those corporations listed in the 1st section of the Tokyo Stock Exchange whose Nikkei Industrious Class is "Motor Vehicles", use the **Set Operation** functions. On the target selection screen, if you open the "Set Operation" tab, the setting screen is displayed, so specify the group code name and condition equation for the stock trading names to be searched for.



(Set Operation input example)

- Motor vehicle industry companies listed on the 1st section of the Tokyo Stock Exchange -> TOKYO&MKT1 AND MOTOR
- o Companies listed on the 1st section of the Tokyo Stock Exchange or on Jasdaq -> TOKYO&MKT1 OR OTC
- Companies listed on the 1st section of the Tokyo Stock Exchange (except banks, securities companies, and insurance companies) -> TOKYO&MKT1 NOT (BANK OR SECR OR INSUR)
 - * Do not put extra parentheses in the equation. If there are extra parentheses, the formula may not be processed normally.

* Target property

If you select "Property" from the right click menu, the target code, Japanese and English names, and other information are displayed.



- * For details on the screening and sort functions, look here.
- o Screening function usage
- o Screening Wizard function usage
- Sorting function usage

>> "Function Details" top

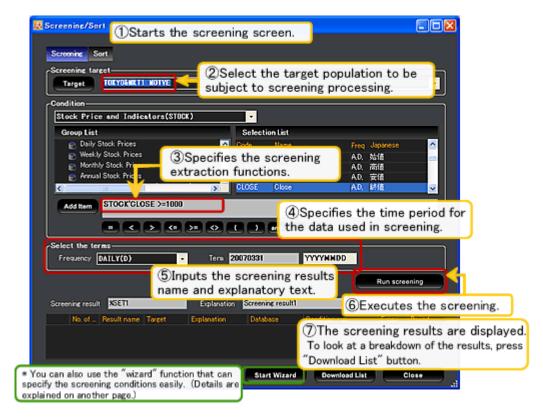
Function Details > Screening function

Screening function

The "Screening" function is a function with which you narrow down your search target (stock trading names and corporations, municipalities, etc.) by specifying extraction conditions such as "companies listed on the 1st section of the Tokyo Stock Exchange whose sales are greater than 1 trillion yen" or "cities in the Tohoku region whose municipal financial strength index is 1 or higher".

* General flow of screening

The figure below shows the rough flow for using the screening function. The conditions are specified in the form "Corporations listed in the 1st section of the Tokyo Stock Exchange (= screening target), those whose closing share price (= item used in condition specification) as of September 1, 2007 (= data timing) recorded in the 'Stock Price and Indicators' database (= database used in condition specification)" are higher than 10,000 yen(= screening extraction function)".



Below are explanations of the details of procedures.

(1) Open the "screening / sort" window.

After setting the database, Code System, and Subkey, move to the Target specification screen. If you open the "screening/sort" tab, the "Start screening" button is displayed in the screen, so open the "screening/sort" window.

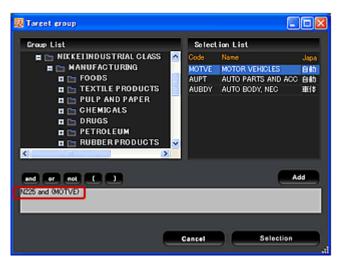


After selecting any group in the target specification screen group list, if you select "Start screening" on the right click menu, screening starts with that target as the population.



(2) Set the target for screening processing

This specifies the target set (population) subject to narrowing down processing through screening. Press the "TARGET" button on the screening screen, then specify from the "Target group list" screen or use a pull down menu to select a population used in previous screening or previous screening results.



When deciding the population on the target group list screen, you can specify not only by just inputting group code names, but also by adding "and" and "or" to form conditional expressions.

A and B:
Finds the elements common to A and B (intersection).
A or B:
Finds the elements in either A or B (union).
A not B:
Subtracts the elements in B from A (difference).
():
Operators within parentheses are processed first.

(Set Operation input example)

- Motor vehicle industry companies listed on the 1st section of the Tokyo Stock Exchange -> TOKYO&MKT1 AND MOTOR
- Companies listed on the 1st section of the Tokyo Stock Exchange or on Jasdaq -> TOKYO&MKT1 OR OTC
- Companies listed on the 1st section of the Tokyo Stock Exchange (except banks, securities companies, and insurance companies) -> TOKYO&MKT1 NOT (BANK OR SECR OR INSUR)
 - * Do not put extra parentheses in the equation. If there are extra parentheses, the formula may not be processed normally.

(3) Extraction condition specification

Input the conditional expression for extracting the target. Set the conditional expression by adding ">" and other symbols and values to the item codes selected from the item list. You can apply screening processing that combines multiple conditions by connecting expressions with each other using "and" and "or".



Example:

STOCK'OPEN >=1000 -> "Stock opening value is 1000 yen or higher" flow(NFINANCIAL'FC001) < flow(NFINANCIAL'FE021) -> "Companies for which the value of exports [FE021] is increasing faster than overall sales [FC001]"

(4) Data time period specification

This specifies the time period for the data used in the target extraction conditions. Select the term type (= data update frequency), then specify the data time period according to the input format in the right frame. (YYYY indicates the year, MM the month, and DD the day.) or entering an abbreviated expressions in an alphabetic character(s) such as "P" or "TODAY".



(5) Input the screening results name and explanatory text.

The extraction results name and explanatory text are written into the input window.



(6) Executing the screening.

Press the "Execute Screening" button to start the screening. If there is no problem with the processing, the extraction results are displayed in a list at the bottom of the screen.



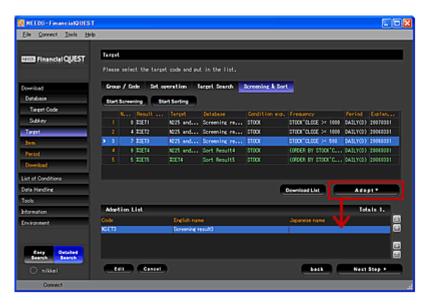
(To rearrange the order of the extracted target with the specified conditions, use the tab at the top of the screen as is to move to the **sorting screen**. If the screening results are specified as the sorting target, they can be rearranged with the set conditions.)

(7) Check the processing results, then return to the target specification screen.

After executing the screening, if you press the "Download List" button, a list of the extracted targets is displayed. (At this time, you can add individual stock trading names to the accept list by selecting a corporation name, then pressing the "Adopt" button.)



If there is no problem in the screening execution results, close the "screening/sort" window and return to the target specification screen.



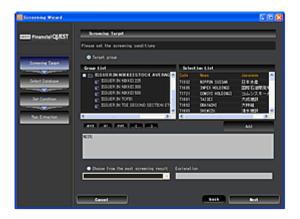
When you return to the target specification screen, a list of the screening results is displayed in the "screening/sort" tab. To make these results the search target, press the "Adopt" button to add them to the Adoption List. When the target specification is complete, then press the "Next Step" button to move to the Item specification screen.

>> "Function Details" top

Function Details > Screening Wizard

Screening Wizard function

The "Screening Wizard" is a screen with which you can easily use the screening function according to the guide on the left side of the screen. The screening function is a function that allows you to narrow down your search target according to the application, for example "companies listed on the 1st section of the Tokyo Stock Exchange whose sales are greater than 1 trillion yen" or "cities in the Tohoku region whose municipal financial strength index is 1 or higher".



* General flow of Screening Wizard

Below is the rough flow for using the Screening Wizard. The conditions are specified in the form "Corporations listed in the 1st section of the Tokyo Stock Exchange (= screening target), those whose closing share price (= item used in condition specification) as of September 1, 2007 (= data timing) recorded in the 'stocks' database (= database used in condition specification) are higher than 10,000 yen(= screening extraction function)".

Open the "Screening Wizard" window.

Select the set to be subject to screening processing..

Specify the target extraction conditions.

Specify the data time period used in screening processing.

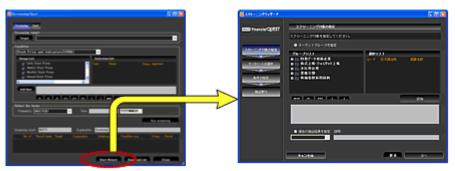
Executing the screening.

Check the processing results, then return to the target specification screen.

This explains the details of the procedures.

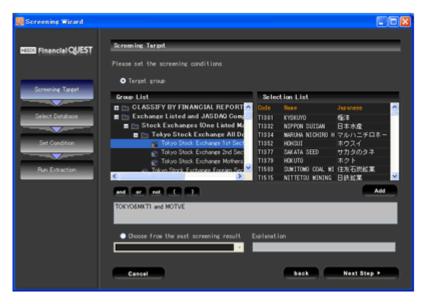
(1) Open the "Screening Wizard" window.

After starting the "screening/sort" window from the target specification screen, if you press the "Start Wizard" button at the bottom right, the screen for using the Screening Wizard is opened.



(2) Selecting the screening processing target

This specifies the population subject to screening processing (extraction according to search conditions) from the Target Group List or past screening results.



When deciding the population from the target group list, specify adding "and" and "or" or the like.

A and B:
Finds the elements common to A and B (intersection).
A or B:
Finds the elements in either A or B (union).
A not B:
Subtracts the elements in B from A (difference).
():
Operators within parentheses are processed first.

(Set Operation input example)

- Motor vehicle industry companies listed on the 1st section of the Tokyo Stock Exchange -> TOKYO&MKT1 AND MOTOR
- Companies listed on the 1st section of the Tokyo Stock Exchange or on Jasdaq -> TOKYO&MKT1 OR OTC
- Companies listed on the 1st section of the Tokyo Stock Exchange (except banks, securities companies, and insurance companies) -> TOKYO&MKT1 NOT (BANK OR SECR OR INSUR)
 - * Do not put extra parentheses in the equation. If there are extra parentheses, the formula may not be processed normally

(3) Selecting the database to use for specifying the screening conditions

Select the database to use for specifying the screening conditions. (The only databases that can be specified at those selected with the "database specification" screen.)



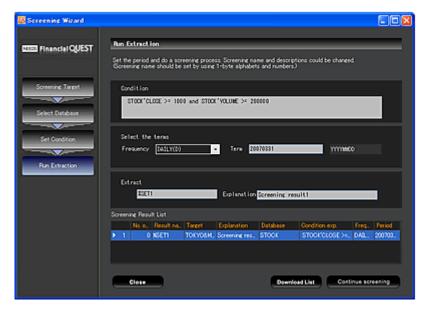
(4) Screening condition specification

Specify the screening conditions expression. The conditions are specified with the "Setting item", "Operators", and "Condition". For example, to set "daily stock opening value 1000 yen or higher", write "STOCK'OPEN >=1000".



(5) Specify the data time period used in screening processing.

This specifies the time period for the data used in the target extraction conditions. Select the data recording term type (= data update frequency), then specify the data time period according to the input example in the right frame. (YYYY indicates the year, MM the month, and DD the day.) or entering an abbreviated expressions in an alphabetic character(s) such as "P" or "TODAY".



(6) Executing the screening.

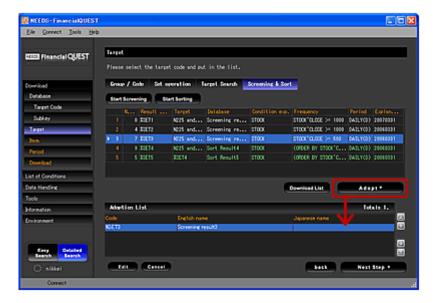
Complete the period specification, input the extraction results name and explanatory text, then press the "Run screening" button. If there is no problem with the processing, the screening results are added to the "Screening result list" at the bottom of the screen.

(7) Processing results check

You can reference the target list after screening processing by pressing the "Download List" button. (At this time, you can add individual targets to the adopted list by selecting a corporation name, then pressing the "Adopt" button.)



If there is no problem in the screening execution results, close the "Screening Wizard" window and return to the target specification screen.



When you return to the target specification screen, a list of the screening results is displayed in the "screening/sorting" tab. To make these results the search target, press the "Adopt" button to add them to the adopted list. When the target specification is complete, then press the "Next Step" button to move to the item specification screen.

>> "Function Details" top

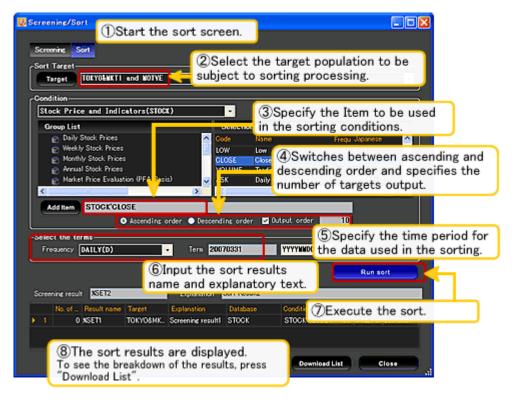
Function Details \geq Sorting function

Sorting function

The "Sorting" function is a function with which you rearrange the targets (stock trading names and corporations, regions, etc.) with the specified conditions, such as "rearrange the stock trading names used in the Nikkei 225 average in order of greater total market capitalization" or "extract the top ten companies by term net profits of those listed on the 1st section of the Tokyo Stock Exchange".

* General flow of Sorting

The figure below shows the rough flow for using the sorting function. The conditions are specified in the form "Corporations listed in the 1st section of the Tokyo Stock Exchange (= sorting target), arrange 100 stock trading names (= output order) in order of higher (= sorting order) of closing share price (= item used in condition specification) as of September 1, 2007 (= data timing) recorded in the 'stocks' database (= database used in condition specification)".



Below, these are explained in detail.

(1) Open the "Screening & Sorting" window.

When you complete the specification of the database, code system, and Subkeys, display shifts to the target specification screen. When you open the "Screening & Sorting" tab, the "Start Sorting" button is displayed on the screen, so open the sort specification screen.

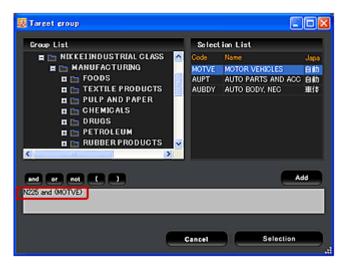


After selecting any group or individual corporations with the target specification screen, when you select "Target Sort" on the right click menu, the "Screening/Sorting" window starts up and the sort can be started with those targets as the population.



(2) Select the target population to be subject to sorting processing.

Specify the population to be the subject of sorting processing. Press the "Target" button on the screening screen, then specify from the "Target group" screen or use a pull down menu to select a population used in previous screening or previous screening results.



When deciding the population from the target group screen, specify adding "and" and "or" or the like to the group code name.

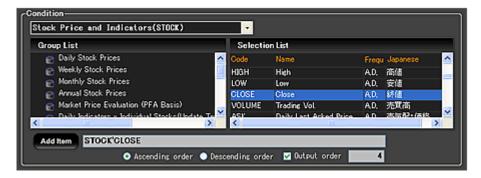
A and B:
Finds the elements common to A and B (intersection).
A or B:
Finds the elements in either A or B (union).
A not B:
Subtracts the elements in B from A (difference).
():
Operators within parentheses are processed first.

(Set Operation input example)

- Motor vehicle industry companies listed on the 1st section of the Tokyo Stock Exchange -> TOKYO&MKT1 AND MOTOR
- Companies listed on the 1st section of the Tokyo Stock Exchange or on Jasdaq -> TOKYO&MKT1 OR OTC
- Companies listed on the 1st section of the Tokyo Stock Exchange (except banks, securities companies, and insurance companies) -> TOKYO&MKT1 NOT (BANK OR SECR OR INSUR)
 - * Do not put extra parentheses in the equation. If there are extra parentheses, the formula may not be processed normall

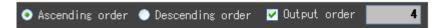
(3) Specify the data items to use for specifying the sorting conditions.

Select the data items to use for specifying the target sorting conditions Select the database with the database specification pull down menu (the only databases that can be selected are those targeted for data searching) and specify the items to use for setting the sorting conditions.



(4) Specify ascending order/descending order and specify the number of targets to output.

Input the data order and the number of items to output.



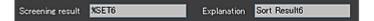
(5) Specify the time period for the data to use in sorting.

This specifies the time period for the data used in the target extraction conditions. Select the data time period type (= data update frequency), then specify the data time period according to the input example in the right frame (YYYY indicates the year, MM the month, and DD the day.) or entering an abbreviated expressions in an alphabetic character(s) such as "P" or "TODAY".



(6) Input the sort results name and explanatory text.

The sort results name and explanatory text are written into the input window.



(7) Executing the sort.

The sort is executed with the specified conditions. If there is no problem with the processing, the sort results are displayed in a list at the bottom of the screen.

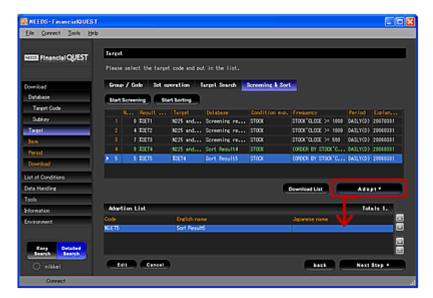


(8) Check the processing results, then return to the target specification screen.

After executing the sort, if you press the "Download List" button, a list of the extracted targets is displayed. (At this time, you can add individual targets to the accept list by selecting a corporation name, then pressing the "Adopt" button.)



If there is no problem in the sort results, close the "screening/sorting" window and return to the target specification screen.



When you return to the target specification screen, a list of the sort results is displayed in the "screening/sorting" tab. To make these results the search target, press the "Adopt" button to add them to the adopted list. When the target specification is complete, then press the "Next Step" button to move to the item specification screen.

>> "Function Details" top

Function Details > Item specification

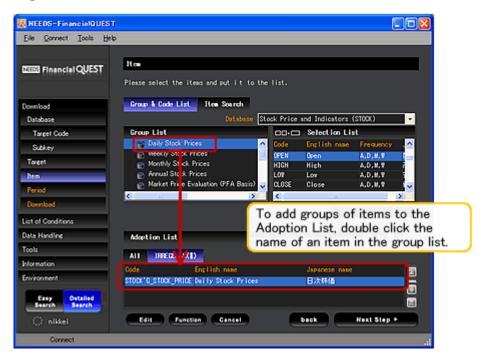
Item specification screen

Select the "Item" whose data is to be output. Items mean data items such as the "Open" and "Close" (for the stock database) or "Term net profit" (for the financial database). It is always necessary to specify items when searching for data



Here on the "Group List" on the left side of the screen, sets of items are displayed classified by data characteristic and on the "Selection List" on the right side of the screen, the breakdown of the items in the groups is displayed. When selecting an individual item, select the item in the Selection List, then press the "Adopt" button. If you click on the Selection List while holding down the Ctrl key, you can select multiple items at one time.

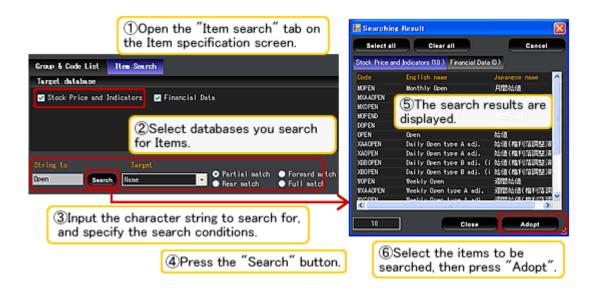
To add groups of items to the Adoption List, either double click the name of an item in the group list or select "Adopt" in the right-click menu.



In the Adoption List, Items are sorted out by term type (frequency of data update). You can download data of the same term type at the same time.

Item search

If you open the "Item search" tab, you can search for items with keyword input. Select the search target language and search conditions (partial match, forward match, rear match, full match), input the keyword, then search. (The picture shows the results of searching with partial matching using a English keyword.)



To search multiple databases at the same time, if you check multiple "Target database" on the item search screen, items matching the keyword are searched for simultaneously in multiple databases.

Item properties

If you select "Property" from the right click menu, the item code, data type, and other information are displayed.



Below is an outline of "Category" and "Data type".

*Category

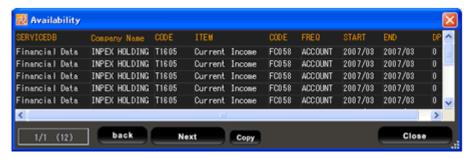
| Data type | Meaning | |
|-------------|---|--|
| Time Series | Data managed by time and date Almost all data provided by this service is of this type. The frequency with which data is generated is called its term type (Frequency). | |
| Scalar | A constant. This is data that does not vary with time and date. When a report is prepared wi scalars and time series data, for the scalars the same value is displayed for all the time perio of the output. All data recorded in the "company attribute" database is scalar. | |
| Set | These are displayed in the form of folders in the Item list. This indicates a group that bri together multiple individual items. When a group is specified to be downloaded, the result developed for the individual items belonging to the group are output as a report. Target gentlement of the group are output as a report. Target gentlement of the group are output as a report. | |

* Data type

| Data type | Meaning | |
|-------------------|--|--|
| Numeric | These are items that have real or integer numeric values. They separately contain information that sets the number of digits after the decimal point. | |
| String | These are items that have character strings as values. "Company codes", "stocking trading names", and flags are string data. | |
| Date | These are items that have dates as values. "Settlement period", "date of shareholders' meeting", "bond redemption date", etc. These are further divided into "year, month, day types", "year and month types", and "year types". | |
| True/false values | Also called "Boolean" These have a value of either true or false. | |

Availability display

If you select "Availability" from "Tools" in menu bar or in the right-click menu, the time period for which the data is recorded is displayed with the starting period and ending period. For a database such as "stock prices" and "corporate finance" for which the target is selected, the recording period is displayed for each stock trading name.



Availability display (detail)

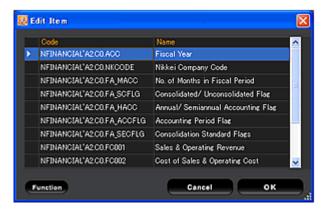
For a database, such as corporate finances or censuses, for which the data is recorded at intervals, all the dates for which data is recorded can be displayed by selecting "Availability (detail)". For example, if you call out the recording conditions for the nationwide total population in a database of "censuses taken every five years", "1970, 1975, 1980, 1985, 1990, 1995, 2000" is displayed in the data date column.



Item code summary

There are the following types of item code (strictly speaking, object code) syntax.

To change an option by directly rewriting the item code, select the item in the Adoption List, then either press the "Edit" button at the bottom of the screen or right click and select "Edit" from the right click menu.



| Code specification method | Code specification method Definition and meaning | |
|---------------------------|--|------------------------|
| Simple | Specifies the item code by itself. Item codes are not case sensitive. When using multiple databases at the same time, if there are items with the same name, the item is searched for sequentially from the priority database and the first instance of that item found is used. | |
| DB code-inclusive | This format adds the "database code" to the head of the item code. Items selected in the item list are normally set in the adoption list in this format. | STOCK'CLOSE |
| Complete specification | This format adds the target and subkey to the item code linked with a ".". There is also the format that adds just the target or sub-key. | |
| Lag/lead | There can be a difference between the actual output time period and the actual data dates. Assigning the data from n periods before to the output period is called lag. For this, [-n] is added to the item code. Assigning the data from n periods after to the output period is called lead. For this, [+n] is added to the item code. (* n is an integer from 1 to 999.) | CLOSE[-1] CLOSE[+5] |
| Making constant | This method converts an item into a scalar (constant) by | |

* Types and formats of making constants.

| Time period type specification type | Format | Explanation | Specification example |
|---|--|--|--------------------------------|
| Absolute time period specification | Item code [time period type, one absolute time period] | The time period type may be omitted. (In this case, the time period type specified in the download conditions is GDP[| |
| Relative period specification ("P" specification) | Item code [time period type, one relative time period] | This specifies 1 time period in the format P. P indicates the latest time period for which the data has been recorded and P-n indicates past time periods.(* n is an integer from 1 to 999.) The term type may be omitted. (In this case, the time period type specified in the download conditions is used.) | CLOSE[P] GDP[A,P-10] |
| "TODAY" specification | Item code [time period type, today specification one period] | This specifies 1 time period in the format TODAY. TODAY indicates the latest time period for and TODAY-n indicates past time periods. (* n is an integer from 1 to 999.) The time period type may be omitted. (In this case, the time period type specified in the download conditions is used.) | CLOSE[TODAY] GDP[A,TODAY-1] |

^{*} Some time period types that can be specified are D (daily), W (weekly), Q (quarterly), SA (semi-annually), A (annually), and A4 (fiscal year starting from April).

* Item Options

There are the following item options.

| Туре | Definition and meaning | Specification example |
|------------------------|---|---|
| Auto conversion method | You can specify the totalization (conversion) method for outputting data tabulated using the automatic time period type conversion function. (The options are discussed below.) | < <agc AVE>>IRF'JPTDC00</agc |
| Decimal depth | You can specify the number of digits after the decimal point for data acquisition. | < <doup 2="">>IRF'UKTD00CNK</doup> |

^{*} The Auto conversion method specification and Decimal depth options are only valid for macro-economic databases.

* Options for totalization method for time period type conversion

The totalization method for time period type conversion is specified in the following form. For example, when tabulating the four main values of the daily interest and foreign exchange rate database (opening value, high, low, closing value) monthly and quarterly, this totalization method converts those four values into the value at the start of the period, the minimum value, the maximum value, and the value at the end of the period, respectively.

When monthly data is prepared converting the time period type of the closing value, if no totalization method is specified, the closing value for each month's data is the closing value for the last business day of the month, but if averaging is specified as the totalization method, the closing value for each month is the average of the closing values for all the days of the month.

| Option format | Meaning | Usage example |
|---------------|--|-------------------------------|
| AGC ASIS | Same as when nothing is specified. The totalization method defined beforehand for each series is used. | < <agc asis="">>GDP</agc> |
| AGC AVE | Takes the average value for the time period. | < <agc ave="">>GDP</agc> |
| AGC SUM | Takes the total value for the time period. | < <agc sum="">>GDP</agc> |
| AGC LAST | Takes the last value in the time period. | < <agc last="">>GDP</agc> |
| AGC FIRST | Takes the first value in the time period. | < <agc first="">>GDP</agc> |
| AGC MAX | Takes the maximum value in the time period. | < <agc max="">>GDP</agc> |
| AGC MIN | Takes the minimum value in the time period. | < <agc min="">>GDP</agc> |

* Item options and arithmetic operations and function usage methods

When using item options in an expression or with functions, specify as follows.

| Туре | Usage example | |
|------------|--|--|
| Expression | < <agc 2="" ave,doup="">>E - <<agc 2="" ave,doup="">>MP</agc></agc> | |
| Function | FLOW(< <agc 3="" ave,doup="">>IRF'UKTD00CNK)</agc> | |

For details on calculation functions using mathematical functions and arithmetic operations, look here.

- Arithmetic operations, function usage

>> "Function Details" top

Function Details > Arithmetic operations, function

Arithmetic operations, function usage

(1) Application of arithmetic operations

After selecting the items with the "Selection List" or "Adoption List" on the item specification screen, either press the "Edit" button at the bottom of the screen or right click and select "Edit" from the right click menu.



The item code (object code) edit screen appears. You can apply arithmetic operations to items by adding symbols such as "+" and "-" to the codes. There are five symbols you can use: "+ (add)", "- (subtract)", "* (multiply)", "/ (divide)", and "** (exponent)".



Input example:

- STOCK'CLOSE 100
 Outputs the closing stock price minus 100.
- STOCK'CLOSE STOCK'CLOSE[-1]
 Outputs the difference between the closing value and the previous day's closing value.

If an invalid value and a valid value are operated together the result is an invalid value. For example, if ND (no data) + "valid value" is calculated, the result is "ND". If not available value (NA) and a valid value are operated together the result is a as specified in "Data handling" -> "Handling of NA for operations".

(2) Application of mathematical functions

When searching data, you can apply mathematical functions to any items you choose. This is handy for calculating the growth compared to the previous year or for rounding off to any number of digits you choose.

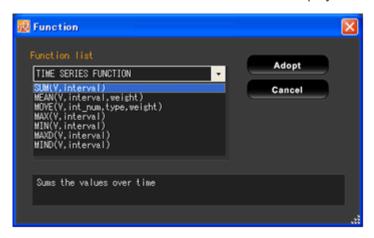
* Application methods for mathematical functions

(1) Select the items to which the mathematical function is to be applied.

Select the items with the "Selection List" or "Adoption List" on the item specification screen, then either press the "Function" button at the bottom of the screen or right click and select "Function" from the right click menu.

(2) Select the function item to apply.

Select the function item to apply to the items. Select the function type from the pull down menu, then select desired item from the mathematical functions listed in the display.



(3) Specifying arguments (only when required)

When it is necessary to specify an argument other than an item name (data acquisition range or other setting value), the argument is specified manually according to the notation example. (For the specification method, see the function list below.)



(4) Adding to Adoption List

When the mathematical function specification is complete, the items to which the function is applied are added to the Adoption List.

* Function list

The mathematical functions that can be applied to items are as follows. Items in square brackets are arguments that [] may be omitted. Function names are not case sensitive. "Code" indicates an Item Code.

– $\mbox{\bf Arithmetic functions}...\mbox{\bf Calculate natural logarithms, round off, etc.}$

| Function format | Meaning | Usage example |
|---------------------|---|--------------------|
| LOG(Code) | Natural logarithm | LOG(GDP) |
| EXP(Code) | exponent of e | EXP(GDP) |
| ROUND(Code,digits) | Round-off (The number of digits after the decimal point is specified with an argument.) | ROUND(FLOW(GDP),1) |
| FLOOR(Code, digits) | Truncates (The number of digits after the decimal point is specified with an argument.) | FLOOR(IIP,0) |

- Lag functions...Compares an item with the same data from the same period the previous year or from the previous period and calculates the amount and percentage of change.

| Function format | Meaning | Usage example |
|-----------------|--|---------------|
| CHY(Code) | Percentage change from the same period in the previous year (* Subjects are monthly - yearly.) | CHY(GDP) |
| FLOW(Code) | Percentage change from the previous period | FLOW(GDP@) |
| CH(Code) | Percentage (annual) change from the previous period (* Subjects are monthly – yearly.) | CH(GDP@) |
| CHVY(Code) | Amount of change from the same period in the previous year (* Subjects are monthly – yearly.) | CHVY(GDP) |
| CHV(Code) | Amount of change from the previous period | CHV(GDP@) |

- Time series functions...Calculates the total value, average value, etc. for the data for the specified time period.

| Function format | Meaning | Usage example |
|--|--|---|
| SUM(Code,Period) | Total | SUM(GDP,t-3 to t) |
| | | = 4-period moving total |
| MEAN(Code,Period [,Weight, Weight,]) | Average (* When weights are specified, the weighted average is calculated. The number of periods and the number of weights must match.) | MEAN(GDP,t-3 to t) = 4-period moving average MEAN(GDP,t-3 to t,1,2,3,4) = 4-period moving average (weighted in favor of the most recent period) |
| MOVE(Code,period,Type [,Weight, Weight,]) | Moving average * Number of periods = integer up to 255 * When weights are specified, the weighted average is calculated. The number of periods and the number of weights must match. * Type = Processing method (explained below) when NA value included in specified period | MOVE(CLOSE,20,1) = 20-period moving average |
| MAX(Code,Period) | Maximum value in the time period | MAX(GDP,t-3 to t) |
| MIN(Code,Period) | Minimum value in the time period | MIN(GDP,t-3 to t) |
| MAXD(Code[,Period]) | Returns the date of the maximum value. When there are multiple dates with the maximum value, returns the earlier of those dates. If the "period" argument is omitted, the entire search period is targeted. It is not possible to specify a moving time period in the "period" argument. | MAXD(CLOSE,D,TODAY to 20010912) = Date of the maximum value between the specific two points |
| MIND(Code[,Period]) | Returns the date of the minimum value. When there are multiple dates with the minimum value, returns the earlier of those dates. If the "period" argument is omitted, the entire search period is targeted. It is not possible to specify a moving time period in the "period" argument. | MIND(CLOSE,A,TODAY) = Date of lowest value since the start of the year |

- Target operation functions...Calculates values for all the targets subject to the search.

| Function format | Meaning | Usage example |
|-----------------|---|-------------------------------------|
| | | TSUM(CLOSE) |
| | | = Calculates the sum of the |
| TSUM(Code) | Returns the value of the total of all the target data | closing values of all stock trading |
| | subject to the search in each time period. | names |
| | | EC001/TSUM(EC001)*100 |
| | | =Calculates the share of sales |
| TMEAN(Code) | Returns the average of all the target data subject to the search in each time period. | TSUM(CLOSE) |
| | | = Calculates the average of the |
| | | closing values of all stock trading |
| | | LVHOUS-TMEAN(LVHOUS) |
| | | = Calculates the mean deviation |

- Item operation functions...Returns the total and average of the specified items.

| Function format | Meaning | Usage example |
|---------------------------|---|----------------------------------|
| LSUM(Formula1,Formula2,) | Calculates the total value of all the items specified as arguments. | TSUM(OPEN,CLOSE) |
| | | = Calculates the total of the |
| | | opening value and closing value. |
| | | LSUM(I95,J95,C95,E95,-MP95) |
| LMEAN(Formula1,Formula2,) | Calculates the average of all the items specified as arguments. | TMEAN(OPEN,CLOSE) |
| | | = Calculates the average of the |
| | | opening value and closing value. |
| | | LMEAN(CDRT03A,CDRT3B) |

* Argument specification

- Time period specification method

When it is necessary to specify the time period subject to totalization with a function argument, write with the appropriate format below.

| Time period type | Format | Explanation | Specification example |
|------------------------------------|--|---|--|
| Absolute time period specification | [Term Type], starting time period TO ending time period | Express the time periods in the format YYYYMMDD. The time period type may be omitted. (In this case, the time period type determined by the download settings is used.) "TO ending time period" may be omitted. The calculated results are scalar (a constant). | A,1990 to 2000 D,2000 200001 to 200012 |
| Relative time period specification | [Term Type], starting time period TO ending time period | Express the time periods in the format P (The most recent time period for each data is treated as P.) The time period type may be omitted. (In this case, the time period type determined by the download settings is used.) "TO ending time period" may be omitted. The calculated results are scalar (a constant). | A,P to P-9 D,P P-99 to P |
| Moving time period specification | Starting time period TO ending time period | In each time period in the time period subject to search, "T" is assigned to that time period. "T-n" indicates the direction into the past; "T+n" indicates the direction into the future. The calculated results are time series data. | T-3 to T T-2 to T+2 |

- MOVE function "Type" argument

This specifies the processing method when a not available (NA) value is included in the specified period for calculating a moving average with the MOVE function.

| Type selection branch | Meaning |
|-----------------------|---|
| 1 | Calculates with only the valid data for that time period and excludes the NA data. The denominator is the number of valid data items. |
| 2 | NA data is ignored and data is acquired farther into the past until there is valid data for the specified number of time periods. |
| 3 | Calculation replaces NA data with the immediately preceding valid data. |
| 4 | Calculation treats NA data as 0. |

* Handling of invalid values in function calculation

| Missing value pattern | Calculation result |
|---|---|
| NC(Common to all functions) | The result of calculation is NC. |
| NA (Common to all functions) | According to the settings in [Data handling] -> [Handling of NA data in operations] |
| ND (FLOW/CH/CHV) | If the value corresponding to "the previous period" is ND, the system goes farther back in time to find a valid value and uses that value for calculating the comparison with the value for the current period. |
| ND (MAX/MIN) | Calculates ignoring ND (no data). |
| ND (MEAN/ SUM move time period) | NA data in the move time period is ignored and data is acquired farther into the past until there is valid data for the specified number of time periods. |
| ND (MEAN/ SUM absolute time period or relative time period) | Calculates ignoring ND in the specified time period. When finding the average, the number of ND items is subtracted from the denominator. |
| ND (MOVE) | NA data in the move time period is ignored and data is acquired farther into the past until there is valid data for the specified number of time periods. |
| ND (other mathematical functions) | The result of calculation is ND. |
| NO (Common to all functions) | The result of calculation is NO. |

<Definition of Invalid Value,">

- NA (Not Available: invalid value)... Indicates that data could not be obtained from the information provider, is not generally publicized, there is no value assigned (for stock and bond related data), or the like.
- ND (No Data)... This means data that does not exist (for example, sales for a bank), stock or bond data for a non-business day or a day the exchange was closed, data for time outside the range of the time period for which the data was recorded, etc.
- o NO (No Object)... Indicates a value for which the specified target or item does not exist.
- NC (Not Calculated: Can not be calculated)... Indicates division by zero, a growth ratio that includes negative numbers, or other such calculation.

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 ${\bf Function\ Details > Seasonal\ Adjustment}$

Seasonal Adjustment

Amidst monthly and quarterly economic statistical data, there are some whose values vary with the seasons, such as department store sales and summer demand for electricity. If you use the seasonal adjustment function, you can acquire data with the seasonality eliminated using the "X-11" or "X-12-ARIMA" technique.

* Seasonal adjustment execution conditions

The databases with which the seasonal adjustment function can be used are the "Nikkei Economic Statistics", "Consumer Statistical Data", and other databases recording domestic and overseas macro-economic data. (This function cannot be used with "Stock Price and Indicators" and other securities databases and "Financial Data" and other financial databases. A condition for target data for the seasonal adjustment function is that the time period type (data update frequency) is monthly or quarterly or that it is time series data that can be converted to monthly or quarterly data.

A minimum of 5 years of recorded data is required. In order to obtain stable seasonal adjustment values, about 7 years of data is necessary for monthly data and about 15 years of data for quarterly data.

* Seasonal adjustment types

* X-11

This executes seasonal adjustment according to the X-11 technique.



* X-12-ARIMA

This technique combines model estimation using regARIMA and X-11. First, pre-adjustment is done with regARIMA and data is prepared that takes past data adjusted with the model and links it with future forecast values. Next, X-11 is applied to calculate the seasonally adjusted value. Compared to using just X-11 alone, this combined method can output more stable seasonally adjusted values, particularly for the periods nearest to the current period.



* Seasonal adjustment usage procedure

- Starting seasonal adjustment

Select the Items to be seasonally adjusted with the "Selection List" or "Adoption List" on the item specification screen, then select "Seasonal Adjustment" either on the right click menu or the "Tool" menu.



- Checking the data recording time period

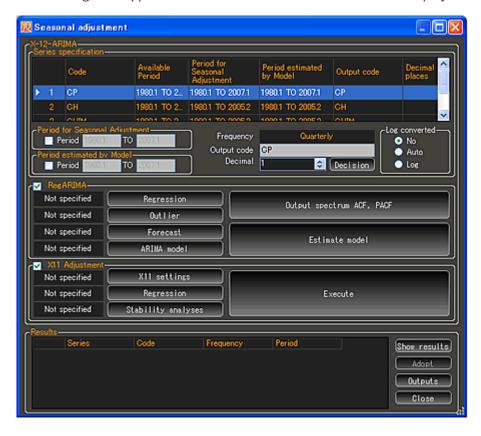
Next, the Seasonal Adjustment time series select screen is displayed. Check that the duration of data recorded is adequate for seasonal adjustment processing, then specify the target items and time period type and press the "OK" button. It is also possible to seasonally adjust multiple sets of data items at the same time.



- Starting the setting screen

The seasonal adjustment setting screen is displayed, so specify the conditions.

When seasonally adjusting multiple sets of data items at the same time, the only conditions that can be set differently for each set of data items are the "seasonal adjustment time period", "model estimate time period", "output code", and "number of digits after the decimal point". "regARIMA", "X-11 seasonal adjustment", "logarithmic conversion" and other settings are applied the same to all the sets of data items displayed.

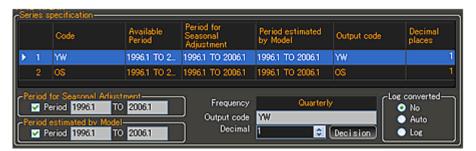


* Seasonal adjustment settings

Since regulation values are assigned to each setting beforehand, it is also possible to execute seasonal adjustment processing with those settings as is. If you want to finely adjust conditions, open the setting screen as below and change parameters.

- Time series setting

To change the seasonal adjustment time period and the number of digits after the decimal point for individual sets of data items, select the target item and adjust the setting.



[Seasonal adjustment time period and other settings]

To change time period for which seasonal adjustments are prepared or the target time period for model estimation using regARIMA, check "Period" and input the time period manually. (If you do not change this setting, the time period for which data has been recorded is set.) In both cases, the time period you set must be within the time period for which data has been recorded.

The output code for the seasonally adjusted values and the number of digits after the decimal point are also set here. After changing a time period, the number of digits after the decimal point, or other setting, be sure to press the "Decision" button.



The time period input format is as follows. Separate the year and term and month with periods.

- o Monthly data yyyy.m (m is 1-12.) (* Example: 2007.9 -> September 2007)
- Quarterly data yyyy.q (m is 1-4.) (* Example: 2007.4 -> Fourth quarter of 2007)
 - * Unlike regARIMA, seasonal adjustment with X-11 does not use pre-adjustment, so changing the "model estimation time period" does not change the seasonally adjusted value.

[Logarithmic conversion settings]

This specifies whether or not to use logarithmic conversion to eliminate the dispersion trend when the dispersion of time series data increases or contracts with time. When "Auto" is selected, whether or not to use logarithmic conversion is judged automatically.



* regARIMA setting

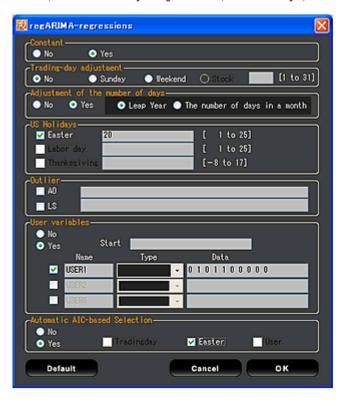
To use pre-adjustment with regARIMA before making the seasonal adjustment, put a check in the "regARIMA" checkbox. Regulation values are initially assigned to recursion variables and other settings, but it is also possible to finely adjust the conditions. If you change a setting, "Specified" is displayed to the left of the button. To look at the autocorrelation coefficient and partial autocorrelation coefficient when setting the ARIMA degree, press the "Output spectrum ACF, PACF" button.

To estimate the model with the set conditions, press the "Estimate Model" button. After model estimation, execute seasonal adjustment with X-11.



[Regression variables]

This sets the recursion variables for prior adjustment. Adjust each item as necessary: constant items, Trading-day adjustment, number of days adjustment, US Holidays, Outlier, user variables, AIC test, etc.



Constant

This specifies whether or not to establish constants in the regARIMA model. If the average for the original data increases or decreases with time, it increases the forecast precision to estimate with a model that takes the difference and has constants.

- Trading-day adjustment

This specifies the day of the week fluctuation adjustment.

- Adjustment of the number of days

This adjusts for fluctuation due to leap years and the different number of days in different months.

- US Holidays

This adjusts for the fluctuation before and after US holidays. This specifies how many days before the holiday are influenced by each holiday, Easter, Labor Day, and Thanksgiving.

- Outlier

When it is judged ahead of time that there is a level shift or abnormal value due to change in the economic environment or system change, set adjustments and eliminations. In the text box in the right column, input the date on which the abnormal value or level shift occurred in the format "YYYY.MM".

- User variables

This sets whether or not to use a user-specified variable as a recursion variable. When "Yes" is selected, specify the starting period and variable name (any name of your choice), type, and data. Input time series data for the number of time periods delimited by spaces in the data column, for example "0 0 0 0 0 1 1 1 1 1 1 1 1". For user variable data, at a minimum, the seasonal adjustment time period + 1 year ahead are required.

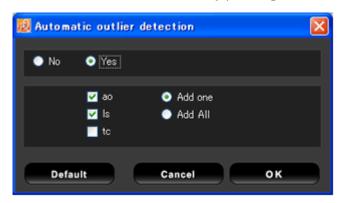
| X-12-ARIMA command correspondence table | | |
|---|-----------------------------|----------------------|
| Day of the week adjustment | Number of days adjustment | Supported parameters |
| | No | tdnolpyear |
| Day of the week type | Leap year | td |
| Day of the week type | Number of days per month | tdnolpyear lom/loq |
| | No | td1nolpyear |
| Saturday type | Leap year | td1coef |
| Saturday type | Number of days per month | td1nolpyear lom/loq |
| No | Leap year | lpyear |
| | Number of days per month | lom/loq |
| Stock type | - | tdstock[n] |

- Automatic AIC-based Selection

When outputting the AIC test results, select "Yes" for the AIC test, and check the necessary items. After executing the model estimation, check the results by pressing "Show Results" button.

[Automatic outlier detection]

When an abnormal value search is done automatically, select "Yes". Check the necessary item, abnormal value (ao), level shift (Is), or temporary change (tc), and select either "Add one" or "Add All". After executing the model estimation, check the search results by pressing "Show Results" button.



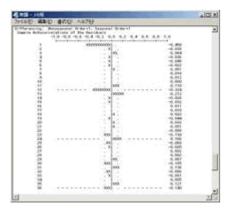
[Forecast value setting]

This specifies the number of time periods for calculating forecast values with the ARIMA model. Forward indicates the future and backward indicates the past.



[Output spectrum ACF, PACF]

If you want to plot autocorrelation coefficients and partial autocorrelation coefficients in order to obtain the information required for determining the ARIMA model, press this button. For normal differences and seasonal differences, you can look at four patterns, combining no difference or a one-step difference for each. For the results, press the "Show Results" button.

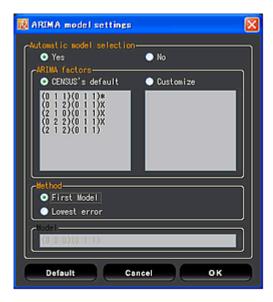


[ARIMA model]

This decides the number of ARIMA dimensions. This specifies when "automatic selection" is selected, which list is automatically selected from, the default model candidates of the United States Department of Commerce Census Bureau or the model candidates prepared by the user from a plot of the autocorrelation coefficient and partial autocorrelation coefficient.

When the number of dimensions list of the model candidates specified by the user is set, input each line in the format "(p d q)(P D Q) X". When the number of dimensions used in the case in which all the combinations are thrown out is pre-determined, the X at the end of the number of dimensions row changes to *. X is not needed at the end of the last line.

When "Do not use automatic setting" is used, input the number of dimensions in the "Model" column in the format "(p d q)(P D Q)".



[Estimate model]

The model is estimated with the conditions specified with regARIMA. When there are multiple model candidates, select the one that fits the conditions. When you press this button, then press the "Show Results" button below, a separate window opens and the results are displayed.

* X-11 Seasonal adjustment settings

To adjust data seasonally using X-11, check the "X-11 Adjustment" checkbox. Regulation values are initially assigned to the settings, but it is also possible to finely adjust the conditions. If you change a setting, "Specified" is displayed to the left of the button.



[X-11 Settings]

This decides the conditions for seasonal adjustment with X-11.



* Mode

Select the multiplication type or addition type as the seasonal adjustment type. Sometimes the initial value is automatically determined by the logarithmic conversion setting and the regARIMA recursion variable setting.

* Outputs

Check the series prepared by execution of X-11 seasonal adjustment.

* Force

This can be specified when annual error corrected (@SAA) or rounding error corrected (@RND) is selected with "Outputs". When it is necessary to make the annual average value or total value for the original series and the

seasonally adjusted values equal, specify the starting month for one year (January for the calendar year or April for the fiscal year).

* Seasonal Filter

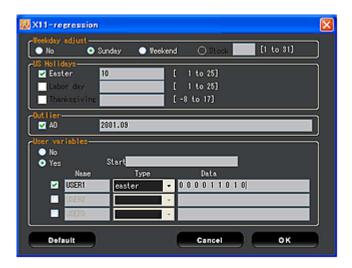
Set the number of items for the moving average (filter) for calculating the seasonal change elements. When "Auto" is selected, this is set based on the results of the moving seasonality ratio I/S (MSR).

* Sigmalimits

This specifies the lower limit and the upper limit for the standard deviation (sigma) used in judging abnormal values (singular term). Irregular elements judged to be abnormal values are adjusted by applying a correction weight.

[Regression]

When the X-11 type number of business days adjustment is made, this sets weekday adjust, US Holidays, outlier, and user varibles.



* Weekday adjust

This specifies the day of the week fluctuation adjustment.

* US Holidays

This adjusts for the fluctuation before and after US holidays. This specifies how many days before the holiday change due to each holiday, Easter, Labor Day, and Thanksgiving.

* Outlier

When it is judged ahead of time that there is an abnormal value due to change in the economic environment or system change, this sets adjustments and eliminations. In the text box in the right column, input the date on which the abnormal value occurred in the format "YYYY.MM".

* User variables

This specifies whether or not to use a user specification as a recursion variable. When "Yes" is selected, specify the starting period and variable name (any name of your choice), type, and data. Input time series data for the number of time periods delimited by spaces in the data column, for example "0 0 0 0 0 1 1 1 1 1 1 1". For user variable data, at a minimum, the seasonal adjustment time period + 1 year ahead are required. You can not specify here the same type of variable as used with regARIMA.

| X-12-Arima command correspondence table | |
|---|----------------------|
| Day of the week adjustment | Supported parameters |
| Day of the week type | td |
| Saturday type | td1coef |
| Stock type | tdstock[n] |

[Stability analyses]

To check the stability of seasonally adjusted values and check whether or not seasonality has been well eliminated, select either MAPR (hysteresis) analysis or sliding span analysis. Check the diagnosis results, but pressing the "Show Results" button after executing seasonal adjustment with X-11.

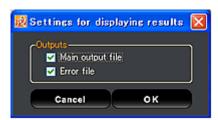


[Execute]

This button executes seasonal adjustment with X-11. When seasonally adjusted values are prepared, the series name is displayed in the "Results" column. If the series is not displayed, check the contents of the processing results (error display), change the conditions as necessary, and re-execute.

[Outputs]

You can specify the type of file opened after the end of seasonal adjustment processing. This is used to verify the process of the processing in detail.

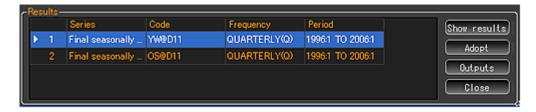


When seasonal adjustment is done, two files are created: "processing results" and "error display". When you press the "Show Results" button on the seasonal adjustment screen, the file whose checkbox is checked in the results display settings is displayed on the screen.

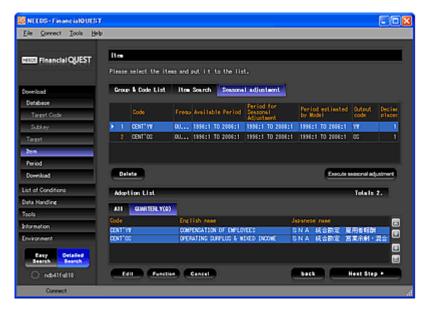
The processing results record the X-12-ARIMA execution conditions (specs) and the processing process output contents. The error display records the contents of errors during processing. (This file is prepared even for a normal end.)

* Use of seasonal adjustment results

When seasonally adjusted values are prepared, the series name is displayed in the "Results" column at the bottom of the screen. To download this data, press the "Adopt" button to add it to the Adoption List on the item selection screen. To end the seasonal adjustment, press the "Close" button at the bottom right.



When you end the seasonal adjustment, the "Seasonal Adjustment" tab is added to the item specification screen and a list of items that were subject to seasonal adjustment processing in the past is displayed. To change regARIMA or X-11 conditions, press the "Execute" button to open the re-do seasonal adjustment screen.



^{*} The X-12-ARIMA used in FinancialQUEST uses "Version 0.2.9 of the Final X-12-ARIMA seasonal adjustment program for Unix workstations", released in January 2002.

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^{*} For a more detailed explanation of X-12-ARIMA, see the following page of the Bank of Japan. http://www.boj.or.jp/type/exp/ron9702c.htm

Function Details > Pperiod specification

Period specification

The time period specification screen specifies the time period for which data is to be acquired. This screen is used in the two specification modes of "Easy Setting" and "Detailed Setting".

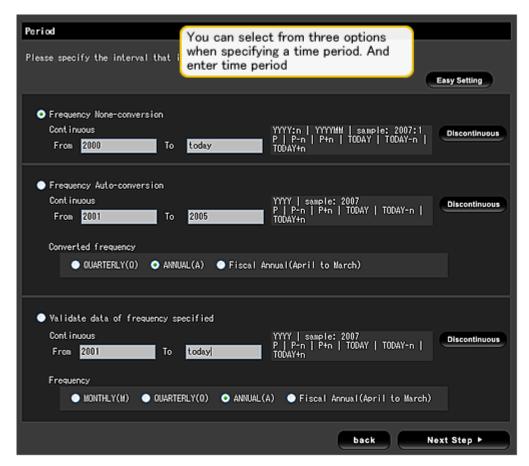
[1] Easy Setting

Select the time period from the selection branches, which include "One month", "Five years", etc. Pressing the "Detail Settings" icon at the top right moves the display to the detailed specification screen.



[2] Detailed Setting

This screen is for specifying the time period manually. You can specify the time period as a range, for example "from 2000 to 2006" or specify multiple individual years, such as "2001, 2002, 2006".



* Time period specification options

You can select from three options when specifying a time period: "Frequency None-Conversion", "Frequency Auto-Conversion", and "Validate data of frequency specified". (The number of these options that can be selected depends on the database.) For example, for stocks and corporate finance, the only selection branch is "Frequency

None-Conversion", but for the Nikkei comprehensive economics file, all three selection branches are displayed. Time **Frequency** (Term Type) means the "data generation frequency".

| Selection branch | Meaning |
|--------------------------------------|---|
| Frequency None-Conversion | Specifies only the download time period. The Frequency is automatically decided as the shortest time period type the database has. For example, when downloading daily stock prices, if you specify the time period "2005–2006", the daily data from January 1, 2005 through December 31, 2006 is downloaded. (Days on which securities markets were closed are treated as no data (ND).) |
| Frequency Auto-Conversion | The data is converted to the specified Frequency and output. For example, for data recorded monthly, if it is specified to convert the Frequency to "quarterly", the monthly data is totalized into quarterly data and output. This selection branch can be selected with the macro-economic database etc. |
| Validate data of frequency specified | Downloads data of the specified Frequency. Data can only be acquired when the database records data of the specified time period type. There is no automatic totalization function if a time period type is specified that does not exist in the database. This selection branch can be selected with the macro-economic database etc. |

* Time period specification method

The time period specification methods are as follows.

(1) Specify the time period as a range.

This is used when specifying the starting time and ending time of the time period to acquire all the data in that range. You can select from among three specification methods: "absolute time specification", "relative time specification", and "TODAY specification".

Specify the time period with absolute times (= State concrete dates).>

For absolute time period specification, specify the day and month in the format YYYYMMDD or YYYYMM:n. (YYYY indicates the year, MM the month, DD the day, and n is a number.)

(a) Specifying with the format YYYYMMDD or YYYY/MM/DD

| Specification in da | ys $	extstyle 	extstyle$ | e format YYYYMMDD or Y | YYY/MM/DD. |
|---|---|---|------------|
| Continuous date ran | ge | YYYYMMDD 例 20070911 | |
| From [20070401 | To 20070630 | YYYYMMDD # 20070911 P P-n P+n TODAY TODAY-n TODAY+n | |

| Continuous date i | YYYYMMDD \$\$ 20070911 | |
|---------------------------------------|--------------------------|--|
| From 200701 | To 200703 | YYYYMMDD #4 20070911 P P-n P+n TODAY TODAY-n TODAY+n |

* Specification in years -> Input in the format YYYY

| Continuous date range | | YYYYMMDD 84 2007091 |
|-----------------------|---------|---|
| From 2000 | To 2002 | YYYYMMDD \$4 20070911 P P-n P+n TODAY TODAY-n TODAY+n |

(b) Specifying with the format YYYYMM:n (specyfy with Colon(:))

| * Specify with the | e format YYYY:n | |
|-------------------------------------|-----------------|--|
| Continuous date | range | YYYYMMDD 94 20070911 |
| From 2007:4 | To 20076 | YYYYMMDD 69 20070911 P P-n P+n TODAY TODAY-n TODAY+n |

 \rightarrow This means the "nth period of the year yyyy".

| * | Specify | with | the | format | "VVVVI | MM·n ² |
|---|---------|-------|-----|--------|--------|-------------------|
| ~ | SHECHY | WHILL | INE | IOrmai | | VIIVI-FI |

| Cor | ntinuous date ra | ange | YYYYMMDD ∰ 20070911 |
|------|------------------|-------------|--|
| From | 200104:1 | To 200604:1 | YYYYMMDD #£ 20070911 P P-n P+n TODAY TODAY-n TODAY+n |

^{-&}gt; Acquires the data from April 1, 2007 through June 30, 2007.

^{-&}gt; For daily stock prices, acquires the data from the first day of January 2007 (January 1) through the last day of March (March 31). (Days on which securities markets are closed are treated as no data (ND).)

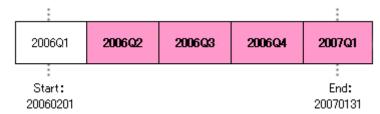
 $[\]rightarrow$ For daily stock prices, acquires the data from the first day of January 2000 (January 1) through the last day of 2002 (December 31). (Days on which securities markets are closed are treated as no data (ND).)

-> This means the "nth period of month MM of the year YYYY".

- When specifying the time period with a colon (:), the meaning depends on the time period type of the data being acquired. For example, if "YYYY:n" is specified on the "Do not specify time period type" screen, when weekly data is downloaded, "YYYY:n" means the "nth week of the year YYYY" and when quarterly data is downloaded, "YYYY:n" means the "nth quarter of the year YYYY".
- For "Automatically convert time period type" or "Output the specified time period type data", the data is output
 with the time period specified with the radio button. For example, when quarters are selected with
 "Automatically convert time period type", "YYYY:n" means the "nth period of the year YYYY".

Cautions for absolute time period specification

1. When the time period is specified as a range, the data acquired is data for "time periods whose starting days" are included in the range. For example, when you specify as in the table below to acquire quarterly data from February 1, 2006 to January 31, 2007, data is downloaded from the second quarter of 2006 through the first quarter of 2007.



2. When "Automatically convert time period type" or "Output the specified time period type data" is selected, data can not be acquired unless the time period type specified with the radio button and the format of the input time period match.

Specifying the time period with a relative value ("P" specification)>

"P" means "the most recent time period for which data has been recorded". "P-3" means "three periods before the most recent time period for which data has been recorded". In particular, for financial data, since the data generation frequency is not uniform and the settlement period depends on the company", it is handy to specify a relative value such as "n periods before the most recent". When you specify "P" to "P-9" as in the figure, this mean "acquire the data for the most recent 10 time periods".

* P specification examples

| Continuous date range | | YYYYMMDD 6% 20070911 |
|---|--------|--|
| From P | To P-9 | YYYYMMDD #6 20070911 P P-n P+n TODAY TODAY-n TODAY+n |

(Table) Format for P specification

| Format | Meaning |
|--------|---|
| Р | Indicates the most recent (newest time point) for each data series. |
| P-n | Indicates "n time periods before" the most recent (newest time point) for each data series * n is from 1 to 999. |
| P+n | Indicates "n time periods in the future from" the most recent (newest time point) for each data series. * n is from 1 to 999. * This is valid for forecast data, for example in performance forecast databases. |

<Specify the time period with "TODAY">

"TODAY" means "the time period that includes today". For example, when you search for daily data by specifying from "TODAY" to "TODAY-9" on September 30, 2007, this means the same as "from September 21, 2007 through September 30, 2007". For quarterly data, it means the same as "from the second quarter of 2005 to the third quarter of 2007".

| * Specifying with "TODAY" | | |
|---|------------|---|
| Continuous date range | | YYYYMMDD (## 20070911 P P-n P+n TODAY TODAY-n TODAY+n |
| From TODAY | To TODAY-9 | TODAY-n TODAY-n |

 $[\]rightarrow$ Acquires the data for the ten most recent time periods including the most recent date.

^{-&}gt; For daily data, this acquires the data for the ten most recent time periods including the date on which the search is executed.

* Specifying combining an absolute time period specification with a TODAY specification
It is possible to search by combining an "absolute time period specification" with a "TODAY" specification

| Continuous date range | | YYYYMMDD 例 20070911 |
|---|----------|---|
| From 20070401 | To TODAY | YYYYMMDD (M) 20070911 P P-n P+n TODAY TODAY-n TODAY+n |

(Table) Format for TODAY specification

| Format | Meaning |
|---------|---|
| TODAY | Indicates the time period that includes "today". |
| TODAY-n | Indicates "n time periods before" the time period that includes "today". * n is from 1 to 999. |
| TODAY+n | Indicates "n time periods into the future from" the time period that includes "today". * n is from 1 to 999. |

(2) Specifying individual time periods

When you press the "Non-continuous specification" for "Do not specify the time period type", "Convert the time period type automatically", or "Output data of the specified time period type", the screen shifts to the one for specifying individual time periods for which to download data. If there are multiple dates for which you want to acquire data, specify them delimited with commas.

Here is an example of the notation for "acquiring the data for the last day of each month from January through June 2007".

| Discontinuous date setting | |
|---|--|
| 20070131,20070228,20070331,20070430,20070531 20070630 | |

Below is an example of the notation for acquiring the data for "the time period 9 before the most recent", "the time period 4 before the most recent", and "the most recent time period".

| © Discontinuous date setting | | |
|------------------------------|--|--|
| p-9p-4p | | |
| | | |

>> "Function Details" top

Function Details > Download

^{-&}gt; This acquires the data from April 1, 2007 through to the day on which the search was executed.

Download screen setting items

* Layout adjustment

While referencing the output image displayed at the center of the "download" screen, decide the layout of the data to be downloaded. When swapping the positions of elements, such as lines, columns, and pages, drag and drop the item name.



* Format adjustment



- Interval axis

You can specify whether or not there is output for dates for which there is no data, for example non-business days. When displaying stock prices, foreign exchange rate data, etc. without displaying non-business days, remove the check from the "Expand interval according to calendar" checkbox.

- Missing value panes

If you remove the check for this checkbox, rows (and columns and pages) that are filled with all empty data (no data = ND) are not displayed. However, you can only switch off the display for the same axis as items assigned as targets. For example, in the example below, each stock trading name is only displayed for the columns for stock exchanges on which it is listed.

| Item on page | | DATE 1 | DATE 2 | DATE 3 | DATE 4 |
|-----------------------------|---------------------|-----------|-----------|-----------|-----------|
| | Stock exchange | | | | |
| Target (Stock trading name) | Stock exchange 2 | | | | |
| | Stock exchange | | | | |

- Contents selection

This specifies the type of item names displayed for table headers, table sides, and pages tabs for output data. From the seven selection options "Code", "English name", "English name + code", "Code + English name", select the one that best fits your application.

If you put a check in the "incl. Units" checkbox, the unit name (for example 10,000 yen or number of shares) is displayed on the same axis as the items.

* Restrictions on data that can be downloaded

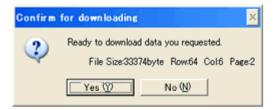
There are the following restrictions on each download execution. If you bump up against these restrictions, reduce the targets, items, or time periods to download, adjust the layout, then execute again.

- Number of targets = 20,000 maximum
- Number of items = 2,000 maximum

- o Number of time periods = 10,000 maximum
- Number of targets x number of time periods = 200,000 maximum
- Number of report lines = 16,000 maximum
- Number of report columns = 252 maximum
- Number of report pages = 255 maximum
- Number of report cells = 300,000 maximum
- o Search time per execution = 30 minutes maximum

* Download confirmation

When you press the download button, a confirmation screen like the following is displayed. Check the data amount and fee, then press "Yes".

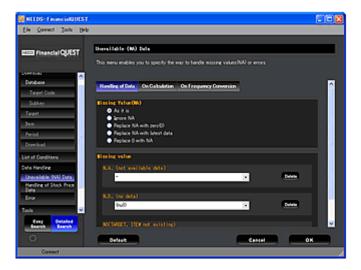


>> "Function Details" top

Function Details > Data handling

"Data handling" setting

These set the handling of data when searching with FinancialQUEST, including definitions of stock price data and invalid data display.



After changing the settings, press the "OK" button at the bottom of the screen to finalize the contents of the change. To return to the initial settings, select "Default" at the bottom right of the screen.

(1) Unavailable (NA) Data

This specifies the processing method when an invalid value (NA or the like) is included in the data targeted for acquisition or when calculation processing or time period type conversion processing is applied to an invalid value.

[Handling of Data]

This specifies how invalid values (NA, ND, or NO) are displayed in the output report when they are present in the data.



* Missing Value (NA)

This specifies the processing method when invalid values (NA) are included in the data. NA (not available) indicates that "data could not be obtained from the information provider"," is not generally publicized", "there is no value assigned", or the like.

| Selection branch | Meaning |
|-----------------------------|---|
| NA as is | The NA value is handled as is as NA. How NA data is displayed is specified with "Missing value". |
| Ignore NA | NA data is converted into no data (ND). How ND data is displayed is specified with "Missing value". |
| Replace NA with zero (0) | NA data is converted to 0s. |
| Replace NA with latest data | Searches for the closest value and converts the NA data to that value. |
| Replace 0 with NA | In addition to the sections where the raw data is NA, data whose value is $"0"$ is also treated as NA for processing. |

^{*} When "Replace NA with latest data" is selected, processing is executed for one item at a time, if there are many items, processing takes quite a while.

* Missing value

This specifies how invalid values (NA, ND, or NO) are displayed in data output results. You can specify the display for NA, ND, and NO data separately by selecting a pull down menu selection branch or manually inputting any desired character string. To make the display "blank" rather than characters, set "(null)".

The definitions of NA, ND, and NO are as follows.

- NA (not available: invalid value)... Indicates that data could not be obtained from the information provider, is not generally publicized, there is no value assigned (for stock and bond related data), or the like.
- ND (No data)... This means data that does not exist (for example, sales for a bank), stock or bond data for a non-business day or day the exchange is closed, data for time outside the range of the time period for which the data was recorded, etc.
- NO (No object)... Indicates a value for which the specified target or item does not exist.

To cancel a manually input character string, press the "Delete" button on the right side of the pull down menu.

[On calculation]

This specifies how to handle NA values in arithmetic operations.



* Missing Value (NA)

This specifies the processing method when rounding or mathematical functions are applied to invalid values (NA).

| Selection branch | Meaning |
|--------------------------|--|
| As it is | If an NA value and a valid value are operated together, the result is NA. |
| Ignore NA | Arithmetic operations ignore NA values. (They are handled the same as ND values.) For handling of ND values by mathematical functions, see here. |
| Calculate NA as zero (0) | Arithmetic operations treat NA data as "0". |
| Calculate NA as one (1) | Arithmetic operations treat NA data as "1". |
| Calculate zero as NA | In addition to the sections where the raw data is NA, data whose value is "0" is also treated as NA for processing. The results are NA. |

* Missing value

This specifies how it is displayed in data output results if the results of calculation are an invalid value (**NC**). You can specify by either selecting a pull down menu selection branch or manually inputting any desired character string. To make the display "blank" rather than characters, set "(null)".

The definition of NC is as follows.

 NC (Not calculated: Can not be calculated) ...Indicates division by zero, a growth ratio that includes negative numbers, or other such calculation.

To cancel a manually input character string, press the "Delete" button on the right side of the pull down menu

[On Frequency Conversion]

* Missing Value (NA)

This specifies the processing method when automatic frequency conversion rounding is applied to invalid values (NA) (such as acquiring monthly data totalized into quarterly data when downloading macro-economic data).



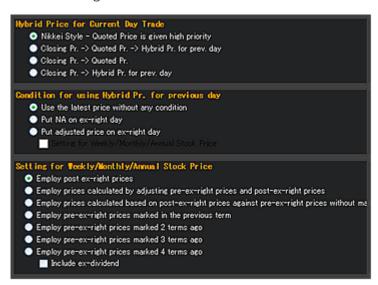
| Selection branch | Meaning |
|--------------------------|---|
| As it is | If an NA value is present in a time period subject to totalization, the result for that totalization time period is NA. |
| Ignore NA | Totalization is processed eliminating NA values in the time period subject to totalization. |
| Calculate NA as zero (0) | Processing treats NA data in the time period subject to totalization as 0. |

Be careful. For databases for which the fee depends on the amount of data acquired, if the specified series is invalid, that series is handled as having no fee, but if the above option is used to convert NA values to 0, a fee is charged for the series.

* In the relationship of processing flow, the three NA handling settings are applied in the order "On Frequency Conversion" -> "Handling of Data" -> "On Calculation".

(2) Handling of Stock Price Data

This specifies the extraction method for data in time period with rights ended, definition of the prices used for the day, etc. when searching the "Stock Price and Indicators" database.



* Hybrid Price for Current Day Trade

This specifies the search method (response return method) for the "Hybrid Price for Current Day Trade (HYBRIDP)" prices usef for the day, which "stock" database daily data record.

| Selection branch | Meaning |
|---|--|
| Nikkei Style – Quoted Price is given high priority | [Listed stocks] Values are used in the priority order "Special quotation or final quotation -> Contract value (closing value) -> Price used on previous day". [Over-the-counter stocks] Returns the next day's reference price. |
| | However, on the day before ex-rights, values are used in the priority order |
| | "Contract value → Bid quotation → Asked quotation → The day's reference |
| | value. |
| Closing Pr> Quoted Pr> Hybrid Pr. for | Values are used in the priority order Contract value (closing value) -> Quotation |
| prev. day | value". |
| Closing Pr> Quoted Pr. | Values are used in the priority order Contract value (closing value) → Quotation value → Value used previous day". |
| Closing Pr> Hybrid Pr. for prev. day | Values are used in the priority order "Contract value (closing value) -> Value used previous day". |

* Condition for using Hybrid Price for previous day

This specifies the usage method for "Price used previous day" in "Hybrid Price for Current Day Trade".

| Selection branch | Meaning |
|--|---|
| Use the latest price without any condition | The day's use price ("the day's reference price" used as the previous day's) is used as is as the value for that day. |
| Put NA on ex-right day | For the ex-rights day, it is set to NA and the previous day's use price is not used. |
| Put adjusted on ex-right day | For the ex-rights day, the previous day's use price is used adjusted (theoretical value calculation). |

* Setting for Weekly/Monthly/Annual Stock Price

This specifies the extraction method for data in an ex-rights time period for the weekly, monthly, and annual four main values and sales volume in the stocks database.

| Selection branch | Meaning |
|---|--|
| Employ post ex-right prices | Returns the price and sales volume after the ex-rights. |
| Employ prices calculated by adjusting pre-ex-right prices and post-ex-right prices | In the term in which the rights expire, the price before the ex-rights is adjusted and a new opening value, high, low, and closing value are calculated. Returns the totaling value before and after the ex-rights for the sales volume. |
| Employ prices calculated based on post-ex-right prices against pre-ex-right prices without making adjustments | In the term in which the rights expire, the price before the ex-rights is not adjusted and a new opening value, high, low, and closing value are calculated. Returns the totaling value before and after the ex-rights for the sales volume. |
| Employ pre-ex-right prices marked in the previous term | After the ex-rights, the price and sales volume before the ex-rights from "1 time period before". Time periods other than the time period in which the rights expire are NA. |
| Employ pre-ex-right prices marked 2 terms ago | After the ex-rights, the price and sales volume before the ex-rights from "2 time period before". Time periods other than the time period in which the rights expire are NA. |
| Employ pre-ex-right prices marked 3 terms ago | After the ex-rights, the price and sales volume before the ex-rights from "3 time period before". Time periods other than the time period in which the rights expire are NA. |
| Employ pre-ex-right prices marked 4 terms ago | After the ex-rights, the price and sales volume before the ex-rights from "4 time period before". Time periods other than the time period in which the rights expire are NA. |

(3) Error

This specifies the data handling for errors.



* Handling when the specified target, item does not exist

This specifies the processing method when the specified target or item does not exist (= NO).

| Selection branch | Meaning |
|--|---|
| Cancel download with error | The error message is output and the search processing is stopped. |
| Continue download (Ignore non-existing TARGET, ITEM) | Search processing moves forward ignoring the non-existent target, item. (Ignored targets and items are not included in output results. |
| Continue download (Display NO value for non-existing TARGET, ITEM) | If the specified target or item does not exist, the search processing moves forward handling the non-existent data as NO. (The notation for NO values in the output results are specified in the "NA Handling" menu "Handling of Data". |

^{*} To change this option, the target list must be cleared, then the target specification is redone again after the settings have been changed. If a target is added or deleted while changing the error handling option, the contents of the specified target may be different from what was intended.

>> "Function Details" top

Function Details > Data handling Function Details > Auto Run

Auto Run

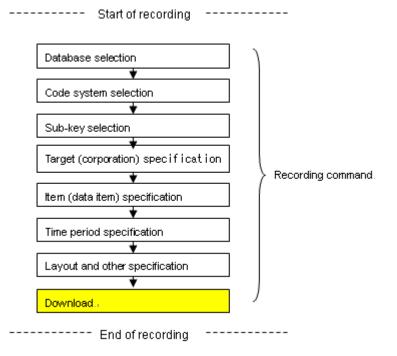
"Auto Run" This function repeats the same operations automatically by executing a command script in which is recorded a series of operations. The recorded script can be edited, so you can also execute automatic operation with some of the search conditions changed.



* Procedure using automatic operation

(1) Recording operations

Press the "Start record" button to start recording operations. (During recording of operations, "Recording: Connect" is displayed on the status bar.) After starting recording, execute the series of operations from database specification to downloading in the same way as for a normal data search. The operation contents are recorded as commands.



To pause recording, press the "Pause record" button in the bottom column. When the operations to record end, press the "Stop record" button.

(2) Editing the script

After the end of the recording of operations, if you select a processing and press the "Edit" button, the script edit dialog opens. To change the search conditions, rewrite the script.



For example, the search Target can be changed by rewriting the stock price code listed in the script specifying the target.

- Toyota Motor search:

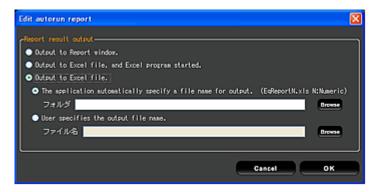
RESET TARGET; NOTFOUND NOVALUE; TARGET \$TARGET, ((T7203));

- Sony search:

RESET TARGET; NOTFOUND NOVALUE; TARGET \$TARGET, ((T6758));

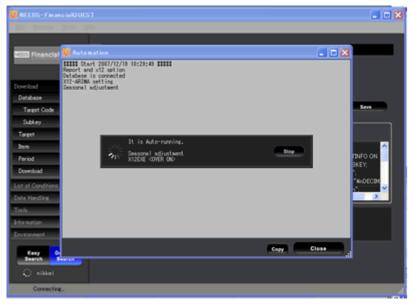
* Data output destination specification

When editing an "Report result output" command, when you press the "Easy Edit" button, you can change the output destination for downloaded data. Select "Output to Report Window", "Output to Excel file, and Excel program started", or "Output to Excel File".



(3) Executing automatic operation

With the recorded command script opened, if you press the "Auto-run" button, automatic operation is executed. If the script includes a "Pause" command, automatic operation stops at that location in the script. To resume execute, press the "Auto-run" button again. If an error occurs during automatic operation execution, the error contents are displayed in the "Auto-run" window.



Screen during automatic operation execution

Auto Run screen function buttons

| Cancels all the commands being displayed and makes a new automatic operation script. |
|---|
| Opens a script saved in the past. |
| Calls a script saved in a separate file and inserts it at the end of the script being worked on. |
| Saves the script being edited as a new file. |
| Saves the script being edited, writing it over its old version. (If the script has never been saved, this |
| becomes a New operation.) |
| Adds the script before the selected line or at the end of the list. (The command edit dialog opens.) |
| Deletes the script on the selected line. |
| Edits the contents of the line pointed at. (The edit dialog opens.) |
| Copies the contents of the line pointed at to the clipboard. (Selecting "Paste" inserts the copied contents.) |
| Deletes the contents of the line pointed at to the clipboard. (Selecting "Paste" inserts the cut contents.) |
| Inserts the contents copied to the clipboard directly before the line being pointed to. |
| Inserts a pause (break point) immediately before the selected line. |
| |

Icons at the bottom of the Auto Run screen

| Start record | Starts recording of operations to be run automatically. |
|--------------------------------------|--|
| Pause record | Pauses recording of operations to be run automatically. Press the "Start Recording" button to resume recording. |
| Stop record | Pressing this button during recording of operations to be run automatically ends the recording. [Stop record] Pressing this button while recording of operations is paused stops automatic operation and ends it. |
| Auto-run | Executes the script. (Starts automatic operations.) |
| Disable/ Disable Release Checkbox | Toggles the line pointed at between disabled and enabled. (Removing the check disables the line.) Automatic operation skips disabled lines. For a line specified to be disabled, the mark before the line number is grayed out. |

[Caution]

- When recording operations into a script, record all steps from database selection to data output. If you start
 recording after the database has already been selected or after some of the search conditions have been
 specified, those conditions will not be recorded into the script and an error will occur in automatic operation.
- When automatic operation ends, the database, target, item, and other search settings are cleared.
- During automatic operation, Financial Quest screen operations and script change are not possible. (The script can be edited during a pause.

>> "Function Details" top

Function Details >Search condition sheet

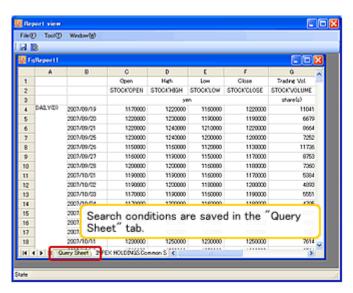
Loading Search condition sheet

When an Excel file output in the past is read again with FinancialQUEST, the previous search conditions are reproduced and the search can be repeated with the same settings. This is handy for searching the same data periodically.



What the search condition sheet is

Of the acquired reports, this part contains the data acquisition settings. If you open the tab displayed with the "Query Sheet" at the bottom of the report, it contains the selected database, acquisition target, item and other conditions, so you can check them.



- Search condition sheet saving method

After the data is acquired, if you press the "Save" button on the report window, the acquitted data and search condition sheet can both be saved.

* To output the search condition sheet together with the data, **be sure to check the "Output the Condition Sheet" checkbox** on the "Environment" menu.

Search condition sheet reading and search execution

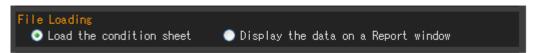
When you select "Open" from "File" menu, the load file selection screen appears. When you select a target file and press the "Open" button, the search condition sheet can be loaded. (A search condition sheet can also be opened by dragging and dropping the file on the FinancialQuest screen.)



When you open the file, the past search conditions are replicated. After the data acquisition time period and targets, items, and other conditions on the screen have been appropriately changed, download the data.

* If you open a file during automatic operation saving, the search conditions in the search condition sheet can be saved in the automatic operation script.

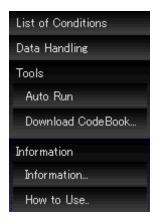
Whether or not data output in the past is also displayed together with the search conditions sheet when the Excel file is opened is set with "Environment" "File Loading".



>> "Function Details" top

Function Details > Other functions

Other functions



* Left navigation menu

- List of Conditions

The setting contents at the current time for database searches, data handling, etc.

- Download CodeBook

The code book (PDF file) containing the item codes and contents recorded in each database can be acquired.

- Information

Displays items added to the database and other most up-to-date Financial Quest information.

- How to Use

Displays the "How to Use FinancialQUEST" screen (this screen).

* Menu bar >> "Help" menu

- Data usage fee

Displays the database usage state and fees for this month, last month, and the month before last.

- Version

Displays information on which version of FinancialQuest is running.

>> "Function Details" top

Function Details > Start / end method

Start / end method

* Start method

Access the FinancialQUEST users' site, and click the software Execute button,



* Login

When the Easy Search screen or Detailed Search screen is displayed, the login input window is displayed at the top right, so input the ID and password, then press the "Login" button. If you put a check in the "SSL" checkbox, the login data is communicated encrypted by SSL.



* End method

To end the software, press the "x" button at the top right of the screen. In the next time you start FinancialQUEST, the application will start up in the search mode (Easy-Search/Detailed-Search) you opened last time.



* Logout

When logging out, select the "Connect" menu "Logout". (This resets all the search conditions set up till now.) When you log out, the login input window is displayed at the top right of the screen, so to login again, input the ID and password, then press the "Login" button.



* Password change

If you press the "Connect" menu "Change Password", the password change screen is displayed.



Input the current password and the new password, then press the "OK" button. In order to prevent mistakes in inputting the new password, input the same password in both input columns.



The conditions for character strings that can be specified as passwords are as follows.

- o Length: 6 digits minimum, 21 digits maximum
- Characters that can be used: Numbers [0-9], English letters [A-Z], symbols [#\$%&@¥_.]
- o Passwords are not case sensitive.
- The first character can not be a number.
- o A password can not be made up only of symbols or only of numbers.

>> "Function Details" top

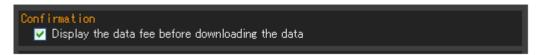
(5) Environment

This outlines the software settings displayed with the "Environment" menu.



[Confirmation]

This specifies whether or not to display the usage fee and file size confirmation before downloading data.



- o Checkbox checked... A message is displayed confirming the usage fee and file size when downloading data.
- o Checkbox not checked... The usage fee and file size confirmation is not displayed.

[Language]

This selects the display language for the screen menus and target and item list displays. After making a setting, restart the software to put the change contents into effect.



| Selection branch | Meaning |
|---|--|
| Japanese mode | Operate in Japanese. |
| English mode | Operate in English. Do not display Japanese. |
| English mode (Supplemented by Japanese) | Operates giving English priority for display. If the OS supported Japanese display, the target and item lists display both English names and Japanese names. When searching domestic macro-economic data and other databases that do not have English notation, item names are not displayed unless the setting is English priority mode instead of English mode. |

[File Loading]

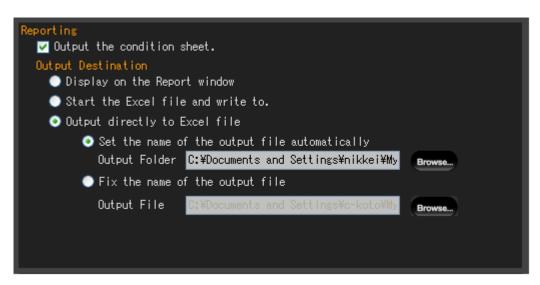
This specifies the operates when an Excel file is opened that was previously saved with this software.



| Selection branch | Meaning |
|-------------------------------------|---|
| Load the condition sheet | When an Excel file is opened that was previously saved with this software, only the search condition sheet is loaded. |
| Display the data on a Report window | Not only the search condition sheet, but also the data is loaded and it is displayed in the Report window. |

[Reporting]

This specifies the output destination for downloaded data and whether or not the search condition sheet is output.



* Condition sheet output

This specifies whether or not the search condition sheet is output when data is output. When the data is saved in an Excel file if there is no condition sheet, the settings can not be reproduced when the file is opened later with FinancialQUEST.

- o Checkbox checked... The search condition sheet is output together with the downloaded data.
- o Checkbox not checked... The search condition sheet is not output.

* Output destination

This specifies the output destination for downloaded reports. (Only the operations for when a detailed search is output can be specified.) For a simple search, the search is always output to the report window.)

| Selection branch | Meaning |
|-------------------------------|--|
| Display on the Report | The downloaded data is displayed in the report window (the standard FinancialQuest data display |
| window | window). |
| Start the Excel file and | The downloaded data is output to the Excel screen. (Excel is started and the data is displayed on the |
| write to | screen. To save the data, it is necessary to select "Save" from the separate Excel menu. |
| Output directly to Excel file | The downloaded data is saved directly into an Excel format file. (Excels is not started.) The output file name is set with "Set the name of the output file automatically" or "Fix the name of the output file". |

* The output destination folder and file name for data specified with "Output directly to Excel file" are not erased even if the "Default" button is pressed. (However, the output destination selection branch is returned to the standard "Display on the Report window".)

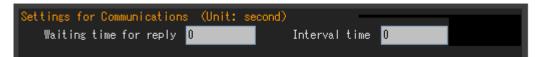
[Editor]

This specifies the program used when a text file is opened with FinancialQuest. If nothing is specified, the program associated with the ".txt" extension in the Windows settings is opened. When outputting the results of seasonal adjustment processing, the program specified here is used.



[Settings for Communications]

This specifies Waiting time for reply and Interval time. (There is no need to change these settings if the system is operating normally.)



Waiting time for reply

This text box enables you to specify the time until automatic disconnection when there is no response for a certain term after making a search request to FinancialQUEST server. You can specify the time limit by the second. When you specify or change time out figures, type in a figure "10" or larger than 10 and also smaller than the time limits for the proxy server or firewall. The time-out is set to the default of "0 (zero)" second. If the time-out has been set to "0", this function will be deemed as invalid.

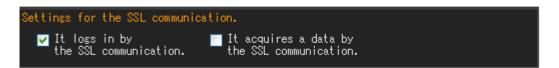
o Interval time

This text box enables you to specify the time until re-connection to FinancialQUEST server after the lapse of the waiting time for receiving a response from the server, which you specified on the left side of the window. You can specify the time limit by the second. The time-out is set to the default of "0 (zero)" second. If the time-out has been set to "0", this function will be deemed as invalid. When you specify a figure other than "0" for the [Waiting time for reply], specify 5 or over 5 for the [Interval time].

* FinancialQUEST also specify the "Time-out". This is the time until automatic logoff when there is no response or operation for a certain term. The time-out is set to 1800 seconds (30 minutes).

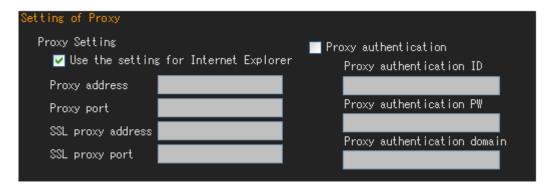
[Setting of SSL comimunication]

- o It logs in by the SSL communication... For login, communication use SSL encryption.
- o It acquires a data by the SSL-communication... All the comminucations use SSL encryption.
 - * When you access to the proxy server which requires authentication with ID and password, all the communications will be via SSL.



[Setting of Proxy]

This makes the Proxy settings. Normally, check the "Use the setting for Internet Explorer" checkbox. (If this check is removed, input the server settings etc. manually in the form.)



*You can switch display/non-display of "Setting of Proxy".

Settings when the "Use the setting for Internet Explorer " checkbox is not checked.

- o **Proxy address**... This specifies the proxy server address.
- o **Proxy port**... This specifies the number of the port connecting with the proxy server.
- SSL proxy address... This specifies the proxy server address for SSL communications. (If the "SSL communications" checkbox is checked in the proxy settings, communications for login reference this.
- SSL proxy port... This specifies number of the connection port for SSL communications with the proxy server.
 (If the "SSL-communication" checkbox is checked in the proxy settings, this is referenced.)

Proxy authentication

When it is necessary to authenticate the ID and password when accessing the proxy server, put a check in the "Proxy authentication" checkbox to save the ID, etc.

- Proxy authentication ID... This specifies the user ID for when connecting to a proxy server for which authentication is required.
- Proxy authentication PW... This specifies the password for when connecting to a proxy server for which authentication is required.
- Proxy authentication domain... When proxy server authentication requires a domain name (the name of the authentication server set by the manager), input that domain name.